



Color Bubble Jet[™] Printer

S450 Series

User's Manual

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Introduction

Welcome Copyright Disclaimer Trademarks How to Use This Manual Safety Precautions

Welcome

Thank you for purchasing the Canon S450 Series Color Bubble Jet™ Printer.

This *User's Manual* provides complete explanations of the features and functions of the printer. To maximize the life of your printer, it's a good idea to familiarize yourself fully with all of its functions.

This *User's Manual* uses the following symbols to indicate important information. Always observe the instructions indicated by these symbols.

- **Caution** Indicates instructions that, if ignored, could result in personal injury or material damage caused by incorrect operation of the equipment. Instructions indicated by this symbol must be observed for safe operation.
- **Note Note** Indicates useful reference information or supplementary instructions concerning operation of the equipment. Be sure to read these notes.

This manual uses the following symbols depending on the computer system you are using. Always observe the instructions indicated by these symbols.



Indicates information for Windows 98 and Windows 95 users.

Macintosh

Indicates information for Macintosh users (OS 8.1 or later).

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Canon Computer Systems, Inc. has reviewed this manual thoroughly in order that it will be an easy-to-use guide to your Canon S450 Color Bubble Jet Printer. All statements, technical information, and recommendations in this manual and in any guides or related documents are believed reliable, but the accuracy and completeness thereof are not guaranteed or warranted, and they are not intended to be, nor should they be understood to be, representations or warranties concerning the products described.

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As an ENERGY STAR[®] Partner, Canon U.S.A., Inc. has determined that this product meets the ENERGY STAR[®] guidelines for energy efficiency.

How to Use This Manual

To view this *User's Manual*, please use Adobe[®] Acrobat[®] Reader 4.0 or later, which is included on your CD.





Click the + (or \triangleright) symbol when you wish to see detailed headings for each chapter.

Click the - (or \mathbf{v}) symbol when you wish to return to the original (condensed) display.

Safety Precautions

Please read the safety warnings provided in this manual to ensure that you use the printer safely. Do not attempt to use the printer in any way not described in this manual as this could result in unforeseen printer faults or cause a fire or electric shock.

Turning off the printer Choosing a location Power supply Working around the printer Cleaning the printer BJ[®] cartridges and ink tanks Using the printer near appliances such as fluorescent lamps

Turning off the printer

To avoid printer malfunctions, always use the POWER button to turn the printer on and off. Do not remove the power cord from the power outlet until the printer has been turned off by pressing the POWER button. Be sure to unplug the power cord from the power outlet after the POWER light goes off.

Choosing a location

Do not install the printer in a location that is unstable or subject to excessive vibration.



The printer could tip over or fall and cause injury.

Do not install the printer in locations that are very humid or dusty, in direct sunlight, or close to a heating appliance or fireplace.



To avoid the risk of fires or electric shocks, install the printer in a location with an ambient temperature range of 41 to $95^{\circ}F$ (5 to $35^{\circ}C$) and humidity of 10 to 90% (no condensation).

Do not place the printer on a thick rug or carpet.



Fibers or dust entering the printer could cause a fire.

Keep the power outlet for the printer free of all obstacles so you can unplug the power cord at any time.



Any obstacles could prevent you from unplugging the printer when a printer fault occurs and thereby cause a fire or electric shock.

When you are carrying the printer, always use both hands and hold the printer by both ends.



When you are moving the printer to another location, keep it stable so that you do not drop it and cause injury. Do not place the printer close to flammable solvents such as alcohol or thinner.



If flammable solvents come in contact with electrical components inside the printer, such substances could cause a fire or electric shock.

Power supply

The socket-outlet shall be installed near the equipment and shall be easily accessible.

Always grasp the plug when you unplug the power cord.



Unplugging the power cord by pulling on the cord itself can damage the cord and cause a fire or electric shock.

Do not use an extension cord.



This could cause a fire or electric shock.

Do not use a power supply voltage other than that supplied in the country of purchase.



Using the incorrect voltage could cause a fire or electric shock. The correct power supply voltage and frequency is: USA/Canada: AC 120V, 60Hz

Do not attempt to plug the power cord into the power outlet or unplug the power cord when your hands are wet.



This could cause an electric shock.

Always push the plug all the way into the power outlet.



A loose or poorly inserted plug could cause a fire or electric shock.

Do not damage, modify, stretch or excessively bend or twist the power cord. Do not place heavy objects on the power cord.



Power leaking from a damaged power cord could cause a fire or electric shock.

Do not use the printer while the power cord is bundled or knotted.



This could cause a fire or electric shock.

If you detect smoke, unusual odors or strange noises around the printer, immediately press the POWER button to turn off the printer and always unplug the power cord.



Continuing to use the printer in these circumstances could cause a fire or electric shock. Call the Canon Customer Care Center.

Betting Help From Canon

Working around the printer

Do not use flammable sprays near the printer.



Gases in the spray could cause a fire or electric shock if they come in contact with electrical components inside the printer.

Do not put your hands or fingers in the printer while it is printing.



The printer contains moving parts that could cause injury.

Do not place metal objects (paper clips, staples, etc.) or containers of flammable solvents (alcohol, thinners, etc.) on the top of the printer.



Such objects could fall or spill into the printer and cause a fire or electric shock.

If any foreign objects (metal or liquid) enter the printer, turn off the printer, unplug the power cord, and call the Canon Customer Care Center.

Getting Help From Canon



Continued use of the printer when a foreign object has fallen into the printer could cause a fire or electric shock.

Cleaning the printer

Use a damp cloth to clean the printer. Never use flammable solvents such as alcohol, benzene, or thinner.



If flammable solvents come in contact with electrical components inside the printer, such substances could cause a fire or electric shock.

Always unplug the printer from the power outlet when you are cleaning the printer.



If you mistakenly turn on the printer while cleaning it, you could touch moving internal printer components and suffer injury.

Do not attempt to disassemble or modify the printer.



The printer contains high-voltage components that could cause a fire or electric shock.

BJ[®] cartridges and ink tanks

For safety reasons, store BJ cartridges and ink tanks out of the reach of small children.



If a child inadvertently licks a BJ cartridge or ink tank or ingests any ink, consult a physician immediately. Do not subject BJ cartridges or ink tanks to shocks or excessive vibration.



This could cause the ink to leak out and stain your clothing or the surroundings.

Do not touch the metal contacts on a BJ cartridge after printing.



The metal parts may be very hot and could cause burns.

■ Using the printer near appliances such as fluorescent lamps

Allow at least 6 inches (approximately 15 cm) clearance between the printer and an appliance such as a fluorescent lamp. Electrical noise generated by a fluorescent lamp placed too close to the printer may cause printer malfunctions.

Parts and Functions of the Printer

Front View

Rear View

Inside the Printer

Operation Panel

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Front View



Ensures that sheets from the paper stack in the auto sheet feeder feed straight into the printer. Always align this guide with the left edge of the

> Paper Rest Raise to support the paper, especially a larger paper size.

Auto Sheet Feeder Holds multiple sheets of paper or other media, which are automatically fed into the printer one sheet at a time.

Paper Output Tray Holds printed sheets after they are ejected from the printer.

Paper Thickness Lever Adjusts the gap between the print heads and the surface of the paper you are printing on.

Rear View

Printer Cable Connector (USB Interface) Provides a connection point for connecting a USB interface cable to the printer.



Printer Cable Connector (Parallel Interface) Provides a connection point for connecting a parallel interface cable to the printer.

Power Connector Provides a connection point for connecting the power cord to the AC power outlet.

Inside the Printer



Cartridge Holder

Contains two slots:

- The left slot holds the BC-30e Black BJ Cartridge (provided), BC-32e Photo BJ Cartridge (optional), or the IS-32 Color Image Scanner Cartridge (optional).
- The right slot holds the BC-31e Color BJ Cartridge (provided).

Operation Panel



Getting Help From Canon



Hold down the RESUME button until the POWER light starts to flash. Then, release the button. The following operations are performed, depending on how many times the light flashes.

• If you release the button after the light flashes **once**:

Print head cleaning is performed.

Cleaning the Print Heads

• If you release the button after the light flashes twice:

A Nozzle Check Pattern is printed out.

Printing a Nozzle Check Pattern

• You can also perform these tasks from the printer driver.



Paper Handling

Paper and Other Print Media Setting the Paper Thickness Lever Printing Area Notes on Handling Print Media Printing on Special Media Types Printing Photographs

Paper and Other Print Media

Plain paper and Canon Specialty Papers are recommended for use with the printer. Refer to any instructions provided with special media for details about handling and printing.



Ordinary Paper

• Plain Paper

Provides standard print quality.

You can use standard photocopier paper if its weight is within the range of 17 to 28 lb (64 to 105 g/m^2). (You can also use Canon Bubble Jet Paper.)

• Envelopes

You can use the standard US Commercial #10 and European DL sizes.

Canon Specialty Papers

Canon offers a range of special paper and films for the reproduction of superb images in vibrant colors.

Artist Canvas

Use this textured cotton canvas to add an artistic touch to your images and artwork. It is ideal for printing photos, illustrations, and artwork.

Back Print Film

This white translucent film is ideal for displays that use backlighting to show a printed image in the same way as slides and stained glass. The original image is reversed (mirrored) when printed.

• Banner Paper

This banner paper allows you to print on up to six connected sheets of letter size paper to create party or advertising banners. It is printable on both sides.

• Brilliant White Paper

Canon's unique paper formulation gives you a bright white printing surface that produces incredibly brilliant colors and dark, crisp black text. This paper works great for everyday use, as well as proposals, color presentations, color charts and graphs, flyers, and newsletters. You can print on both sides of the sheet. (In the printer driver, select Plain Paper for the Media Type when you load this paper.)

• Bubble Jet Paper (water resistant)

The Canon Bubble Jet Paper has been developed for high quality printing with minimal or no smearing or running when in contact with water or damp surfaces, making it a good choice for damp or rainy environments. The paper is specially coated and printable on both sides. (In the printer driver, select Plain Paper for the Media Type when you load this paper.)

Glossy Photo Cards

This is a special 4.75×8.5 inch sheet made of the same stock as Glossy Photo Paper. You can print borderless photos by printing the image so that it extends beyond the perforations and then trim off the unwanted white margins. Use this card when you want to print a full 4×6 inch photo.

Glossy Photo Paper

This high quality glossy-coated, heavy-weight paper produces vibrant, life-like color images. With this paper, you can print photographic quality images.

• Greeting Cards

Get the most out of your card-making software with Canon Greeting Cards. These cards give your unique, personalized cards the look and feel of professional cards. You can create cards, invitations, announcements, and more. These cards come in quarter-fold size and half-fold size.

• High Gloss Photo Film

This is a film sheet with a higher gloss than Glossy Photo Paper. To obtain the highest quality reproduction of photographs, use this media with the BC-31e Color BJ Cartridge. (You cannot use this media type with the optional BC-32e Photo BJ Cartridge.)

• High Resolution Paper

This medium is extra smooth for sharp text, brilliant graphics, and professional quality images. It is ideal for printing photographs or business documents that include color charts and graphs.

• Magnet Sheets

This medium provides a durable, bright-white, glossy surface. Printable magnets can be cut to any desired shape or size. They are ideal for picture frames, calendars, and business cards.

• Transparencies

Use transparencies to prepare materials for use with an overhead projector. To avoid paper jams and other problems, use transparencies specifically designed for use with the Canon Bubble Jet printer. Do not use transparencies designed for laser printers or photocopiers.

Media Types You Cannot Use With the Printer

To avoid poor print quality and possible damage to the printer, do not use the media types listed below.

- Folded paper
- Curled paper
- Creased or crumpled paper
- Damp or wet paper
- Excessively thin media (weight less than 17 lb 64 g/m²)
- Excessively thick or extremely heavy paper (exceeding 28 lb 105 g/m²)
- Continuous feed paper (tractor feed)
- Punched paper (loose-leaf folder inserts, etc.)
- Reply-paid postcards (such as double postcards)
- Postcards with a photograph printed on the reverse side
- · Postcards with a photograph or sticker pasted on
- Envelopes with overlapping flaps
- Envelopes with pressure seals
- · Envelopes with embossed or treated surfaces

Media Sizes You Can Use With the Printer

The following table lists the standard paper sizes that you can use with the printer.

Paper	Width $ imes$ Height
Letter	8.5 in. $ imes$ 11.0 in.
Legal	8.5 in. $ imes$ 14.0 in.
A4	210 mm × 297 mm
A5	148 mm × 210 mm
B5	182.0 mm $ imes$ 257.0 mm
Envelope (US Com. #10)	9.5 in. $ imes$ 4.12 in.
Envelope (European DL)	220 mm × 110 mm
Canon 4" × 6"	4 in. \times 6 in.
Custom Size	8.5 in. × 11.0 in.

You can also use custom paper sizes within the following ranges.

Width	3.94 in. to 9.50 in. (100.0 mm to 241.3 mm)
Height	3.94 in. to 23.0 in. (100.0 mm to 584.2 mm)

You can load media of the following weight for printing.

17 lb to 28 lb (64 g/m² to 105 g/m²)

Landscape and Portrait

There are two methods of orientation you can use to load the printer, depending on the type of media you intend to load.

- When the short edge of the paper is fed into the auto sheet feeder, this is called Portrait orientation.
- When the long edge of the paper is fed into the auto sheet feeder, this is called Landscape orientation.

Paper	Portrait (vertical)	Landscape (horizontal)
Letter	Yes	No
Legal	Yes	No
A5	Yes	Yes
B5	Yes	No
A4	Yes	No
Envelope (US Com. #10)	No	Yes
Envelope (European DL)	No	Yes
Glossy Photo Cards	Yes	No

Print Side

The following media must be printed on its correct side.

•	Artist Canvas	Must be printed on coated side of the canvas.
•	Back Print Film	Must be printed on the matte side.
•	Glossy Photo Cards	Must be printed on the whiter (glossy) side.
•	Glossy Photo Paper	Must be printed on the whiter (glossy) side.
•	Greeting Cards (1/4-fold)	Must be loaded with the words "Canon Greeting Cards" face down.
•	Greeting Cards (1/2-fold)	Can be printed on either side.
•	High Gloss Photo Film	Must be loaded and printed with the glossy side facing up and the cut corner at top right against the right side of the auto sheet feeder.
•	High Resolution Paper	Must be printed on the whiter side.
•	Magnet Sheets	Must be printed on the glossy side.
•	Envelope	Must be printed on the address side.

Number of sheets that can be loaded at a time

The number of sheets that can be loaded varies according to the type of media. Make sure that the paper stack is not higher than the load limit mark (\blacktriangleright I) on the auto sheet feeder.

Media type	Maximum capacity of sheet feeder
Plain Paper	Approximately 100 sheets (20 lb — 75 g/m ²)
Artist Canvas	1 sheet
Back Print Film	Approximately 10 sheets
Banner Paper	1 sheet (2 to 6 sheets in length)
Glossy Photo Cards	1 sheet
Glossy Photo Paper	Approximately 10 sheets
Greeting Cards	1 sheet
High Gloss Photo Film	1 sheet
High Resolution Paper	Approximately 80 sheets
Magnet Sheets	1 sheet
Transparency	Approximately 30 sheets
Envelopes	Approximately 10 pieces (US Com. #10 or European DL)
Setting the Paper Thickness Lever

Before you print, be sure to set the paper thickness lever as listed below.



Paper Thickness Lever Adjusts the gap between the print head and the surface of the paper you are printing on.

Media type	Position
Plain Paper	Up
Artist Canvas	Down
Back Print Film	Up
Banner Paper	Down
Glossy Photo Cards	Up
Glossy Photo Paper	Up
Greeting Cards	Down
High Gloss Photo Film	Up
High Resolution Paper	Up
Magnet Sheets	Down
Transparency	Up
Envelope	Down

Printing Area

To ensure the best print quality, the printer requires a margin along each edge of the media. The printing area, which varies according to the media size, is the paper size minus the margins.

There is both a printing area (recommended) and a printable area (possible).

Printing area (dark gold)	Canon recommends that you print within this area for optimum print quality.
Printable area (light gold)	The area where it is possible to print. However, printing in this area can adversely affect the print

quality or the paper feed precision. (







Letter, Legal



Recommended printing area
Printable area where it is possible to print.*



* Printing in this area can adversely affect the print quality or the paper feed precision.

A4, A5, B5

Media Type	Printable Area (width $ imes$ height)
A4	203.2 mm \times 289.0 mm
A5	141.2 mm $ imes$ 202.0 mm
B5	175.2 mm $ imes$ 249.0 mm





* Printing in this area can adversely affect the print quality or the paper feed precision.

Glossy Photo Cards



US Com. #10 Envelope



Recommended printing area (The printable area is identical to the printing area.)

European DL Envelope



Printing Area

Banner Paper





* Printing in this area can adversely affect the print quality or the paper feed precision.

Notes on Handling Print Media

- Whenever possible, hold the paper by the edges and avoid touching the print side. Any scratching or soiling on the print side will adversely affect the print quality.
- When storing your media, put the media back in its original packaging and avoid locations that are exposed to direct sunlight or that are subject to high temperatures or humidity. To avoid bending or wrinkling the paper, store it in a level place.
- After printing, do not touch the print side until the ink is dry. If water gets on the printed media, do not touch the print side until the media dries.
- The following are guidelines on how long ink takes to dry on individual print media.

Artist Canvas	About 15 minutes
Back Print Film	About 15 minutes
Glossy Photo Cards	About 2 minutes
Glossy Photo Paper	About 2 minutes
High Gloss Photo Film	About 2 minutes
Magnet Sheets	About 30 minutes
Transparency	About 15 minutes

Printing on Special Media Types

Artist Canvas

Back Print Film

Banner Paper

Glossy Photo Cards

Glossy Photo Paper

Greeting Cards

High Gloss Photo Film

High Resolution Paper

Magnet Sheets

Transparencies

Envelopes

Artist Canvas



Make sure that the printer is turned on and the paper thickness lever is set to the Down position. Raise the paper rest.





- With the print side (coated side) facing up, load one sheet of Artist Canvas with the edge aligned against the right side of the auto sheet feeder.
- Adjust the paper guide to the left side of the sheet.





You can load one sheet of Artist Canvas in the auto sheet feeder.

3 Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select High Resolution Paper in the Media Type box. Also make sure that the BJ Cartridge setting matches the BJ cartridge installed in the printer. For Page Size, select Custom and set it to $9.5" \times 14"$.

Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify the media type (High Resolution Paper), and the BJ cartridge installed in the printer.

Using the Macintosh Printer Driver

4 Start the print job.



Remove each printed sheet as it is ejected from the printer.

Do not touch the printed side until the ink is completely dry. About 15 minutes are required for drying.



Return unused sheets to the original package. Store the sheets in a flat, dry, cool location away from direct sunlight, high temperature, and high humidity.

Back Print Film

1

Make sure the printer is turned on and the paper thickness lever is set to the Up position. Raise the paper rest.



2 Fan the Back Print Film to remove static cling and tap the edges against a flat surface to align them neatly.

If the film is curled, bend it slightly in the opposite direction of the curl to straighten it.





- The matte side of the film is the print side which should be loaded face up.
- To avoid touching the print surface, always handle the sheets by the edges. Unclean or scratched print surfaces can adversely affect print quality.



- With the print (matte) side facing up, place one sheet of plain paper under the stack. Load the stack with the edges aligned against the right side of the sheet feeder.
- Adjust the paper guide to the left side of the stack.



You can load up to ten sheets of film in the auto sheet feeder.

4 Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select Back Print Film in the Media Type box. Also make sure that the BJ Cartridge setting matches the BJ cartridge installed in the printer.

Change the settings if necessary.

Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify the media type (Back Print Film), and the BJ cartridge installed in the printer.

Using the Macintosh Printer Driver

- **5** Start the print job.
- *6* Remove each printed sheet of Back Print Film as it is ejected from the printer.

Do not touch the printed side until the ink is completely dry. About 15 minutes are required for drying.

Note 🗼

- An image is reversed when printed on Back Print Film in order to display correctly when lit with a backlight.
- After drying, cover each sheet of Back Print Film with one sheet of plain paper (uncoated) to prevent sticking and abrasion. Also, cover each sheet of Back Print Film if you are storing them in plastic pockets to prevent the film from sticking to the plastic.
- Store unused film in the original package in a dry, cool location away from direct sunlight, high temperature, and high humidity.

Banner Paper



Make sure the printer is turned on and the paper thickness lever is set to the Down position. Lower the paper rest.





Before you tear off the sheets, make sure that you take one more sheet than you need for printing. (When you wish to print three sheets, tear off a length of four sheets—one more than you need for printing.)

Note 🗼

You can print on up to six sheets. If you want to print a banner of maximum length (six sheets), tear off a length of seven sheets—one more than you need for printing.





Load the Banner Paper:

- Align the right side of the first sheet with the right side of the sheet feeder and insert it into the sheet feeder until it stops.
- Adjust the paper guide to the left side of the sheet.





- You can print on either side of Banner Paper.
- Neatly fold the unprinted paper behind the printer and do not allow it to hang over the edge of the table.



Gently fold over the perforations between the first and second sheet.



5 Be sure to provide ample space in front of the printer so each sheet is supported as it comes out of the printer and then allowed to hang over the edge of the table:





A dense printout will require more time to dry. Be careful that wet ink does not stain the desk or the floor.



Windows

In the Windows driver, you select Banner Printing on the Page Layout tab.

➡ Printing on Banner Paper

Macintosh

When using a Macintosh, select Banner Printing before creating a document using an application program.

Printing on Banner Paper

Glossy Photo Cards



Make sure the printer is turned on and the paper thickness lever is set to the Up position. Raise the paper rest.





- Load the Glossy Photo Card:
 - With the print side (glossy side) facing up, place the Loading Support Sheet A provided with the package under the sheet. Load the sheet with the edges aligned against the right side of the sheet feeder. (For details, refer to the instructions provided with the Glossy Photo Cards package.)
 - Adjust the paper guide to the left side of the sheet.





- Do not remove the borders from the photo card before printing.
- To avoid touching the print side (glossy side), always handle the sheet by the edges. Unclean or scratched print surfaces can adversely affect print quality.

3 Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select Glossy Photo Cards in the Media Type box. Also make sure that the BJ Cartridge setting matches the BJ cartridge installed in the printer.

Change the settings if necessary.

Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify the media type (Glossy Photo Cards), and the BJ cartridge installed in the printer.

Using the Macintosh Printer Driver

4 Windows

Click the Page Layout tab and make sure that the Page Size setting is Canon $4" \times 6"$.

Normally you can set the paper size with the application program. However, if the setting on the Page Layout tab does not match the setting in the application program, or if your application program does not provide a size selection for Glossy Photo Cards, specify the setting here.

Using the Windows 98/95 Printer Driver

Macintosh

Select Canon $4" \times 6"$ for the Page Size setting. Normally you can set the paper size with the application program.

Using the Macintosh Printer Driver

- 5 Start the print job.
- 6 Remove each printed card as it is ejected from the printer.

Do not touch the printed side until the ink is completely dry. About two minutes are required for drying.

- **7** Tear away the strip of the Glossy Photo Card. For more details, see the instructions provided with the Glossy Photo Cards package.
- **Note** Store unused Glossy Photo Cards in the original package in a dry, cool location away from direct sunlight, high temperature, and high humidity.

Glossy Photo Paper



Make sure the printer is turned on and the paper thickness lever is set to the Up position. Raise the paper rest.



2 Fan the Glossy Photo Paper to remove static cling and tap the edges against a flat surface to align them neatly.

If the film is curled, bend it slightly in the opposite direction of the curl to straighten it.





To avoid touching the print surface, always handle the sheets by the edges. Unclean or scratched print surfaces can adversely affect print quality.



- With the print side (glossy side) facing up, place the Loading Support Sheet A provided with the package under the stack. Load the stack with the edges aligned against the right side of the sheet feeder. (For details, refer to the instructions provided with the package.)
- Adjust the paper guide to the left side of the stack.





- You can load up to ten sheets in the sheet feeder.
- Do not use the Support Sheet B provided with the package.

4 Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select Glossy Photo Paper in the Media Type box. Also make sure that the BJ Cartridge setting matches the BJ cartridge installed in the printer.

Change the settings if necessary.

Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify the media type (Glossy Photo Paper), and the BJ cartridge installed in the printer.

Using the Macintosh Printer Driver

5

Start the print job.

6 Remove each printed sheet as it is ejected from the printer.

Do not touch the printed side until the ink is completely dry. About two minutes are required for drying.



Store unused film in the original package in a dry, cool location away from direct sunlight, high temperature, and high humidity.

Greeting Cards



Make sure the printer is turned on and the paper thickness lever is set to the Down position. Raise the paper rest.





- Load the Greeting Cards:
 - For 1/4-fold greeting cards, load the sheet with the words "Canon Greeting Cards" face down, and align the edge of the sheet against the right side of the sheet feeder. 1/2-fold greeting cards can be printed on either side. (For details, refer to the instructions provided with the Greeting Cards package.)
 - Adjust the paper guide to the left side of the sheet.





Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select High Resolution Paper in the Media Type box. Also make sure that the BJ Cartridge setting matches the BJ cartridge installed in the printer.

Change the settings if necessary.

Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify the media type (High Resolution Paper), and the BJ cartridge installed in the printer.

Using the Macintosh Printer Driver

- 4 Start the print job.
- **5** Remove each printed card as it is ejected from the printer.

Do not touch the printed side until the ink is completely dry.



Store unused Greeting Cards in the original package in a dry, cool location away from direct sunlight, high temperature, and high humidity.

High Gloss Photo Film

- Note >>> Use only the BC-31e Color BJ Cartridge for printing on High Gloss Photo Film. Do not use the BC-32e Photo BJ Cartridge.
 - 1
- Make sure the printer is turned on and the paper thickness lever is set to the Up position. Raise the paper rest.





Load one sheet of High Gloss Photo Film:

- Remove one sheet from the package and hold the glossy side up with the cut corner up and on the right. Align the right edge with the right side of the auto sheet feeder and insert the sheet into the auto sheet feeder.
- Adjust the paper guide to the left side of the sheet.





- If the sheet is curled, bend it slightly against the curl to straighten it.
- Always handle the sheet by the edges. An unclean or scratched print surface can adversely affect print quality.
3 Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select High Gloss Photo Film in the Media Type box. The BJ Cartridge setting is automatically set to Color.

Change the settings if necessary.

➡ Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify the media type (High Gloss Photo Film), and the BJ cartridge (Color).

Using the Macintosh Printer Driver

- 4 Start the print job.
- 5
- Remove each printed sheet as it is ejected from the printer.

Do not touch the printed side until the ink is completely dry. About 10 minutes are required for drying.



Store unused film in the original package in a dry, cool location away from direct sunlight, high temperature, and high humidity. After storing the unused film in the package, place it on a stable, horizontal surface so that the film is not curled or creased in the package.

High Resolution Paper



Make sure the printer is turned on and the paper thickness lever is set to the Up position. Raise the paper rest.



2

Fan the stack to remove static cling and align the edges of the stack by tapping them on a flat surface.





To avoid touching the print surface, always handle media by the edges. Unclean or scratched print surfaces can adversely affect print quality.



Load the stack of paper with the whiter-side facing up:

- Align the stack with the right side of the auto sheet feeder and insert it into the auto sheet feeder.
- Adjust the paper guide to the left side of the stack.





Make sure that the top of the stack is not higher than the load limit mark. Maximum capacity of the sheet feeder is approximately 80 sheets of High Resolution Paper.

4 Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select High Resolution Paper in the Media Type box. Also make sure that the BJ Cartridge setting matches the BJ cartridge installed in the printer.

Change the settings if necessary.

Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify High Resolution Paper for the media type and select the BJ cartridge installed in the printer.

Using the Macintosh Printer Driver

5 Start the print job.

6 Check the printed sheets as they are ejected from the printer.As soon as about 20 sheets have stacked on the paper output tray, remove them.

If the printed sheets are excessively curled after they are ejected from the printer, remove each sheet immediately to prevent curled sheets from blocking other sheets ejected from the printer.



• Store unused paper and other media flat in the original package in a dry, cool location away from direct sunlight, high temperature, and high humidity.

Magnet Sheets



Make sure the printer is turned on and the paper thickness lever is set to the Down position. Raise the paper rest.



2 Place one sheet of plain paper behind one magnet sheet.

Place both sheets on a hard surface to align the bottom edge and sides.





• From the bottom edge, roll the two sheets together with the plain paper facing out and glossy side of the magnet sheet facing inside.



• Once rolled, hold in this position for 20 seconds.





Unroll the media and place it in the sheet feeder immediately.

- Make sure the print (glossy) side is facing up and one sheet of plain paper is under the sheet, load the two sheets with the edges aligned against the right side of the sheet feeder.
- Adjust the paper guide to the left side of the sheets.





You can load one Magnet Sheet in the sheet feeder.

4 Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select Glossy Photo Paper in the Media Type box. The BJ Cartridge setting is automatically set to Color.

Change the settings if necessary.

Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify the media type (Glossy Photo Paper), and the BJ cartridge (Color).

➡ Using the Macintosh Printer Driver

- 5 Start the print job.
- 6 Remove the printed Magnet Sheet as it is ejected from the printer.

Do not touch the printed side until the ink is completely dry. About 30 minutes are required for drying.

Discard the sheet of plain paper.



 Return unused Magnet Sheets to the original package and store the sheets in a flat, dry, cool location away from direct sunlight, high temperature, and high humidity.

Transparencies



Make sure the printer is turned on and the paper thickness lever is set to the Up position. Raise the paper rest.





Fan the transparencies to remove static cling and tap the edges against a flat surface to align them neatly.





- To avoid touching the print surface, always handle the sheets by the edges. Unclean or scratched print surfaces can adversely affect print quality.
 - Do not remove transparencies from the package until you are ready to load them in the auto sheet feeder, especially in humid conditions.



Load the transparencies:

- Load the stack with the edges aligned against the right side of the sheet feeder.
- Adjust the paper guide to the left side of the stack. You can print on either side of transparencies, but using a slightly curled surface as a print side is recommended.





You can load up to 30 transparencies in the sheet feeder.

4 Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select Transparency in the Media Type box. Also make sure that the BJ Cartridge setting matches the BJ cartridge installed in the printer.

Change the settings if necessary.

➡ Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify the media type (Transparency), and the BJ cartridge installed in the printer.

➡ Using the Macintosh Printer Driver

5 Start the print job.



Remove each printed transparency as it is ejected from the printer.

Do not touch the printed side until the ink is completely dry. About 15 minutes are required for drying.



- After drying, cover each transparency with one sheet of plain paper (uncoated) to prevent sticking and abrasion. Also, cover each transparency if you are storing them in plastic pockets to prevent the transparencies from sticking to the plastic.
- Store unused transparencies in the original package in a dry, cool location away from direct sunlight, high temperature, and high humidity.

Envelopes



Make sure the printer is turned on and the paper thickness lever is set to the Down position.





- To avoid poor print results, do not attempt to print on envelopes with embossed or treated surfaces.
- To avoid misfeeds and jams, do not use envelopes with overlapping flaps or pressure seals.



Prepare the envelopes.

- Press down firmly on the corners of the envelopes and all edges to flatten the envelopes and expel all air.
- If the envelopes are still warped, hold the edges of the envelopes diagonally and bend gently. Make sure the flaps are straight.
- To ensure the envelopes feed correctly, use a pen or similar object to flatten the flaps.





- Failure to flatten the envelopes before loading may cause jams.
- Warping and air pockets in the envelopes should not exceed 0.2 in. (5 mm).



Load the envelopes:

- Load the top edge of the address side (flap side down) into the auto sheet feeder and align the stack with the right side of the auto sheet feeder.
- Adjust the paper guide to the left side of the stack.





4

You can load up to ten envelopes in the sheet feeder.

Windows

Open the Printer Properties dialog box, then select the most appropriate icon in the Choose Print Mode box under the Main tab. Select Envelope in the Media Type box. Also make sure that the BJ Cartridge setting matches the BJ cartridge installed in the printer.

Change the settings if necessary.

Using the Windows 98/95 Printer Driver

Macintosh

Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box. Specify the media type (Envelope), and the BJ cartridge installed in the printer.

Using the Macintosh Printer Driver

5 Windows

Click the Page Layout tab, then select "#10 Env. 9.50×4.12 in." or "DL Env. 220.0×110 mm" in the Page Size box for the envelope size.

Normally you can set the envelope size with the application program. However, if the setting on the Page Layout tab does not match the setting in the application progam, change the setting here.

Using the Windows 98/95 Printer Driver

Macintosh

Select "#10 Env. 9.50 \times 4.12 in." or "DL Env. 220.0 \times 110 mm" for the envelope size.

Normally you can set the envelope size with the application program.

➡ Using the Macintosh Printer Driver

- 6 Start the print job.
- **7** Remove each printed envelope as it is ejected from the printer.

Printing Photographs

Tips for Printing Photographic Images

About Photo Optimizer

Tips for Printing Photographic Images

To produce the best possible print quality for printing photographic images from a digital camera or scanner, or photographic images downloaded from a home page on the Internet, follow these guidelines:

- Use the combination of the BC-32e Photo BJ Cartridge and the BC-31e Color BJ Cartridge.
- Use special media designed for reproducing photographs.
- Use correct print settings in the printer driver.
 - **1** Make sure that the printer is turned on. Also make sure that the BC-32e Photo BJ Cartridge is installed in the cartridge holder.
 - 2 Load special print media in the auto sheet feeder of the printer. Excellent prints of photographs can be obtained with plain paper; for superior color reproduction, using one of the following special media is recommended.
 - Glossy Photo Cards
 - Glossy Photo Paper
 - High Gloss Photo Film
 - High Resolution Paper
 - ➡ Paper and Other Print Media





3

Open the Printer Properties dialog box and select SuperPhoto in the Choose Print Mode box under the Main tab.

When SuperPhoto is selected, the BJ Cartridge setting automatically changes to Photo/Color so you can use the different types of inks provided by the BC-32e Photo BJ Cartridge.



Click the **OK** button to close the Printer Properties dialog box.



Start the print job.

Macintosh



- Select the command used for printing (for example, Print from the File 3 menu) to open the Printer Properties dialog box.
- 4
- Select the Photo icon in the Printer Properties dialog box.
 - Select Photo/Color in the BJ Cartridge setting, and click the **Print** button. 5



For optimum reproduction of all the color tones, make sure that the Media Type setting is correct for the media you have loaded in the printer.

About Photo Optimizer

The Photo Optimizer adjusts a photographic image created with a digital camera device when it is printed out. Use the Photo Optimizer to compensate unsatisfactory color balance and over- or underexposure before printing.

Windows

- **1** Open the Printer Properties dialog box, then click the Main tab.
- 2 Click the **Advanced** button.
- **3** Select Photo Optimizer in the Quality tab.
- **4** Check the Whole Page checkbox, if necessary.

Enabled:

When the Whole Page setting is enabled, the Photo Optimizer adjusts multiple photographic images appearing on the same page separately. Use this setting when any trimmed or rotated images are contained in the page.

Disabled:

When the Whole Page setting is disabled, the Photo Optimizer adjusts multiple graphic images appearing on the same page as a whole.

Macintosh

1

Open the Photo Optimizer in the Quality panel. The Photo Optimizer feature works on the image that is edited using the edit menu such as Cut and Rotate in a graphics application program.

Disabled

Enabled





Using the Windows 98/95 Printer Driver

Printer Driver Basics Windows 2000 and Windows NT Users Preparing and Executing a Print Job Getting to Know the Windows 98/95 Printer Driver Making the Most of the Windows 98/95 Printer Driver Using Maintenance Functions

Printer Driver Basics

The printer driver controls communication between the printer and your computer. To use the printer with your computer, you must install the printer driver. For instructions on installing the printer driver, refer to the *Quick Start Guide*.



Windows 2000 and Windows NT Users

The information in this section is specific to Windows 98 and Windows 95.

If you are a Windows 2000 or Windows NT 4.0 user, please note that some of the operation procedures are not identical to Windows 98 and Windows 95, and some of the features are not supported.

To open the S450 Properties dialog box from the Start menu, you click **Start**, **Settings**, and **Printers**. Highlight the Canon S450 icon and then select "Printing Preferences" from the File menu. The printer settings are arranged on these tabs:

Windows 2000/NT 4.0 tabs

Main Page Setup Effects Profiles Maintenance

Although the printer settings are arranged differently on these tabs, the functionality is basically the same.

For more details on the operation procedures for Windows 2000 or Windows NT 4.0, please use the online help feature.



Preparing and Executing a Print Job

Before you start a print job, you need to specify the print settings. The print settings in the printer driver allow fine control over the print quality and color adjustment, but you can simplify the setup procedure as follows.

- 1
- Set the paper size you use from within the application program before printing.



Select the command used for printing (for example, Print or Print Setup in the File menu) in the application program.



- Click the **Properties** button to open the Printer Properties dialog box, then select the desired icon for your print mode in the Choose Print Mode box under the Main tab.
 - The most appropriate print settings are pre-assigned in each icon for a particular type of print job.
 - The BJ Cartridge and Media Type settings are selected automatically.
- **4** Make sure that the BJ Cartridge and Media Type settings match the BJ cartridges installed in the printer and the print media you are using. Change the settings, as needed.
 - **5** Also make sure that the Paper Size setting in the Page Layout tab matches the setting in the application program.
- 6
- Click the **OK** button to close the Printer Properties dialog box.
- **7** Click the **OK** button in the Print window. Printing begins.

Getting to Know the Windows 98/95 Printer Driver

Opening the Printer Properties Dialog Box Selecting the Print Mode Setting the Page Size Using Online Help Closing the Printer Properties Dialog Box

Opening the Printer Properties Dialog Box

When you specify the print settings or use maintenance functions such as print head cleaning, you must open the Printer Properties dialog box.

Note This section describes the general procedures for opening the Printer Properties dialog box. Depending on the application program you use, different menu items may be used for printing. For more details, refer to the documentation for your application program.

From your application program

You can open the Printer Properties dialog box from your application program before printing.

1 Select the command used for printing (for example, Print or Print Setup from the File menu) in your application program.



Make sure that Canon S450 is selected in the Printer box.

If another printer name is displayed, click the down-arrow and then select Canon S450 from the pull-down list.

Print		? ≍
Printer		
Name:	Canon S450	Properties
Status:	Default printer; Ready	
Type:	Canon S450	
Where:	LPT1:	
Comment:		Fint to file
Print range		Copies
⊙ <u>A</u> I		Number of gopies:
C Pages	from: 1 to:	1 2 3 Collate
O Selec		1 2 3 Collate
		OK Cancel

3

Click the **Properties** button. The Printer Properties dialog box opens. The Main, Page Layout, Stamp/Background, and Maintenance tabs are displayed in the Printer Properties dialog box.

Canon S450 Properties		<u>? ×</u>
Main Page Layout Stamp/Backg	ground Maintenan	ce]
Choose Print Mod <u>e</u> :		
Standard Dr	at DTP	Photo SuperPhoto
BJ Cartridge: Black/Color	- E G	rayscale Print
Media Type: Plain Paper		•
c c	Page Size: Orientation: Printing Type:	Letter Portrait Normal-size Printing
A) Direction: Portrait Feed: Auto Feeder C) Paper Thickness Lever: Up	Stamp: Background:	None None
Ad <u>v</u> anced	About	Defaults
OK	Cancel	Apply Help

From the Start menu

When you wish to specify print settings that are common to all application programs, open the Printer Properties dialog box from the Start menu.

This method is also helpful when you wish to use maintenance functions such as print head cleaning without starting up an application program.



Click the Start button. Point to Settings, then click Printers.



When the Printers window is displayed, click the Canon S450 icon.



3

Select Properties from the File menu. Or, right-click and select Properties from the pop-up menu. The Properties dialog box opens. The Main, Page Layout, Stamp/Background, and Maintenance tabs are contained in the Printer Properties dialog box.

Canon S450 Prop	erties		? ×
General	out 🖹 S Details	tamp/Background	👪 Maintenance 🛛
🇳 Canon	S450		
<u>C</u> omment:			_
<u>S</u> eparator page:	(none)	<u>B</u> rowse	
		Print <u>1</u> est Page	3
	OK	Cancel Ap	ply Help



When you open the Printer Properties dialog box from the Start menu, some other tabs (such as General and Details) are added by the Windows operating system. For more details on these additional tabs, refer to your Windows documentation.

Selecting the Print Mode

Before you start a print job, open the Printer Properties dialog box and specify the print mode. The print settings in the Printer Properties dialog box allow fine control over the print quality and color adjustment, but you can simplify the setup procedure by selecting the icon in which the most appropriate print settings are pre-assigned.

Default settings

The following print modes are set up as defaults in the printer driver. When you select an icon in the Choose Print Mode box, the combination of BJ Cartridge and Media Type settings changes automatically. Select the most appropriate icon according to your print job.

Icon	Purpose	BJ Cartridge	Media Type
Standard	For printing documents that consist mostly of text (such as word processor files) at the standard print quality.	Black/Color	Plain Paper
a Draft	Gives priority to print speed rather than print quality. Use this print mode for trial printing.	Black/Color	Plain Paper
DTP	Automatically recognizes photographs and graphics and prints using the optimum print settings. This print mode is the best choice when you print data that contains different elements such as text, tables, graphs, and photographs in the same document.	Black/Color	Plain Paper
Photo	Produces high print quality for printing photographs and other graphics with fine gradations of tone.	Black/Color	High Resolution Paper
SuperPhoto	Produces the best possible print quality for printing photographs. This print mode is also suitable for printing graphics with fine gradations of tone.	Photo/Color	Glossy Photo Paper



- In addition to the BJ Cartridge and Media Type settings, other print settings are also pre-assigned to each icon in the Choose Print Mode box. To confirm all default settings, click the **Advanced** button after selecting the icon. The settings on the Quality, Special Effects, and Color tabs are the properties of the print mode.
 - You can modify the default print mode settings, as necessary.
 - Creating an original print mode

Selecting the print mode

After you select the icon, match the BJ Cartridge and Media Type settings with the BJ cartridges and print media installed in the printer.

- 1
- Open the Printer Properties dialog box, then click the Main tab.



Select the desired icon according to your print job in the Choose Print Mode box.



Make sure that the BJ Cartridge and Media Type settings are identical to the BJ cartridge and print media installed in the printer.

Canon S450 Properties		<u>? ×</u>
Main Page Layout Stamp/Backs	ground Maintenar	nce
Choose Print Mode:		
Standard Standard Dr	aft DTP	Photo SuperPhoto
BJ Cartridge: Black/Color	• •	Grayscale Print
Media Type: Plain Paper		•
¢,	Page Size: Orientation: Printing Type:	Letter Portrait Normal-size Printing
A) Direction: Portrait Feed: Auto Feeder C) Paper Thickness Lever: Up	Stamp: Background:	None None
Ad <u>v</u> anced	About	Defaults
OK	Cancel	Apply Help



When you change a default setting in the BJ Cartridge or Media Type box, the icon that indicates the current settings changes to User-modified.



You can start a print job with the User-modified icon, but you can also save and register the settings in the Choose Print Mode box under a new icon.

Customizing the Print Settings in the Printer Driver (Creating an original print mode)

Setting the Page Size

Set the page size you use from within the application program before printing.

Also make sure that the page size setting in the Printer Properties dialog box is identical to the page size setting in the application program.

Confirming the page size

You can view the page size you use in the print settings information box of the Main tab. Make sure that Page Size is identical to the setting in the application program before printing.



Changing the page size (for regular paper sizes)

- 1
- Click the Page Layout tab.
- 2 Click the down-arrow in the Page Size box, then select the appropriate page size from the pull-down list.



Changing the page size (for custom paper sizes)

- 1
- Click the Page Layout tab.
- 2 Click the down-arrow in the Page Size box, then select Custom Size from the pull-down list.

Canon S450 Properties	?	×
Main Page Layout Stamp/	Background Maintenance	
	Page Sige: Letter 8 50 x 11.00 in A4 210 0 x 237 0 mm B5 120 x 257 0 mm Letter 8 50 x 11.00 in Custom Size (\$2500 x 110 mm) Castom Size (\$2500 x 10 inch) Castom Size (\$2500 x 10 inch) Castom Size (\$2500 x 10 inch) Size (\$2500 x 237.0 mm)	
Copies: 1	Reverse order	
	Printer control Defaults	
OK	Cancel <u>Apply</u> Help	

The Custom Paper Size dialog box is displayed.
3 Select inch or mm (millimeter) for the unit of measurement in the Unit box, and enter the desired width and height within the following ranges:

Width: 3.94" to 9.50" (100.0 mm to 241.3 mm)

Height: 3.94" to 23.0" (100.0 mm to 584.2 mm)

Custom Paper Size 🛛 🕐 🗙		
Paper Size	<u>W</u> idth: H <u>e</u> ight:	7.0
<u>U</u> nit:	inch 💌	
OK Cancel <u>H</u> elp		



Click the **OK** button.

Using Online Help

When you want to learn about a particular topic, the online help function provides the necessary information on the screen of your computer.

Finding information on a particular topic

- 1
- When you click the "?" button on the upper right corner of the Printer Properties dialog box, the shape of the mouse pointer changes to " $\$?".
- 2 Click the desired item to learn more about the item. A detailed explanation appears.

Canon S450 Properties	Canon S450 Properties
Main Page Layout Stamp/Background Maintenance	Main Page Layout Stamp/Background Maintenance
Choose Piint Mode: Standard Standard Draft DTP Photo SuperPhoto BJ Catridge: Black/Color Carlos Grayscale Print Media Type: Plain Paper Carlos Car	Choose Pink Modg: Prink Mode A print mode registers a combination of print quality and color settings. When you select the icon that is the closest to the document or purpose, the system automatically sets the recommended [BJ Cartridge] and [Media Type]. If the selections are different from the items that have actually been set in the printer, correct the [BJ Cartridge] and (Media Type] settings so that they match the printer settings. To specify settings for other print modes, select the icon and click the [Advanced] button. Check the contents of the [Oduality] and [Color] tabs.
A) Direction: Portrait Feed: Auto Feeder Stamp: None C) Paper Thickness Lever: Up Background: None	The settings can also be changed from these tabs. Feed: Auto Feeder Stamp: None C) Paper Thickness Lever : Up Background: None Advanced About Defaults
Advanced About Defaults	
DK Cancel Apply Help	OK Cancel Apply Help

Finding information on an operation procedure

- 1
- Click the **Help** button on the lower right corner of the Printer Properties dialog box.
- 2
- When the contents of the Canon BJ Printer Driver Help are displayed, select the desired item to learn more about that item.



Closing the Printer Properties Dialog Box

After specifying the necessary print settings, close the Printer Properties dialog box and start your print job.



Make sure that the information on Direction, Feed, and Paper Thickness Lever in the illustrated guideline is correct.

BJ Cartridge: Black/Color	Grayscale Print
Media Type: Plain Paper	•
C C	Page Size: Letter Orientation: Portrait Printing Type: Normal-size Printing
A) Direction: Portrait Feed: Auto Feeder C) Paper Thickness Lever: Up	Stamp: None Background: None
Ad <u>v</u> anced	About Defaults
ОК	Cancel Apply Help



Click the **OK** button. The print settings become enabled and the Printer Properties dialog box closes.



- When you want to enable the print settings without closing the Printer Properties dialog box, click the **Apply** button.
- When you do not want to enable the print settings, click the **Cancel** button.
- When you want to revert the print settings to the factory settings, click the **Defaults** button in each tab.

Making the Most of the Windows 98/95 Printer Driver

Printing Documents Enlarged/Reduced (Scaled Printing)

Printing Multiple Pages on One Sheet (Page Layout Printing)

Printing Documents Enlarged (Poster Printing)

Printing on Banner Paper

Changing the Print Order/Number of Copies

Printing a Stamp

Printing a Background

Optimizing Image Data

Photo Optimizer

Using Special Effects

Changing the Print Quality (Halftoning)

Adjusting Image Data

Customizing the Print Settings in the Printer Driver

Using Background Printing

Using the BJ Status Monitor

Using the BJ Printer Monitor

Printing Documents Enlarged/Reduced (Scaled Printing)

The Scaled Printing feature of the printer driver allows you to set a scaling value to print an enlarged or reduced page on a paper size that is larger or smaller than the paper size of the original file in the application program.

There are two different ways to use Scaled Printing.

Setting the scaling value

This method is helpful when you know the enlargement or reduction ratio before printing.

- 1
- Open the Printer Properties dialog box and click the Page Layout tab.



Click **Scaled Printing**. The Scaling and Printer Paper Size settings are enabled.

Canon S450 Properties		
Main Page Layout Stamp/Background Maintenance		
	Page Size: Letter 8.50 x 11.00 in	
	Orientation: Portrait C Landscape Layout: C Mormal-size Printing Scaling: Scaled Printing Page Layout Printing C Poster Printing C Banner Printing C Banner Printing C Banner Printing C Banner Printing	
	Printer Paper Size:	
Copies: 1 Collate		
	Printer control Defaults	
ОК	Cancel Apply Help	

3 Set the desired enlargement or reduction ratio in the Scaling box.

To change the value of the enlargement or reduction ratio, click the up- or down-arrow to the right of the Scaling box. (You can also enter the desired value directly.)

4

Confirm the layout of the printout in the preview area and click the **OK** button.

Note 🗼

When you wish to revert Scaled Printing to the original value (100%), click **Normal-size Printing**.

Setting a printer paper size different from the original page size

- 1
- Open the Printer Properties dialog box and click the Page Layout tab.
- 2 Click **Scaled Printing**. The Scaling and Printer Paper Size settings are enabled.

Canon S450 Properties	
Main Page Layout Stamp/Background Maintenance	
Page Size: Letter 8:50 x 11.00 in Direntation: Orientation: Orienta	
Background Printing Copies: 1	
OK Cancel Apply Help	

3 Click the down-arrow to the right of the Printer Paper Size box and select the desired paper size. When you select a paper size in the Printer Paper Size box which is different from the paper size originally set in the Page Size box, the enlargement or reduction ratio is calculated automatically and is displayed in the Scaling box. (If you need to make a fine adjustment, change the value in the Scaling box.)



- **4** Confirm the layout of the printout in the preview area and click the **OK** button.
- Note 🗼
- When you wish to revert to the original value (100%), click **Normal-size Printing**.

Printing Multiple Pages on One Sheet (Page Layout Printing)

By reducing the scale in a 2-Page Print or 4-Page Print layout, you can print multiple pages on one sheet. You can save the total amount of paper used for long documents. This feature is also useful when you wish to view an image spread or print your document as a book cover.

Specifying the layout

- 1
- Open the Printer Properties dialog box and click the Page Layout tab.



Click **Page Layout Printing**. The **Specify** button is displayed and the preview area display changes.

Canon S450 Properties
Main Page Layout Stamp/Background Maintenance
1 2 1 2 1 2 1 0 0
Background Printing Copies: 1 Printer control
OK Cancel Apply Help



Click the **Specify** button, as necessary. You can specify the detailed layout setting in the Page Layout Printing dialog box.

Page Layout Printing ? 🗙		? ×
Page <u>s</u> :	2-Page Print	
Pa <u>ge</u> Order:		
Frame Border		
ОК	Cancel De <u>f</u> aults <u>H</u>	elp

Pages:	Click the down-arrow and select the 2-Page Print or 4-Page Print layout. The 2-Page Print setting prints two pages on one sheet of paper and the 4-Page Print setting prints four pages on one sheet of paper.
Page Order:	Click the icon in the Page Order box. The icon indicates the order in which the pages run (for example, running from top-left to top-right to bottom-left to bottom-right in the 4-Page Print setting).
Frame Border:	Check the Frame Border checkbox when you wish to print with a frame around each page.

4 Confirm the layout of the printout in the preview area and click the **OK** button.



- When you use Page Layout Printing, check that Background Printing is enabled in the Page Layout tab.
- When you wish to revert Page Layout Printing to the original setting, click **Normal-size Printing**.

Printing Documents Enlarged (Poster Printing)

By dividing image data (such as a photographic image) and enlarging it for printing, you can print one page on multiple sheets. Pasting the pages after printing makes it possible to create a large-sized document such as an artistic poster.

Setting the image divisions

- 1
- Open the Printer Properties dialog box and click the Page Layout tab.
- **2** Click the button for **Poster Printing**. The **Specify** button is displayed and the preview area displays the changes.

Canon S450 Properties	? ×
Main Page Layout Stamp/B	ackground Maintenance
	Page Sige: Letter 8:50 x 11:50 in.
Background Printing Copies: 1	Image: Comparison of the control.
OK	Cancel Apply Help



Click the **Specify** button, as necessary. You can specify a detailed image division setting in the Poster Printing dialog box.

Poster Printing	? ×	
Image divisions:		
 ☑ Print "Cut/Paste" in margins ☑ Print "Cut/Paste" lines in margins 		
OK Cancel Defaults H	lelp	

Image divisions:

Specifies the number of divisions you want to make on the image.

- 2×2 : The number of printouts totals 4.
- 3×3 : The number of printouts totals 9.
- 4×4 : The number of printouts totals 16.

Print Cut/Paste in margins:

When Print Cut/Paste in margins is enabled, the printer prints "cut" and "paste" characters. Use these characters as a guideline when you cut and paste each page after printing.

Print Cut/Paste lines in margins:

When Print Cut/Paste lines in margins is enabled, the printer prints lines for cutting along. Use these lines as a guideline when you cut and paste each page after printing.



Confirm the layout of the printout in the preview area and click the **OK** button.

Note 🗼

- When you use Poster Printing, check that Background Printing is enabled in the Page Layout tab.
- When you wish to revert Poster Printing to the original setting, click **Normal-size Printing**.
- You can divide the image divisions between printed pages and unprinted pages.

When you do not wish to print the page, click the image division in the preview area. (The image division disappears and the page is not printed.)

When you wish to restore the image division, click the image division in the preview area again. (The image division reappears and the page is printed.)

• You can select the printed or unprinted pages at one time. Right-click the mouse in the preview area and select Print all pages or Delete all pages.

Printing on Banner Paper

This section describes the print settings for printing on banner paper. For details on how to load banner paper in the printer, refer to the Paper Handling section.

Banner Paper

Setting banner printing

Open the Printer Properties dialog box and choose the desired icon in the 1 Choose Print Mode box of the Main tab. Also make sure that Plain Paper is set in the Media Type box.



- Click the Page Layout tab.
- 3
 - Click the button for **Banner Printing**. A confirmation message appears.



- If you click the **Help** button, detailed instructions on banner printing are given.
- If you wish to skip over the detailed instructions on banner printing, click the **OK** button.



Confirm the preview area and click the **OK** button.



When you wish to revert Banner Printing to the original setting, click Normal-size Printing.

Changing the Print Order/Number of Copies

Based on the default settings of the printer driver, the printer starts printing one set of any document from the first page. When you print multiple copies of the same document, you need to specify the number of copies. You can change the print order with Reverse and Collate, as needed.

Setting the print order and number of copies

When you wish to print multiple copies of the same document, specify the number of copies.

You can also change the print order with Reverse and Collate.

1

Open the Printer Properties dialog box, then click the Page Layout tab.

2 When you print multiple copies of the same document, set the number of copies between 1 and 999 in the Copies box.

Background Printing	2 □ Reverse order
	Printer control Defaults
OK	Cancel <u>Apply</u> Help

Reverse order:

Use this setting when you print a multiple page document. The printer starts printing from the last page of the document. (When this setting is disabled, the printer starts printing from the first page of the document.)

Collate:

Use this setting when you print multiple copies of a multiple page document.

When Collate is enabled, the printer prints the document and collates each copy from the first page to the last page.

When Collate is disabled, the printer prints the document and collates copies of the same page.

- 3 Select the print order.
- 4
- Click the **OK** button to close the Printer Properties dialog box.



- Before setting the print order and number of copies, make sure that Background Printing is enabled in the Page Layout tab. (If it is disabled, you cannot change the print order and number of copies.)
- When Banner Printing is selected in the Page Layout tab, you cannot change the print order or the number of copies.
- When Poster Printing is selected in the Page Layout tab, Reverse order is grayed out and cannot be used.

Printing a Stamp

The printer driver allows you to print a stamp on your documents. Stamps are notations such as CONFIDENTIAL or IMPORTANT, which are frequently rubber-stamped on documents to alert readers. Several default stamps are available for immediate use.

Printing a default stamp

- 1
- Open the Printer Properties dialog box, then click the Stamp/Background tab.
- 2

Click the down-arrow and select the desired stamp item from the pull-down list. (The stamp you select is displayed in the preview area at this time.)

Canon S450 Properties		
Main Page Layout Stamp/Background Maintenance		
IMPORTANT	Stamp: IMPORTANT V Nore DFAFT CONFIDENTIAL SECRET Background: None Select Background	
Defaults		
OK Cancel Apply Help		

3 Specify whether to print the stamp on the first page only or on each page of the document.

Place stamp over text:

Click this checkbox to print the stamp over the document data. If you leave the box unchecked, the document data are printed on top of the stamp.

Stamp first page only:

Click this checkbox to print the stamp on the first page only. If you leave the box unchecked, the stamp is printed on each page.

Stamp:
IMPORTANT V
Place stamp over text
🔲 Stamp fijrst page only
<u>D</u> efine Stamp

4 Click the **OK** button to close the Printer Properties dialog box and start the print job.



- When Background Printing is disabled or Banner Printing is enabled in the Page Layout tab, the stamp items are grayed out and cannot be used.
- To cancel stamp printing, select None from the Stamp pull-down list.
- When you wish to change settings such as size, color, or position of the stamp, click the **Define Stamp** button.

Customizing the Print Settings in the Printer Driver (Creating an original stamp)

Printing a Background

The printer driver allows you to print a background on your documents, like a watermark. Two types of default backgrounds are available for immediate use.

Printing a default background



- Open the Printer Properties dialog box, then click the Stamp/Background tab.
- 2 Click the down-arrow and select the desired background item from the pull-down list. (The background you select is displayed in the preview area at this time.)

Canon S450 Properties	×
Main Page Layout Stamp/Background Maintenance	
Stapp: None Pibes stamp gyer text. Stamp figt page only Define Stamp Background: None Sample 1 Sample 2	
Select Background	
Defaults	
OK Cancel Apply Help	

3 Specify whether to print the background on the first page of the document only, as necessary.

Background first page only:

Click this checkbox to print the background on the first page only.

If you leave this box unchecked, the background is printed on each page.

4 Click the OK button to close the Printer Properties dialog box and start the print job.



- When Background Printing is disabled or Banner Printing is enabled in the Page Layout tab, the background items are grayed out and cannot be used.
- When you wish to revert to the normal print setting without any background, select None from the pull-down list.
- When you wish to change settings such as the layout or position of the background, click the **Select Background** button.
- You can also use a bitmap file as a background.
 - Customizing the Print Settings in the Printer Driver (Creating an original background)

Optimizing Image Data

The printer driver allows you to compensate and optimize the print quality of image data. Depending on the type of image data you print, you can use either Image Optimizer or Photo Optimizer.

Image Optimizer

Enlarging an image often causes edges to look jagged. To solve this problem, after enlarging an image in your application program, turn on the Image Optimizer before printing. For example, you may want to use the Image Optimizer when you print a low-resolution image downloaded from a home page on the Internet.



Open the Printer Properties dialog box, then click the Main tab.



Click the **Advanced** button.



Select Image Optimizer in the Quality tab to enable the Image Optimizer setting.

'Untitled' Proper	ties			? ×	1
Quality Special	Effects C	olor Save	1		
BJ <u>C</u> artridge:	Black/(Color	💌 🗆 Gj	rayscale Print	
<u>M</u> edia Type:	Plain Pa	per	•	hick Paper	
Paper Feed:	Auto Fee	eder			
Print Quality:					
	<u>a</u> , 1	_ <u>j </u>	a_		
	Fast		Fine		
Halftoning:	🔽 Auto:		Ima	ge Optimi <u>z</u> er	
			Pho	oto Optimizer	
		Diffusion		<u>W</u> hole Page	
			L	Defaults	
		OK	Cancel	Help	



Click the **OK** button to return to the Main tab.



Click the **OK** button to close the Printer Properties dialog box and start the print job.



- The Image Optimizer setting may have little or no effect on printing, depending on the application program you use.
- The Image Optimizer setting has more effect on low-resolution images than on high-resolution images.
- Using the Image Optimizer setting to smooth an image may require more time for printing.

Photo Optimizer

The Photo Optimizer adjusts a photographic image created with a digital camera when it is printed out. Use the Photo Optimizer to compensate unsatisfactory color balance and overor underexposure before printing.

- **1** Open the Printer Properties dialog box, then click the Main tab.
- 2 Click the Advanced button.
- **3** Select Photo Optimizer in the Quality tab to enable the Photo Optimizer setting.

📕 [Photo] Prop	erties ?X
Quality Specia	Effects Color Save
BJ <u>C</u> artridge:	Black/Color 🗾 🗖 Grayscale Print
<u>M</u> edia Type:	High Resolution Paper 🔽 Thick Paper
Paper Feed:	Auto Feeder
Print Quality:	
	a <u>.</u> a_
	Fast Fine
Halftoning:	Auto:
Fine(Fast)	Fine Diffusion
	De <u>f</u> aults
	OK Cancel Help

4 Check the Whole Page checkbox, if necessary.

Disabled:

When the Whole Page setting is disabled, the Photo Optimizer adjusts multiple photographic images appearing on the same page separately.

Enabled:

When the Whole Page setting is enabled, the Photo Optimizer adjusts multiple graphic images appearing on the same page as a whole. Use this setting when any trimmed or rotated images are contained in the page.



- Click the **OK** button to return to the Main tab.
- 6
- Click the **OK** button to close the Printer Properties dialog box and start the print job.

Note 🗼

- Using the Photo Optimizer setting to adjust an image may require more time for printing.
- When Background Printing is disabled in the Page Layout tab, the Whole Page setting is grayed out and cannot be used.
- When Banner Printing is enabled in the Page Layout tab, the Whole Page setting can be turned on but does not function.

Using Special Effects

The printer driver not only performs simple color adjustments to improve the quality of the original image, but also enhances images for artistic effect.

Setting Simulate Illustration

Use this artistic effect to simplify complex image data so that a photograph appears to be an illustration.



Open the Printer Properties dialog box, then click the Main tab.



Click the **Advanced** button.



Click the Special Effects tab.

`Untitled` Properties ? 🗙
Quality Special Effects Color Save
Contract Contract
Monochrome Effects
C Lepia
C Green
C Select Color
<u>C</u> ofor ▼
Defaults
OK Cancel Help

- **4** Check the **Simulate Illustration** checkbox to enable the setting. The appearance of the image data in the preview area changes (as if the photograph is converted to an illustration) at this time.
- **5** If necessary, drag the slide bar to increase or decrease the contrast.
- 6 Click the **OK** button to return to the Main tab.
- Click the OK button to close the Printer Properties dialog box and start the print job.



- The Simulate Illustration setting can be used with the Monochrome Effects setting (see below).
- When Background Printing is disabled in the Page Layout tab, the Simulate Illustration setting is grayed out and cannot be used.
- When Black is selected in the Main tab, the Simulate Illustration setting is grayed out and cannot be used.

Setting Monochrome Effects

Use this setting when you want to give expression to an image by using a monochrome effect.

- 1
- Open the Printer Properties dialog box, then click the Main tab.



Disable Grayscale Print by unchecking the Grayscale Print checkbox.

- **3** Click the **Advanced** button.
- **4** Click the Special Effects tab.
- **5** Check the **Monochrome Effects** checkbox to enable the setting. The appearance of the image in the preview area changes to a monochrome image.

'Untitled' Properties
Quality Special Effects Color Save
✓ Simulate []Justration Contrast ☑ ✓ Image: Contrast ✓ Image: Contrast ✓ Sector ✓ Sector
C green Seject Color Color P Defaults
OK Cancel Help

- *6* Select the desired monochrome effect from Sepia, Blue, Pink, Green or Select Color.
- 7 When you select Select Color, drag the color slide bar until the desired monochrome image is displayed in the preview area. (You can also select the desired monochrome image by clicking the right or left arrow of the color slide bar.)

- 8 Click the **OK** button to return to the Main tab.
- *9* Click the **OK** button to close the Printer Properties dialog box and start the print job.
- Note
- The Monochrome Effects setting can be used with the Simulate Illustration setting.

Setting Simulate Illustration

- When Background Printing is disabled in the Page Layout tab, the Monochrome Effects setting is grayed out and cannot be used.
- When Grayscale Print is enabled in the Main tab, the Monochrome Effects setting is grayed out and cannot be used.

Changing the Print Quality (Halftoning)

When your printouts are not satisfactory, the printer driver allows you to make fine adjustments to the print quality and halftoning settings.

Setting the print quality/halftoning



- If there is a problem in the image data you wish to print, the print quality and halftoning settings may not be visible or effective.
- 1
- Open the Printer Properties dialog box, then click the **Advanced** button in the Main tab.
- 2
- Click the Quality tab and set Print Quality and Halftoning, as needed.

'Untitled' Prope	rties			<u>?×</u>
Quality Specia	I Effects C	olor Save	1	
BJ <u>C</u> artridge:	Black/0	Color	💌 🗆 G <u>r</u>	ayscale Print
<u>M</u> edia Type:	Plain Pa	per	▼ TF	nick Paper
Paper Feed:	Auto Fee	eder		•
Print Quality:				
	a , -	_ <u>ĵ </u>	a)	
	Fast		Fine	
Halftoning:	Auto:			ge Optimi <u>z</u> er
			Pho	to <u>O</u> ptimizer
Fine(Fast)	Fine	Diffusion		<u>√</u> hole Page
			ſ	Defaults
		OK	Cancel	Help

Print Quality:

When you wish to improve the print quality, drag the Print Quality slide bar to the right (Fine). The print mode changes according to the setting of the slide bar. Please note that using a higher setting in the direction of Fine requires more time for printing.

Halftoning:

The colors and shapes of printouts are reproduced by the ink dots ejected from the nozzles of the print head. Halftoning determines the color boundaries of intermediate tones.

Fine (Fast):

Uses a simplified halftoning method for high speed printing.

Fine:

Lines up ink dots of different colors under the rules specified in the printer driver. Use this setting for printing graphics or charts with clearly defined color boundaries.

Diffusion:

Randomly places ink dots of different colors. Use this setting for printing natural color images such as photographs.

Auto:

The printer driver automatically distinguishes among the types of image data, and switches to the most appropriate halftoning method.

- **3** Click the **OK** button to return to the Main tab.
- **4** Click the **OK** button to close the Printer Properties dialog box.
- Note 🗼
- Depending on the Halftoning settings, some of the Print Quality settings cannot be used. When you wish to print at the highest quality, set Halftoning to Diffusion.
- Depending on the BJ Cartridge and Media Type settings in the Main tab, some of the Print Quality and Halftoning settings cannot be used.

Adjusting Image Data

When the color reproduction of your printouts is unsatisfactory, you can adjust the color balance and intensity as needed. Use this feature only when you wish to make fine adjustments to the color balance in the printouts, and do not change the settings excessively. (Please note that this feature does not compensate the overall color balance of the image data as some application programs for editing image data would do.)

Adjusting the colors

Before adjusting the color balance and intensity, make sure that Color Adjustment is enabled in the Colors tab under the Main tab.



Open the Printer Properties dialog box, then click the **Advanced** button in the Main tab.



Click the Color tab and make sure that the Color Adjustment setting is enabled.

🗐 [Standard] Pro	perties			? ×
Quality Special E	ffects Color	Sa	ve	
Color Adjustr	nent		🗖 🔟se ICM	
	Color Balanc	e		
	<u>C</u> yan:	0	•	
	<u>M</u> agenta:	0	•	
	Yellow:	0	•	•
	Blac <u>k</u> :	0	•	
	Output Style		Auto	•
	Brightn <u>e</u> ss:		Normal	•
Intensity:	0 💌	-	Û	💌
				De <u>f</u> aults
		OK	Cancel	Help

3

Set the following items as needed.

Color Balance:

Move the slide bars of the individual colors. For example, when blues are too strong in the printouts, drag the slide bar for Cyan to the left.

Output Style:

Specifies whether printouts should emphasize intermediate tones or produce bright and sharp colors. When you select Auto, the printer driver automatically distinguishes among the types of image data, and switches to the most appropriate matching method.

Brightness:

Specifies the contrast among intermediate tones between black and white. Adjusting the brightness toward Light makes the overall image brighter, with stronger contrast in the light areas and lower contrast in the dark areas.

- **4** Click the **OK** button to return to the Main tab.
- **5** Click the **OK** button to close the Printer Properties dialog box.



Depending on the application program you use, you can also use the ICM (Image Color Management) feature of the Windows 98 operating system. For more details, refer to the online Help for Windows or your Windows documentation.

Adjusting the intensity

The Intensity Setting specifies whether to make the overall printout darker or lighter.

- Open the Printer Properties dialog box, then click the **Advanced** button in 1 the Main tab.
- 2
 - Click on the Color tab.
- Move the Intensity slide bar to the left (lighter) or right (darker). 3

Intensity:	0	•	·	_()	
					De <u>f</u> aults
			ок	Cancel	Help

- Click the **OK** button to return to the Main tab. 4
- Click the **OK** button to close the Printer Properties dialog box. 5

Customizing the Print Settings in the Printer Driver

Changing the default properties of the Print Mode, Stamp, and Background settings makes it possible to use them as customized settings in the printer driver.

You can also register your original stamp and background in the printer driver.

Creating and deleting an original print mode

You can create an original print mode by changing the default properties of the Print Mode settings as desired. It is also possible to save your original print mode as a file and delete it when it is unnecessary.

Creating an original print mode

1 Open the Printer Properties dialog box, then select the most appropriate icon for printing your document from the Choose Print Mode box in the Main tab.



Click the **Advanced** button. This displays all the properties of the print mode you selected in step 1.



When you need detailed descriptions of the print settings on any tab, click the ? button and then move the ? symbol to the item you want to learn more about in order to display the online Help of the printer driver.



Change the print settings in the Quality tab, if necessary.

'Untitled' Prope	rties			<u>?×</u>
Quality Special	Effects C	olor Save	1	
BJ <u>C</u> artridge:	Black/0	òlor	💌 🗆 G <u>i</u>	ayscale Print
<u>M</u> edia Type:	Plain Pa	per	TH	nick Paper
Paper Feed:	Auto Fe	eder		•
Print Quality:				
	8,5	_ <u>j </u>	a)	
	Fast		Fine	
Halftoning:	Auto:			ge Optimi <u>z</u> er
				to <u>O</u> ptimizer
				Whole Page
				Defaults
		OK	Cancel	Help



Change the print settings in the Special Effects tab, if necessary.

📕 [Standard] Properties 🛛 💽 🗙
Quality Special Effects Color Save
Contrast Contra
Blae Blae Brak Brak Crown
Seglect Color
Defaults
OK Cancel Help


Change the print settings in the Color tab, if necessary.

📕 [Standard] Pre	operties	? ×
Quality Special	Effects Color	r Save
Color Adjust	ment	🗖 Шве IСМ
	Color Balan	ce
	<u>C</u> yan:	
	<u>M</u> agenta:	
	Yellow:	
	Blac <u>k</u> :	
	Output Style	e: Auto 🔻
	Brightn <u>e</u> ss:	Normal 💌
Intensity:	0 😽	1 1 1 w
intensity.	° Ľ	/ Ľ/
		De <u>f</u> aults
		Dejduks
		OK Cancel Help

6 Click the Save tab. You can save the desired print settings you made in steps 3, 4, and 5 here.

🚺 [Standard] Properties 🔹 🖓 🗙
Quality Special Effects Color Save
Saved Settings:
Standard Draft DTP Photo
Standard
Icon Selection
Description: Selects optimum settings for printing text.
<u>Save</u> <u>D</u> elete Sa <u>v</u> e as <u>O</u> pen
OK Cancel Help

- **7** To save the new print settings, enter a name for the desired print settings in the Title box of the Save tab. You can use up to eight characters. Please note that you cannot use a title that is pre-assigned in the printer driver (such as Draft or Standard).
- 8 Select the desired icon from the Icon Selection box.
- *9* Write a brief description in the Description box, if necessary.
- **10** Click the **Save** button. The icon you selected in step 8 appears in the Saved Settings box at this time.
- **11** Click the **OK** button to return to the Main tab. Make sure that the icon you selected in step 8 for the new print settings is in the Choose Print Mode box, and that the description you wrote in step 9 appears when you move the mouse pointer to the icon.



- When User-modified is displayed to the left of the Choose Print Mode box of the Main tab, you can save the new print settings using the following procedure.
 - (1) Right-click the User-modified icon, then select Save As from the pull-down menu.
 - (2) To save the new print settings, enter a name for the desired print settings in the Title box of the Save tab. You can use up to eight characters.
 - (3) Select the desired icon from the Icon Selection box.
 - (4) Write a brief description in the Description box, if necessary.
 - (5) Click the **Save** button.
 - You cannot use a title that is pre-assigned in the printer driver (such as, Draft or Standard).

Changing the position of a print mode icon

- **1** Open the Printer Properties dialog box, then click the **Advanced** button in the Main tab.
- 2 Click the Save tab.
- **3** Select the icon you wish to change the position of in the Saved Settings box.
- **4** Each time you click the arrow a to the right of the Saved Settings box, the icon moves in the direction of the arrow. (To move the icon, you can also drag the icon directly to the desired position.)



Click the **OK** button to return to the Main tab.

Note >>> You cannot move the icon back to its original position by clicking the **Cancel** button.

Saving an original print mode as a file

- 1 Open the Printer Properties dialog box, then click the Advanced button on the Main tab.
- 2 Click the Save tab.
- **3** Select the icon you wish to save as a file in the Saved Settings box.
- **4** Click the **Save As** button. This displays the Save File dialog box.

Save File		? ×
File Name:	Directory: c:\	
Icon:	[cardwork] [esm2] [msoffice] [mydocu~1] [progra~1] [wallpa~1] [win98] [win98]	•
	OK	Cancel

- **5** Enter a file name in the File Name box.
- 6 Select the drive name and folder name in the Directory box.
- **7** Click the **OK** button. The print mode is saved as a file.

Note >>> You can save multiple print modes to a single file.

Opening an original print mode that was saved as a file

- **1** Open the Printer Properties dialog box, then click the **Advanced** button.
- 2 Click the Save tab.
- 3 Click the **Open** button. This displays the Open File dialog box.
- **4** Select the drive name and folder name in the Directory box.
- **5** Select the file in which the original print mode was saved in the File Name box.
- 6 Select the icon you wish to open in the Icon Selection box.
- 7 Click the **OK** button. The original print mode you opened in the printer driver is displayed in the Saved Settings box.

Deleting an unnecessary print mode

- **1** Open the Printer Properties dialog box, then click the **Advanced** button on the Main tab.
- 2 Click the Save tab.
- **3** Select the icon you wish to delete in the Saved Settings box.

- **4** Click the **Delete** button.
- **5** When a confirmation message appears, click the **OK** button. The icon of the original print mode is deleted from the Saved Settings box in the Save tab.



Click the **OK** button to return to the Main tab. (The icon of the original print mode is also deleted from the Choose Print Mode box in the Main tab.)

Note

- You cannot delete default print modes such as Standard.
- You can delete the unnecessary print mode directly in the Choose Print Mode box of the Main tab.
 - (1) Right-click the icon of the original print mode you wish to delete in the Choose Print Mode box of the Main tab.
 - (2) When a confirmation message appears, click the **OK** button.

Creating and deleting an original stamp

You can create an original stamp by changing the default properties of the Stamp settings as desired. You can also register your original stamp in the printer driver.

Creating an original stamp



Open the Printer Properties dialog box, then click the Stamp/Background tab.

- 2 When you wish to change the settings of a default stamp item, click the Stamp box and then select the item you wish to change from the pull-down menu. When you wish to create an original stamp, select None in the Stamp box.
- 3
- Click the **Define Stamp** button. The Stamp Settings Properties dialog box is displayed.
- Note >>> When you need detailed descriptions of the settings on any tab, click the ? button and then move the ? symbol to the item you want to learn more about in order to display the online Help of the printer driver.
 - **4** Specify original settings related to text in the Text tab.



5 Specify original settings related to colors in the Color tab.

Stamp Settings:[IMPORTANT] Proper	ties 🔹 🕄 🗙
Stanp Settings (MEOBIAN) Property Save setting (Save setting) (Sav	
OK	Cancel Help

6

Specify original settings related to the stamp position in the Placement tab.

Stamp Settings:[IMPORTANT] Property Text Color Placement Save setting	
IMPORTANT	Stamp Position Position Position 2 Fostion Criegtation: 0
	Defaults
OK	Cancel Help



Stamp Settings (IMPORTANT) Properti Text Color Placement Save setting IMPORTANT	
	ave Delete
OK	Cancel Help

- 8 Enter a name for the original stamp in the Title box of the Save settings tab.
- **9** Click the **Save** button.
- **10** When a confirmation message appears, click the **OK** button.
- **11** Click the **OK** button in the Save settings tab to return to the Stamp/ Background tab.

Deleting an unnecessary stamp

- **1** Open the Printer Properties dialog box, then click the Stamp/Background tab.
- 2 Click the **Define Stamp** button. The Stamp Settings Properties dialog box is displayed.

- **3** Click the Save settings tab.
- **4** Select the stamp you wish to delete from the Title box.
- **5** Click the **Delete** button.
- 6 When a confirmation message appears, click the **OK** button.
- 7 Click the **OK** button in the Save settings tab to return to the Stamp/ Background tab.
- Note >>> You cannot delete default stamp items such as IMPORTANT and CONFIDENTIAL.

Creating and deleting an original background

You can create an original background by changing the default properties of the Background settings as desired. You can also register your original background (bitmap file only) in the printer driver.

Creating an original background

- **1** Open the Printer Properties dialog box, then click the Stamp/Background tab.
- 2 When you wish to change the settings of a default background item, click the Background box and then select the item you wish to change from the pull-down menu. When you wish to create an original background, select None in the Background box.



Click the **Select Background** button. The Background Settings Properties dialog box is displayed.

Background Settings:[Not Saved] Properties	? ×
Background Save settings	
File: Layout Method: ⊂ Fil page ⊂ Fil to paper size ⊂ Set pation Econicit ⊻Postor: 	
Select File Defaults	
OK Cancel He	lp



Click the **Select File** button. The Select image file dialog box is displayed.



Select the name of the drive in which the bitmap file you wish to use as an original background is saved.

Select image file File game:	Eolders: c:\windows C:\ c:\ c:\ c:\ c:\ c:\ All Users C: Application Data C: cistr	•	Cancel
List files of type: Bitmap Files	Drives:	•	

- 6 Select the name of the folder in which the bitmap file you wish to use as an original background is saved.
- **7** Select the file name of the bitmap file you wish to use as an original background.
- 8 Click the **OK** button. The file name you specified in step 7 is displayed in the File box of the Background tab.
- *g* Specify the other settings in the Background tab, if necessary.
- **10** Click the Save settings tab.
- **11** Enter a name for the original background in the Title box of the Save settings tab.

Background Settings:[Sample 1] Properties		
Background Save settings		
* * * * * * * * * * * * * * * * * * *	Fig: IFICITIELSSAMPLEOBAR Layout Method Fig to paper size Fig to paper size Set position Pression Pression Internity. Internity.	
Selec	t File Defaults	
ОК	Cancel Help	

- **12** Click the **Save** button.
- **13** When a confirmation message appears, click the **OK** button.
- **14** Click the **OK** button in the Save settings tab to return to the Stamp/ Background tab.
- Note
- Make sure that the file size of the bitmap file you can use as an original background is smaller than 15 MB. A bitmap file that is larger than 15 MB cannot be used as the background.

Deleting an unnecessary background

- **1** Open the Printer Properties dialog box, then click the Stamp/Background tab.
- 2 Click the **Select Background** button. The Background Settings Properties dialog box is displayed.
- **3** Click the Save settings tab.
- **4** Select the background you wish to delete from the Title box.
- **5** Click the **Delete** button.
- 6 When a confirmation message appears, click the **OK** button.
- 7 Click the **OK** button in the Save settings tab to return to the Stamp/ Background tab.

Using Background Printing

The print processing method that enables you to do other tasks simultaneously while printing documents is called background printing.

Normally, the Canon BJ Printer Driver performs background printing. The BJ Background Monitor and BJ Backgrounder allow you to confirm the progress of printing that is being performed in the background.

About background printing

You can see the Background Printing checkbox in the Page Layout tab of the Printer Properties dialog box. When background printing is enabled, the BJ Background Monitor and BJ Backgrounder are launched before the printer starts the print job. You can verify information on the print process.

Note

When background printing is disabled in the Page Layout tab, the following settings cannot be used because background printing is applied to them.

Page Layout tab:

Page Layout Printing, Poster Printing, Copies, Printer control, Reverse order and Collate

Stamp/Background tab:

All stamp and background settings

Quality tab (opens from the Advanced button in the Main tab): Photo Optimizer

Special Effects tab (opens from the Advanced button in the Main tab):

All Simulate Illustration and Monochrome Effects settings

BJ Background Monitor

When a print command is sent to the printer, the BJ Background Monitor is launched automatically and is minimized on the Windows taskbar.

To verify the print process, click the BJ Background Monitor icon minimized on the Windows Taskbar. The following items are displayed.



Application/Print Document:

Shows the file names of documents that are queued or currently being printed. (Depending on the application program you use, the name of the application program is also displayed.) The icon on the left of the file name indicates the document which is currently being printed.

Page(s) [Size]:

Shows the file size of the documents in pages and bytes.

Time/Date:

Shows the time and date when the print job started.

The BJ Background Monitor makes it possible to perform the following tasks:

- You can change the order of the documents you print.
 Drag the document you wish to change the priority of to the desired position.
 Please note that you cannot change the priority of the document which is being printed.
- You can cancel a print job.
 Click the document you wish to stop printing, then select Delete from the Edit menu. When a confirmation message appears, click the **OK** button.
- You can quit the BJ Background Monitor. Select Quit from the File menu.
- You can give priority to background printing.
 Select Priority from the Option menu and drag the slide bar.
 As you drag the slide bar to the left, another job you are working on using an application program is given priority over the background printing in order to make the processing for the application program faster.
- You can change the temporary directory for saving print data. To perform background printing, a region which is used to save the print data temporarily is required on the hard disk. (If sufficient hard disk space is not available, background printing cannot be performed.) To solve this problem, you need to change the directory that saves the print data temporarily, as described on the next page.

- **1** Select Directory from the Option menu.
- 2 Select the drive and directory.
- **3** Click the **OK** button.



- When you wish to open the BJ Background Monitor while the printer is not printing, follow these steps:
 - (1) From the Start menu, select Programs.
 - (2) Point to BJ Printer, and then select BJ Background Monitor. or
 - (1) Double-click the BJ Printer icon on the Windows desktop.
 - (2) Double-click the BJ Background Monitor in the BJ Printer window.
 - For more details on the BJ Background Monitor, refer to the online Help for the BJ Background Monitor.

BJ Backgrounder

When Background Printing is enabled in the Page Layout of the Printer Properties dialog box, the BJ Backgrounder is displayed in the lower right corner of the screen.

🖉 CJRSTR : Microsoft Word - Va 🔳 🗐 🔀					
	Printing			Cance	
				Pause	
	Pages : Copies:	2	7	4	
	Copies:	1	1	1	

The BJ Backgrounder makes it possible to perform the following tasks:

• You can cancel a print job.

When you wish to cancel printing in mid-job, click the **Cancel** button. When a confirmation message appears, click the **OK** button.

• You can stop the print process of the printer driver temporarily. When you wish to stop the print process of the printer driver temporarily for some reason, click the **Pause** button.

While the print job is paused, the **Pause** button changes to the **Resume** button. Click the **Resume** button to start printing again.

Using the BJ Status Monitor

The BJ Status Monitor (which is found in the Maintenance tab) is a utility program that allows you to check the status of the printer. If an error occurs for some reason, the BJ Status Monitor displays the cause of the error and a solution.

In addition, the BJ Status Monitor detects the remaining ink of the BJ cartridge and displays a warning message when the ink is low.

About the operating environment

The following are the minimum requirements to run the BJ Status monitor.

When using the parallel interface only:

- Check that your computer supports bi-directional communications.
- Check that your printer cable (interface cable) supports bi-directional communications.

When using the parallel or USB interface:

• Check that the settings to support bi-directional communications are enabled in the Windows operating system.



To check that the settings to support bi-directional communications are enabled in Windows, follow these steps:

- (1) Open the Printer Properties dialog box from the Start menu.
- (2) Click the Canon S450 icon in the Printers window, then select Properties from the File menu.
- (3) Click the Details tab.
- (4) Click the **Spool Settings** button.
- (5) Check that the "Enable bi-directional support for this printer" is enabled in the Spool Settings dialog box.

Launching the BJ Status Monitor

When a print command is sent to the printer or low ink is detected, the BJ Status Monitor is launched automatically and is minimized on the Windows taskbar.

To verify the print process and the type of BJ cartridge, click the BJ Status Monitor icon minimized on the Windows taskbar. The following items are displayed.

er Stat	Canon BJ Printer Stat.	RSTR : Micros	Canon BJ Backgroun	Microsoft Word - Vac	9 🛃 🗹 🧕	🏽 🕅 Start
	+					
PT1:	Status Monitor - LPT1:	100				
	<u>H</u> elp	Options Port				
on	Guide Ink information	Printer Status				
PT1:	Canon S450 - LPT1:	Printer Name:				
BMP	me: ConnectPrinter.BMP	Document Nam				
ng. A	Printing.	Status:				
:51 PM	5/25/2000 2:31:51 PM	Start Time:				
	41%	Progress:				
Cancel Printing	: 0	Pages Printed:				
Right:	Left: 📮 Black Right	Cartridges L				
	lone	Low Ink: N				

Printer Name:

Shows the name of the printer you are using.

Document Name:

Shows the file name of the document that is currently being printed. (Depending on the application program you use, the name of the application program is also displayed.)

Status:

Shows the printer status and print job progress using graphics and messages.

Start Time:

Shows the time and date when the print job started.

Progress:

When "Spool print jobs so program finishes printing faster" is enabled and the "Spool data format" is set to RAW in the Spool Settings dialog box under the Details tab, the print job progress is indicated by the percentage and gauge shown here.

Pages Printed:

Shows the number of printed pages.

Cancel Printing:

Click this button when you wish to cancel the print job (before data transfer is completed).

Cartridges:

Shows the BJ cartridges currently installed in the printer.

Left cartridge holder:







-Scanner Cartridge

Right cartridge holder:



Low Ink:

Shows the remaining ink warning icon when the ink is low.

Error and warning display



- When you wish to open the BJ Status Monitor while the printer is not printing, follow these steps:
 - (1) Open the Printer Properties dialog box.
 - (2) Click the Maintenance tab.
 - (3) Click the Start Status Monitor button.
 - You can select the way of launching the BJ Status Monitor. For more details, refer to the online Help for the BJ Status Monitor.
 - When nothing is displayed in Progress, follow these steps:
 - (1) Open the Printer Properties dialog box from the Start menu.
 - (2) Click the Details tab.
 - (3) Click the **Spool Settings** button.
 - (4) Check that "Spool print jobs so program finishes printing faster" is enabled in the Spool Settings dialog box.
 - (5) Check that RAW is displayed in the Spool data format box.
 - To close the BJ Status Monitor, click the **X** button on the upper right corner of the BJ Status Monitor window. When the BJ Status Monitor is minimized on the Windows Taskbar, right-click the BJ Status Monitor icon on the Taskbar and then select Close.

Error and warning display

If an error occurs, the BJ Status Monitor launches automatically. Check the meaning of the error in the Status box of the Printer Status tab first. Then click the Guide tab and refer to the information on the solution.

🚯 Canon BJ Status Monitor - LPT1:	🚯 Canon BJ Status Monitor - LPT1:
Options Port Help	Options Port Help
Printer Status Guide Ink information	Printer Status Guide Ink information
Printer Name: Canon 5450 - USBPFN01 Document Name: screen1 Statu: Load more paper, then press the RESUME button.	Load the paper. To print manually, insert the paper in the manual feed slot. [Next]
Start Time: 12/1/1999 3:06:54 PM	
Progress: 100%	
Pages Printed: 0 <u>C</u> ancel Printing	
Cartridge: Left Black Right B Colour	<bask next<="" td=""></bask>

When the remaining ink is running low, the BJ Status Monitor displays a low ink warning icon in the Printer Status tab.

- Black is running low.
- Cyan is running low.
- —Magenta is running low.
- ₽ Yellow is running low.

When the ink runs out, the () low ink warning icon is replaced with the () ink empty icon. For more details, click the Ink Information tab.

🚯 Canon BJ Status Monitor - LPT1:	🚯 Canon BJ Status Monitor - LPT1:
Options Port Help	Options Port Help
Printer Status Guide Ink information	Printer Status Guide Ink information
Printer Name: Canon S450 - USEPFIN01 Document Name: Statu: The printer is on-line. Stort Time: Progress: 0%	black BJ cartridge colour BJ cartridge
Pages Printed: 0	
Cartridge: Left: Black Right: Colour	
Low Ink:	



Even after the ink runs out, the printer continues to print for a while. However, it is recommended that you install a new ink tank.

Replacing the lnk Tanks

Cancelling the print job

You can cancel the print job using the BJ Status Monitor. To cancel the print job, open the BJ Status Monitor and then click the **Cancel Printing** button in the Printer Status tab.

Switching the BJ Status Monitor

When you are using multiple Bubble Jet printers and launching the BJ Status Monitor of each printer as well, select the port to which the printer you wish to display is connected from the Port menu.



The BJ Printer Monitor displays all Bubble Jet printers installed in your system. To launch the BJ Status Monitor of a specific printer, double-click the printer name in the BJ Printers tab.

➡ Using the BJ Printer Monitor

Using the BJ Printer Monitor

The BJ Printer Monitor displays all Bubble Jet printers installed in your system. You can view information such as the printer status, printer port to which the printer is connected, and installed BJ cartridges.

You can also launch the BJ Printer Monitor for a desired printer.

About the operating environment

The following are the minimum requirements to run the BJ Printer monitor.

When using the parallel interface only:

- Check that your computer supports bi-directional communications.
- Check that your printer cable (interface cable) supports bi-directional communications.

When using the parallel or USB interface:

• Check that the settings to support bi-directional communications are enabled in the Windows operating system.



To check that the settings to support bi-directional communications are enabled in Windows, follow these steps:

- (1) Open the Printer Properties dialog box from the Start menu.
- (2) Click the Canon S450 icon in the Printers window, then select Properties from the File menu.
- (3) Click the Details tab.
- (4) Click the **Spool Settings** button.
- (5) Check that "Enable bi-directional support for this printer" is enabled in the Spool Settings dialog box.

Launching the BJ Printer Monitor

- **1** From the Start menu, select Programs.
- **2** Point to BJ Printer, and then select BJ Printer Monitor.

or

- **1** Double-click the BJ Printer icon on the Windows desktop.
- **2** Double-click the BJ Printer Monitor in the BJ Printer window.

Information display of the BJ Printer Monitor

PrinterIn fo ⊻iew ∰©_≣≣≣		T				
BJ Printers USB C						
Printer Name	Port	Status	Cartridges	Ink Information	Jobs	Other Information
🕲 Canon S450	LPT1:	On Line	Black/Colour		0	
(Þ

Printer Name:

Shows the name of the printer installed in your system. The icon to the left of the printer name shows the printer status.

— Normal condition.



Port:

Shows the port to which the printer is connected.

Status:

Shows a brief description about the printer status.

Cartridges:

Shows the type of the installed BJ cartridges.

Ink Information:

Shows ink information when the remaining ink is running low or when it runs out.

Jobs:

Shows the number of print jobs that are currently being processed.

Other Information:

Shows information such as paper size and the availability of options (when using the S450, no information is displayed).



- The following printers are not displayed in the BJ Printer Monitor: A printer that is connected using a USB/parallel conversion cable A printer that is being shared by other computers
- Make sure that the printer port setting is correct before using the BJ Printer Monitor. For example, if you are using a printer which does not support USB or infrared communication but the printer port is set to a USB port or IrDA port, the printer is not displayed in the BJ Printer Monitor.
- To close the BJ Printer Monitor, click the **X** button on the upper right corner of the BJ Printer Monitor window. When the BJ Printer Monitor is minimized on the Windows Taskbar, right-click the BJ Printer Monitor icon on the Taskbar and then select Close.



• To view a printer connected using a USB interface cable, click the USB Connected Printer tab (Windows 98 only).

🗬 Canon BJ Printer Monitor		
<u>Printer Info</u> <u>View</u> <u>Option</u> <u>H</u> elp		
BJ Printers USB Connected Printer		
Nost Computer		
🖆 🔷 USB Root Hub		
Canon S450 on USBPRN01 (Canon S450, Color)		



- When you wish to refresh the information display of the BJ Printer Monitor, select Refresh from the View menu.
- To launch the BJ Status Monitor from the BJ Printer Monitor screen, select the desired printer name and then select Start Status Monitor from the Printer Info menu. (You can also launch the BJ Status Monitor by double-clicking the printer name.)
- For more details, refer to the online Help for the BJ Printer Monitor.

Using Maintenance Functions

Cleaning the Print Heads Printing a Nozzle Check Pattern Aligning the Print Heads Turning the Printer On and Off Using the Special Settings Using ECP Mode Uninstalling the BJ Printer Driver

Cleaning the Print Heads

Cleaning the print heads clears the nozzles. There are two ways to clean the print heads: normal print head cleaning and deep print head cleaning. Always execute normal print head cleaning first. If this does not correct the problem then execute deep print head cleaning.

Note

Cleaning the print heads consumes ink so clean the print heads only when necessary.

Normal print head cleaning



- Open the Printer Properties dialog box, then click the Maintenance tab.
- 2 Click the first (left) print head cleaning icon in the Print Head Cleaning box.

Canon S450 Proper	ties	?	×
Main Page Layou	t Stamp/Background Main	lenance	
Print Head Cleaning			
Test Prints	Executes print hear	d cleaning.	
Power	ř=		
Start Status Mon	itor	Custom Setting	ו
	OK Cancel	App(y Help	



When a confirmation message appears, make sure that the printer is turned on and then click the **OK** button.

Canon S450	×
Start c	leaning?
OK	Cancel

Print head cleaning begins. (It takes about 40 seconds to complete print head cleaning and the POWER light stops flashing.)

4 Print a Nozzle Check Pattern to confirm the success of normal print head cleaning.

➡ Printing a Nozzle Check Pattern



You can also start print head cleaning with the RESUME button on the printer. Press and hold down the RESUME button until the POWER light flashes once, and then release it.

Deep print head cleaning

Note >>> Always execute normal print head cleaning first. Only when the normal print head cleaning does not correct the problem, perform deep print head cleaning.

1 Open the Printer Properties dialog box, then click the Maintenance tab.

2 Click the print head deep cleaning icon in the Print Head Cleaning box.

Canon S450 Properties ?	×
Main Page Layout Stamp/Background Maintenance	
Print Head Cleaning	
Test Prints	
Power	
Start Status Monitor]
OK Cancel Apply Help	



When a confirmation message appears, make sure that the printer is turned on and then click the **OK** button.

Canon S450	×
Start print P	nead deep cleaning?
OK.	Cancel

Print head cleaning begins. (It takes about two minutes to complete print head cleaning and the POWER light stops flashing.)

4 Print a Nozzle Check Pattern to confirm the success of deep print head cleaning.

➡ Printing a Nozzle Check Pattern



If the cleaning had no effect, perform normal print head cleaning and deep print head cleaning again. After cleaning the print heads several times, if the Nozzle Check Pattern is not satisfactory, a print head may be worn out and the corresponding BJ cartridge must be replaced.

Deplacing a BJ Cartridge Replacing a BJ Cartridge
Printing a Nozzle Check Pattern

The Nozzle Check Pattern confirms whether the inks are being correctly ejected from the print head nozzles and whether the print heads on the BJ cartridges are correctly aligned. Print the Nozzle Check Pattern when your printouts are streaked or the color tones are not correct, or after performing print head cleaning.



Open the Printer Properties dialog box, then click the Maintenance tab.



Click the nozzle check pattern icon in the Test Prints box.

Canon S450 Properties	? ×
Main Page Layout Stamp/Background Maintenance	
Print Head Cleaning	
Test Prints	
Prints a nozzle check pattern.	_
Power	
Start Status Monitor	
OK Cancel Apply He	lp

- **3** When a confirmation message appears, make sure that paper is loaded in the printer and the printer is turned on.
- **4** Click the **OK** button.



You can also start printing a Nozzle Check Pattern with the RESUME button on the printer. Press and hold down the RESUME button until the POWER light flashes twice, and then release it. Look at the check patterns and perform the correction procedure. Separate patterns are printed to display the status of each BJ cartridge.

• Standard color combination BC-30e (Black BJ Cartridge and BC-31e Color BJ Cartridge)



If patterns (1) or (2) are broken or missing, print head cleaning is required.

Cleaning the Print Heads

If patterns (3) are not overlapped perfectly, print head alignment is required.

Aligning the Print Heads

 Photo color combination—optional (BC-32e Photo BJ Cartridge optional and BC-31e Color BJ Cartridge)



If patterns (1) or (2) are broken or missing, print head cleaning is required.

Cleaning the Print Heads

If patterns (3) are not overlapped perfectly, print head alignment is required. Aligning the Print Heads



If the cleaning had no effect, perform normal print head cleaning and deep print head cleaning again. After cleaning the print heads several times, if the Nozzle Check Pattern is not satisfactory, one of the print heads may be worn out and the corresponding BJ cartridge must be replaced.

Replacing a BJ Cartridge

Aligning the Print Heads

Two BJ cartridges are always installed in the S450 printer. Each time you replace a BJ cartridge or switch BJ cartridges for a special print job, you must align the print heads to ensure optimum results in printing.

There are two ways to align the print heads: automatically and manually. Normally you will execute the automatic print head alignment feature of the printer driver. If this does not work for some reason, then you can execute manual print head alignment.

Automatic print head alignment



Open the Printer Properties dialog box, then click the Maintenance tab.



Click the print head alignment icon in the Test Prints box.

Canon S450 Prope	rties		? ×
Main Page Layou	ut]Stamp/Background M	aintenance	
Print Head Cleanin	¹⁹		
Print Head Alignme Test Prints	ent		
Power	۴Þ ۹		
<u>S</u> tart Status M	onitor	Custom Setting	
	OK Cance	el <u>A</u> pply Help	>

3

When a confirmation message appears, make sure that the printer is turned on and at least one sheet of plain paper is loaded in the printer. Click the **OK** button. The printer starts to print the head alignment pattern. After the following pattern prints, the print heads of the two BJ cartridges are aligned properly.





- The automatic print head alignment feature may not work properly in the following circumstances.
 - When ink runs out.
 - The nozzles of the print heads are clogged.
 - The printer is exposed to strong light.

If automatic alignment does not work properly, execute manual print head alignment.

Hanual print head alignment

• To turn off the printer after automatic head alignment, always press the POWER button to turn off the printer. If you do not turn off the printer correctly with the POWER button, the print head alignment settings are not saved.

Manual print head alignment

If the automatic print head alignment does not work effectively for some reason, align the print heads manually.



Open the Printer Properties dialog box, then click the Maintenance tab.





Click Custom Setting on the bottom right of the screen. You see this screen:

Custom Setting		×
Set printer to ECP	mode	
🔽 High-speed printin	g	
Pause Page		
Pause Scan		
E Automatically align	heads after replacin	g BJ cartridge
Align heads manu	ally	
Send	Cancel	Defaults
Shows a simple descr	iption of the currently	selected feature.

- **3** Check "Align heads manually," then click the **Send** button.
- **4** When a confirmation message appears, click the **OK** button.
- **5** Now click the print head alignment icon on the Maintenance tab.

- 6 When a confirmation message appears, make sure the printer is turned on and at least two sheets of letter-size plain paper are loaded; then click the OK button. The printer starts to print the standard head alignment pattern. During print head alignment, do not open the front cover.
- **7** When this pattern is printed, click the **Yes** button.

()	^{Y)} =	4 -3	-2	-1	_0	+1	+2	+3	+4				
()	x1)		-2 	-1 	ııı	+1	+2	+3	+4				
()	x2) -	4 -3	-2 	$\overline{[]}^1$	IIÎ	†1	+2	+3	+4				
()	x3) -	4 -3	-2 	\overline{W}^1	III III	+1	+2	+3	+4				
()	X4) -	4 -3	-2 	\bar{l}_{ll}^{1}	0	+1	+2	+3	+4				
()	x5) -	4 -3	-2	$\bar{[]]}^1$	0	+1	+2	+3	+4				
()	x6) -	4 -3	-2	-1 	0	+1	+2	+3	+4				
(B2) -7 -6 -	 -5 -	4 -3 4 -3	-2 -2 -2		° ≡=°	+1 +1 +1	+2 +2 +2	+3	+4	+5 +∭ +5	+6	+7 +11111 +7 +7111111	

Print head alignment pattern

You see this screen:

Print Head Alignment	<u>? ×</u>
Standard resolution is being adjusted. Referrin patterns (Y), (X1)-(X6), (B1) and (B2), enter the columns in which the deviation of the upper a minimal.	e numbers of the
Vertical Alignment (-4 to +4)	
M: 🔲 🛱	
Horizontal Alignment (-4 to +4)	
(X1): 0 🖛 (X2): 0 🖛 (X3); 0
(X4): 0 🐳 (X5): 0 🐺 (X6): 0 🖛
Bi-directional Alignment (-7 to +7)	
(B <u>1</u>): 0 ¥ (B2): 0 ¥	
OK	<u>H</u> elp

- 8
- Check all the patterns in lines of (Y), from (X1) to (X6), and from (B1) to (B2).

For each line enter the appropriate number where you see the lines perfectly aligned.





When you finish entering numbers, click the **OK** button to save the settings.

10 Make sure that the printer is turned on and letter-size plain paper is loaded; then click the **OK** button. The printer starts to print the high-resolution head alignment pattern.

		(1)	-1	0	+1				
		(X1)	īđ	ŵ	ili I				
		(32)	īļ	Ŵ	ţ,				
		(\$3)	Ī	Ŵ	<u>1</u> 1				
		(34)	1	Ŷ	1				
		(35)	1	Ŷ	1				
t	xe) -3	-2	1	ů	+1 	+2 Ⅲ	+3 		
		(B1) (B2)			+1				



Check all the patterns in lines of (Y), from (X1) to (X6), and from (B1) to (B2).

For each line enter the appropriate number where you see the lines perfectly aligned.



- **12** When you finish entering numbers, click the **OK** button to save the settings.
- **13** Click the **OK** button. This completes the manual print head alignment procedure.
- **Note** When you wish to turn off the printer after manual head alignment, always press the POWER button to turn off the printer. If you do not turn off the printer correctly with the POWER button, the print head alignment settings are not saved.

Turning the Printer On and Off

You can turn the printer on and off from the Printer Properties dialog box.

The Auto Power On/Off capability of the printer driver also allows you to turn the printer off when no data is sent to the printer for a certain period of time, or turn the printer back on again when data is sent to the printer.

Turning the printer off

- 1
- Open the Printer Properties dialog box, then click the Maintenance tab.
- 2
- Click the Power-off icon.
- **3** When a confirmation message appears, click the **OK** button. The printer is turned off.

Power	ř			
Start Status Mo	mitor		Custom S	ietting
	OK	Cancel	Apply	Help

Note The next time you turn on the printer, press the POWER button of the printer.

Setting Auto Power on/off

- 1
- Open the Printer Properties dialog box, then click the Maintenance tab.





Select the desired settings in the Auto Power dialog box.



Auto Power On:

Click the down-arrow and select either Enable or Disable. When this setting is enabled, the printer is turned on when data is sent to the printer. The default setting is Disable.

Auto Power Off:

Click the down-arrow and select the desired value. When no data is sent to the printer within the set time interval, the printer is turned off automatically. The default setting is Disable.



Make sure that the printer is turned on and click the **Send** button.



When a confirmation message appears, click the **OK** button.



When you wish to disable the Auto Power On/Off setting, select Disable for Auto Power On and Auto Power Off in the Auto Power dialog box.

Using the Special Settings

You can use some special settings that allow you to change the printer operation mode in the printer driver.

Changing the printer operation mode



Open the Printer Properties dialog box, and then click the **Custom Setting...** button in the Maintenance tab. This displays the Custom Setting dialog box.

Custom Setting	×
Set printer to ECP mode	
High-speed printing	
Pause Page	
Pause <u>S</u> can	
Automatically align heads after replacing BJ cartridge	
Align heads manually	
Send Cancel Defaults	
Shows a simple description of the currently selected feature.	



Change the printer operation mode, as needed.

Set printer to ECP mode (when using the parallel interface only) Click this checkbox when you wish to use the ECP mode setting to operate the printer.

➡ Using ECP Mode

High-speed printing

Click this checkbox when you wish to shorten the response speed of the printer to enable high-speed printing.

Pause Page

Click this checkbox when you wish to increase the pause between printed pages after performing high density printing. Use this setting to prevent the backs of pages from becoming stained after they are printed and ejected from the printer.

Pause Scan

Click this checkbox when you wish to increase the pause in the print head operation while the print job is being executed. Use this setting to prevent the next page from stacking on top of a printed page before it is dry.

Automatically align heads after replacing BJ cartridge

Click this checkbox when you wish to perform print head alignment automatically each time you change a BJ cartridge.

Align heads manually

Click this checkbox when you wish to perform manual print head alignment.

- **3** Make sure that the printer is turned on and click the **Send** button.
- **4** When a confirmation message appears, click the **OK** button to close the dialog box and send the setting to the printer.

Using ECP Mode

Normally, data transfer between the computer and printer are conducted using the Centronics[®]-compatible mode, which is a widely used printer interface type.

You can change the data transfer method to ECP mode, as needed. The ECP mode makes it possible to conduct data transfer between the computer and printer at a higher speed while keeping compatibility with the former interface type. This shortens the time required for printing, depending on the computer system.

Note 🕨

- Before changing the data transfer method to the ECP mode, consider the following points:
- The computer system and printer cable you are using must support ECP mode. For details, contact your computer manufacturer.
- The parallel port must be set for ECP in the BIOS settings of your computer. When you change the BIOS settings of your computer system, be sure to refer to your computer's documentation, or contact the computer manufacturer.



If the print job cannot be executed properly after changing the data transfer method to ECP mode, follow these steps:

- (1) Click the **Custom Setting** button in the Maintenance tab.
- (2) Uncheck the Set printer to ECP mode checkbox in the Custom Setting dialog box.
- (3) Click the **Send** button.
- (4) Shut down Windows, then turn the printer off.
- (5) Turn the printer back on again. The ECP mode setting is released.

Uninstalling the BJ Printer Driver

The printer driver may be updated to improve the performance of the printer. When you install a new version of the printer driver, delete the old version before installing the new version.

Uninstalling the BJ Printer Driver with the Uninstaller

When you use multiple Bubble Jet printers and wish to delete all the printer drivers for the Bubble Jet printers at the same time, use the Uninstaller feature.

- **1** Select **Programs** from the **Start** menu, then click **BJ Printer**.
- 2 Click Uninstall.
- **3** When a confirmation message appears, click the **Yes** button.
- **4** Click the **OK** button. This completes the uninstallation procedure.



Depending on the system you use, you may be prompted to restart the system. Click the **OK** button.



- You can also delete all printer drivers for Bubble Jet printers at the same time from the Windows desktop. Follow these steps:
 - (1) Double-click the BJ Printer icon on the Windows desktop.
 - (2) Double-click the Uninstall icon in the BJ Printer folder.
- When you wish to delete a specific printer driver, follow these steps:
 - (1) Select Settings from the Start menu, then click Printers.
 - (2) Select the icon of the printer driver you wish to delete in the Printers window.
 - (3) Select Delete from the File menu.
 - (4) When a confirmation message appears, click the **Yes** button.
- You cannot run the uninstaller while the BJ Printer Status Monitor is active.

Using the Macintosh Printer Driver

Printer Driver Basics Preparing and Executing a Print Job Print Mode Settings Executing Special Functions Printer Maintenance

Printer Driver Basics

The printer driver controls communication between the printer and your computer. To use the printer with your computer, you must install the printer driver. For instructions on installing the printer driver, refer to the *Quick Start Guide*.



Preparing and Executing a Print Job

Before you start a print job, you need to specify the print settings. The print settings in the printer driver allow fine control over the print quality and color adjustment, but you can simplify the setup procedure as follows.

- **1** Set the paper size you use from within the application program before printing.
- 2 Select the command used for printing (for example, Print in the File menu) in the application program.
- **3** Select the most appropriate icon that indicates the print mode in the Printer Properties dialog box.
- **4** Specify the BJ Cartridge setting according to the BJ cartridge you are using.
- **5** Specify the Media Type setting acording to the print media you are using.
- 6 Click the **Print** button. Printing begins.

Print Mode Settings

Selecting a Printer Driver Changing the Page Setup Dialog Box Settings Changing the Print Dialog Box Settings How to Use Help

Selecting a Printer Driver

Before using the Page Setup dialog box and the Print dialog box, you must first go into Chooser in the Apple Menu and choose the correct printer driver for your type of connection.

Once you have chosen the printer driver, it will remain selected. You will only need to choose it again if you change to another driver.

Selecting the printer driver using the Chooser

If the printer is directly connected to your Macintosh, use the procedure below to choose the printer driver.



Select Chooser from the Apple Menu. The Chooser is displayed.

2 Click the S450 icon.

Chooser 🛛				
AppleShare S450(Server)	Connected to : \$450 1 \$450 1\$450 1\$450 1\$450 1\$450 1\$450 1\$450 1\$450 1\$450 1\$450 1\$4			





Click in the Close box to close the Chooser. A dialog box may appear with 4 this message:

> You have changed your current printer. Please choose "Page Setup..." in all the open applications.

Simply click **OK**.

You can now use the S450 for printing.

3

Changing the Page Setup Dialog Box Settings

The size of the paper to be used for printing is usually set when a document is created with an application. In your application, open the Page Setup dialog box and select the paper size that you want to use with your printer. (The default Paper Size is Letter.)

Selecting the page size and the orientation

You can open the Page Setup dialog box from your application program.

- **1** Select the command used for Page Setup in your application program. Normally, click Page Setup from the File menu, and the Page Setup dialog box is displayed.
- 2
- Click on the Paper Size drop-down box, and then select the appropriate paper size from the pop-up menu.

Canon \$450		Version 3.6	
	Paper Size :	A5 A4 B5	OK Cancel
Height : 11.00inch Width : 8.50inch	Scale : Orientation :	Letter Legal #10 Envelope DL Envelope Canon 4" x 6" Custom1 Custom2 Custom3	Custom Utilities

3 Select Orientation.



4 Click the OK button.

The Page Setup dialog box closes.

Selecting the paper size (for custom paper sizes)

When you use custom paper sizes, select any one of Custom1 to Custom3.



Select the command used for Page Setup in your application program. Normally, click Page Setup from the File menu, and the Page Setup dialog box is displayed. **2** In Paper Size, select Custom1, Custom 2, or Custom3 and then click the **Custom** button.

The Custom dialog box is displayed.

Canon S450		Version 3.6
	Paper Size : Letter	+
	🗌 Banne	r Printing Cancel
Overall and an art on a rest of a factory trading	Scale : 100 %	Custom
	Orientation :	↓
Height:11.00inch Width:8.50inch	Save S	Settings

3 Select inch or mm for the unit of measurement in Unit and enter the desired width and height.

Canon \$450		Version 3.6	Apply
Media : Custom1			Cancel
Unit: 🔾 mm 🖲	inch		
Paper Size :	Margin -		7
Height: 11.00	Left: 3.2	Top: 2.8	
Width : 8.50	Right: 3.5	Bottom : 4.9	



The Custom dialog box closes and the specified paper size is set.



- Any Custom can be specified as the user-defined paper size.
- To make the setting made with the Page Setup dialog box the default, so that it is automatically selected whenever a new document is created, place a check mark in the Save Settings checkbox.

Changing the Print Dialog Box Settings

Before you can start printing, a few basic settings must be made. Set the BJ Cartridge and Media Type settings to match your printer setup, then select the icon corresponding to the print mode which you want to use to print your document.

Setting the print mode and starting printing



Select the command used for Print in your application program.

Normally, click Print from the File menu, and the Print dialog box is displayed.

2 Type in the number of copies to be printed, and then set which pages are to be printed.

Canon \$450		Version 3.6
Copies : 1 Pages : 🖲 All	From To	Cancel
BJ Cartridge :	Print Mode :	
Black/Color 😫	🚃 💽 🐖	
Media Type :		Details
Plain Paper 🔶	Current Settings : Text	
Paper Feed :	Print Quality : Normal(Fast) Halftoning : Pattern	Options
Auto Feeder 🔶	Color Correction : BJ Standard	Apply
Print Grayscale		
Print: Document Print Selection Only	All pages in range 🔶	Word Options



When only certain pages of a document are to be printed, enter the first (From) and last (To) print pages.



Select BJ Cartridge and then select Media Type.

Click the drop-down box to display a pop-up menu. Select the BJ cartridge combination you have installed and the media type you have loaded.

Canon \$450		Version 3.6	Print
Copies : 1 Pages : @ All	-		Cancel
BJ Cartridge :	Print Mode :		
Black/Color \$	E S		
Media Type :	E 🚺 📰		Details
Plain Paper 🔶			
Paper Feed :	Print Quality : Normal(Fast) Halftoning : Pattern		Options
Auto Feeder 🔶	Color Correction : BJ Standard		Apply
Print Grayscale			
Print:			
Document 🗢	All pages in range 🔶	W	ord Options
Print Selection Only	Range		



When a document created in color is to be printed out in monochrome, place a check mark in the Print Grayscale checkbox.



Select the Print Mode icon.

Select the icon that is closest to your document type and intended results. The Current Settings show the name of the selected icon, along with the types of Print Quality, Halftoning, and Color Correction.

Canon S450		Version 3.6
Copies : 1 Pages : @ All	÷	Cancel
BJ Cartridge :	Print Mode :	
Black/Color 😫	E 1	
Media Type :	🖭 💌 🗶	Details
Plain Paper 😫	Current Settings : Lext	
Paper Feed :	Print Quality : Normal(Fast) Halftoning : Pattern	Options
Auto Feeder 🔶	Color Correction : BJ Standard	Apply
🔲 Print Grayscale		
Print:		
Document 🔶	All pages in range 💠	Word Options
Print Selection Only	Range	

Print Mode Icons





Click the **Print** button to close the Print dialog box and start the print job.

Displaying a print preview of the document

To view a preview of the document as it will appear when printed, click the **Options...** button and change the output destination.

1 Open the Print dialog box, and click the **Options...** button. The Options dialog box is displayed.



Select Preview as the output destination, and click the **OK** button.

Canon Option	s	
() Printer 9 Preview) PICT File	Cancel
³ / ₁ □ Pi	rint in reverse order rint collated pages	
	Page Layout : 1 Up Page Order : Left to right Frame : None \$	¢



Click the **Preview** button in the Print dialog box.

Canon \$450	Version 3.6
Copies : 1 Pages : @ A	ll 🔘 From 🔄 To 🔄 Cancel
BJ Cartridge :	Print Mode :
Black/Color 🖨	
Media Type :	Details
Plain Paper 🗧 🖨	Current Settings : Text
Paper Feed :	Print Quality: Normal(Fast) Halftonina: Pattern
Auto Feeder 🔶	Color Correction : BJ Standard Apply
🗌 Print Grayscale	
Print:	
Document 🗢	All pages in range 💠 Word Options
Print Selection Only	Range

The Preview dialog box is displayed.



4

When you are satisfied with the document and want to print it, click the **Print** button. To close the preview screen without printing, click the **Cancel** button.

Saving a document as a PICT file

To save your document as a PICT file, click the **Options...** button and change the output destination.

1 Open the Print dialog box, and click the **Options...** button. The Options dialog box is displayed.



Select PICT File as the output destination, and click the **OK** button.

Canon Option	IS		
	Preview PICT File		OK Cancel
 Print in reverse order Print collated pages 			
	Page Layout : Page Order : Frame :	1 Up 🔶	*



Click the File button in the Print dialog box.

Canon \$450	Version 3.6
Copies : 1 Pages : (0)	
BJ Cartridge :	Print Mode :
Black/Color :	I 📰 💽 🐷 🔊
Media Type :	Details
Plain Paper :	
Paper Feed :	Print Quality: Normal(Fast) Halfonina: Pattern
Auto Feeder :	Color Correction : BJ Standard Apply
Print Grayscale	
Print:	
Document 🗢	All pages in range 💠 Word Options
Print Selection Only	Range


📾 Desktop 🗢		📼 HD
⊂ HD		Eject
📆 Trash		Desktop
	*	New 🐧
Save as:		Cancel
PICTFile		Save

The document data is saved in PICT file format and displayed on your desktop.

How to Use Help

The printer driver has many helpful functions. To display an explanation of these functions, use the balloon help. When you position the cursor over a given item, a brief explanation of that item appears in a balloon.

Displaying balloon help

- 1
- Select Show Balloons from the Help menu.
- **2** Display the printer driver screens (the Page Setup dialog box, the Print dialog box, etc.).
- 3
- Position the cursor over the item for which you want to display an explanation. An explanation of the item is displayed.

Canon \$450	Version 3.6
Copies : 1 Pages : @ A	ul 🔉 From 🔄 To 🔄 Cancel
BJ Cartridge :	Print Mode :
Black/Color 🗘	
Media Type :	E E E E E E E E E E E E E E E E E E E
Plain Paper 🗘	Current Settings : T Select the
Paper Feed :	Print Quality: No Option to print Halftoning: Patter picture or
Auto Feeder 🔶	Color Correction illustrations. Apply
Print Grayscale	
Print:	
Document 🗢	All pages in range 💠 Word Options
Print Selection Only	Range



To turn off the balloon help, select Hide Balloons from the Help menu.

Executing Special Functions

Printing Documents Enlarged/Reduced Printing on Banner Paper Printing Multiple Pages on One Sheet Changing the Print Order Setting for Manual Printing Changing the Print Quality/Halftoning Optimizing Image Data Adjusting the Image Data Registering and Managing Print Settings Using Background Printing Using the Printer With a Network

Printing Documents Enlarged/Reduced

The scaled printing feature of the printer driver allows you to set a scaling value so you can print an enlarged or reduced page on a paper size that is larger or smaller than the page size of the original file in the application program.

Setting the scaling value

Set a value between 25% and 400% as the enlargement/reduction scale in the Page Setup dialog box.

- Open the Page Setup dialog box.
 Normally, select Page Setup from the File menu.
- **2** S
 - Set Paper Size, as necessary.
 - 3 Set the desired enlargement or reduction ratio in Scale. Enter the value of the enlargement or reduction ratio; or you can click the drop-down box in Scale.



4 Click the OK button.The Page Setup dialog box closes.

5 To start printing, click the **Print** button in the Print dialog box. Normally, select Print from the File menu to open the Print dialog box.



- When you wish to revert Scaled Printing to the original value, set the original value (100%) in the Scale box.
- You can type in a Scale value from 25 to 400%. When clicking the arrows, the Scale values run from 50 to 200%.

Printing on Banner Paper

Banner Paper

Setting banner printing

Place a check mark in the Banner Printing checkbox in the Page Setup dialog box.

Open the Page Setup dialog box.Normally, select Page Setup in the File menu.



3 Click the Banner Printing checkbox to place a $\sqrt{}$ in the box.

Canon \$450		Version 3.6	ОК
	Paper Size :	Letter 😫	
		🕢 Banner Printing	Cancel
Curren Hini purtu Geographica Factor	Scale :	100 % 🖨	Custom
	Orientation :	t © t₽	Utilities
Height:11.00inch Width:8.50inch		Save Settings	
Height: 11:00inch Width: 8:30inch			

- 4 Click OK.
- 5
- When a confirmation message appears, click the **OK** button. The Page Setup dialog box closes.



- **7** Select Plain Paper in Media Type.
- 8 Click the **Print** button to close the Print dialog box and start the print job.



- Always set 1 in the Copies box in the Print dialog box. If you set multiple copies, the data cannot be printed on the banner paper properly.
- When you wish to return to normal printing, clear the check mark from the Banner Printing checkbox.

Printing Multiple Pages on One Sheet

By reducing the scale in a 2-up or 4-up layout, you can print multiple pages on one sheet of paper. You can save the total amount of paper used for long documents. This feature is also useful when you wish to view an image spread or print your document as a book cover.

Specifying the layout

Open the Options dialog box from the Print dialog box and make the necessary settings.

- Open the Print dialog box.Normally, select Print from the File menu.
- 2 Click the Options... button. The Options dialog box is displayed.



Click on the Page Layout drop-down box and select the 2 Up or 4 Up layout from the pop-up menu.

The 2-Page Print setting prints two pages on one sheet of paper and the 4-Page Print setting prints four pages on one sheet of paper. Confirm the layout of the printout in the Preview.

Canon Options
Destination : Printer OK
Preview Cancel
PICT File
Page Layout : 4 Up Page Order : Horizontally from top left Frame : None

4

Make the following settings, as necessary.

Page Order:

Click on the Page Order drop-down box. The illustration indicates the order in which the pages run:

Horizontally from top left Horizontally from top right Vertically from top left Vertically from top right

Frame:

When you print multiple pages of data on one sheet, this option allows you to select whether to add a border around each page. Click on the drop-down box to select None, Fine line, or Broad line.

- 5 Click th
 - Click the **OK** button.

The Options dialog box closes.



Click the **Print** button to close the Print dialog box and start the print job.



When you wish to revert Page Layout printing to the original setting, select the 1 Up layout in Page Layout.

Changing the Print Order

Based on the default settings of the printer driver, the printer starts printing one set of any document from the first page. When two or more copies of the same data are to be printed, specify collation reverse order printing. This saves you from having to rearrange the copies after they have printed.

Setting the print order

When you wish to print multiple copies of the same document, you can change the print order with "Print in reverse order" and "Print collate pages," as necessary.

- Open the Print dialog box.
 Normally, select Print in the File menu.
- 2
- Click the **Options...** button.

The Options dialog box is displayed.



Set the print order using "Print in reverse order" or "Print collate pages," as necessary.

Canon Option	s	
	● Printer ○ Preview ○ PICT File	OK Cancel
³ / ₁ □ P	rint in reverse order rint collated pages	
	Page Layout : 4 Up Page Order : Horizontally f Frame : None 4	+ rom top left +

Print in reverse order:

Use this setting when you print a multiple page document. The printer starts printing from the last page of the document. When this setting is disabled, the printer starts printing from the first page of the document.

Print collated pages:

Use this setting when you print multiple copies of a multiple page document.

When "Print collated pages" is enabled, the printer prints the document and collates each copy from the first page through to the last page.

When "Print collated pages" is disabled, the printer prints the document and collates copies of the same page. In this case, you will need to manually combine the pages to create each set of a multiple-page document. Click the OK button.The Options dialog box closes.

5 Click the **Print** button to close the Print dialog box and start the print job.

Setting for Manual Printing

Selecting the 🖳 icon allows you to set your own printing parameters, including the quality, halftoning, color balance, and density. Also, once you have specified your custom settings, you can reapply those settings simply by clicking the 🖳 icon.

Specifying the print settings manually

Select the $\boxed{2}$ icon from Print Mode in the Print dialog box. You can then set the items in the Quality panel and the Color panel.

- 1
- Open the Print dialog box. Normally, select Print from the File menu.
- 2 Click the 🖳 icon in Print Mode.
- 3 Click the **Details...** button.

The Quality panel of the Detailed Setting dialog box is displayed.

4 Set Print Quality or Halftoning, as necessary.

Canon Detailed Set	tting	
Quality Special effects	Print Quality : Fast Normal(Fast)
Color	Halftoning : Pattern	Scatter
	Photo Optimizer	
▲ ▼	Restore Defaults	Cancel OK

Changing the Print Quality/Halftoning
 Photo Optimizer

5

When you wish to adjust the color settings, click the Color icon. The Color panel is displayed.

Canon Detailed Set	ting	
Quality	Color Correction : BJ S Matching Method : Printer Profile :	Photo ¢ Recommended by Canon ¢
Special effects	Color Balance :	0
Color		0 Yellow 0 Black
4 V	Density : Restore Defaults	0 Cancel OK

Adjusting the Image Data

- 6
- When you have completed the settings, click the **OK** button. Then return to the Print dialog box.
- 7
- Click the **Print** button to close the Print dialog box and start the print job.



When the same print mode setting is to be used the next time you print, select the 2 icon from Print Mode in the Print dialog box.

Changing the Print Quality/Halftoning

When your printouts are not satisfactory, the printer driver allows you to make fine adjustments to the print quality and halftoning settings. If there is a problem in the image data you wish to print, changes to the print quality and halftoning settings may not be visible or effective.

Adjusting the print quality

When you wish to specify detailed Print Quality and Halftoning, select the 🖳 icon in Print Mode.

- Open the Print dialog box.Normally, select Print from the File menu.
- 2 Select the 🖳 icon in Print Mode.
- Click the Details... button.
 The Quality Panel of the Detailed Setting dialog box is displayed.

4 Set the Print Quality.

The further you move the slide bar toward the right, the better the print quality will be, but the longer it will take to perform the printing. The print mode display varies with the position of the slide bar.

Canon Detailed Set	tting
	Print Quality: Fast Fine
Quality	Fine
Color	Halftoning :
	Photo Optimizer Whole page
▲ ▼	Restore Defaults Cancel OK

5

Select the Halftoning icon, as necessary.

The halftoning selection determines the way in which the ink dots are arranged on the page, and changes the appearance of halftones.

Canon Detailed Se	etting			
Quality Quality Special effects			Fine	
Color	Halftoning :	Pattern	Scatter	
		Dptimizer Ie page		
*	Restore Defaults)	Cancel	ОК

Pattern:

Dots of different colors are arranged in a specified order.

Select this option when you want to print graphics with clearly defined color boundaries or graphs in which large areas are filled with the same color.

Scatter:

Dots of different colors are arranged at random.

Select this option when you want to print images with blurred boundaries and fine gradations of tone and color. This setting is best for printing photographs.



Click the **OK** button. You return to the Print dialog box.

7 Click the **Print** button to close the Print dialog box and start the print job.



- Some Print Quality settings cannot be selected depending on the setting made for Halftoning. To obtain the best quality printing, select Scatter.
- Some settings cannot be selected depending on the type of BJ cartridge and the selected paper type. In such cases, make the necessary adjustments within the supported range.

Optimizing Image Data

The Photo Optimizer adjusts a photographic image created by a scanner or a digital camera when it is printed out. Use the Photo Optimizer to compensate for unsatisfactory color balance and over- or under-exposure before printing.

Photo Optimizer

Place a check mark in the Photo Optimizer checkbox in the Detailed Settings dialog box.

- Open the Print dialog box.
 Normally, select Print from the File menu.
- **2** S
 - Select the 🛃 icon in Print Mode.
 - **3** Click the **Details...** button.

The Quality Panel of the Detailed Setting dialog box is displayed.

- 4
- Place a check mark in the Photo Optimizer checkbox.

Canon Detailed	Setting
Quality Quality Special effects	Print Quality: Fast Fine Fine
Color	Halftoning : Friend Control Co
	✓ Photo Optimizer ↓ ∰ □ Whole page
	Restore Defaults Cancel OK

5 Click the **OK** button. You return to the Print dialog box.

6 Click the **Print** button to close the Print dialog box and start the print job.

Adjusting the Image Data

When the color reproduction of your printouts is unsatisfactory, you can adjust the color balance and density as needed. Use this feature only when you wish to make fine adjustments to the color balance in the printouts, and do not change the settings excessively. (Please note that this feature does not compensate the overall color balance of the image data as some application programs for editing image data would do.)

Adjusting the colors

Select the 🖳 icon in Print Mode and then click the Color icon in the Detailed Setting dialog box.

1

Open the Print dialog box. Normally, select Print from the File menu.

- 2 Select the 🖳 icon in Print Mode.
- **3** Click the **Details...** button. The Quality panel is displayed.

Click the Color icon.
 The Color panel is displayed.

Canon Detailed Se	tting	
Quality Special effects	Printer Profile : (Gamma Correction :	iandard ¢ Photo ¢ Recommended by Canon ¢ 1.8 Cyan +14 Cyan +9 Cyan +9 Yellow -11 K
4	Density : Restore Defaults	+29 Cancel OK

5 Set the following items as needed.

Color Correction

BJ Standard: Applies the optimum color correction for printing with a Bubble Jet printer. Normally, you will select this setting.

ColorSync: Selected when color correction is performed with ColorSync.

None: Selected when color correction is not to be applied.

Matching Method

This sets the color representation method.

Photo: For printing overlapping intermediate color.

Graphic: To print primary color more brightly.

Spot Color: To print documents that use large amounts of a basic color.

Printer Profile

This selects the profile to suit the type of document. Generally, you will use the Recommended by Canon setting.

Recommended by Canon lists the color features that are suitable for the BJ cartridge, paper size, print quality, halftoning, etc.

Gamma Correction

Gamma Correction enables the adjustment of halftone contrast between perfect white and perfect black.

If you want to adjust the contrast, place a check in this box and move the slider left or right to set a value.

When Gamma Correction is not to be performed, clear the check mark from the checkbox.

Color Balance

The color intensity is set separately for cyan, magenta, yellow, and black.

The color intensity is adjusted by dragging the slide bar for each color to the right or left. For example, if you feel that the blue (cyan) component is too strong, drag that slider in the negative direction (to the left). On the other hand, if you think that the blue (cyan) is too weak, drag the slider in the positive direction (to the right). Once you have made the adjustment, the balance of the four colors changes and the overall color tone changes as well. It's a good idea to make such adjustments in very small steps.

Density

Moving the slider to the right increases the density while moving it to the left decreases the density.

- 6 Click the **OK** button. Then return to the Print dialog box.
- **7** Click the **Print** button to close the Print dialog box and start the print job.

Registering and Managing Print Settings

You can name the settings in the Print dialog box (such as BJ Cartridge, Media Type, Print Grayscale, and Print Mode) when you perform registration. You can set default mode for any setting that is used often.

Registering print settings

You can use names to register the contents of those settings that are performed with the Print dialog box.

- **1** Open the Print dialog box, and then select options as needed.
- 2
- Click the **Apply** button.

The Register Settings dialog box is displayed.

3 Click the Apply button.

C anon Register Settings	= Close
Settings :	
✓Factory Defaults	Import
	Apply
	Remove
*	Defaults

4 Type in the name under which you want to register the settings and then click the **OK** button.

New Settings Name :			
Report			
	Cancel OK		

You return to the Register Settings dialog box.



Click the **Close** button.

You return to the Print dialog box.

Note >>> You cannot specify a name that is already being used for a set of print mode settings. Use a different name, or remove the settings with that name before you register the new settings.

Importing registered print setting

You can read in a previously registered print mode and set it as the Print dialog box for the icon.





Click on the print mode setting you want to import and then click the **Import** button.

Canon Register Settings	Close	
Settings :	Import	
✓Factory Defaults		
Report	Apply	
Photo Print		
	Remove	
*	Defaults	

3

Click the **Close** button.

You return to the Print dialog box.

Note >>> When a registered Print Mode is to be set as the default (so this print mode is always selected when the Print dialog box is open), select its name in the Register Settings dialog box and click the **Defaults** button. If a check mark is shown next to a name, it indicates that the print mode is set as the default.

Removing registered print settings

When a registered print mode is no longer necessary or you want to register a different setting under the same name, delete it by following these steps:



Open the Print dialog box and click the **Apply...** button. The Register Settings dialog box is displayed.



Click the print mode setting you want to remove and then click the **Remove** button.

Canon Register Settings			
Settings :	Import		
✓Factory Defaults			
Report	Apply		
Photo Print	Саррія		
	Remove		
*	Defaults		



When a confirmation appears, click the **OK** button.

The selected print setting is removed from the list.

Canon Register Settings			
Settings :			
✓Factory Defaults	Import		
Report	Apply		
	Remove		
*	Defaults		



Click the **Close** button. You return to the Print dialog box.



- Factory Defaults cannot be deleted.
- Once you delete a print setting, you cannot restore it. If you need it, you will have to go through the entire setting process again.

Using Background Printing

If background printing is selected with the Chooser, you can open the BJ PrintMonitor to confirm the progress of printing or to stop printing.

Also, the order in which suspended documents are printed can be changed.

About background printing

The print processing method that enables you to do other tasks simultaneously while printing documents is called background printing. When background printing is to be performed, select Chooser from the Apple Menu, select a printer driver, and set Backgrounding to On.

Selecting a Printer Driver

While background printing is being performed, you can display the BJ PrintMonitor to confirm the progress of printing or to stop the printing.

Displaying the BJ PrintMonitor window

When Backgrounding is set to On, the BJ PrintMonitor starts up automatically when you print. The BJ PrintMonitor appears in the Application Menu.

To verify the print process, click the BJ PrintMonitor icon in the Application Menu.



Closing the BJ PrintMonitor window

When you select Close Status Window from the File menu, the BJ PrintMonitor window closes.

🔹 File Help	3:10 PM	<u>&</u> I	BJ PrintMonitor
Open Status Window 80 Close Status Window 80	BJ PrintMonitor	18	
Preferences Pause Printing			English HD
	Desktop User : Michel, Page : 1/1, Copies : 1/1,Destination :9450 1		
	Document Name Pages Copies Receive Time		
		4	
	Documents Queued : 1	1	

BJ PrintMonitor Function

The BJ PrintMonitor shows the document currently being printed and a list of the documents queued for printing.

Print queue document information includes the document name, number of pages, number of copies, and the time when the print job was accepted. The total number of print queue documents is displayed in the bottom row.



The BJ PrintMonitor makes it possible to perform the following tasks.

The order of the documents in the print queue can be changed.
 Position the cursor over the name of the document whose position you want to change and drag it to the desired position in the queue while holding down the mouse button. When you release the button, the document moves to the selected position.

You can temporarily suspend the printing of one document so that another document in the print queue can be printed out.

- Printing can be stopped.
 Click the name of the document name for which you want to stop printing and then click the is icon. The selected document is deleted from the list.
- Printing can be suspended/restarted.
 Click the name of the document for which you want to suspend printing and then click the III. To restart printing, click the III icon.

Using the Printer With a Network

The S450 can be connected to a network. To enable use of the printer from any computer connected to the network, the necessary printer driver must be installed on each computer.

Connection environment and installation

- The S450 can be connected to an Ethernet environment.
- Install the printer driver on all the computers that will use this printer. See your *Quick Start Guide*.
- The printer must be connected to the computer acting as the print server via a USB interface cable. The print server and the client machines use different printer drivers and different tools to confirm printing progress. Refer to the example shown below.



Print server

Refers to the computer to which the printer is directly connected via a USB interface cable. On the print server, select the printer driver called S450. From the print server, the progress of printing can be confirmed using the BJ PrintMonitor.

Client machine

Refers to a computer that is connected to the print server via an Ethernet network. From a client machine, select the printer driver called S450 (Server). When printing is executed, data is sent to the printer via the print server. Although the BJ PrintMonitor cannot be started from a client machine, the progress of printing can be confirmed by starting the BJ StatusMonitor on the print server.

Selecting the printer driver

To use the printer with a network, the correct printer driver must be installed on each computer. The print server must be set up first. Then, the necessary settings are made for each client machine.

Setting up the print server



Select Chooser from the Apple Menu.



Chooser E			
Appløshare Apsløshare S450(Server)	Cho 5450	oser E	
	4	Share Setup Backgrounding On Off AppleTalk Active AppleTalk Active 7.6.2	

- **3** Click the **Share** button.
- **4** Confirm that S450 Server is selected for "Enter new print server name:", and then click the **Send** button.

Canon \$450	Version 3.61
Current Print Servers	
	Remove
Enter New Print Server Name : \$450 Server Connected to : \$450 1	Send Close

- **5** Confirm that a new print server name has been added to "Current print servers," and then click the **Close** button.
- 6 Click the close box to close the Chooser.

Setting up client machines

- **1** Select Chooser from the Apple Menu.
- **2** Select the S450 (Server) icon and select the print server in "Connected to:".

	Chooser E					
	NO	<u> </u>		Connected	to:	
				S450 1		
	AppleShare	S450				
	S450(Server)					
			-	AppleTalk	Active	
L			Ŧ		Inactive	7.6.2

3

Click the close box to close the Chooser.

Confirming the status of the print server from a client machine

When the progress of printing with the print server is to be confirmed in the BJ PrintMonitor, start the BJ StatusMonitor.

Starting the BJ StatusMonitor

Double-click the BJ StatusMonitor icon in the BJ Extras folder.



Closing the BJ StatusMonitor window

Select Quit from the File menu to close the BJ StatusMonitor.



Functions of the BJ StatusMonitor

The progress of print jobs being performed by the print server machine can be confirmed using the BJ StatusMonitor. A list of documents that are currently being printed as well as those in the print queue is displayed. The information related to the jobs in the print queue includes the document name, number of pages, number of copies, and the time at which the print job was accepted. The total number of documents in the print queue is displayed in the bottom row.

BJ Print Server	Functions of the buttons
	Suspends the printing of specified documents only.
Report Preparing to print	Restarts printing of the documents suspended with .
Document Name Pages Copies Receive Time	Stops printing of the specified document.
	Displays information related to the document currently being printed.
Documents queued : 0 Searching for the print server	The icon on the left gradually fills with black as printing proceeds.
	Lists the names of the queued documents.

The following operations can be performed with the BJ StatusMonitor. Note, however, that the owner of the client machine and the owner of the document must be the same. If you double-click a document name, you can determine the owner of the print job.

Stop printing

Click the name of the document for which you want to stop printing and then click the *is icon*. The selected document is deleted from the list.

Suspend/Restart printing

Click the name of the document for which you want to suspend printing and then click the I icon. To restart printing, click the I icon.



- The owner of a computer can be determined from the Owner Name item after selecting File Sharing from the Control Panel.
- When you are using two or more print servers, you can switch the display of BJ StatusMonitor. Select the desired print server from Print Server and then click the **OK** button. You can then switch the display of the BJ StatusMonitor.

Cleaning the Print Heads Printing a Nozzle Check Pattern Aligning the Print Heads Turning the Printer On and Off Special Settings Uninstalling the Printer Driver

Cleaning the Print Heads

Cleaning the print heads clears the nozzles. There are two ways to clean the print heads: normal print head cleaning and deep print head cleaning. Always execute normal print head cleaning first. If this does not correct the problem, then execute deep print head cleaning, which produces more intensive cleaning.

Note

Cleaning the print heads consumes ink, so clean the print heads only when necessary.

Normal print head cleaning

- Open the Page Setup dialog box.Normally, select Page Setup from the File menu.
- 2 Click the **Utilities** button.
- **3** After confirming that Print Head Cleaning is selected in the drop-down menu, click the elicon.


4 When a confirmation message appears, make sure that the printer is turned on and then click the **OK** button. Print head cleaning begins. (It takes about 40 seconds to complete print head cleaning and the POWER light stops flashing.)

Cleaning	
Select print head to clea	n.
🗌 🛛 All Colors —	
🔲 Black	
Color	
	Cancel OK

Print a Nozzle Check Pattern to confirm the success of print head cleaning.

Printing a Nozzle Check Pattern

Deep print head cleaning

5



Always execute normal print head cleaning first. Only when the normal print head cleaning does not correct the problem, perform deep print head cleaning.



Open the Page Setup dialog box. Normally, select Page Setup from the File menu.



Click the **Utilities** button.

		Version 3.6
Paper Size :	Letter	
	Banner Printing	Cancel
Scale :	100 % 🗢	Custom
Orientation :		Utilities
	Save Settings	
	Scale :	Grientation :

3

After checking that Print Head Cleaning is selected, click the 🐋 icon.

Canon S450Printer Utility	Version 3.6
Print Head Cleaning	
Print Head Cleaning Starts print-head cleaning.	
Print Head Deep Cleaning Starts print-head deep cleaning.	
Feed Rollers Cleaning Starts cleaning paper feed rollers.	
	Close

4 When a confirmation message appears, make sure that the printer is turned on and then click the **OK** button.

A	Deep clean the print head?
	Cancel

Print head cleaning begins. (It takes about two minutes to complete print head cleaning and the POWER light stops flashing.)

- 5
- Print a Nozzle Check Pattern to confirm the success of deep print head cleaning.

Printing a Nozzle Check Pattern



If the cleaning had no effect, perform normal print head cleaning and deep print head cleaning again. After cleaning the print head several times, if the Nozzle Check Pattern is not satisfactory, one of the print heads may be worn out and the corresponding BJ cartridge must be replaced.

Replacing a BJ Cartridge

Printing a Nozzle Check Pattern

The Nozzle Check Pattern confirms whether the inks are being correctly ejected from the print head nozzles and whether the print head on the BJ cartridge is correctly aligned. Print the Nozzle Check Pattern when your printouts are streaked or the color tones are not correct, or after print head cleaning has been executed.

- 1
- Open the Page Setup dialog box.

Normally, select Page Setup from the File menu.

2 Click the Utilities button.



Select Test Print, then click the 📄 icon.

Canon \$450 Printer Utility	Version 3.2
Test Print	
Nozzle Check Pattern Prints a nozzle-check pattern.	
Print Head Alignment It will align the print heads to correct any error in their installation position.	
	Close

- **4** When a confirmation message appears, make sure that paper is loaded in the printer and the printer is turned on.
- **5** Click the **OK** button. The Nozzle Check Pattern is printed.

Look at the check patterns and perform the correction procedure. Separate patterns are printed to display the status of the BJ cartridge.

 Standard color combination (BC-30e Black BJ Cartridge and BC-31e Color BJ Cartridge)



If patterns (1) or (2) are broken or missing, print head cleaning is required.

If patterns (3) are not overlapped perfectly, print head alignment is required. Aligning the Print Heads Photo color combination—optional (BC-32e Photo BJ Cartridge (optional) and BC-31e Color BJ Cartridge)



- (1) Photo BJ Cartridge nozzle check pattern
- (2) Color BJ Cartridge nozzle check pattern
- (3) Print head alignment check pattern for both BJ Cartridges

If patterns (1) or (2) are broken or missing, print head cleaning is required.

Cleaning the Print Heads

If patterns (3) are not overlapped perfectly, print head alignment is required.

Aligning the Print Heads

Aligning the Print Heads

Two BJ cartridges are always installed in the S450 printer. Each time you replace a BJ cartridge or switch BJ cartridges for a special print job, you must align the print heads to ensure optimum results in printing.

There are two ways to align the print heads. Normally you will execute the automatic print head alignment feature of the printer driver. If this does not work for some reason, then you can execute manual print head alignment.

Aligning the print heads automatically

1

Open the Page Setup dialog box. Normally, select Page Setup from the File menu.

2

Click the **Utilities** button.

3 Select Test Print, then click the 🔟 icon.



- **4** When a confirmation message appears, make sure that the printer is turned on and that plain paper is loaded in the printer.
- **5** Click the **OK** button.

The printer starts to print the head alignment pattern. During print head alignment, do not open the front cover.

After the following pattern prints, the print heads of the two BJ cartridges are aligned properly.





- The automatic print head alignment feature may not work properly in the following circumstances.
 - When ink runs out.
 - The nozzles of the print heads are clogged.
 - The printer is exposed to strong light.

If automatic alignment does not work properly, execute manual print head alignment.

Aligning the print heads manually

• To turn off the printer after automatic head alignment, always press the POWER button to turn off the printer. If you do not turn off the printer correctly with the POWER button, the print head alignment settings are not saved.

Aligning the print heads manually

If the automatic print head alignment does not work effectively for some reason, align the print heads manually.

- **1** Select Page Setup from the File menu.
- 2 Click the **Utilities** button.
- **3** Select Special Settings by clicking the up- or down-arrow.
- **4** Check "Align heads manually," then click the **Send** button.
- **5** When a confirmation message appears, click the **OK** button.
- *6* Click the up- or down-arrow to select Test Print, then click the Print head alignment icon.
- 7 When a confirmation message appears, make sure the printer is turned on and at least two sheets of letter-size plain paper are loaded; then click the OK button. The printer starts to print the standard head alignment pattern. During print head alignment, do not open the front cover.





Print head alignment pattern

- 9
- Check all the patterns in lines of (Y), from (X1) to (X6), and from (B1) to (B2).

For each line enter the appropriate number where you see the lines perfectly aligned.



- **10** When you finish entering numbers, save the settings.
- **11** Make sure that the printer is turned on and letter-size plain paper is loaded; then click the **OK** button. The printer starts to print the high-resolution head alignment pattern.

	¥)	-1	0	+1				
	X1)	ī	ııî	*1 W				
(X2)	īù	щů	†ì				
(x3)	Ŵ	ııî	1				
		ĪÌ.	ııı	11				
	X5)		ll	11				
(X6) -3	-2	1	Ĥ	#1	+2	+3		
	81) 82)	1999 1999	≢° ≢°	+1000 +1000				

12 Check all the patterns in lines of (Y), from (X1) to (X6), and from (B1) to (B2).

For each line enter the appropriate number where you see the lines perfectly aligned.





When you finish entering numbers, save the settings.



- Click the **OK** button. This completes the manual print head alignment procedure.
- Note 🗼
- When you wish to turn off the printer after manual head alignment, always press the POWER button to turn off the printer. If you do not turn off the printer correctly with the POWER button, the print head alignment settings are not saved.

Turning the Printer On and Off

The Auto Power On/Off capability of the printer driver allows you to turn the printer off when no data is sent to the printer for a certain period of time and turn the printer back on again when data is sent to the printer.

- Open the Page Setup dialog box.Normally, select Page Setup from the File menu.
- 2 Click the **Utilities** button.
- **3** Click Auto Power Setting, and then select the auto power settings Auto Power On and Auto Power Off, as necessary. Click the **Send** button.

Canon S450Printer Utility		Version 3.61
Auto Power Setting	\$	
🗙 Auto Power Off : 🛛 5	min. 🗢	
🔲 Auto Power On		
Defaults	Send	Close

Auto Power On:

When this setting is enabled, the printer is turned on when data is sent to the printer.

The default setting is off.

Auto Power Off:

When no data is sent to the printer for the set time, the printer is turned off automatically.

The default setting is off.



When a confirmation message appears, click the **OK** button.



When Auto Power On/Off is to be cancelled, remove the check mark from each checkbox using the same procedure.

Special Settings

With the special settings in the Print Utility dialog box, you can change the printer's mode settings and printer driver to change its operation.

Use the Chooser to change the driver-supported resolution.

Changing the printer's mode

A pause can be specified to allow the most recent printout to dry, or to adjust the print head position.

- Open the Page Setup dialog box.Normally, click Page Setup from the File menu.
- 2
 - Click the **Utilities** button.
 - **3** Select Special Settings, and then place a check mark in the checkboxes corresponding to the required settings. Click the **Send** button.

Canon S450Printer Utility	Version 3.61
- Special Settings 🔷	
 Pause between pages. Pause between scanning. Automatically align heads after re Align heads manually. 	placing BJ Cartridge.
Defaults	Send Close

Pause Between Pages

Inserts a pause after completing high-density printing of a page. Select this item, by setting it to On, if you find that print quality is being affected by the next page being fed before the ink on the previous page has completely dried.

Pause Between Scanning

Inserts a pause between passes of the print head. Select this item, by setting it to On, if you find that the printed pages are not drying well.



When a confirmation message appears, click the **OK** button. This completes changing the printer's mode.

Changing the driver-supported resolution

The driver-supported resolution is usually set to Standard. Try changing this setting.

- 1
 - Select Chooser from the Apple menu.



Click the S450 icon.

3 Click the **Setup** button.



4 Click on Driver-Supported Resolution and select High from the pop-up menu.

Canon \$450	Version 3.61
Driver-Supported Resolution : High	\$
Cancel	ОК

- **5** Click the **OK** button.
- 6 Click the close box to close the Chooser.

Uninstalling the Printer Driver

When the Printer Driver is no longer necessary, you can remove an installed printer by selecting Custom remove. The Custom remove option allows you to remove just those files that are not needed when you change your computer environment.

Uninstalling the printer driver with the Custom remove

- **1** If there are any unsaved documents in applications that are currently running, save your documents.
- 2 Double-click S450 folder and then double-click Printer Driver folder.
- **3** Double-click the BJ Installer icon.
- **4** When the Software License Agreement is displayed, click the **Agree** button.
- 5
- Select Uninstall from the pop-up menu.

installer	ΞE
Uninstall Click "Uninstall" to remove all the software needed to use the 5450. After the software is uninstalled, restart the computer.	
Install Location Quit Uninstalled from the disk "English HD" Uninstall	

6 Click the **Uninstall** button.

7

When a confirmation message appears, click the **Continue** button.

0	No other applications can be running during this operation. Click Continue to automatically quit all other running applications. Click Cancel to leave your disks untouched.
	Cancel

8 When a confirmation message appears, click the **OK** button to restart the computer.

0K

The uninstall was successful. However, some files/folders could not be deleted because they are shared by other applications, are currently in use, or contain files not installed by this install program.

Routine Maintenance

Prolonging the Service Life of the Printer **BJ Cartridges You Can Use With the Printer** Notes on Handling BJ Cartridges **BJ Cartridge Maintenance** When to Replace a BJ Cartridge **Printing a Nozzle Check Pattern Cleaning the Print Heads Replacing the Ink Tanks Replacing a BJ Cartridge Aligning the Print Heads Cleaning the Printer Transporting the Printer**

Prolonging the Service Life of the Printer

To ensure a long service life for your printer, clean it frequently and replace consumable items such as the BJ cartridges when required. Before you move the printer to a new location, pack it in its original box and packing material to prevent damage during shipping.

Guidelines for replacement of consumable items

ntenance BJ Cartridge Maintenance

When to Replace a BJ Cartridge

How to maintain the printer

Cleaning the Printer

Transporting the Printer

How to pack the printer for moving

Iransporting the Printer

BJ Cartridges You Can Use With the Printer

You can install two combinations of BJ cartridges for printing.

• Standard color combination Use this standard color combination for business graphics or standard color printing of charts and text.

> Left: BC-30e Black BJ Cartridge Right: BC-31e Color BJ Cartridge

- Photo color combination (optional) Use this photo color combination for printing photographs and scanned images that require fine halftone colors.
 - Left: BC-32e Photo BJ Cartridge (optional) Right: BC-31e Color BJ Cartridge





BC-30e Black BJ Cartridge

This BJ cartridge contains pigment black ink, which takes longer to dry than general dye ink, but produces extremely sharp, water-resistant text and graphics. The BC-30e Black BJ Cartridge, used in combination with the BC-31e Color BJ Cartridge, is ideal for business and technical reports that contain text with color charts or graphs.

The BC-30e Black BJ Cartridge is composed of two distinct parts, a replaceable print head and one replaceable ink tank, the BCI-3eBk Ink Tank. When this BJ cartridge runs out of black ink, only the ink tank needs to be replaced.





BC-31e Color BJ Cartridge

This BJ cartridge contains three inks: Cyan, Magenta, Yellow (CMY). The BC-31e Color BJ Cartridge is always installed on the right side of the cartridge holder. When this color BJ cartridge is used with the BC-30e Black BJ Cartridge installed on the left side of the cartridge holder, the combination is ideal and economical for printing text and color graphs and charts.

The BC-31e Color BJ Cartridge is composed of four distinct parts, a replaceable print head and three replaceable ink tanks. When a color runs out, only that ink tank needs to be replaced.



BC-32e Photo BJ Cartridge (optional)

This BJ cartridge contains three photo inks: Photo Cyan and Photo Magenta, which are slightly lighter than ordinary cyan and magenta, and dye black. The combination of the Photo Cyan and Photo Magenta of the BC-32e Photo BJ Cartridge with the three colors of the BC-31e Color BJ Cartridge achieves the most spectacular photo-realistic effects in printed photographic images.

The BC-32e Photo BJ Cartridge is composed of a replaceable print head and three replaceable ink tanks. When a color runs out, only that ink tank needs to be replaced.

Photo Black:	BCI-3ePBk Photo Ink Tank
Photo Cyan:	BCI-3ePC Photo Ink Tank
Photo Magenta:	BCI-3ePM Photo Ink Tank

Replacing the Ink Tanks



Notes on Handling BJ Cartridges

When you handle BJ cartridges...

- To avoid personal injury or damage to the print head, do not touch the print head of a BJ cartridge. The print head becomes very hot during printing and can cause a minor burn. Touching the print head could damage it and make further printing impossible.
- To avoid ink spills and stains on your clothing or the surrounding area, do not drop or shake BJ cartridges or ink tanks.



When you store BJ cartridges...

When you replace a BJ cartridge, always store the BJ cartridge you are not using in an Ink Cartridge Storage Box. If the BJ cartridge is not properly stored in the container, the ink will dry out and you can no longer use the BJ cartridge. Also, after removing the seal on an ink tank, always insert it into a BJ cartridge to prevent the ink tank from drying out.





Always store BJ cartridges and ink tanks out of the reach of small children. If any ink enters an eye or is accidentally ingested, seek medical assistance immediately.



- Do not attempt to reattach the protective cap and protective tape after removing them. Observe all local regulations regarding the location and method of disposing of them.
- Do not leave an empty ink tank in a BJ cartridge. Remove it immediately after ink runs out, and replace it with a new ink tank.
- If, for some reason, you remove a usable ink tank from the BJ cartridge, re-insert the ink tank right away. Otherwise the ink will dry and print jobs may not be performed properly when you install the ink tank later.
- For optimum print quality, an ink tank or BJ cartridge should be used up within six months or a year respectively, after opening the original packaging.

Replacing the lnk Tanks

When you replace an ink tank or BJ cartridge...

The BC-30e Black, BC-31e Color, and BC-32e Photo BJ Cartridges contain replaceable ink tanks. Ink tanks and BJ cartridges are consumable items. When an ink tank runs out of ink, or after a print head wears out, replace the item.

Replacing the lnk Tanks

Replacing a BJ Cartridge

Note 🗼

- When you replace an ink tank, note the name and number and replace it only with an identical ink tank.
- If the print head is worn out, replace the entire BJ cartridge.

BJ Cartridge Maintenance

Over time, ink tanks run out and require replacement, and eventually the BJ cartridges also require replacement after the print heads wear out. The following topics regarding BJ cartridge maintenance describe how to check the status of the BJ cartridges and take the appropriate actions to correct problems.

- Printing a Nozzle Check Pattern
- Cleaning the Print Heads
- Replacing the lnk Tanks
- Replacing a BJ Cartridge
- Aligning the Print Heads

When to Replace a BJ Cartridge

If your printout appears streaked or blurred, open the front cover of the printer and visually check the level of the ink in all the ink tanks. If the remaining ink is low or has run out, replace the necessary ink tank(s).

Replacing the Ink Tanks



If an ink tank runs out of ink, the printer beeps four times and the BJ Status Monitor for Windows starts up to display a message to warn you that an ink tank has run out of ink.

If, after you replace the ink tank(s), the print quality is still poor, follow the procedure outlined in the flow chart on the next page.



- Printing a Nozzle Check Pattern
- Cleaning the Print Heads
- Replacing a BJ Cartridge
- Aligning the Print Heads

Printing a Nozzle Check Pattern

The Nozzle Check Pattern confirms whether the inks are being correctly ejected from the print head nozzles and whether the print head on the BJ cartridge is correctly aligned. Print the Nozzle Check Pattern when your printouts are streaked or the color tones are not correct, or after you perform print head cleaning.

Windows

Printing a Nozzle Check Pattern

Macintosh

Printing a Nozzle Check Pattern

Note

You can print a Nozzle Check Pattern with the printer driver or with the RESUME button on the printer. To print the Nozzle Check Pattern from the operation panel, press and hold down the RESUME button until the POWER light flashes twice, and then release it.

Cleaning the Print Heads

Cleaning the print heads clears the nozzles. There are two ways to clean the print heads: normal print head cleaning and deep print head cleaning. Always execute normal print head cleaning first. If this does not correct the problem, then execute deep print head cleaning.



Cleaning the print heads consumes ink, so clean the print heads only when necessary.

Windows

Cleaning the Print Heads

Macintosh

Cleaning the Print Heads



You can also start print head cleaning with the RESUME button on the printer. Press and hold down the RESUME button until the POWER light flashes once, and then release it.

Replacing the Ink Tanks

Note >>> When you purchase extra ink tanks, make sure that you get the correct ink tanks for each BJ cartridge.

• For BC-30e Black BJ Cartridge: BCI-3eBk Black Ink Tank

BC-30e Black BJ Cartridge

 For BC-31e Color BJ Cartridge: BCI-3eC Cyan Ink Tank BCI-3eM Magenta Ink Tank BCI-3eY Yellow Ink Tank

BC-31e Color BJ Cartridge

 For BC-32e Photo BJ Cartridge: BCI-3ePBk Photo Black Ink Tank BCI-3ePC Photo Cyan Ink Tank BCI-3ePM Photo Magenta Ink Tank

BC-32e Photo BJ Cartridge (optional)

1 Make sure that the printer is turned on and open the front cover. The cartridge holder moves to the left side.



- If you need to replace more than one ink tank, do not remove the ink tanks together. Remove and replace each ink tank one by one to ensure that each new ink tank is inserted in the correct slot. If you insert an ink tank in the wrong slot, colors will not print correctly.
- To avoid interfering with the ink supply from a tank, never touch the opening on an ink tank.
- 2 To remove the empty ink tank, press in on the tab on the ink tank to release it; then lift it out of the slot.

Do not remove the BJ cartridge! Leave the BJ cartridge installed in the printer and remove only the ink tank(s).





- Discard empty ink tanks according to the local laws and regulations regarding disposal of consumables.
- To avoid staining your hands, clothing, or areas of your work site, do not shake or drop ink tanks when you are handling them.
- **3** Remove the new ink tank from its package. Pull the orange tape up and against the perforations to open the packing film.





- Remove the film carefully so you do not remove the label from the ink tank. The label is needed to match the ink tank with the correct slot of the BJ cartridge.
- Remove the film by pulling on the orange tape. Do not attempt to remove the film before you remove the orange tape.


Grip the bottom of the ink tank and twist off the orange protective cap in the direction of the arrow.



To prevent ink spills, do not press this side of the ink tank.



Do not attempt to reattach a protective cap to an ink tank. Discard the protective cap immediately.

5

Hold the new ink tank at a slight angle and align it with the correct slot. Then insert the ink tank in its place.

Make sure you insert the ink tank into the correct slot of the cartridge holder.



6 To lock the ink tank in place, press down on top of the ink tank. Press down until the ink tank locks in place with a click.



7 Close the front cover.

The cartridge holder returns to the home position, and print head cleaning begins automatically.

The POWER light flashes during print head cleaning. When print head cleaning is complete and the POWER light stops flashing, you can resume normal operation.

Replacing a BJ Cartridge

If print quality remains poor even after replacing the ink tanks and cleaning the print heads, the print head is worn out and you must replace the corresponding BJ cartridge.



Use only the following BJ cartridges with the S450 printer:

- BC-30e Black BJ Cartridge
- BC-31e Color BJ Cartridge
- BC-32e Photo BJ Cartridge (optional)
- **1** Make sure that the printer is turned on and open the front cover. The cartridge holder moves to the left side.



Raise the cartridge lock lever to unlock the BJ cartridge.

- If you are replacing a BC-30e Black BJ Cartridge or a BC-32e Photo BJ Cartridge, raise the left cartridge lock lever.
- If you are replacing the BC-31e Color BJ Cartridge, raise the right cartridge lock lever.

Make sure you raise the lever all the way up.





To avoid staining your hands, clothing, or areas in your work site, handle the BJ cartridge carefully. Avoid dropping or shaking the BJ cartridge.



Remove the entire BJ cartridge with the ink tanks in place.





- If you are removing a partially used BJ cartridge, store it in the Ink Cartridge Storage Box.
- Always hold the BJ cartridge by the handles embossed on the left and right sides of the BJ cartridge. Do not touch the metal contacts or the print head on the BJ cartridge.

Notes on Handling BJ Cartridges

4 Remove a new BJ cartridge from its package. Remove the orange protective cap then slowly remove the orange protective tape.





- Do not attempt to reattach the tape or cap to the BJ cartridge. Discard the protective cap and tape immediately.
 - To avoid poor print quality, do not touch the print head area of the BJ cartridge.

5 Set the BJ cartridge in the cartridge holder, then lower the cartridge lock lever until it locks in place.





- When you install either a BC-30e Black BJ Cartridge or an optional BC-32e Photo BJ Cartridge, insert it into the left side of the cartridge holder. You insert the BC-31e Color BJ Cartridge into the right side of the cartridge holder.
- 6
- Press in on the tab of the protective cartridge insert and remove it.



7 Insert the ink tank(s) in the new BJ cartridge.



You can use new ink tanks or the ink tanks from the worn BJ cartridge.

Replacing the Ink Tanks

Note >>> Install an ink tank immediately after removing it from the worn BJ cartridge or its package. If an ink tank remains exposed for a long period, it may run out of ink quickly after it is installed.

8 Close the front cover.

The cartridge holder returns to the home position and print head cleaning begins automatically. Do not open the front cover during print head cleaning.

After you replace a BJ cartridge, always align the print heads.



Aligning the Print Heads

Two BJ cartridges are always installed in the S450 printer. Each time you replace a BJ cartridge or switch BJ cartridges for a special print job, you must align the print heads to ensure optimum printing.

There are two ways to align the print heads: automatically or manually. Normally you will execute the automatic print head alignment feature of the printer driver. If this does not work for some reason, then you can execute manual print head alignment.

Aligning the Print Heads

Macintosh

Windows

Aligning the Print Heads

Cleaning the Printer

With routine use paper dust and room dust may accumulate around the paper output tray and other parts of the printer. Clean the printer periodically.

ACaution

- To avoid personal injury from burns or electrical shock or damage to the printer during cleaning, do not use a flammable solvent such as thinner, benzene, or alcohol.
 - To avoid personal injury from touching printer components, always unplug the printer before cleaning.
 - Do not unplug the power cord when the POWER light is on or flashing. This may damage the printer.
- **1** Press the POWER button (\bigcirc) to turn the printer off. Check the POWER light and make sure that it is not on or blinking.
- 2 Make sure that the POWER light is off, then unplug the power cord from the power outlet.



Remove the paper output tray and wipe the paper output area with a soft cloth.



Transporting the Printer

Use the original box and packing material to repack the printer for shipping or moving to another location. (When you do not use the original box, make sure that the printer is packaged properly so that it does not get damaged during transportation.)

- Make sure that the printer is turned on and open the front cover. The cartridge holder moves to the left side.
- **2** Raise the cartridge lock lever to unlock the BJ cartridge.
- 3
- Remove the entire BJ cartridge with the ink tanks in place.
- Note
- Always hold the BJ cartridge by the handles embossed on the left and right sides of the BJ cartridge. Do not touch the metal contacts or the print head area on the BJ cartridge.
- To avoid staining your hands, clothing, or areas in your work site, handle the BJ cartridge carefully. Avoid dropping or shaking the BJ cartridge.
- If you are removing a partially used BJ cartridge, store it in the Ink Cartridge Storage Box.

Notes on Handling BJ Cartridges

4 Lower the cartridge lock lever.

- **5** Press the POWER button (()) while leaving the front cover open. The POWER light turns off and the cartridge holder remains in the same position. Now unplug the power cord from the power outlet.
 - *6* Fix the cartridge holder with tape and the cartridge lock lever with packing material.



- 7 Close the front cover.
- 8 Lower the paper rest.
- *9* Remove the paper output tray.

10 Disconnect the printer cable from your computer and printer, and disconnect the power cord from the printer. (Illustration shows use of a parallel printer cable.)



11 Reattach the tape and packing material to the printer and insert the printer into its plastic bag.



12 Fit the packing material on either end of the printer and pack the printer into the original box.





If you are shipping the printer through a shipping agent, mark the box with FRAGILE or HANDLE WITH CARE.

Troubleshooting

Printout Is Unsatisfactory Printer Does Not Start or Stops Mid-Job Paper Jams or Does Not Feed The POWER Light Flashes Orange An Error Message Appears Other Problems Before You Call for Help Getting Help From Canon

Printout Is Unsatisfactory

Colors not clear Printed and on-screen colors do not match Meaningless characters or symbols printed Text cut off at bottom right corner, right edge, or bottom edge Colors streaked or wrong Straight lines are broken Printed pages curled Backs of pages stained with ink Ink blurred Printed surface scratched White streaks visible Colors streaked or uneven Last part of print job not printing Characters and figures notched/gradation streaked or unnatural

Colors not clear

The colors in printed photographs and illustrations are not as clear as you expected.

Check 1 BJ CARTRIDGE AND MEDIA CORRECT FOR THE PRINT JOB?

For printing photographs or illustrations, use of High Resolution Paper, Glossy Photo Paper, or High Gloss Photo Film is recommended. These media provide better color reproduction and brighter colors than plain paper.

For best results, use the combination of the BC-31e Color BJ Cartridge and the optional BC-32e Photo BJ Cartridge.

For printing color graphs or charts with text, use the combination of the BC-30e Black BJ Cartridge and the BC-31e Color BJ Cartridge.

A clogged or worn BJ cartridge may also cause printing problems. Print a Nozzle Check Pattern and check the printed patterns.

Printing a Nozzle Check Pattern

Check 2 PRINTER DRIVER SETTINGS CORRECT FOR MEDIA AND PRINT JOB?

Open the Printer Properties dialog box and select the print mode best suited for the print job in the Choose Print Mode box under the Main tab.

Also make sure that the BJ Cartridge and Media Type settings match the BJ cartridge and media currently set in the printer.

Using the Windows 98/95 Printer Driver



Windows

You may also want to click the **Advanced** button in the Main tab. Click the Color tab, check that Color Adjustment is enabled, and then adjust the Color settings such as Color Balance, Output Style, and Brightness.

Macintosh

Select the Color panel and change the settings such as the Matching Method.

Check 3 Re-FILLED INK TANK INSTALLED IN THE BJ CARTRIDGE?

You may not be able to achieve satisfactory performance with an ink tank that does not contain genuine Canon ink. It is recommended that you use genuine Canon ink tanks especially designed for use with the Canon BJ cartridges.

Replacing the lnk Tanks

Printed and on-screen colors do not match

The colors you see on the screen do not match the colors you see in the printed copy of the same image. For example, objects that appear blue on the screen are printed purple and objects that appear pale green on the screen are printed dark green.

A color display and printer do not reproduce color in the same way. The printed color tones may not perfectly match the colors you see on the screen because screen colors vary based on how the screen is viewed and calibrated.

If the differences between displayed and printed colors are extreme, check the following.

Check 1 Is the INK IN THE BJ CARTRIDGE IN GOOD CONDITION?

If there are wide differences between the screen colors and printed colors, one of the ink tanks may have run out of ink or some of the print head nozzles may be clogged. Print a Nozzle Check Pattern and check the results.

Printing a Nozzle Check Pattern

Check 2 IS THE INK TANK INSTALLED IN THE CORRECT SLOT OF THE CARTRIDGE HOLDER?

Make sure that you install the ink tanks in the correct slots of the BJ cartridge.

Replacing the Ink Tanks

Check 3 ARE THE PRINTER DRIVER SETTINGS CORRECT?

Open the Printer Properties dialog box and select the print mode best suited for the print job in the Choose Print Mode box under the Main tab.

Also make sure that the BJ Cartridge and Media Type settings match the BJ cartridge and media currently set in the printer.

➡ Using the Windows 98/95 Printer Driver



If Monochrome Effects is selected for Special Effects, the colors displayed on the screen may differ from those that are printed. Make sure the correct settings are selected.

Windows

You may also want to click the **Advanced** button in the Main tab; then click the Color tab and adjust the color settings such as Color Balance, Output Style and Brightness. If Color Adjustment is off, click the checkbox to turn it on.



Use Manual for printing.

Meaningless characters or symbols printed

The document is displayed correctly on the screen but meaningless text and symbols are printed.

Check 1 Are you using the correct printer driver?

Windows

Meaningless characters and symbols may print if you have selected the wrong printer driver for the print job.

Start the print procedure again and make sure that Canon S450 is displayed in the Name entry box of the Print dialog box.

If another driver is selected, click the down-arrow and select Canon S450 from the pull-down list.



If you use only the Canon S450 printer, select the Canon S450 as the default printer. Click **Start**, **Settings**, and then **Printers**. Highlight the S450 icon and right-click. Click "Set as default"; make sure a checkmark appears next to "Set as default".

Check 2 Are the printer and computer securely connected?

Check the printer cable connections at the printer and computer. A faulty or loose connection can generate meaningless characters and symbols to print.

Check 3 Is the problem in the original file?

If meaningless characters or symbols are printed only when you print a certain file, the cause of the problem may be in the file or the application program you are using. Rebuild the file and print it again.

If the rebuilt file prints correctly, the original file was probably faulty.

If the rebuilt file does not print correctly, contact the applications company.

Before You Call for Help

Text cut off at bottom right corner, right edge, or bottom edge

The text is printing in the bottom right corner of the page or printing beyond the right or bottom margins and cut off from view.

Check Is Scaled Printing set for enlargement in the printer driver?

If Scaled Printing is set for enlargement in the printer driver, the document is enlarged and printed in the bottom right corner, or cut off at the bottom or right edge of the paper.

If you want to use Scaled Printing with enlargement, make sure that the correct percentage is set and confirm that the Page Size selection is correct.



To disable Scaled Printing, open the Printer Properties dialog box, click the Page Layout tab, and click Normal-size Printing.

➡ Using the Windows 98/95 Printer Driver

Macintosh

To disable Scaled Printing, select Page Setup from the File menu and set 100% in the Scale box.

Using the Macintosh Printer Driver

Single file page prints over two or more pages

Check Does the Page Size setting in the application program and printer driver match?

Windows

Set the same Page Size setting for the application program and the printer driver.

Open the Printer Properties dialog box, click the Page Layout tab, and select the Page Size that matches the Page Size setting in the application program.

Colors streaked or wrong

The text appears scratched, streaked, or the wrong colors are printed.

Check 1 Is the INK IN THE **BJ** CARTRIDGE IN GOOD CONDITION?

If text or images are streaked, scratched, faint, or if the wrong colors are printing, one of the ink tanks may have run out of ink, the print nozzles may be clogged, or the print head may be worn out.

Print a Nozzle Check Pattern and check the printed patterns.

Printing a Nozzle Check Pattern

Check 2 Has the protective tape or cap been reattached to the BJ cartridge?

After removing the orange protective cap and tape, do not attempt to re-attach them to the BJ cartridge. Re-attaching the tape or cap can cause air bubbles, trap dirt or dust, and clog the ink nozzles.

If the protective tape or cap has been re-attached, remove it. Install the BJ cartridge in the printer and clean the print heads immediately.

Check 3 DID YOU PRINT ON THE CORRECT PRINT SIDE OF THE MEDIA?

The correct print side is different for each type of media.

Make sure that the correct print side is facing up when you load the media in the auto sheet feeder.

Paper and Other Print Media—Print Side

Straight lines are broken

Check 1 Have the print heads been aligned?

Each time you install a BJ cartridge, you must align the print heads. If you do not align the print heads, straight lines may appear broken or uneven.

Aligning the Print Heads

Check 2 IS PRINT QUALITY SET TO FAST IN THE PRINTER DRIVER?

Changing Print Quality to Fine in the printer driver may improve the quality of printed straight lines.

Windows

- **1** Open the Printer Properties dialog box.
- 2
- Click the **Advanced** button in the Main tab.
- 3 In the Quality tab, drag the slide bar to the right to select Fine.

Macintosh

- 1
- When using Manual for printing, click the **Details** button in the Printer Properties dialog box.
- **2** In the Quality panel, drag the slide bar to the right to select Fine.

Check 3 IS THE PAPER THICKNESS LEVER SET CORRECTLY?

If straight lines are printed uneven or broken after changing the setting of the paper thickness lever on the front of the printer, re-align the print heads.

Aligning the Print Heads

Printed pages curled

As printed pages are ejected from the printer, they are curled or wavy.

Check 1 Are you printing on thin paper?

The large amount of ink used to print color photographs and illustrations can cause printed pages to curl or warp.

For such cases, be sure to use special media such as High Resolution Paper or Glossy Photo Paper.

Note >>> When you use High Resolution Paper, Glossy Photo Paper, or other special media, always load the pages with the print side (whiter side) facing up. Only one side of these media is treated with a special coating for better ink absorption.

Check 2 Is the printer driver set for high density printing?

Move the Intensity setting (print density) in the Color tab to a lower setting and execute the print job again. A lower Intensity setting uses less ink and thus causes less curling of the printed page.

Windows

- **1** Open the Printer Properties dialog box and click the **Advanced** button in the Main tab.
- 2 Click the Color tab.
- 3
- Use the Intensity slide bar to change the Intensity setting.

Macintosh

- **1** When using Manual for printing, click the **Details** button in the Printer Properties dialog box.
- 2 Click the Color panel, and use the Density slide bar to change the intensity setting.
- Note
- Curling occurs most frequently with small paper sizes such as A5. To avoid this curling problem, try not to use small paper sizes to print documents that contain photographs or illustrations.

Backs of pages stained with ink

The backs of pages are stained after they are printed and ejected from the printer.

Check Is grayscale printing being performed?

If you are performing grayscale printing, the backs of the pages may be stained with ink. You may be able to eliminate this problem by reducing the black density on the printer driver setting screen.

Windows

- **1** Open the Printer Properties dialog box and click the **Advanced** button in the Main tab.
- 2 Click the Color tab.
- 3 Use the Black slide bar to change the print density setting.

If this does not produce an improvement, try using the optional BC-32e Photo BJ Cartridge (with the BC-31e Color BJ Cartridge) to perform your printing.

Macintosh

1

When using Manual for printing, click the **Details** button in the Printer Properties dialog box.

2 In the Color panel, use the Black slide bar to change the print density setting.

Ink blurred

The ink has blurred in the print job; images are not sharp and the ink has spread and run together.

Check 1 Are you using plain paper?

If you are using plain paper, use another type of print media. To minimize ink spread, use High Resolution Paper, Glossy Photo Paper, or High Gloss Photo Film.

Check 2 IS THE PRINT HEAD DIRTY?

Clogged print head nozzles can cause ink spread and blurring, so clean the print heads.

Cleaning the Print Heads

Check 3 Is the printer driver set for high-density printing?

The Intensity setting in the printer driver can be used to adjust print density (that is, the amount of ink used to print).

Lowering the print density setting can reduce the tendency for ink to spread in color photographs or illustrations.

Windows

- **1** Open the Printer Properties dialog box and click the **Advanced** button in the Main tab.
- 2 Click the Color tab.
- 3
- Use the Intensity slide bar to change the intensity setting.

Macintosh

- **1** When using Manual for printing, click the **Details** button in the Printer Properties dialog box.
- 2 In the color panel, use the Density slide bar to change the print density setting.

Printed surface scratched

The print side of the paper is scratched and stained.

Check 1 Are you printing on thick paper?

If you print on thick paper, the print head may scratch the printed surface of the page. If you experience difficulty when printing on thick paper, clean the print heads.

Cleaning the Print Heads

Check 2 Is the Paper Thickness Lever set correctly?

When you use thick paper such as envelopes or Artist Canvas, set the paper thickness lever to the Down position.

If the printed surface is scratched or stained on plain paper, it may also help to set the paper thickness lever to the Down position.

Check 3 Are you printing on curled plain paper?

If curled plain paper is loaded with the curl bowing up, the print heads may scratch the bottom edge of the paper.

Try to uncurl the paper. If necessary, turn the paper over, and load it in the sheet feeder again.

Check 4 ARE YOU EXECUTING A HIGH-DENSITY PRINT ON PLAIN PAPER?

If you execute a high-density print job on plain paper, the paper may absorb too much ink and curl, and the print heads may scratch the surface of the curled page. Lower the Intensity setting.

Windows

- **1** Open the Printer Properties dialog box, and click the **Advanced** button in the Main tab.
- 2 Click the Color tab.
- **3** Use the Intensity slide bar to change the print density setting.

Check 5 Are you printing outside the recommended printing area?

If you print outside the recommended printing area, the print heads may scratch the bottom edge of the page. To avoid problems, print only in the recommended printing area.



When you print on High Gloss Photo Film or Back Print Film, the bottom margin must be larger than 1.02 in. (26 mm).

Printing Area

White streaks visible

Check PRINT A NOZZLE CHECK PATTERN.

If colors are broken or missing, clean the print heads.

If lines are not aligned properly, align the print heads.

If any portion of the Nozzle Check Pattern is streaked, the print heads could be clogged, may not be aligned properly, or the BJ cartridge may be worn out.

If the problem persists after cleaning the print heads and aligning the print heads, try replacing the BJ cartridge.



If the Nozzle Check Pattern prints normally, there may be a problem in the application program. For details, refer to the Troubleshooting sections of the documentation of your application program.

Printing a Nozzle Check Pattern
Colors streaked or uneven

Patterns of uneven or streaked coloring appear on the printout.

Check 1 IS PRINT QUALITY ON THE QUALITY TAB IN THE PRINTER DRIVER SET TO FAST?

Set Print Quality to Fine and print again. This reduces uneven coloration you may see in a document where a large amount of ink is used.

Windows

- **1** Open the Printer Properties dialog box.
- 2 Click the **Advanced** button in the Main tab.
- **3** In the Quality tab, drag the slide bar to the right toward Fine and click the **OK** button.

Macintosh

- 1
- When using Manual for printing, click the **Details** button in the Printer Properties dialog box.
- **2** In the Quality panel, drag the slide bar to the right toward Fine.

Check 2 IS HALFTONING SET FOR OPTIMUM PERFORMANCE?

Check the Halftoning setting in the Quality tab of the printer driver. The Diffusion setting smoothes uneven or streaked colors.

Windows

- **1** Open the Printer Properties dialog box.
- 2
- Click the **Advanced** button in the Main tab.
- **3** In the Halftoning box under the Quality tab, disable Auto if it is checked and enabled.
- **4** Click Diffusion and click the **OK** button.

Macintosh



- When using Manual for printing, click the **Details** button in the Printer Properties dialog box.
- 2 In the Quality panel, set Halftoning to Scatter.

Last part of print job not printing

The last part of each page in the document is not printed.

Check 1 Are you using the paper size specified in the Page Size setting?

If the size of the paper loaded in the printer does not match the Page Size setting in the printer driver, part of each page may not print.

Check the Page Size or Paper Size setting. If it does not match the size of the paper you are using, click the down-arrow and select the correct size from the pull-down list.



Check the Page Layout tab.



Check the Page Setup dialog box.



Set the same Page Size setting for the application program and the printer driver.

Set the Page Size that matches the Page Size setting in the application program.

Check 2 Are the computer and printer securely connected?

Check the connection of the printer cable at the computer and printer. A loose connection can cause losing part of a print job.

Check 3 IS A WPS PRINTER DRIVER INSTALLED? Windows

You may not be able to print correctly with a WPS (Windows Printing System) printer driver installed in your system. Confirm whether or not a WPS driver is installed in your system.

Change the WPS driver port setting to FILE or delete the WPS driver.

- **1** Open the WPS Driver Properties window.
- **2** In the Details tab, select FILE in the Print to Port setting.
- **3** To delete the WPS driver, select Programs and then Windows Printing System from the Windows Start menu and click Uninstall.

Characters and figures notched/gradation streaked or unnatural Windows

Characters and figures print with unnatural notches.

Gradation appears streaked.

Check Are you using an application program that only supports PostScript?

The S450 is a QuickDraw printer and is not a PostScript printer. Therefore, if you use an application program that supports only PostScript, the lines of characters and figures may print with unnatural notches. Always use an application program that supports QuickDraw.

Some PostScript application programs have a setting that allows you to use ATM fonts or TrueType fonts. When you specify the ATM fonts or TrueType fonts in the application program, then characters, figures and gradation can be reproduced properly.

Printer Does Not Start or Stops Mid-Job

Printer does not turn on Print job does not start Printing halts Printing starts but nothing prints Cartridge holder does not move to the center

Printer does not turn on

The printer does not turn on when you press the POWER button.

Check 1 Have you pressed the **POWER** BUTTON FIRMLY?

Press the POWER button fully down, then release it. If you do not press the button hard enough, the printer may not turn on.

Check 2 Is the power cord plugged in?

Make sure that the power cord is plugged into a power outlet.

Check 3 Is the power outlet live?

Connect another electrical device to the same power outlet. If the other device operates normally, the power outlet is functioning normally.

If you perform all these checks and the problem is not solved, unplug the printer and contact the Canon Customer Care Center.

Before You Call for Help

Getting Help From Canon

Print job does not start

Printer does not operate after print job is executed from the computer.

Check 1 Is the printer turned on?

Check the POWER light to see if it is green.

If the POWER light flashes green, the printer is either warming up or receiving data.

When the POWER light is on, the printer is ready to use.

Check 2 Are you printing a very large file?

A very large file may require some time to process before printing begins. Photographs and illustrations can increase the size of a file. For a very large file, wait a few minutes for the print job to begin.

Check the POWER light. If the POWER light flashes green, the computer is sending print data to the printer and the job is executing normally.

Check 3 Are the printer and computer securely connected?

Check the printer cable connections at the printer and computer. A faulty or loose connection can prevent the printer from starting.

Check 4 ARE YOU USING THE CORRECT PRINTER DRIVER?

A print job may not start if you have selected the wrong printer driver for the print job.

Windows

Check that Canon S450 is displayed in the Name entry box of the Print dialog box.

If another driver is selected, click the down-arrow and select Canon S450 from the pull-down list.

If Canon S450 does not appear in the list, you must install the printer driver.

Note >>> If you use only the Canon S450 printer, select the Canon S450 as the default printer. Click **Start**, **Settings**, and then **Printers**. Highlight the S450 icon and right-click. Click "Set as default"; make sure a checkmark appears next to "Set as default".

Macintosh

Select S450 from the Chooser of the Apple menu.

Check 5 Is the correct printer port selected?



If you are using the parallel interface to connect your printer, set your printer port to LPT1.

If you are using USB Interface to connect your printer, set your printer port to USBPRN.

- **1** Open the Printer Properties dialog box: click Start, select Settings, and click Printers. Highlight the Canon S450 icon and right-click. Now select Properties.
- 2 Click the Details tab and select LPT1 or USBPRN in the Print to the following port box (LPT1: Canon BJ LPT Printer Port).

Printing halts

The printer stops printing before the print job is complete.

Check 1 IS THE PRINT JOB A FINELY DETAILED PHOTOGRAPH OR ILLUSTRATION?

The printer requires more time to process a finely detailed illustration or photograph.

Check the POWER light. If the POWER light flashes green, the computer is sending print data to the printer and the job is executing normally.

If the print job requires a large amount of black ink on plain paper, the print job may require more time.

Check 2 Has the printer been operating for a long time?

The print heads may occasionally overheat during a long print job.

If the print heads overheat, printing pauses at the end of a pass across the page to allow time for the print heads to cool and then restarts after a brief interval. Interrupt printing at a convenient point, turn the printer off, and wait for at least 15 minutes for the print heads to cool.

If the printer overheats while printing a densely colored photograph or illustration, the printer may beep and stop printing to protect the print heads. In this case, you cannot continue printing. Turn the printer off and wait at least 15 minutes for the print heads to cool.



To avoid minor burns, never touch the print heads or the surrounding area.

Printing starts but nothing prints

The printer operates but nothing is printed on the page.

Check 1 Is the INK IN THE BJ CARTRIDGE IN GOOD CONDITION?

The print head nozzles may be clogged, one or more of the ink tanks may be low, or the BJ cartridge may be worn.

Visually check the level of the ink in the ink tanks. If the tanks are empty, replace them.

Replacing the Ink Tanks

Next, print a Nozzle Check Pattern to check the status of the print heads and clean the print heads.

Printing a Nozzle Check Pattern

Cleaning the Print Heads

If the problem is not solved, replace the BJ cartridge.

Replacing a BJ Cartridge

If you can print a Nozzle Check Pattern, check that the printer is connected to the computer securely. If the connection is loose, printing starts but nothing may be printed.

Also check that there is no problem with the original file.

Check 2 DID YOU REMOVE THE ORANGE PROTECTIVE TAPE FROM THE PRINT HEAD?

If the orange protective tape is not removed from the BJ cartridge, ink cannot be ejected from the BJ cartridge. Remove the BJ cartridge and check the print head.

If the tape has not been removed, remove it.

Align the print heads before you resume printing.

Replacing a BJ Cartridge

Aligning the Print Heads

Cartridge holder does not move to the center

You want to switch the BJ cartridge, replace an ink tank, or replace the BJ cartridge, but the cartridge holder does not move to the center when you open the front cover.

Check 1 Is the printer turned on?

Check the POWER light and make sure that it is green. If the POWER light is off, turn on the printer.

If you have just turned on the printer and the POWER light flashes green, the printer is warming up. Wait until the POWER light stops flashing.

Check 2 Has the front cover been open longer than 10 minutes?

If the front cover remains open longer than 10 minutes, the cartridge holder automatically returns to the home position to prevent the print heads from drying out.

Close the front cover and open it again. The cartridge holder moves to the center.

Paper does not feed from auto sheet feeder Paper skews during feeding Multiple sheets feed together Paper jams

Paper does not feed from auto sheet feeder

After the print job is started, the paper loaded in the auto sheet feeder does not feed.

Check 1 Is the paper too thick?

Thick paper does not feed from the auto sheet feeder. Do not attempt to print on paper or other media thicker than .024" or 28 lb (0.6 mm or 105 g/m^2).

Check 2 IS THE SHEET FEEDER OVERLOADED?

The number of sheets you can load in the auto sheet feeder depends on the media you are using. The media does not feed correctly if you exceed the prescribed number of sheets.

Check 3 DID YOU RAISE THE PAPER REST?

Before you load media other than envelopes in the auto sheet feeder, you should always raise the paper rest. If you do not raise the paper rest before loading, the media does not completely enter the paper feed slot during feeding.

Check 4 Is the paper folded or curled?

To avoid misfeeds and paper jams, never load paper in the auto sheet feeder that is folded, curled, or wrinkled.

Media Sizes You Can Use With the Printer

Media Types You Cannot Use With the Printer

Paper skews during feeding

The paper or other media does not feed straight into the paper feed slot.

Check 1 IS THE AUTO SHEET FEEDER OVERLOADED?

The number of sheets you can load in the auto sheet feeder depends on the media you are using. The media does not feed correctly if you exceed the prescribed number of sheets.

Check 2 IS THE PAPER FOLDED OR CURLED?

To avoid misfeeds and paper jams, do not load paper in the auto sheet feeder that is folded, curled, or wrinkled.

Media Types You Cannot Use With the Printer

Check 3 IS THE PAPER GUIDE SET CORRECTLY?

If the paper guide on the auto sheet feeder is not set correctly, the paper does not feed straight or may jam in the printer.

The paper guide must be snug against the side of the stack and not too tight.

Multiple sheets feed together

More than one sheet feeds from the stack at the same time.

Check 1 DID YOU FAN THE STACK BEFORE LOADING?

Before loading a stack of media in the auto sheet feeder, always fan the pages to remove static cling and align the edges. Fanning the stack separates the sheets so they can feed smoothly from the auto sheet feeder.

Check 2 IS THE AUTO SHEET FEEDER OVERLOADED?

The number of sheets you can load in the auto sheet feeder depends on the media you are using. The media does not feed correctly if you exceed the prescribed number of sheets.

Check 3 IS THE PAPER FOLDED OR CURLED?

To avoid misfeeds and paper jams, never load paper in the auto sheet feeder that is folded, curled, or wrinkled.

Media Types You Cannot Use With the Printer

Check 4 Are you printing on transparencies?

When more than one transparency feeds from a stack at the same time, lower the paper rest, set the stack, and try again.

Transparencies

Paper jams

If paper jams in the printer, remove it.

1 Slowly pull the paper out of the printer from the auto sheet feeder or the paper output slot, whichever is easier. (If the paper tears or shreds, open the front cover and remove all the fragments of paper.)



Close the front cover, load the paper, and then press the RESUME button.





- If the paper cannot be removed, press the POWER button twice to eject the paper automatically and start the print job again.
- Paper within the range of 17 to 28 lb (64 to 105 g/m²) can be loaded in the auto sheet feeder.

Media Sizes You Can Use With the Printer

• To avoid misfeeds and paper jams, do not load wrinkled, folded, or curled paper in the auto sheet feeder.

Media Types You Cannot Use With the Printer

The POWER Light Flashes Orange

When an error occurs, the POWER light flashes orange. The number of flashes indicates the cause of the problem.

Two flashes: Out of paper, paper jam, paper feed error Three flashes: Paper jam Four flashes: BJ cartridge out of ink Five flashes: BJ cartridge not installed correctly Six flashes: BJ cartridge not installed Seven flashes: BJ cartridge defective Eight flashes: Waste ink absorber almost full The POWER light flashes orange and green alternately: Service error

Two flashes: Out of paper, paper jam, paper feed error

If no paper is loaded in the auto sheet feeder, or if the paper is not loaded correctly, set the paper correctly and press the RESUME button.

If paper has jammed in the printer, remove the jam and press the RESUME button.

Paper Jams or Does Not Feed



If the paper is not feeding into the auto sheet feeder, adjust the paper guide and insert the paper.



Three flashes: Paper jam

If paper has jammed in the printer, remove the jam and press the RESUME button.



Four flashes: BJ cartridge out of ink

An ink tank in a BJ cartridge has run out of ink.

Replace the empty ink tank and press the RESUME button.

Replacing the lnk Tanks

Five flashes: BJ cartridge not installed correctly

One of the BJ cartridges is not installed correctly. Install a BJ cartridge for the S450.

BJ Cartridges You Can Use With the Printer

Six flashes: BJ cartridge not installed

One of the BJ cartridges is not installed. Select and install two BJ cartridges (black and color or photo and color) according to the work you are doing.

Seven flashes: BJ cartridge defective

There is a problem with one of the BJ cartridges installed in the printer.

Remove each BJ cartridge and check that the contacts on the BJ cartridge and cartridge holder are clean. Also check that the orange protective tape has been removed from the print head then install the BJ cartridge again.

If the error occurs again after you resume operation, replace the BJ cartridge.

Replacing a BJ Cartridge

Eight flashes: Waste ink absorber almost full

The printer has a built-in waste ink absorber to hold the ink that is consumed during print head cleaning.

Eight flashes indicate the waste ink absorber is nearly full. Press the RESUME button to skip the error so you can continue printing.

Call the Canon Customer Care Center for help to have the waste ink absorber replaced immediately.

Setting Help From Canon

Note >>> When the waste ink absorber becomes full, the POWER light flashes orange and green alternately, and printing will no longer be possible. Call the Canon Customer Care Center.

The POWER light flashes orange and green alternately: Service error

A service error means the printer requires the attention of a qualified technician.

Count the number of flashes. (You may be asked for this information.) Call the Canon Customer Care Center.

Before You Call for Help

Getting Help From Canon

An Error Message Appears

Error writing to LPT1 or USBPRN Windows
Application error, general protection fault Windows
Other error messages

Error writing to LPT1 or USBPRN



You cannot print when this message appears.

Check 1Is THE PRINTER TURNED ON?Check the POWER light to see if it is green.If the POWER light flashes green, the printer is warming up.After the POWER light is on, the printer is ready to use.

Check 2 Are the printer and computer connected properly?

Check the connections of the printer cable at the computer and the printer.

Check 3 IS PRINT SPOOLING OPERATING CORRECTLY?

Cancel spooling and send the print job directly to the printer.

- 1 Open the Printer Properties dialog box from the Start menu: click Start, select Settings, and click Printers. Highlight the Canon S450 icon and right-click. Select Properties.
- 2 Click the Details tab and click the **Spool Settings** button. Click the button for "Print directly to the printer."

Check 4 IS THE PRINTER PORT OPERATING CORRECTLY?

Check the status of the printer port.

When you are using the parallel interface:

- **1** Right-click the My Computer icon and select Properties from the pop-up menu.
- 2 Click the Device Manager tab, double-click Ports (COM & LPT), and then double-click Canon BJ LPT Printer Port (LPT1).
- **3** In the General tab, check that Original Configuration (Current) is enabled. An error occurs if this item is disabled. Read the message under Device Status and verify that no problem is indicated.
- **4** Click the Resources tab and read the message under Conflicting device list. If a conflict is indicated, reconfigure the competing device to another port.

When you are using the USB interface:

- **1** Right-click the My Computer icon and then select Properties from the popup menu.
- 2 Click the Device Manager tab, select the Universal serial bus controller, and then double-click Canon S450.
- *3* In the General tab, note what is displayed. Resolve any problems.

Check 5 IS THE PRINTER DRIVER INSTALLED CORRECTLY?

There may be a problem with the printer driver. Uninstall the printer driver and install it again.

Uninstalling the BJ Printer Driver

See the *Quick Start Guide* for details on installing the printer driver.

Check 6 Is the printer port setting identical to the interface you are using?

If the printer port setting is not identical to the interface connected to the printer, an error message appears.

To check the printer port setting, open the Printer Properties dialog box and click the Details tab.

- If LPT1 is displayed in the "Print to the following port" box, the printer port is set to the parallel port.
- If USBPRN nn (nn: numerals) is displayed in the "Print to the following port" box, the printer port is set to the USB port.

If the printer port setting does not match the interface connected to the printer, shut down Windows and turn the printer off. Then connect the printer using the correct interface specified in the printer driver, or install the correct printer driver that matches the connected interface.

Check 7 IS A WPS DRIVER INSTALLED?

You may not be able to print correctly if a WPS (Windows Printing System) driver is installed on your computer.

- **1** Click Start, point to Settings, and click Printers.
- **2** If a WPS driver is installed, right-click the icon and then select Properties from the pop-up menu.
- 3 Click the Details tab and check the "Print to the following port" setting. If the selected port is the port also used by the S450, change the WPS driver port setting to FILE or delete the WPS driver.

Application error, general protection fault



Check 1 Are you using a Windows 3.1 Application program?

Attempting to print from a Windows 3.1 application program installed on a system with Windows 98 or Windows 95 may cause an error. Use a Windows 98 or Windows 95 compatible application program.

Note You cannot use the Canon S450 with the Windows 3.1 operating system.

Check 2 Are several application programs running in the BACKGROUND?

If you are running several application programs at the same time, there may not be enough memory available for the print job.

Quit the other application programs and try again.

Check 3 Does the computer have sufficient memory?

Make sure that you have the required amount of memory installed for the application program you are using to print.

For details, refer to the documentation for your application program.

If the amount of memory is insufficient, install more memory.

Checking the Windows version and memory capacity

Check 4 IS THERE SUFFICIENT FREE SPACE ON THE HARD DISK?

An error may occur if there is not enough free space available on the hard disk.

Check the amount of free space on the hard disk.

If there is little free space available on the disk, delete any unneeded files.

Checking the amount of free space on hard disk

Check 5 IS THERE A PROBLEM IN THE FILE YOU ARE TRYING TO PRINT?

If these errors occur only when you try to print a particular file, there may be a problem in the file or the application program. Rebuild the file and try printing it again.

If there is no problem with the new file, the old file was probably faulty.

If the same error occurs with the new file, call either the software company or the Canon Customer Care Center.

Defore You Call for Help

Check 6 Is the printer driver installed correctly?

There may be a problem with the printer driver. Uninstall the printer driver and install it again.

Uninstalling the BJ Printer Driver

See the *Quick Start Guide* for details on installing the printer driver.

Other error messages

Check 1

1 AN ERROR DISPLAYED IN THE **BJ** STATUS MONITOR?

Windows

When an error occurs, the BJ Status Monitor screen opens.

The Print Status tab displays a short description of the error and other information about the print job. Click the Guide tab to display instructions on how to solve the problem.

For problems that require more than one step in correcting the problem, click the **Next** button to see the next screen, or click the **Back** button to see the previous screen.

Check 2 An error displayed in any screen other than Windows THE BJ STATUS MONITOR?

One of the following messages may be displayed.

S Insfficient disk space. ...

Delete any unneeded files to make more disk space available.

Checking the amount of free space on hard disk

S Insfficient memory. Cannot spool normally. ...

Quit any other application programs you are running in the background.

Checking the Windows version and memory capacity

S Cannot read printer driver. ...

Uninstall the printer driver and reinstall it.

Uninstalling the BJ Printer Driver

See the Quick Start Guide for details on installing the printer driver.

Solution of the second printing failed.

Restart Windows and try again.

(Application name) cannot print. ...

Try printing again after the current job is finished.

Check 3 ANY ERROR NUMBER (XXXX:) DISPLAYED? (Macintosh)

Error number (*202) displayed

Sufficient memory not available for the application program.

Check that the required amount of memory is allocated to the application program.

If there is not enough memory installed, install more memory.

Refer to your computer documentation for information on installing additional memory.

Error number (*203) displayed

Installed printer driver not operating correctly.

Remove the installed Macintosh printer driver and then install the printer driver again.

Uninstalling the Printer Driver

See the Quick Start Guide for details on installing the printer driver.

Error number (*300) displayed

Check the following.

- Printer is turned on?
- Printer cable is connected securely?

Make sure that the printer cable is securely fastened to the computer and the printer.

If the problem cannot be solved, check the settings in the Chooser.

- **1** Select the Chooser from the Apple menu.
- 2 Click the S450 icon.
- **3** Make sure that S450 is specified in the "Connect to" box.

Other Problems

Cannot install the printer driver BJ Status Monitor does not open Cannot execute background printing

Cannot install the printer driver

Check 1 DID YOU FOLLOW THE PRINTER DRIVER INSTALLATION INSTRUCTIONS IN THE QUICK START GUIDE?

The *Quick Start Guide* provides step-by-step instructions for installing the printer driver. If you are reinstalling the printer driver, remove any other Bubble Jet printer drivers which have been installed on the computer before reinstalling the printer driver.

Note

If an error occurred during installation and you had to shut down the installation procedure, you may not be able to install the printer driver because Windows is no longer stable. Restart Windows and then reinstall the printer driver.

Check 2 Are any other application programs running?

The installation program may not execute successfully if it is run with other applications running in the background.

Before you run the installation program again, shut down all other application programs.

If other BJ printer drivers are installed on your system, uninstall them before you run the installation program again.
Check 3 DID YOU SPECIFY THE CORRECT CD-ROM DRIVE FOR Windows INSTALLATION?

If the printer driver installation program did not start automatically when you loaded the CD-ROM, double-click the My Computer icon, then double-click the CD-ROM icon on the Windows desktop.

For details about the installation procedure, refer to the *Quick Start Guide*.



- When you install the printer driver from Run in the Start menu, specify the CD-ROM drive and file name (Setup.exe) correctly.
- The drive name (E:, for example) varies according to how your system is set up.

Check 4 Is there a problem with the S450 Canon Creative CD-ROM?

The S450 Canon Creative CD-ROM may be damaged. On the Windows desktop, double-click the My Computer icon then double-click the CD-ROM icon. If Windows cannot read the CD-ROM, call the Canon Customer Care Center.

Defore You Call for Help 🕈

Setting Help From Canon

BJ Status Monitor does not open



Check 1 Does your printer cable support bi-directional communication?

Check the hardware specifications of your printer cable. Operation of the BJ Status Monitor requires bi-directional data transfer between the computer and printer. The printer cable must be capable of bi-directional data transfer.

Check 2Is the bi-directional option selected in the printer driver?Check the bi-directional option.

- **1** Open the Printer Properties dialog box from the Start menu.
- 2 Click the Details tab and click the **Spool Settings** button.
- 3
- In the Spool Settings dialog box, click the button for "Enable bi-directional support for this printer."

Cannot execute background printing

The BJ Backgrounder is not displayed during a print job and you cannot use background printing.

Check 1 Is THERE ENOUGH FREE SPACE AVAILABLE ON THE HARD DISK?
You may not be able to print if there is not enough free space on the hard disk. Delete unneeded files to create more space.
Checking the amount of free space on hard disk

Note If you are unable to make more space available on your hard disk by deleting files, turn background printing off.

Check 2 Is background printing enabled in the printer driver?

Windows

- **1** Open the Printer Properties dialog box, then click the Page Layout tab.
- **2** Check Background Printing in the Background checkbox.

Macintosh

- 1
- Select Chooser from the Apple menu.
- 2 Set Backgrounding to On.

Before You Call for Help

Narrowing down the problem

Checking the printing environment

Narrowing down the problem

If you are experiencing difficulties, try to narrow the problem down to one of these factors.

Printer problem

If the printer will not operate, or if the POWER light flashes orange and green alternately with beeps, call the Canon Customer Care Center. Count the number of flashes and beeps. (You may be asked for this information.)

Hardware problem other than the printer

If the printer is operating normally and the settings in the application program are also correct, there may be a problem with a printer cable or in the computer system (for example, memory, hard disk, or interface). Contact your computer manufacturer.

Application program problem

Problems that arise only when you use a particular application program are probably caused by the application program. For details, consult the software company.

The problem may also be solved by installing the latest version of the printer driver.

Checking the printing environment

Check the information on the operating environment such as the name and version number of your operating system, the amount of memory installed, hard disk capacity and amount of free space on hard disk, and the printer driver version number.

Checking the Windows version and memory capacity



- **1** Right-click the My Computer icon and select Properties from the pop-up menu.
- **2** On the General tab note the system name, version number, and memory capacity.



Select About This Computer from the Apple menu.

Checking the amount of free space on hard disk

Windows

- **1** On the Windows desktop, double-click the My Computer icon.
- **2** Right-click the icon of the hard disk and select Properties from the pop-up menu.
- **3** On the General tab, check the hard disk capacity and the amount of free space.

Macintosh

- **1** On the desktop, click the icon of the hard disk.
- 2 Select Get Info from the File menu.
- *3* Select General Information.

Checking the version number of the printer driver

Windows

1 On the Windows desktop, click the **Start** button, point to Settings, and click Printers.



Right-click the S450 icon and select Properties from the pop-up menu.



Click the Main tab and click the **About** button. The version number of the printer driver is displayed.

Macintosh

- **1** Double-click the Extensions Folder in the System Folder and then select the S450 icon.
- 2 Select Get Info from the File menu.
- **3** Select General Information. The version number of the printer driver is displayed.

Getting Help From Canon

Canon Computer Systems, Inc. offers a full range of customer technical support* options including:

- For e-mail technical support, the latest driver downloads and answers to frequently asked questions (**www.ccsi.canon.com**)
- 24-hour, 7-day-a-week, automated support for troubleshooting issues on most current products (1-800-423-2366)
- 24-hour, Fax-On-Demand System for product specifications and technical information (1-800-526-4345)
- Free technical support Monday-Saturday (excluding holidays) for products still under warranty** (1-757-413-2848)
- Technical support 7 days a week (excluding holidays) for products no longer under warranty, for \$24.99 per call (**1-800-423-2366**), or for \$2.50 per minute, to a maximum of \$25.00 per call (**1-900-246-1200**)
- For information about extending your Canon service and support up to an additional two years, call 1-800-385-2155, or visit our Web Site at www.ccsi.canon.com (within 90 days from the date you purchase your Canon peripheral).

Note 🗼

Within Canada, call for technical support 24 hours a day, 7 days a week (1-800-OK-CANON)

- * Support program specifics subject to change without notice.
- ** Refer to individual product information for warranty details.

Specifications

General Specifications System Requirements

General Specifications

Printing method

Bubble Jet on-demand

Printing resolution

- Black and color: 1440 (horizontal) x 720 (vertical) dpi
- Photo: 720 x 720 dpi

Print speed (printing with Canon standard pattern)

- Black: 10 ppm
- Color: 7 ppm

Print direction

Bi-directional

Print width

8 in. (203.2 mm) max.

Receive buffer

128 KB max.

Interface (parallel) IEEE 1284-compatible Interface (USB) USB 1.1-compatible

Interface connector (parallel)

Amphenol 57-40360 or equivalent

Interface connector (USB)

USB standard Series B receptacle (USB interface)

Recommended parallel printer cable — IEEE 1284-compatible

- Material AWG28 or larger
- Type Twisted-pair shielded cable
- Length Up to 6.5 ft (2.0 m)
- Connectors Amphenol 30360 or equivalent

Recommended USB printer cable

- Material AWG28 (data wiring pair) or AWG20 to 28 (distribution pair)
- Type Twisted-pair shielded cable
- Length Up to 16.4 ft (5.0 m)
- Connectors
 USB standard Series B pluggable

Acoustic noise level

Less than approx. 45 dB (per ISO 9296)

Operating environment

TemperatureHumidity	41 to 95°F (5 to 35°C) 10 to 90% RH (no condensation)
Storage environment Temperature Humidity 	32 to 95°F (0 to 35°C) 5 to 90% RH (no condensation)
Power supply	

USA/Canada AC 120V, 60Hz

Power consumption

 Off Approx. 1W (AC 230±10%) Approx. 1W (AC 120V)
 Standby Approx. 3W (AC 230±10%) Approx. 3W (AC 120V)
 Printing Approx. 30W

Dimensions (with paper rest and paper output tray retracted)

- 17.9" x 12.3" x 6.8" (W x D x H)
- 455 x 312 x 173 mm (W x D x H)

Weight

Approx. 9.5 lb. (4.1 kg)

Sheet feeder capacity

- Plain paper (17 lb. or 64 g/m²)
- Artist Canvas
- Back Print Film
- Banner Paper
- Glossy Photo Cards
- Glossy Photo Paper
- Greeting Cards
- High Gloss Photo Film
- High Resolution Paper
- Magnet Sheet
- Transparencies
- Envelopes

- 1 sheet
- 10 sheets max.

100 sheets max.

- 1 sheet (2 to 6 sheets in length)
- 1 sheet
- 10 sheets max.
- 1 sheet
- 1 sheet
- 80 sheets max.
- 1 sheet
- 30 sheets max.
- 10 pieces max.

Ordinary print media

Regular size Letter, Legal, A4, A5, B5, US Com.#10, European DL

Custom size

WidthHeight	3.94" to 9.50" (100.0 to 241.3 mm) 3.94" to 23.0" (100.0 to 584.2 mm)
Weight	17 to 28 lb (64 to 105 g/m ²)
Thickness	0.24" (0.6 mm) max.

Canon Specialty Papers

- Artist Canvas
- Back Print Film
- Banner Paper
- Brilliant White Paper
- Bubble Jet Paper (water-resistant)
- Glossy Photo Cards
- Glossy Photo Paper
- Greeting Cards
- High Gloss Photo Film
- High Resolution Paper
- Magnet Sheets
- Transparencies

Graphic image printing

Data format Resolution Canon extended mode—Raster image format Canon extended mode—180, 360, 720, 1440 dpi

Printer driver software

Windows[®] 98/95

486 processor; 16MB RAM; 38MB free hard-disk space

Windows 2000

Pentium[®] processor, 133MHz or faster; 3.2MB RAM for Professional, 64MB RAM for Server; 25MB free hard-disk space

Windows NT[®] 4.0

Pentium®; 16MB RAM; 25MB free hard-disk space

Macintosh®

Macintosh with USB; Mac[®] OS (8.1 or later); 10MB RAM; 30MB free hard-disk space



- The BJ Status Monitor cannot be used when the printer is used in a network operating environment.
- When connecting the printer and computer through a USB interface, use the system under the following operating environment.

Computer with Microsoft Windows 98 or Windows 2000, which is preinstalled by a computer manufacturer on purchase. (USB port operation also needs to be assured by the manufacturer.)

Macintosh computer with Mac OS 8.1 or later, which is preinstalled by a computer manufacturer on purchase. (When using an iMac running under Mac OS 8.1, the system must be upgraded using iMac Firmware 1.0, which can be downloaded from the home page of Apple Computer, Inc.)

• Specifications subject to change without prior notice.

Using the Optional IS-32 Color Image Scanner Cartridge

Using the Scanner Using the Scanner With Windows Using the Scanner With Macintosh Scanner Problems

Using the Scanner

Scanner Driver Basics Unpacking the Scanner Cartridge Installing the IS Scan Software Installing the Scanner Cartridge Basic Scanning Procedure Using the White Calibration Sheet Scanning Area Guidelines Loading an Image

Scanner Driver Basics

Installing the optional IS-32 Color Image Scanner Cartridge in the printer makes it possible to scan and save images such as your favorite photographs and greeting cards.



Wallpaper for your computer

Windows

To use the scanner cartridge, you must install the IS Scan software, which includes the IS Scan scanner driver and the IS Scan Plus utility program. These two programs provide many features that allow you to perform simple color adjustments to improve the quality of the original image or enhance the image for artistic effect.

You can run the IS Scan driver from within a TWAIN-compliant graphics application program, or you can run the IS Scan Plus utility program directly as a stand-alone application program. The IS Scan Plus utility program allows you to scan, edit, enhance, and save the image data.

Macintosh

To use the scanner cartridge, you must install the IS Scan software. You can run the IS Scan driver from within a TWAIN-compliant graphics application, or you can run it directly as a stand-alone program.

Note

TWAIN is an industry interface standard that allows software applications to communicate with digital imaging devices such as scanners. Applications that support TWAIN provide a standardized method of acquiring images.

Unpacking the Scanner Cartridge

Make sure you have the following items.

■ IS-32 Color Image Scanner Cartridge





The scanner cartridge is composed of precision components. To avoid poor scanning results, do not touch the optical components or electrical contacts.

White Calibration Sheet

You use this sheet to maintain the correct color balance of scanned images. The first time you install the scanner cartridge, you need to run the white level calibration. You will also run calibration when the white level calibration data needs to be updated.



Scanning Holder

You can use this holder to hold a photo or other small image you wish to scan. The holder is two layers, one being a clear plastic cover to protect photographs.



Installing the IS Scan Software

Make sure the S450 Printer Driver is installed on your computer before you proceed with the following instructions.

- **1** Insert the S450 Canon Creative CD-ROM in your CD-ROM drive.
- 2 Double-click the S450 icon on your desktop:



3 Click the Manuals, Supplies, and Help button. You'll see this screen:





Click Canon Accessories and Paper.

You'll see this screen:



- **5** Click the Install IS-32 Driver button.
- 6 Follow the instructions on the screen.

Installing the Scanner Cartridge





- The scanner cartridge is composed of precision components. To avoid poor scanning results, do not touch the optical components or electrical contacts.
 - To avoid damaging the scanning head of the scanner cartridge, do not store the scanner cartridge in an Ink Cartridge Storage Box. The pad for the BJ cartridge print head inside the container is covered with ink that could damage the scanning head of the scanner cartridge.

Replacing a BJ Cartridge With the Scanner Cartridge

- **1** Make sure that the printer is plugged in and turned on. Open the front cover; the cartridge holder moves to the center automatically.
- **2** Raise the left cartridge lock lever to unlock the BJ cartridge.
- **3** Remove the BJ cartridge from the left slot.
- **Caution** To avoid staining your hands, clothing, or work area, handle the BJ cartridge carefully. Avoid dropping or shaking the BJ cartridge. Store the BJ cartridge in the Ink Cartridge Storage Box.
 - **4** Insert the scanner cartridge into the left slot of the cartridge holder, then lower the cartridge lock lever until it locks in place.



Basic Scanning Procedure

After installing the IS Scan scanner driver, you can use the S450 printer as a scanner.

- 1
- Remove the BJ cartridge installed in the left slot of the cartridge holder and then install the IS-32 Color Image Scanner Cartridge in the left slot.
- 2
- Start a graphics application program.

Windows

For Windows Users

- If you use a TWAIN-compliant graphics application program, launch the TWAIN-compliant application program. IS Scan launches from within the application program.
- If you use IS Scan Plus, select Programs from the Start menu first. Point to IS Scan Plus and then select IS Scan Plus.

Macintosh

For Macintosh Users

- If you use a TWAIN-compliant graphics application program, launch the TWAIN-compliant application program first. IS Scan launches from within the application program.
- If you use IS Scan as a stand-alone application program, double-click IS Scan S450 in the folder you specified during the installation procedure.

3 The first time you use the scanner, you need to perform the White Level Calibration.

Using the White Calibration Sheet

4 Insert the image you wish to scan into the scanning holder, then load the scanning holder into the auto sheet feeder.

➡ Loading an Image

- 5 Scan the image.
 Windows
 ➡ Scanning an Image
 Macintosh
 ➡ Scanning an Image
 6 Save the scanned image.
 - **7** Now you can install the BJ cartridge and print the scanned image.

Using the White Calibration Sheet

The white calibration sheet provided with the scanner cartridge is used for maintaining the correct color balance of scanned images. White level calibration is required when the scanner cartridge is used for the first time and when the white level calibration data needs to be updated.

When white level calibration is needed, you will see this screen when you click the Prescan or Scan button.





Load white calibration sheet.	
Cancel OK	

1 Load the white calibration sheet with the cropped corner at upper left.





- Click the OK button on your screen.
- **3** When the white calibration sheet is ejected from the paper output tray, White Level Calibration processing is complete. Click the OK button.



- Do not leave the white calibration sheet in locations that are exposed to direct sunlight or that are subject to high temperatures or humidity.
- Do not bend or wrinkle the white calibration sheet.
- When cleaning the white calibration sheet, use a soft cloth that is dipped in a weak, neutral detergent solution, and then wipe its wet surface off with a dry, soft cloth.
- The white level calibration data is stored into memory and used for maintaining the correct color balance of scanned images. When a message appears and prompts you to load the white calibration sheet, click the OK button and perform white level calibration.

You can also initiate White Level Calibration from the IS Scan driver.



Other IS Scan Features



Paper size	Scanning area
Letter 8.50 \times 11.00 in	8.19×10.00 Inches
A6 105.0 × 148.0 mm	3.86×5.42 Inches
A5 148.0 × 210.0 mm	5.55×7.86 Inches
A4 210.0 × 297.0 mm	8.00 × 11.28 Inches
B5 182.0 × 257.0 mm	6.89×9.71 Inches

- The scanning area varies according to conditions such as the scanning resolution and display resolution.
- If you wish to scan images larger than the size of the scanning holder provided with the IS-32 Color Image Scanner Cartridge, the SH-101 A4/LTR scanning holder is available for purchase. Visit the Canon Web site to find out about accessories and supplies (www.ccsi.canon.com).
- The maximum thickness of the image must be within 0.12 inch (0.45 mm), including the scanning holder. The scanning holder is 0.008 inch (0.2 mm) thick so the image you wish to scan must be less than 0.01 inch (0.25 mm) thick.
- To prevent possible damage to the printer or scanner cartridge, do not scan an image with paper clips or staples.
Loading an Image

- **1** Slide the paper guide to the left edge of the auto sheet feeder.
- 2
- Place the image in the scanning holder.
 - To prevent paper jams, always insert the image you wish to scan into the scanning holder.
 - Do not leave the scanning holder in locations that are exposed to direct sunlight or that are subject to high temperatures or humidity.
 - When you load the scanning holder on the printer, be sure to set the paper thickness lever to the down (or envelope) position. Scanning with the lever set incorrectly will adversely affect the print quality.
- 3
- Load the scanning holder in the auto sheet feeder of the printer.



Adjust the paper guide to the left edge of the scanning holder.





To prevent possible damage to the scanning holder, always insert the seamed side into the auto sheet feeder first.

Using the Scanner With Windows

Using IS Scan Changing the Scanning Mode Using the Customized Scanning Mode Saving the Settings **Using the Saved Settings** Other IS Scan Features **Using IS Scan Plus** Using Copy **Using Capture Image Using Capture Photo Editing a Scanned Image Printing a Scanned Image** Saving a Scanned Image

Using IS Scan

This section describes how to scan an image when you launch IS Scan from within a TWAIN-compatible application program.

Scanning an Image

- Note
- These basic procedures may vary according to the application program you are using.
- 1
 - Install the IS-32 Color Image Scanner Cartridge in the printer.

➡ Installing the Scanner Cartridge

2 Make sure Canon IS Scan 2 is set as the Acquire Source and then select the command used for scanning (such as Acquire or TWAIN) from the menu of the application program. The main IS Scan dialog box displays:

Settings File:	
	<u> </u>
	.etter 8.50 x 11.00 in
Scanning Mode	
DTP(Color)	DTP(B&W)
Photo	S FAX
G OCR	Text
Custom	
Image Size	_
8.19 x 10.60 lr	iches 🔹 8254 KB
Q ?	Default
	Scan Prescan



- Specify the basic settings.
 - Click the down-arrow on the right of the Paper Size box and select the most appropriate paper size for the image you wish to scan.
 - Select the most appropriate scanning mode for the image you wish to scan in the Scanning Mode box.

Changing the Scanning Mode

- **4** Load the image you wish to scan in the auto sheet feeder of the printer and click the Prescan button.
- Note
- It's a good idea to use prescanning to determine whether or not an image can be scanned properly or to test the effects of image adjustments. If the image is slanted or a portion of the image is cut off in the preview area, click the Clear button. Load the image correctly and click the Prescan button again.
- 5
- To scan only a portion of the image, you can drag the mouse to specify the portion. The specified portion is called a Selection Box and only the area in the Selection Box will be scanned. To specify the Selection Box:
 - Point to a corner of the rectangular area of the image that you want to select.
 - Drag the mouse to the opposite corner of the rectangle.

• Release the mouse button. The Selection Box appears on the image.





- To move the Selection Box, place the mouse pointer within the Selection Box and drag the mouse to the desired position.
 - To resize the Selection Box, point to a corner of the Selection Box and then drag the mouse.
 - You can confirm the dimensions of the Selection Box in the Image Size box.
 - The minimum size of the Selection Box is $1" \times 1"$ (25.4 mm \times 25.4 mm).

- 6 Load the image you wish to scan in the auto sheet feeder again.
- 7 Click the Scan button. Remember, if you specified a Selection Box in step 5, only that portion of the image is scanned.

<mark>≋i IS Scan</mark> S <u>e</u> ttings ⊻iew <u>O</u> ption <u>H</u> elp	
	Settings File: Paper Size: Letter 8.50 x 11 00 in Scanning Mode DTFrColor) Photo Castorn Castorn Image Size Stat × 4.02 Inches 7272 KB Qefault Iransfer Clear
	Color 360 dpi

- 8
- After scanning is complete, click the Transfer button to transfer the image data to the TWAIN-compatible graphics application program. Adjust, edit, or enhance the image in the application program as needed.



- Some TWAIN-compliant graphics application programs do not display the main IS Scan dialog box but instead display a different screen characteristic of the application program. If you are using this type of application program, read the documentation of the application program carefully and perform prescanning or normal scanning.
- After launching IS Scan from within a TWAIN-compatible application program, do not close the application program. If you do, the system may not be able to respond.
- To quit IS Scan, select Exit Driver from the Settings menu.

Changing the Scanning Mode

You can select a scanning mode according to your scanning purpose. Optimum settings, such as image type and resolution, are pre-assigned based on the contents of a scanning job. When you wish to customize the settings for special scanning jobs, click the Custom button.

Selecting a Default Scanning Mode

Select the most appropriate icon in the Scanning Mode box of the main IS Scan dialog box according to your scanning purpose.

Scanning Mode	Purpose	Image Type Resolution	Edge Emphasis Character Emphasis Color Matching	Prescan Mode
DTP(Color)	Standard setting for scanning a color image	Color 180 dpi	Off Off On	Grayscale
DTP(B&W)	Standard setting for scanning a monochrome image	Grayscale 180 dpi	Off Off Off	Grayscale
Photo	Suitable for scanning a photographic print such as a snapshot	Color 360 dpi	Off Off On	Grayscale

Scanning Mode	Purpose	Image Type Resolution	Edge Emphasis Character Emphasis Color Matching	Prescan Mode
FAX	Scans by converting a monochrome image into the data suitable for facsimile transmission	Monochrome 200 dpi	Off On Off	Monochrome
CCR	Scans by converting a monochrome image into the data suitable for OCR input	Monochrome 360 dpi	Off On Off	Monochrome
Text	Suitable for scanning an image that consists mostly of text	Monochrome 180 dpi	On Off Off	Monochrome
Custom	Used for customizing the settings for special scanning jobs Using the Customized Scanning Mode	_		—

Note 🗼

When you select FAX or OCR, the document is scanned and processed as a grayscale image and converted to monochrome binary image data. This process eliminates unnecessary image background and increases the quality of the scanned text and line art. When you select Text, the document is scanned and processed as a monochrome image.

Using the Customized Scanning Mode

When you select Custom in the Scanning Mode box of the main dialog box, the Custom dialog box opens and allows you to adjust the scanning settings for special scanning jobs.



Open the main IS Scan dialog box.

- 2
 - Click the Custom button in the Scanning Mode box. This displays the Custom dialog box:

Cu	stom	×
	<u>S</u> tandard Value:	DTP(Color)
	Image Type:	Color
	<u>R</u> esolution:	180 💌 dpi
	<u>I</u> hreshold:	<u> </u>
	 Edge Emphasis Character Emphasis Color Matching 	
	<u>M</u> onitor Type:	
	BJ Standard	T
	Prescan O Monochrome O Grayscale O Color	
\\	OK	Cancel <u>H</u> elp

3 Specify these settings in the Custom dialog box:

Standard Value

You change the standard values for the default settings here.

Image Type

Select a type of image: Color (the default), Grayscale, or Monochrome.

Resolution

Determines the precision of the scanned image. The higher the resolution setting, the higher the precision and quality of the scanned image. (However, the higher the resolution setting, the larger the file size.)

- The 90 dpi setting is sufficient for viewing images on a screen.
- The 180 dpi setting is sufficient for printing images.

Threshold

Determines the intensity of halftones for monochrome images. Drag the slide bar to the left for a lighter image or drag it to the right for a darker image. The Threshold option is available only when the Image Type is set for Monochrome and Character Emphasis is off.

Edge Emphasis

Sharpens the edges of a soft image to create a clearer, more accented appearance in the entire image. This option is available only when the Image Type is set for Monochrome. Edge Emphasis is not used with prescanning.

Character Emphasis

Determines whether or not Image Trust processing is used for scanning grayscale images. Image Trust processing sharpens the appearance of characters in monochrome documents. This is especially helpful if you intend to use the scanned original with an OCR software application. This option is available only when the Image Type is set for Monochrome.

Color Matching

In some cases, the colors displayed on your monitor may not match the colors you see in your printout. Color Matching attempts to match the colors of the scanned image with the selection in the Monitor Type box in order to attain a better match between the colors you see on the monitor and the colors you see in your printout. This option is available only when the Image Type is set for Color.

Monitor Type

Displays the name of the monitor profile currently in use. To select another monitor type setting, click the down-arrow and select a name from the dropdown list. This list includes the names of ICC profile formats, standard profiles for monitors, installed in the system. A monitor profile can be selected only when Color Matching is selected.

Prescan

Selects the type of image for prescanning. Select Monochrome, Grayscale (the default), or Color.

- **4** Click the OK button to return to the main dialog box.
- **5** Make sure that the image you wish to scan is inserted into the scanning holder properly and is loaded in the auto sheet feeder of the printer, then click the Scan or Prescan button.

Saving the Settings

You can save the settings in the main IS Scan dialog box to a file. The next time you scan, you only need to open the file in which the desired settings are stored and start scanning.

Saving the Settings to a File

Save the Page Size, Scanning Mode, and Image Size settings in the main IS Scan dialog box as a file.



Specify the desired settings in the Paper Size, Scanning Mode, and Image Size boxes.



Select Save Settings File from the Settings menu.

Gave settings	to file.					? ×
Save jn: 🦲	IS Scan		-	<u></u>	d ir.	5-5- 0-0- 5-5-
File <u>n</u> ame:	MyCat					<u>S</u> ave
Save as <u>t</u> ype:	IS Scan setting file (*.1	ojs)		•		Cancel

- **3** Select the folder in which the file is to be saved.
- **4** Enter a File name.
- **5** Click the Save button.

Using the Saved Settings

Open the file in which the desired settings were saved and use those settings for scanning.



- Select Open Settings File from the Settings menu.
- 2 Select the file you wish to use, then click the Open button. The file name is displayed in the Settings File box, and the settings change in the main IS Scan dialog box.



- When you open the file while an image is displayed in the preview area, the prescanned or scanned image is discarded. Prescan or scan the image again.
 - Select Save Settings File from the Settings menu when you have changed the settings and you wish to overwrite the current file and save all the current settings to it.
- Select Save Settings File As from the Settings menu when you have changed the settings and you wish to save all the current settings under a new file name.

Other IS Scan Features

White Level Calibration

Use this feature to maintain the correct color balance of scanned images. You need to perform White Level Calibration when you use the scanner cartridge for the first time and when the white level calibration data needs to be updated.

- **1** Select White Level from the Option menu of the main IS Scan dialog box.
- **2** When a message appears, insert the white calibration sheet into the auto sheet feeder of the printer.

➡ Using the White Calibration Sheet

- **3** Click the OK button.
- **4** When the white calibration sheet is ejected from the paper output tray, the White Level Calibration process is complete.

Device Information

When you select Device Information from the Option menu of the main IS Scan dialog box, you can verify the name of the printer that is currently connected to your system and information on the communication mode.

- If the printer is connected using the parallel interface, Device Information displays a communication mode such as ECP/1 or ECP/2.
- If the printer is connected using the USB interface, Device Information displays USB as the communication mode.

Enlarging the Scanned Image in the Preview Area

To enlarge the scanned image in the preview area, click the Enlarge icon (\textcircled key) or select Large from the View menu.

To return to the original size, click the Standard icon (Rey) or select Normal from the View menu.

Using Online Help

When you click the ? symbol in the main IS Scan dialog box, the online Help for IS Scan opens so you can learn more about IS Scan.

Using IS Scan Plus

IS Scan Plus is a utility program that allows you to edit, enhance, print, and save an image acquired by the IS Scan scanner driver. You can use IS Scan Plus if you do not have a graphics application program.

Launching IS Scan Plus



Select Programs from the Start menu, then click IS Scan Plus.



Select IS Scan Plus. The main IS Scan Plus screen appears:





Select an option:

Сору

Scan and immediately print an image without editing.

➡ Using Copy

Capture Image

Scan and edit an image other than a photographic print.

➡ Using Capture Image

Capture Photo

Scan and edit a photographic print such as a snapshot.

➡ Using Capture Photo

Device Information

Verify the name of the printer that is currently connected to your system and information on the communication mode.

Using Online Help



When you need detailed instructions, click the Help button in the upper right of the main screen. You can access the online Help from all the screens that IS Scan Plus displays.

Verifying the Device Information

Make sure that the printer is connected properly and is turned on, and click the Device Information button.

- If the printer is connected using the parallel interface, Device Information displays a communication mode such as ECP/1 or ECP/2.
- If the printer is connected using the USB interface, Device Information displays USB as the communication mode.

Closing IS Scan Plus



When you wish to close IS Scan Plus, click the Exit button in the upper right of the main screen. You can access the Exit button from all the screens that IS Scan Plus displays.

IS Scan Buttons



Returns to the main IS Scan Plus screen.



Moves back to the previous screen.



Displays the Edit screen.

b Editing a Scanned Image



Prints a scanned image.

➡ Printing a Scanned Image



Saves a scanned image.

Saving a Scanned Image

Using Copy

Use the Copy feature when you wish to print an image immediately after scanning. You cannot edit or enhance the scanned image before printing.



Click the Copy button in the main IS Scan Plus screen. The Copy screen displays:





Specify any required settings:

- Select Color or Monochrome in the Document Type box.
- Select Fine or Fast in the Copy Mode box.
- Select the paper size in the Paper Size box.
- The Copies box is disabled.

3

Click the Print Setting button. This displays the Print Setup dialog box. Make sure Canon S450 is displayed as the default printer. Click the Properties button, if necessary, to display the Printer Properties dialog box and specify any printer settings.

Using the Windows 98/95 Printer Driver



- **4** When you click the Copy button, a message box appears. Click OK in the message box to confirm that the scanner cartridge is installed. Copying begins.
- **5** Another dialog box appears to remind you to remove the scanner cartridge, and install the BJ cartridge according to your print job. Also, make sure paper is loaded in the auto sheet feeder of the printer.



Click the OK button in the dialog box. Printing begins.

Note 💓

- To print the image displayed in the Preview Area again, click the Reprint button.
- To make a copy of another image using the same settings, click the Copy button. When a confirmation message appears, click the Yes button and repeat the procedure described above.
- To make a copy using different settings, click the Clear button to clear the copied image from the preview area. Repeat the procedure described above.

Using Capture Image

Use the Capture Image feature to scan an image other than a photographic print. You can also edit, enhance, save, and print the scanned image.



Click the Capture Image button in the main IS Scan Plus screen. This displays the Capture Image screen.



2 Select the most appropriate icon in the Scanning Mode box of the Capture Image screen according to your scanning purpose.



Standard setting for scanning a color image.



Standard setting for scanning a monochrome image.



Suitable for scanning a photographic print such as a snapshot.



Suitable for scanning an image that consists mostly of text.



Used for customizing the settings for special scanning jobs.

Using the Customized Scanning Mode



Select the paper size in the Paper Size box.



Insert the image you wish to scan in the scanning holder, and then load it in the auto sheet feeder of the printer.

5 Click the Prescan button.

The remaining steps are similar to those described for Scanning an Image using IS Scan.

🦈 Scanning an Image

Using Capture Photo

Use the Capture Photo feature to scan a photographic print such as a snapshot. You can also edit, enhance, save, and print the scanned image.



Click the Capture Photo button in the main IS Scan Plus screen. The Capture Photo screen displays:



By default, a Selection Box displays in the Preview Area. To delete the Selection Box, point to any location in the Preview Area and right-click your mouse.

- 2 Specify these settings:
 - Select Color or Black & White in the Photo Type box.
 - Select Regular or Panorama in the Photo Size box.

- **3** Insert the image you wish to scan into the scanning holder, and then load it in the auto sheet feeder of the printer.
- **4** Click the Prescan button.

The remaining steps are similar to those described for Scanning an Image.

Scanning an Image

Editing a Scanned Image

You can edit or enhance a scanned image acquired using the Capture Photo or Capture Image feature. The editing features you can use vary according to the settings you used for scanning and whether you used the Capture Photo or Capture Image feature for scanning.

You can edit or enhance the image displayed in the Preview Area.

1 Click the Edit button in the main IS Scan Plus screen. The Edit screen displays:



2 You can select these editing options. For details on each feature, use the online Help for IS Scan Plus.

Contrast / Brightness

Adjusts the brightness and contrast of an image.

Image Compensation

Softens edges in the image by reducing the contrast between pixels, or sharpens hazy or blurred images. You can also smooth the appearance of the image and invert the image.

Edges

Enhances the edges in an image by increasing the contrast of the pixels between areas of different colors.

Lines

Emphasizes selected edges and de-emphasizes all other edges of an image.

Pixelize

Squares off all the pixels in an image to lower resolution and makes the pixels appear larger to create a mosaic tile effect.

Posterize

Reduces the number of colors in an image.

Low Relief

Applies special options to create a three-dimensional effect in the image.

Background

Allows you to add a background to a monochrome image.

Crop Photo

Crops a scanned photograph in the Preview Area.

Frame

Allows you to add a frame border around the image.



- Depending on the settings you use for scanning, some editing features are not available. For details, see the online Help for IS Scan Plus.
- You cannot use Crop Photo and Frame in the Capture Image screen. You can select Background when a monochrome image is captured.
- **3** Edit or enhance the image as required.
- Click the Apply button to apply the effect to the image in the Preview Area.To undo the settings, click one of the undo buttons:

Undo All

Click once to undo all editing effects and restore the original in the Preview Area.

Undo Previous

Click once to undo the previous editing effect; click repeatedly to undo each previous editing effect one by one.

Printing a Scanned Image

You can print a scanned image acquired using the Capture Image or Capture Photo feature. Remove the scanner cartridge, and install the BJ cartridge according to your print job.

Click the Print button on the IS Scan Plus screen. If you are using Capture Image, the Print dialog box appears:

Print		?×
Printer —		
<u>N</u> ame:	Canon S450	<u>Properties</u>
Status:	Default printer; Ready	
Type:	Canon S450	
Where:	LPT1:	
Comment:		🥅 Print to file
Print range		Copies
• <u>A</u> II		Number of <u>c</u> opies: 1
C Pages	from: 1 to:	
C <u>S</u> elec	ion	1 2 2 3 3 Collate
		OK Cancel

If you are using Capture Photo, the Photo Print Options dialog box appears.



Click Print Setting to change the printer settings or click Print to print the image.

➡ Opening the Printer Properties Dialog Box

Saving a Scanned Image

1

IS Scan Plus allows you to save a scanned image to a file under a new name. You can use the saved image for pasting into another document or for attaching to your e-mail or a home page on the Internet.

You can save the image displayed in the Preview Area.

Click the Save butto	n. This displays the Save As dialog bo
Save As	? 🗙
Save jn: 🤷 My Documents	💌 🖻 🖄 👘
File name: photo_01	Save
Save as type: BMP Files(*.bmp)	Cancel

- 2 Select the folder in which you wish to save the image.
- 3 Enter a File name.

4

Click the down-arrow for "Save as type" and select a format for the file.

You can select one of the following file formats.

- Bitmap.BMP
- JPEG.JPG
- TIFF.TIF
- **5** Click the Save button.
Using the Scanner With Macintosh

Scanning Images With Application Software Using the Main IS Scan Dialog Box Scanning an Image Scanning Images With IS Scan Changing the Scanning Mode **Customizing the Scanning Settings** Copying a Scanned Image to the Clipboard **Adjusting an Image** Modifying an Image **Applying Special Effects to an Image** Other IS Scan Functions Using the Copy Utility

Scanning Images With Application Software

This section explains how to start IS Scan from a TWAIN image editing application software so that you can scan images.

Selecting a TWAIN-compatible Device

Before you scan images with application software, you must first select a TWAINcompatible device using the S450 driver. The basic procedure is described below (steps may vary based on your application software).

- **1** Start the application software and then select New... from the File menu. Then, open the menu you use to scan images. Install the scanner cartridge in the printer.
- 2 To open the dialog box for selecting a TWAIN-compatible input device, you normally select Import and then select TWAIN Select... from the File menu. The "Select a source" dialog box is displayed.

	select a source.
IS Scan S450	<u> </u>
	OK Cancel

3 Click the IS Scan S450 icon and then click the OK button.

S450 is now selected as the input device. Once you have performed these steps, the setting remains in effect until you change to another input device.

Using the Main IS Scan Dialog Box



Menu button

Selects the IS Scan functions. Click this button to change the settings for a scanned image or to edit a scanned image.

Scan, Prescan, or Clear button

Click this button to start scanning. This button switches to Prescan or Clear, depending on the setting or situation.

Transfer or Save button

Click this button to transfer a scanned image to an application. When using IS Scan only without an application software, this button says Save.

Halt button

Click this button to cancel scanning.

Information box

Displays the settings related to image scanning. To perform scanning using other settings, click the Menu button and then select Settings.

Help button

Click this button to display helpful explanations about the IS Scan functions.

Brightness and Contrast

Click this button to adjust the degree of brightness of an image.

Image Control Panel

Displays the size of the image to be scanned. For units, you can select inches, mm, or pixels.

Preview area

Displays a scanned image.

Scanning an Image

1 Click the Menu button and then select Settings. The Settings dialog box displays:

	Settings
Paper Size:	Letter 8.5 in x 11.0 in
Scanning Mode:	DTP(Color)
Image Type:	Color \$
Resolution:	180dpi \$
Threshold:	
🔲 Prescan	Black & White 😫
🗵 Color Matching	
🔲 Edge Emphasis	White Level
Help	Default Cancel OK



- Make the necessary settings for the image to be scanned.
 - Click on Paper Size to select a size that approximates the image to be scanned.
 - Click on Scanning Mode to select the item that best approximates the image to be scanned.

Changing the Scanning Mode

• Place a check mark in the Prescan check box. Prescan performs a quick scan so you can check the image. You can disable this function.

- **3** Click the OK button and then close the Settings dialog box.
- **4** Place the object to be scanned in the printer and then click the Prescan button. You see the image displayed in the Preview Area.



5 If you only want to scan part of the object, drag the mouse within the Preview Area to select the part to be scanned. The Selection Box indicates the area that will be scanned.



- To create a Selection Box, position the cursor over one corner of the area to be selected, press and hold down the mouse button, and then drag the mouse diagonally to the opposite corner of the area you want to select. Release the mouse button.
- If you position the cursor over a point within the selected area, you can move the area by dragging. If you position the cursor over one of the lines indicating the selected area, you can change the size of the selected area by dragging that line in or out.
- The minimum size of the selected area is $1" \times 1"$ (25.4 mm by 25.4 mm).
- The size of the selected range is displayed in the Image Control Panel.
- *6* Place the image to be scanned in the printer and click the Scan button. Remember, only the range indicated by the Selection Box is scanned.



7 If the image displayed in the Preview Area is not what you expect, click the Clear button and start over.

If you like the image, click the Transfer button. The scanned image is transferred to the application software. Edit the image data as required prior to printing or saving it.



- Some application programs do not display the main IS Scan dialog box, but display their own scanning screen. In this case, refer to the documentation supplied with the scanning software.
- Do not close an application program that started IS Scan while IS Scan is still running. This may cause the system to lock up.

Scanning Images With IS Scan

You can use IS Scan as a stand-alone program to scan and edit images.

Starting IS Scan

- 1
- Turn on the printer and install the scanner cartridge.
- 2 Double-click the IS Scan S450 folder.



3

Double-click the IS Scan S450 icon.



IS Scan S450 Canon 8.50 <u>x</u> 11.00 Inches 9 Menu 🔻 Scan Save Image Type: Color Resolution: 180dpi Size: 1986K Color Matching: ON 0

IS Scan starts and the main dialog box displays.

The contents of the main dialog box and the method you use to scan images are basically the same as when using TWAIN application software.

Saving Scanned Images



Click the Save button.



2 Make the necessary settings.

📓 15 Scan S450 Fo	older 🚖	œ HD
⊂ HD	-	Eject
📆 Trash		Desktop
	*	New 🧊
Name:		Cancel
scan1		Save
Format PICT	\$	

- Select the location to which you want to save your image.
- Enter a name for the image data in Name.
- Click the drop-down box in Format to select PICT or TIFF.
- **3** Click the Save button. The image data is saved into a file.

Changing the Scanning Mode

You can select a scanning mode according to your scanning purpose. Optimum settings, such as image type and resolution, are pre-assigned based on the contents of a scanning job. When you wish to customize the settings for special scanning jobs, click the Custom button.

Selecting a Default Scanning Mode

Select a setting that best approximates the image to be scanned.

Scanning Mode	Use	Image Type Resolution	Edge Emphasis Color Matching	Prescan Mode*
DTP (Color)	Standard setting used when a color draft is to be scanned	Color 180 dpi	Off On (Execute)	Grayscale
Photo	Recommended when scanning a photograph	Color 360 dpi	Off On (Execute)	Color
DTP (B&W)	Standard setting used when a black & white draft is to be scanned	Grayscale 180 dpi	Off Off	Grayscale

* By default, Prescan is disabled. Once enabled, Black & White is the default Prescan Mode. You can select a Prescan Mode of Color, Grayscale, or Black & White.

Scanning Mode	Use	Image Type Resolution	Edge Emphasis Color Matching	Prescan Mode*
Text	Recommended when scanning a document consisting entirely of text, such as a document created with a typewriter or word processor	Black & White 180 dpi	On (Execute) Off	Black & White
FAX	Scans by converting a monochrome image into the data suitable for facsimile transmission	Black & White (Text Enhanced) 200 dpi	Off Off	Black & White
OCR	Scans by converting a monochrome image into the data suitable for OCR input	Black & White (Text Enhanced) 360 dpi	Off Off	Black & White
Custom	Selected when a specific range of settings are to be made Customizing the Scanning Settings			

* By default, Prescan is disabled. Once enabled, Black & White is the default Prescan Mode. You can select a Prescan Mode of Color, Grayscale, or Black & White.



- The Settings dialog box displays when you select Settings after you click the Menu button in the main dialog box.
- When you select FAX or OCR, the document is scanned and processed as a grayscale image and converted to monochrome binary image data. This process eliminates unnecessary image background and increases the quality of the scanned text and line art. When you select Text, the document is scanned and processed as a monochrome image.

Customizing the Scanning Settings

When you select Custom for Scanning Mode in the Settings dialog box, you can specify the scanning settings.



Click the Menu button in the main dialog box and then select Settings.



Click the drop-down box in Scanning Mode and then select Custom.

Settin	js
Paper Size: Letter 8.5 in x	11.0 in 文
Scanning Mode: Custom	\$
Image Type: Color	\$
Resolution: 180dpi	\$
Threshold:	
🔲 Prescan	Black & White 🔹
🚮 Color Matching	
🔲 Edge Emphasis	
	White Level
Help Default (Cancel OK

3

Make the appropriate settings for the image to be scanned.

Image Type

Select a mode according to the image to be scanned. You can select Color, Grayscale, Black & White, or Black & White (Text Enhanced).

Resolution

Select a resolution according to the image to be scanned. The higher the resolution, the finer the image you can get, although the amount of data will be large. In general, 90 dpi is sufficient for home pages, while 180 dpi is good for output to a printer. Settings are 90, 180, 200, 300, 360.

Threshold

This function is valid only when Image Type is set to Black & White. The lightness/darkness of monochrome images can be adjusted by moving the slide bar. If the slide bar is moved to the left, the scanned image will be lighter, while if the slide bar is moved to the right, the image will be darker.

Prescan

Place a check mark in the Prescan check box to perform the prescan. The scanning mode can be set to Black & White, Grayscale, or Color.

Color Matching

This function is effective only when Image Type is set to Color. When this function is enabled, the colors are adjusted according to the monitor when the image is scanned. The monitor itself is set with the system feature of ColorSync[®] in the Apple menu control panel.

Edge Emphasis

This function is valid only when Image Type is set to Black & White. If this function is selected, only the edge of the image is emphasized when the image is scanned. This is disabled for prescan.

4

Click the OK button. The main dialog box displays.

5 Place the image to be scanned in the printer, then click the Prescan button or Scan button to start scanning.

Copying a Scanned Image to the Clipboard

If you copy a scanned image to the clipboard, you can use the image easily with other application software. This is particularly useful when you want to paste an image into documents created with application software that is not TWAIN-compatible.

Copying an Image

Click the Menu button in the main dialog box. Select Edit and then select Copy.

The image data is copied to the clipboard.



To use an image copied to the clipboard, start your application software and then select Paste from the Edit menu.

Adjusting an Image

If you are not satisfied with a scanned image, you can perform fine adjustment using a range of functions. Image data can be processed so that the brightness of the image changes or so that the image appears sharper or softer.

Adjusting the Brightness and Contrast



Click the Brightness and Contrast button in the main dialog box. The Brightness and Contrast dialog box displays.



2

Move each slide bar to the right or left to adjust the image.

Brightness

Moving the Brightness slide bar to the left makes the entire image darker, while moving it to the right makes the image brighter.

Contrast

Moving the slide bar to the left reduces the contrast of the entire image, while moving it to the right increases the contrast.

- **3** After making the adjustment, click the Apply button to change brightness and contrast of the image displayed within the preview area.
- **4** Once you are satisfied with the adjustment, click the OK button.

Modifying an Image

You can modify a scanned image so that it looks sharper or softer. Also, a Despeckle function allows you to remove speckling and make a scanned image appear cleaner. A function for inverting colors to produce a negative film is also available.

- **1** Click the Menu button in the main dialog box, select Image, and then select the desired function from the submenu.
 - Sharpen Sharpens an image to make it clearer.

Soften Softens the edges of an image.

- Despeckle Removes speckling from an image, making any such areas less noticeable.
- Invert Inverts the colors of an image to produce a negative of the original.

You can check the effect of the adjustment in the Preview Area.

Applying Special Effects to an Image

Special effects such as edge emphasis, line emphasis, pixelization, posterization, and low relief can be applied to a scanned image, creating an image with a feeling different from that of the original.

- **1** Click the Menu button in the main dialog box, select Enhance, and then select the desired function from the submenu.
 - Edges... Emphasizes the edges of a photograph or line drawing.
 - Lines... Emphasizes only lines in a specific direction.
 - Pixelize... Applies a mosaic effect to an image.
 - Posterize... Reduces the number of colors and simplifies the image.
 - Low Relief... Creates a low relief version of the image.

When you select one of these functions, the corresponding dialog box displays.

2 Select a desired function from the list.

The following is an example of the screen displayed when you select Edges. The operation is the same when any other function is selected. You can check the approximate result of the selection in the Preview Area.

For details of each function, refer to the explanation displayed when you click the Help button.





- Once you are satisfied with the adjustment, click the OK button.
- Note To cancel an adjustment you have made, click the Menu button and then select Undo. Then, select either of the following:
 - Last Only the function applied immediately before is cancelled. If you perform editing two or more times, only the function that you selected most recently is cancelled.
 - All All the applied functions are cleared and the original image is restored.

Other IS Scan Functions

White Level Calibration

To achieve the correct color balance for an object to be scanned, an operation called White Level Calibration is required. When an image is scanned for the first time, or when the temperature of the scanner cartridge rises to a certain level, a message displays prompting you to place the white calibration sheet in the printer.

Place the white calibration sheet in the printer and then click the OK button. The calibration sheet is scanned and the calibration is performed.

You can also initiate this operation whenever necessary.

- Click the Menu button in the main dialog box and then select Settings. 1
- Click the White Level button. 2
- 3

When the message appears, place the white calibration sheet in the printer.

Using the White Calibration Sheet

Click the OK button. 4

When the white calibration sheet is ejected, white leveling is complete.

Using the Online Help

Clicking the Help button on the main dialog box displays helpful explanations of the functions of IS Scan. You can also display the Help by clicking the Menu button, then Help, and Help again.



Using the Copy Utility

Use this utility to scan an object and then print the result immediately. Although the scanned image cannot be edited or saved, the process from scanning to printing is completed quickly and easily.

Installing the Copy Utility

To use the Copy Utility, you must first copy the folder including the necessary files to any location.



Load the S450 Canon Creative CD-ROM into the CD-ROM driver on your Macintosh.

2

Double-click on the Copy Utility folder.



3 Drag the Copy Utility for S450 folder and copy it to any location.



Now you can start the Copy Utility at any time.

Note To use the Copy Utility, the printer driver and IS Scan scanner driver must also be installed.

Starting the Copy Utility



- Turn on the printer and install the scanner cartridge.
- **2** Click the Copy Utility for S450 folder.

	🖹 Macintosh HD	
đ	2 items, 1 MB available	
	Cony Utility for 15 Scan	4
•		▶ ///





The Copy Utility starts and the main dialog box displays:

Color	Black & White
Paper Size: Letter 8.5 in x 11.0 inch Copies: 1 🛓	Media Type: Plain Paper High Resolution Paper Transparency
Brightness: 🧕 Darker	
	Reset Reprint Copy
	Quit

Copying the Image

- **1** Click the Color or Black & White button according to the image to be scanned.
- 2 Select the paper size you are using in Paper Size.
- **3** Select the number of copies to be output in Copies.
- **4** Select the type of paper you are using: Plain Paper, High Resolution Paper, or Transparency.
- **5** Set Brightness, as necessary. Move the slide bar to the right and left to set the brightness.
- *6* Place the image to be copied in the printer, then click the Copy button. Scanning starts.
- **7** When the message appears, remove the scanner cartridge and replace it with a BJ cartridge according to the printing settings.
- *8* Place a blank sheet of paper in the printer and click the OK button.Printing starts.



- To print the same image again, click the Reprint button.
- To copy another document with the same settings, click the Copy button and follow the instructions on the screen.
- To perform copying with different settings, click the Reset button and follow the instructions on the screen.

Ending the Copy Utility

To close the Copy utility, click the close box or the Quit button.

ABC Color	Black & White
Paper Size: Letter 8.5 in x 11.0 in Copies: 1 →	Media Type: Plain Paper High Resolution Paper Transparency
Brightness: 🧝 Darker	I I I I I I I I I I I I I I I I I
	Reset Reprint Copy

Scanning Result Is Unsatisfactory Scanner Cannot Be Used With a TWAIN-Compatible Application Program Other Scanner Problems

Scanning Result Is Unsatisfactory

Quality of Scanned Image Is Uneven

White Portion Becomes Grayish

Parts of an Image Missing or Not Aligned Properly

Image Contains Unexpected Colors, or Is Too Light or Too Dark

Scanned Image Blurred or Distorted

Check 1 Are you using a clear image for scanning?

Blurry images are not suited for scanning. For best scanning results, always use a clear, sharp image. (The scanned image cannot be better than the original image.)

Check 2 Is the scanning holder unstained and undamaged?

The scanning holder is bound to get dirty. Clean the scanning holder using a soft cloth that is dipped in a weak, neutral detergent solution, and then wipe its wet surface off with a dry, soft cloth.

If the scanning holder is scratched or damaged, replace it.

Note >>> You can purchase a scanning holder for A4/LTR-size images. Visit the Canon Web site to find out about accessories and supplies (www.ccsi.canon.com).

Check 3 Are you scanning thick paper?

The image being scanned must be thinner than 0.01 inch (0.25 mm). The thickness including the scanning holder must be thinner than 0.02 inch (0.45 mm).

Quality of Scanned Image Is Uneven

The scanned image is coarse and/or blurry.

Check Is the resolution setting high enough?

Resolution determines the precision of the scanned image.

The greater the number of dots used to draw an image, the higher the precision and the quality of the scanned image becomes. For a better quality image, select a greater number.

The scanning speed becomes slower and the file size of the scanned image becomes larger when you use a higher resolution.

Windows

Changing the Scanning Mode

Macintosh

Changing the Scanning Mode

- White Portion Becomes Grayish
- Check 1 DID YOU PERFORM WHITE LEVEL CALIBRATION?

Use White Level Calibration to maintain the correct color balance of scanned images.

➡ Using the White Calibration Sheet

Check 2 DID YOU ADJUST THE BRIGHTNESS AND CONTRAST?

Depending on the image you scan, a white portion is not recognized as white because the scanner detects and scans even the small differences of the density between white and other colors.

Adjust the brightness and contrast.



- When you are using IS Scan Plus, use the online Help.
- When you are using a TWAIN-compatible graphics application program, see the User's Manual for the application program.
Check 3 DID YOU SCAN A MONOCHROME IMAGE USING THE COLOR OR GRAYSCALE SETTING?

If the Scanning Mode is set to Color or Grayscale, the scanner detects and scans even the grades of the density, and white may not be recognized as white.

When you scan a monochrome image, always set Black & White in the Scanning Mode so the scanner can scan using only two values between white and black.

For details on how to set Black & White in the Scanning Mode, use the online Help.



Changing the Scanning Mode

Macintosh

Changing the Scanning Mode

Parts of an Image Missing or Not Aligned Properly

Check 1 DID YOU PLACE AN IMAGE WITHIN THE PROPER SCANNING AREA?

Check that the image you wish to scan is placed in the proper scanning area.

Check 2 DID YOU SPECIFY THE SCANNING AREA CORRECTLY?

If the Paper Size setting is smaller than the size of the image you scan, parts of the image will be missing.

If you place the image outside the scanning area, parts of the image may not be aligned properly. Always check that the image is set within the proper scanning area.

Image Contains Unexpected Colors, or Is Too Light or Too Dark

The appearance of the scanned image is not what you expected, or the image is too light or too dark.

Check 1

IS THE NUMBER OF DISPLAY COLORS SET TO HIGH COLOR OR TRUE COLOR?



Check the number of display colors as follows.

- **1** From the Start menu, select Settings, and then select Control Panel.
- **2** Double-click the Display icon, then click the Settings tab.
- **3** Check that Colors is set to High Color or True Color in the Colors box.



Check the Color Depth setting as follows.

- **1** From the Apple menu, select Control Panels.
- **2** Select Monitors & Sound.
- **3** Check that Thousands or Millions are set for Color Depth.

Check 2 Is Color Matching enabled?

The colors displayed on your display may not match the actual scanned colors.

Color Matching attains the best match between the colors displayed on your display and the actual colors in the scanned image.

You can enable Color Matching when the Scanning Mode is set for Color.



- Check that Color Matching is enabled.
- 1
- Click the Custom Setting button.
- 2
- Make sure that Color Matching is enabled in the Custom Setting dialog box.

Macintosh

- 1
 - Select Settings from the Menu screen.
 - **2** Make sure that Color Matching is enabled.

Scanner Cannot Be Used With a TWAIN-Compatible Application Program

Cannot Launch IS Scan From Within the TWAIN-Compatible Graphics Application Program

Cannot Transfer to TWAIN-Compatible Graphics Application Program

Cannot Launch IS Scan From Within the TWAIN-Compatible Graphics Application Program

Check DOES THE TWAIN-COMPATIBLE GRAPHICS APPLICATION PROGRAM YOU ARE USING SUPPORT THE LATEST 32-BIT TWAIN SPECIFICATIONS OR TWAIN SOURCE MANAGER (VERSION 1.5 OR LATER)?

Windows

When IS Scan is used as a TWAIN interface, you must use the latest 32-bit TWAIN-compatible graphics application program. See the *User's Manual* for your application program.

Macintosh

When IS Scan is used as a TWAIN interface, you must use the graphics application program that supports the TWAIN Source Manager (Version 1.5 or later). See the *User's Manual* for your application program.

Cannot Transfer to TWAIN-Compatible Graphics Application Program Check Does the TWAIN-compatible Graphics Application Program YOU ARE USING SUPPORT THE FILE FORMAT TYPE AND RESOLUTION OF THE IMAGE DATA?

Some TWAIN-compatible graphics application programs support specific file format types and resolution settings only. For example, the resolution settings of some OCR (optical character reader) application programs are limited to 300 or 400 dpi.

Check the file format types and resolution settings of the TWAINcompatible graphics application program first, and then scan and transfer the image again.

Other Scanner Problems

Cannot Install Scanner Driver Does Not Launch With Default Settings Windows Improper Colors Displayed in the Dialog Box Scanning Too Slow Communication Error Occurs Error Message Appears

Cannot Install Scanner Driver

Check 1 DID YOU FOLLOW THE SCANNER DRIVER INSTALLATION Windows INSTRUCTIONS?

➡ Installing the IS Scan Software

If an error occurred during installation and you had to shut down the installation procedure, you may not be able to install the scanner driver because Windows is no longer stable. Restart Windows and then reinstall the scanner software.

Check 2 Are any other application programs running?

The scanner driver installation program may not execute successfully if it is run with other applications running in the background.

Before you run the installation program again, shut down all other application programs.

Check 3 DID YOU SPECIFY THE CORRECT CD-ROM DRIVE FOR Windows INSTALLATION?

If the S450 splash screen did not come up automatically when you loaded the CD-ROM, double-click the My Computer icon, then double-click the CD-ROM icon on the Windows desktop.

➡ Installing the IS Scan Software



The drive name (E: for example) varies according to how your system is set up.

Check 4 IS THERE A PROBLEM WITH THE CD-ROM?

Windows

The Canon Creative CD-ROM may be damaged. On the Windows desktop, double-click the My Computer icon then double-click the CD-ROM icon. If Windows cannot read the CD-ROM, call the Canon Customer Care Center for help.

Betting Help From Canon

Does Not Launch With Default Settings

Windows

Check DID YOU LAUNCH IS SCAN FROM A TWAIN-COMPATIBLE GRAPHICS APPLICATION PROGRAM?

This problem occurs when IS Scan is launched from a TWAIN-compatible graphics application program.

Depending on the TWAIN-compatible graphics application program, Previous Settings selected in the Standard Value box under the Custom Settings dialog box may be cleared, and standard settings characteristic of the TWAIN-compatible program you are using may be used when launching IS Scan.

To use the settings selected in the Custom Settings dialog box when launching IS Scan, follow these steps:

- **1** Select Save Settings File from the Settings menu.
- **2** The next time you launch IS Scan, select Open Settings File from the Settings menu.

Improper Colors Displayed in the Dialog Box

Check IS THE NUMBER OF DISPLAY COLORS SET TO HIGH COLOR OR TRUE COLOR?

Windows

This problem occurs when IS Scan is launched from a TWAIN-compatible application program.

If the problem is not solved, change the number of display colors of your computer.

- **1** From the Start menu, select Settings, and then select Control Panel.
- 2 Double-click the Display icon, then click the Settings tab.
- **3** Check that the Colors setting is High Color or True Color in the Colors box.

Or, you may be able to solve the problem by minimizing the IS Scan window and then return to the original size.

Macintosh

Check the Color Depth setting.

- **1** Fr
 - From the Apple menu, select Control Panels.
 - 2 Select Monitors & Sound.
 - **3** Check that Thousands or Millions are set for Color Depth.

Scanning Too Slow

Scanning is requiring an unusually long time.

Check Are you using a higher resolution than required?

In order to scan an image, your computer must be able to receive a large amount of data. Therefore, the scanning speed varies according to the performance of the computer.

To shorten the time required for scanning:

- Use the appropriate resolution setting. Make sure that the resolution is not set higher than you require.
- Use the prescanning capability.

Communication Error Occurs

Check 1 DID YOU LAUNCH IS SCAN OR IS SCAN PLUS IMMEDIATELY AFTER IT WAS CLOSED?

Do not attempt to launch IS Scan or IS Scan Plus again immediately after it is closed. Wait for a few seconds and then launch again.

Check 2 Is the printer plugged in and ready?

Check that the printer is plugged in and ready.

Check 3 Are you using the USB interface running under Windows 98?

When using the USB interface running under Windows 98, a communication error may occur if the Hardware acceleration setting is Full. To solve the problem, follow these steps:

- **1** Double-click the System icon in the Control Panel for Windows.
- **2** When the System Properties window is displayed, click the Performance tab.
- *3* Click the Graphics button.
- **4** If Hardware acceleration is set to Full in the Advanced Graphics Settings dialog box, set to None.

Error Message Appears

Check **REFER TO THE ONLINE HELP.**

Windows

From the main IS Scan screen, select Contents from the Help menu, or press F1.

Macintosh

Open the online Help.