## **BJ-200ex**

# USER'S MANUAL

## Canon

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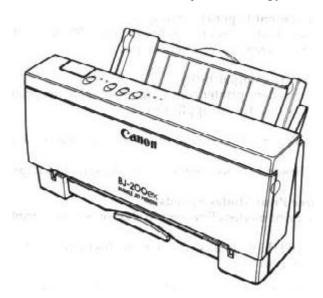
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editiing by Jason Plank and Cindy Cassat

# Chapter 1 Introduction

Congratulations on your purchase of the Canon BJ-200ex Bubble Jet Printer. We appreciate your choosing this printer to meet your printing needs.

The BJ-200ex offers excellent print quality, fast print speed, and trouble-free operation with the convenience of compact size and low cost. We are certain you will be satisfied with its advanced bubble jet technology.



This chapter introduces you to the features of your new printer, lists the options and supplies you can purchase for the printer, and describes Canon's customer support procedures.

## Features and Benefits

The BJ-200ex Bubble Jet Printer produces high quality printing by incorporating many useful features.

#### **Excellent Print Quality**

The printer's high performance print head offers 720 (horizontal) by 300 (vertical) dots per inch (dpi) for high resolution text and graphics. The printer produces excellent grayscale quality when using Microsoft® Windows<sup>TM</sup> graphics applications through the BJ-200ex printer driver for Windows.

#### **Convenient Paper Handling**

An automatic sheet feeder holds up to 100 sheets of plain paper, 40 transparencies, or 15 envelopes.

#### **Software Compatibility**

Two resident printer control modes enable the printer to work with a wide variety of software applications:

- BJ-10 mode emulates the IBM Proprinter X24E printer.
- Epson LQ mode emulates the Epson LQ-510 printer.

#### **Three Print Modes/Speeds**

The print modes allow you to choose between print quality and speed.

- HQ(high quality) mode provides high quality at 204 characters per second (cps).
- HS(high speed) mode provides draft quality printing at 248 cps.
- Smoothing mode refines your printout by polishing away the jagged edges and ragged stair-stepping curves of characters and graphics, and enables the printer to print both text and graphics at 720 x 360 dpi.

#### **Reduction Mode**

The printer offers two reduction modes for printing spreadsheets and other wide documents on regular paper. In reduction mode, the printer reduces the output to two-thirds or one-half of its full size.

#### **High Quality Ink**

The ink in the BC-02 ink cartridge is not easily affected by light, dries quickly, and is smudge-resistant.

#### **Automatic Capping System**

To ensure trouble-free operation, the printer automatically moves the print head to the home position and caps the print head whenever the printer is inactive or set off-line.

#### **Simple Maintenance**

The replaceable ink cartridge contains both the ink and the print head; when it runs out of ink, you simply replace it.

#### **TrueType Fonts**

The Canon TrueType<sup>TM</sup> Font Pack enhances your font capability and improves your print quality.

#### **Compact Desktop Design**

The printer is lightweight (6.6 lb / 3.0 kg) and occupies a minimum amount of desk space.

#### **Quiet Printing**

The nonimpact printing method offers quiet operation.

#### **On-Line Documentation**

A detailed Visual Guide makes learning about the printer easy and fast by displaying helpful information on your computer screen within the Microsoft Windows environment. It includes detailed instructions for setting up and using your printer as well as troubleshooting and technical information.

## **Options and Supplies**

Canon has an extensive dealer network equipped to offer you supplies as you need them. To find a dealer near you, call the Canon referral service at **1-800-848-4123.** 

If you want to purchase supplies directly from Canon, you may do so by calling Canon Accessories at **1-800-671-1090.** Supplies are offered at the manufacturer's suggested list price.

#### Ink Cartridge

Canon offers the following ink cartridge:

Canon Ink Cartridge BC-02 (black)



#### Print Media

Canon manufactures the following print medium for this bubble jet printer.

#### **Canon Transparencies Q07-001-M1**

These overhead clear transparencies (also called Over Head Projection or OHP film) are specially designed for Canon Bubble Jet printers. Other overhead clear transparencies may cause problems in your Canon printer by not feeding correctly into the printer or by not allowing the ink to dry properly. Canon overhead clear transparencies are specially designed to produce crisp and professional overhead presentations. Letter size is available.

#### Related Publication

#### **Programmer's Manual**

The information in the *BJ-200ex Programmer's Manual* is intended for the software designer, the advanced programmer, and the operator who can use a programming language to send commands to the printer.

To obtain this manual, call the Canon help desk as listed in the next section.

## **Customer Support**

#### **Help Desk**

Canon provides customer support and service for all Canon printer products. If you have any questions regarding your new printer, call the Canon Computer Systems help desk at **1-800-423-2366.** Help is available Monday through Friday from 8 A.M. to 11 P.M. Eastern Standard Time (EST) and on Saturday from 11 A.M. to 6 P.M. EST. The help desk is closed on Sundays and holidays.

If you seem to have an operational problem, try to solve it by referring to the information in Chapter 7, *Troubleshooting*, or by using your Visual Guide. If you cannot quickly resume normal operations, contact Canon's experienced support personnel at the help desk number above.

#### Fax Number

You can send suggestions, and technical questions to Canon via facsimile. The number for this service is **1-714-438-3317**, which accesses a G3 fax machine. Be sure to state your question and provide a phone number or fax number for a response.

#### **Fax Retrieval System**

Canon also provides a 24-hour toll-free fax retrieval system. You can use this service to get helpful documents faxed directly to your fax machine. These documents contain useful information to assist you in the operation of your Canon printer. To access this service, call **1-800-526-4345**.

#### **Bulletin Board Services**

Canon also provides a bulletin board service (BBS), which is useful for obtaining newly developed, third-party drivers. Call **1-714-438-3325.** The protocol for the BBS is up to 14,400 bps, eight data bits, one stop bit, and no parity.

If you use CompuServe®, you can access the Canon Peripherals Forum. This allows you to talk with other users, send a message to Canon, or download printer drivers. Just type GO CANON at any CompuServe prompt.

#### Canada

Customer support for Canadian residents is available 24 hours a day (seven days a week) at **1-800-263-1121.** 

In other countries, please contact your Canon dealer.

#### **Supplies**

To order supplies, call Canon Accessories at **1-800-671-1090** from 9 A.M. to 7 P.M. EST.

## Servicing the Printer

The Canon BJ-200ex Bubble Jet Printer is designed with the latest technology to provide trouble-free operation. The warranty card that came with your printer describes Canon's limited two-year warranty for its Bubble Jet printers. Be sure to read the warranty information and save the card.

If you seem to have a problem, try to solve it by referring to the information in Chapter 7, *Troubleshooting*. If you cannot solve the problem, contact Canon's support personnel at the help desk.

If you fell that your BJ-200ex Bubble Jet Printer needs servicing, call the Canon help desk to locate the Canon Authorized Service Facility (ASF) nearest you or how to find out about the exclusive Canon *InstantExchange* limited warranty service.

At the time of this manual's writing, Canon does not offer an extended warranty program beyond the two-year warranty; however, some authorized Canon dealers may offer such programs for a fee. If you are interested in an extended warranty, contact your Canon Authorized Service Facility to see if it offers such a service.

# Chapter 2 Setting Up the Printer

This chapter describes how to unpack the printer and select a location for setting it up, examines the printer's components, and explains how to assemble the printer. It also describes how to load a stack of paper and print a self test followed by installing the printer driver and managing your printer's features.

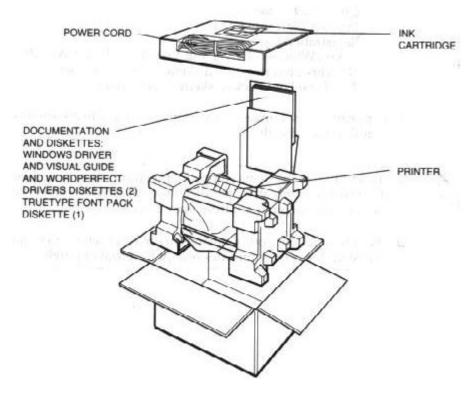
If you already set up your printer using the *Quick Start Guide*, you may want to look through this chapter to find any additional information it supplies.

## Unpacking the Printer

Follow these steps to unpack your printer:

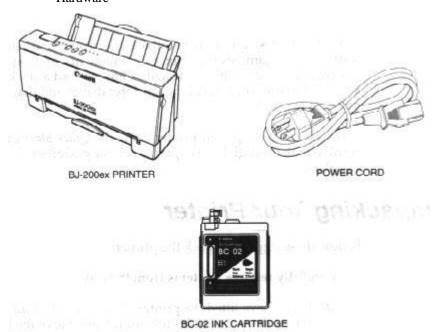
#### 1. Carefully remove all items from the box.

- If you have lifted the printer's box using the built in handles, press the cardboard handles toward the outside of the box before trying to lift the printer out of the box.
- It is best to have someone hold the box while you lift the printer and its protective packaging out of the carton.



#### 2. Check to see that you have the following items:

Hardware



Documentation and Diskettes:

User's Manual (this manual)
Quick Start Guide
Product Warranty Card
Registration Card
Canon Windows Driver and Visual Guide
and WordPerfect<sup>TM</sup>
Drivers diskettes (two diskettes in an
envelope)
TrueType Font Pack (diskette in envelope)

If your printer was damaged in shipping, or if any items are missing, notify your dealer immediately.



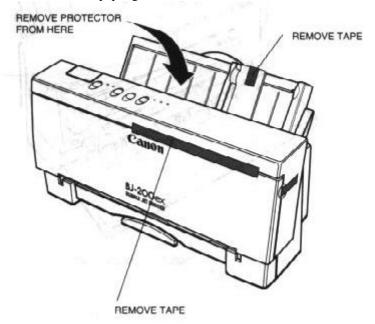
- In addition to the items shipped with your printer, you need a Centronic®-compatible, parallel interface cable, which you can purchase from your dealer.
- Be sure to fill out your Registration card and send it to Canon Computer Systems, Inc. Save your sales receipt for proof of purchase.

#### Removing the Shipping Materials

As you unpack the printer, save the carton and packing materials in case you want to move or ship the printer in the future. Follow these steps:

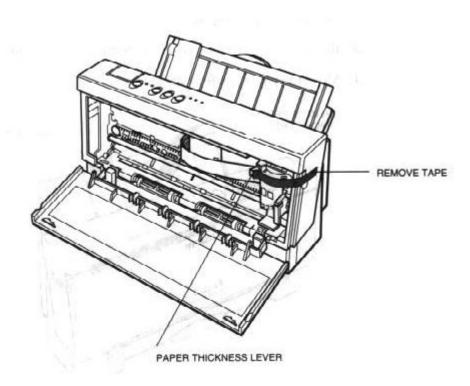
## 1. Remove the shipping tape from the outside of the printer.

- Remove all pieces of tape. (The shipping tape may not be in the exact locations shown here; just be sure to remove all the tape from the outside of the printer.)
- Remove the protector (plastic or Styrofoam) inside the sheet feeder.
- Move the paper guide to the left.



#### 2. Remove the shipping tape inside the printer.

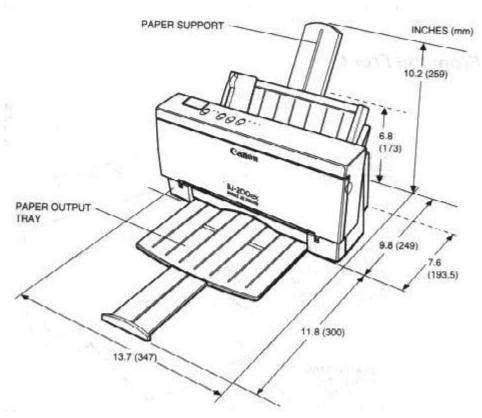
- Open the front cover by grasping the sides of the cover and pulling it down.
- Remove the tape that secures the ink cartridge holder.
- Make sure the paper thickness lever is set to the left for printing on normal paper.



## Selecting a Location for Your Printer

Before you set up your printer, choose the best location for it. Follow these guidelines:

- Choose a flat, sturdy surface with enough space for the paper to flow freely into and out of the printer. Angled print stands may cause quality and reliability problems.
- Fully extend the paper rest and paper output tray to ensure enough space is available for proper operation. The printer requires this much space:

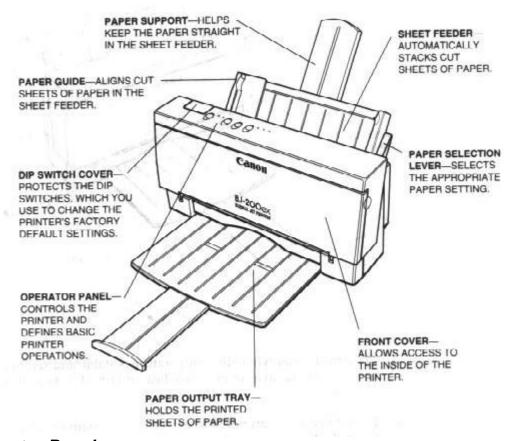


- Place the printer where the temperature is stable and set for human comfort. Avoid areas of excessive heat or humidity as well as direct sunlight.
- Do not install the printer near devices that contain magnets or generate magnetic fields (such as loudspeakers or base units of cordless telephones). These devices can erase information on the printer's intelligent circuits.
- Do not subject the printer to strong physical shock or vibrations.
- Keep the printer clean. Dust accumulation may prevent the printer from functioning properly.
- To protect the printer from damage, hold both sides when you move it.
- While the BJ-200ex Bubble Jet Printer is small and compact, it is not designed for mobile printing.

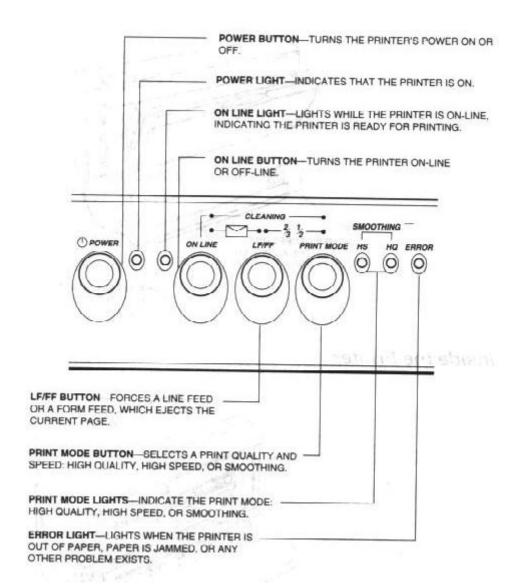
## Examining the Printer

Before setting up the printer, it's a good idea to familiarize yourself with its parts and understand their functions.

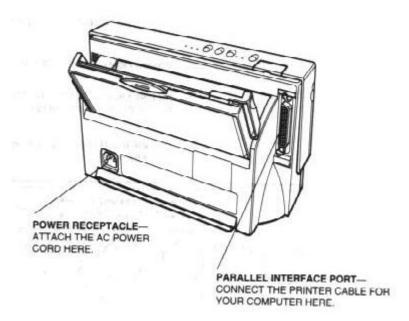
#### From the Front



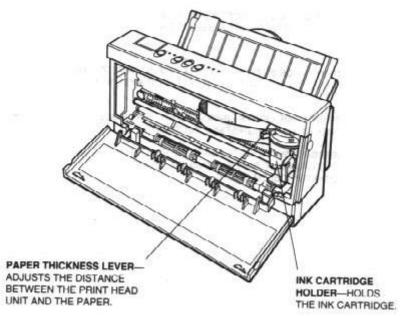
## **Operator Panel**



#### From the Back



#### Inside the Printer



## Attaching the Power Cord

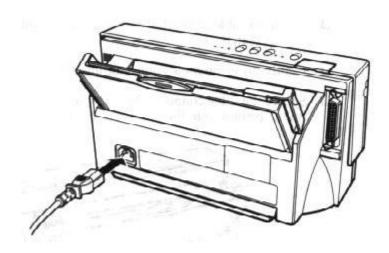


- Use a power supply that is the appropriate voltage and frequency: AC 120 V, 60 Hz 0.5A. This is the standard for an electrical outlet in the United States or Canada.
- Use only the power cord that came with the printer. Using a longer cord or an extension cord may result in reduced voltage or malfunctions.
- If you smell a peculiar odor or see smoke, unplug the power cord immediately.
- Do not place anything in front of your wall outlet that may obstruct your access to it or put pressure on the power cord.

 When unplugging the power cord, always remove it by holding the plug and not the cord.

To attach the power cord, follow the steps below.

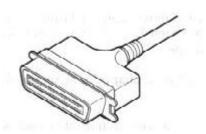
## 1. Attach the power cord to the AC power receptacle on the back of the printer.



2. Plug the power cord into a properly grounded AC outlet.

## Connecting Your Printer to the Computer

Your printer has an 8-bit parallel interface port, which allows you to use it with IBM PCs and compatible computers. You need to purchase a Centronics-compatible parallel interface cable from your dealer. Ask your dealer for assistance if you need help selecting the right cable.





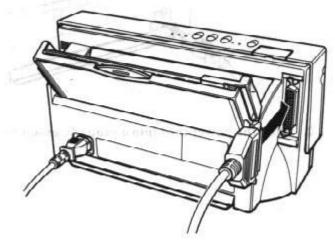
**NOTE:** For reliable data communications between your computer and the printer, use a short cable, six feet or less in length.

To connect the computer to the host computer, follow the steps below:

## 1. Make sure both the printer and the computer are turned off.

#### 2. Connect the parallel cable.

- Align the cable connector with the printer's interface port so the shapes match.
- Gently press the cable connector into the port.
- Secure the cable connector by snapping the two wire clips (located on the printer) into the cable connector.



3. Connect the other end of the interface cable to the parallel interface port on your computer.

## Installing the Ink Cartridge

You use the BC-02 ink cartridge with this printer. Each ink cartridge can print about 400 to 500 letter-size pages (700,000 characters) in HQ mode and 800 to 1000 pages (1,400,000 characters) in HS mode. The actual amount varies according to the print density of a page. If you print a lot of graphics, you may need to change cartridges more often.

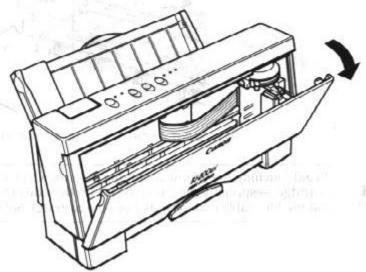


**NOTE:** Canon makes numerous ink cartridges; the BC-02 is designed specifically for the BJ-200ex and is the only one you should use. Using the BC-01 cartridge will result in decreased print quality.



To install the in cartridge, follow these steps:

1. Grasp the sides of the front cover and open it so you can access the cartridge holder.

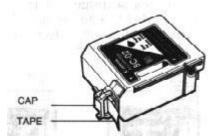


2. Take the ink cartridge out of its protective packaging.

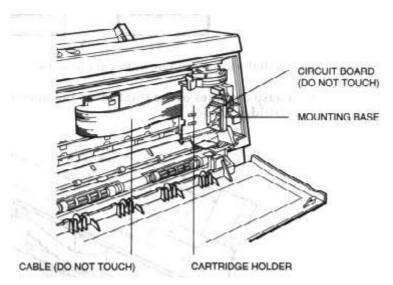


**NOTE:** Install the ink cartridge immediately after removing it from its protective packaging.

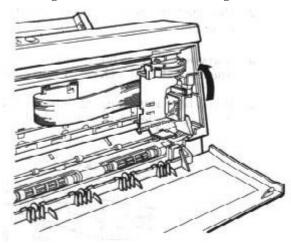
3. Slide off the orange protective cap from the print head and remove the orange tape.



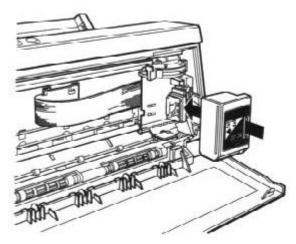
4. Locate the cartridge holder on the right side of the printer.



5. Lift the green lock lever on the cartridge holder.

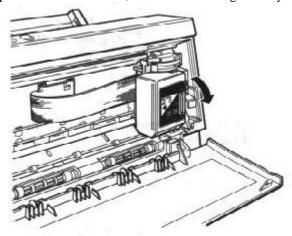


- 6. Fit the ink cartridge over the yellow mounting base with the print head facing down.
- When installed correctly, the label on the cartridge will appear upside down.



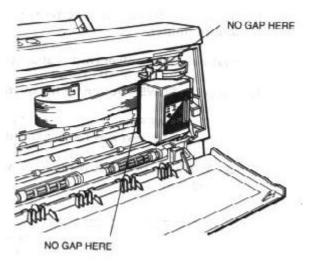
#### 7. Push the lock lever down until it locks into place.

- Use one hand only to set the cartridge and press the lock lever
- Make sure there is no resistance when you press on the lock lever. The lever should lock easily into place.
- If you hear any snapping noises or feel any resistance as you press down on the lever, remove the cartridge and try again.



#### 8. Be sure no gap exists between the ink cartridge and cartridge holder.

When secure, the ink cartridge makes contact with the circuit card inside the cartridge holder.





Do not move the ink cartridge after installing it. Moving the ink cartridge to the left and leaving it there may uncap the print head caution and cause it to dry out.

#### 9. Close the front cover.

When you turn off the printer, the ink cartridge moves to the home position on the right and caps itself to keep itself from drying out. The cartridge will not cap and may dry out or clog in the following cases:

- If you unplug the printer while it is printing.
- If you power off the printer via a power strip while it is printing.
- If you move the ink cartridge from the home position.

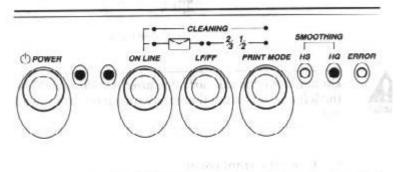


If, after installing the new ink cartridge, the printer seems to be printing but no ink appears, stop the print operation. Remove and replace the ink cartridge making sure it is secure.

## Turning On the Printer

To turn on the printer's power, follow these steps:

- 1. Make sure the parallel interface cable is connected to your printer and computer.
- Make sure the power cord is attached to the printer and a wall outlet.
- 3. Press the POWER button on the operator panel.
- The POWER light flashes and the printer makes several sounds as it warms up and gets ready to print.
- When the printer is ready to print, the POWER, ON LINE, and HQ lights are on.



To turn off the printer, press the **POWER** button again. After turning off the printer, always wait at least five seconds before turning it back on again.



Never unplug the printer or turn it off a power strip to which the printer is attached when the printer's power is turned on. This may prevent the print head from returning to the home position. Once in the home position, the print head is capped, which prevents damage or drying out. This is critical. If left uncapped, the print head may clog, and you may have to purchase a replacement.

## Cleaning the Print Head

The print head on a new ink cartridge needs to be cleaned to ensure the best possible print quality. The printer automatically cleans the print head when you follow these steps:

- 1. Make sure the printer is turned on and on-line.
- 2. Press the ON LINE and PRINT MODE buttons at the same time.
- When the ON LINE light starts to blink, release the buttons.

The **ON LINE** indicator will blink for about 12 seconds while the printer cleans the print head. When complete, the **ON LINE** indicator will stop blinking and go off. The printer will stay off-line until you press the **ON LINE** button.



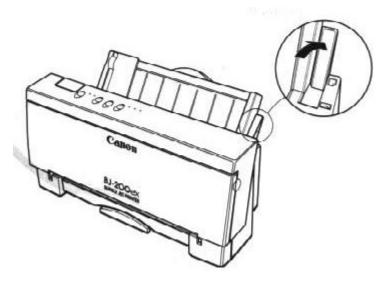
Cleaning the print head consumes a small amount of ink. Repeating this procedure unnecessarily reduces the life of the cartridge.

## Loading a Stack of Paper

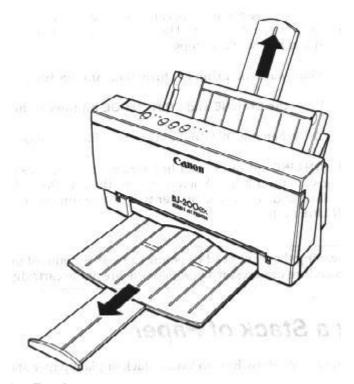
These steps show how to load a stack of plain paper and test your printer. In the next chapter, you'll learn how to print on different types of print.

You can stack about 100 sheets of plain paper in the sheet feeder.

1. Make sure the paper selection lever is set to the back position.

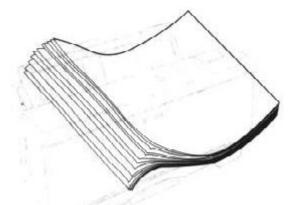


2. Pull the paper support up until it stops and pull out the paper output tray.

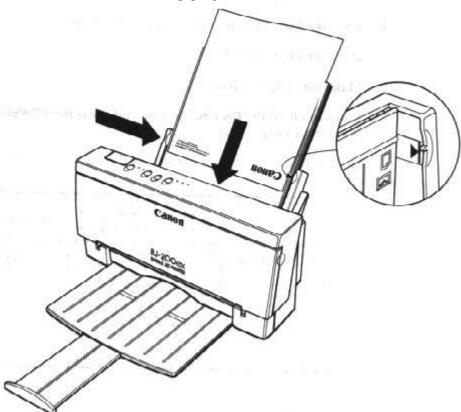


#### 3. Fan the paper.

- For best results, fan the paper before loading it.
- Always fan a stack of paper along the edge that will feed into the printer first.



- 4. Slide the stack of paper into the sheet feeder until it stops.
- Align the edge of the paper with the right edge of the sheet feeder.
- Secure the stack with the paper guide.



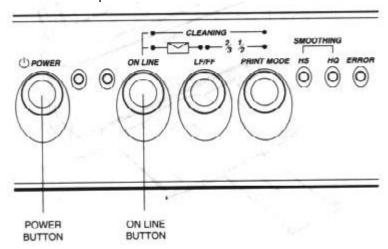


Do not force the paper into the printer.

## Printing a Test Pattern

To check that you have properly set up the printer, you can print one of the printer's test patterns. The test patterns are described in detail in the next chapter. For now, print Demo Print 1:

- 1. Press the POWER button to turn off the printer.
  - Wait a few seconds.
- 2. Make sure the paper is loaded.
- 3. Press and hold the ON LINE button, and press the POWER button until the printer beeps twice.
  - The two beeps are approximately three seconds apart.



The printer starts to print Demo Print 1:

## Canon Bubble Jet Printer BJ-200ex Imprimante Bulle d'encre BJ-200ex Bubble-Jet-Drucker BJ-200ex

High Quality Prints	720x300 dpl for high resolution laser quality text and graphics. Now with superior grayscale printing through Windows driver.
High Speed Print:	248 cps in High Speed mode and 204 cps in High Quality mode with output at up to 3.4 pages per minute for text printing.
Software Support:	Canon extended mode support Windows applications.  Canon BJ, IBM X24E and Epson LQ modes ensure support for almost every DOS application.
Easy Paper Handling:	Built-in automatic sheet feeder holding up to 100 sheets of letter size or A4 size paper.
Quiet Operation:	Approximately 42dB(A) noise level or less makes it perfect for your home or office.

- 4. To stop printing the Demo Print, press the ON LINE button for one second.
  - The printer stops printing, ejects the page, and goes back on-line.

## Installing a Printer Driver

Before you can print documents from your software applications, you must install the appropriate printer driver

on your computer. The printer driver takes the information from your application and translates it into a language the printer can understand.

If you are using Microsoft Windows 3.1 applications, install the Windows printer driver and Visual Guide as described in the next section.

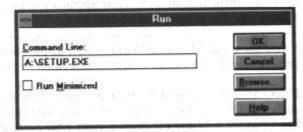
If you are using MS-DOS applications, you must install a printer driver for each MS-DOS software application that you intend to use with the printer. See Chapter 4, *Using the Printer With Your Software*, for details.

#### Installing the Windows Printer Driver and Visual Guide

The Canon Windows Driver and Visual Guide diskettes contain a setup program called SETUP.EXE. This program automatically installs both the Canon BJ-200ex printer driver for Windows 3.1 and the Visual Guide. You can choose to install either the driver, the guide, or both.

#### Follow these steps:

- 1. Turn on your computer.
- 2. Make backup copies of the diskettes.
- If you are not already in the Windows environment, type WIN and press ENTER. Make sure the Windows Control Panel is closed.
- 4. Insert the first diskette (Disk 1 of 2) into the disk drive A (or your desired drive).
- 5. From the Program Manager, select the File menu and then choose the Run option.
- 6. In the Command Line prompt box, enter the path name that identifies the SETUP.EXE file on the Windows driver diskette and then click on OK. For example:



7. Now follow the instructions on the screen to install the Windows driver and the Visual Guide.

The SETUP program installs the BJ-200ex printer driver for Windows in the C:\WINDOWS\SYSTEM directory. If you choose to install the Visual Guide, the SETUP program creates an icon in the Program Manager. Whenever you need information about the BJ-200ex, you can open the icon and look up the information you need.



For faster printing operations in Windows, do not use the Windows Print Manager.

#### Using the Visual Guide

When the SETUP program is complete, you can start the Visual Guide and take a look at its features. Simply open the BJ-200ex icon in the Program Manager.



From now on, you can use the Visual Guide for all your documentation needs. The Visual Guide contains all the information included in this *User's Manual*. In addition:

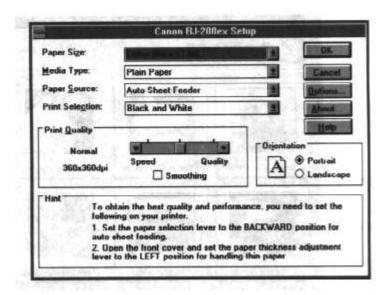
- It shows you photographs as well as illustration of all the topics it covers.
- It includes demonstrations and simulations of procedures you actually perform.
- It includes technical information regarding printer command codes and ESCape sequences.

Using the Visual Guide, you can easily search for the topic you are interested in and you can move forward and backward through the guide with a click of your mouse. If, for some reason, your computer and /or Visual Guide are not available, you can look up the information you need in the *User's Manual*.

## Using the BJ-200ex Windows Driver

When you first install the Canon BJ-200ex driver for Windows, it's a good idea to run the Setup program and

select the printer settings that you will normally use. Later, from within each of your software applications, you can select the printer settings that are unique to the current print job.



This screen shows the default settings for the BJ-200ex. see Chapter 4, *Using the Printer With Your Software*, for details on selecting other printer settings for the BJ-200ex printer driver for Windows.

#### Installing the Canon TrueType Fonts for Microsoft Windows 3.1

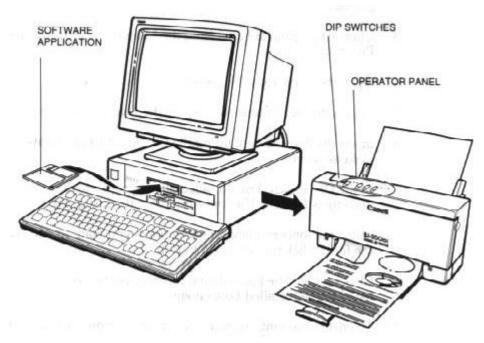
- 1. Make sure your computer is turned on.
- 2. Start Windows 3.1 by typing WIN and pressing **ENTER** at the MS-DOS prompt.
- 3. Choose the Control Panel from the Main icon group window in the Program Manager.
- 4. Open the Fonts icon. The Fonts dialog box appears.
- 5. Choose the Add button to display the Add Fonts dialog box.
- Insert the diskette containing the Canon TrueType Fonts into the diskette drive.
- 7. In the Drives scroll menu, select the appropriate drive where the diskette is located. The fonts appear in the List of Fonts box
- 8. Select the fonts by clicking on the fonts you want to add. To select all the fonts, click the Select All button.
- 9. Click on OK. The Fonts dialog box reappears with the installed fonts listed in the Installed Fonts menu.
- 10. To ensure the fonts appear in your application, click the TrueType button. The TrueType dialog box appears.
- 11. Make sure an X appears in the Enable TrueType Fonts box. Click on OK to exit the TrueType dialog box.
- 12. Click on Close to exit the Fonts dialog box.

Your installation is now complete.

If you would like to remove the installed fonts, please refer to the instructions that came with your TrueType fonts.

## Managing Your Printer's Features

You select and control the printing features of the BJ-200ex printer with your software application, with the printer's operator panel, or with the printer's DIP switches. Each method allows you to select some or all of the printing features that control the appearance of your printed documents.



## Software Applications

Your software applications, when used with the appropriate printer driver, can control all aspects of the printer's features. This is the easiest method for controlling the the look of your printed documents, including typeface style, and size and placement of text, graphics, and margins. Normally, settings made with your software applications override the settings made through the operator panel or the DIP switches.

See Chapter 4, *Using the Printer With Your Software*, for details on setting up your software applications for use with the BJ-200ex.

## **Operator Panel Buttons**

The buttons on the operator panel allow you to turn the printer on and off, set the printer on-line and off-line, pause a print operation, select basic printing modes, feed paper,

clean the print head, start a printer self test, and turn on automatic line feeds.

See Chapter 5, *Using the Operator Panel*, for details.

#### **DIP Switches**

The printer's DIP switches allow you to set the default printer configuration settings, such as paper and envelope size, text lines per page, character sets, and so on. See Chapter 8, *Customizing the Printer*, for details.

## Line Printers Versus Page Printers

#### **Line Printers**

Your Canon BJ-200ex Bubble Jet printer is an example of a line printer. Line printers, sometimes called band printers, process and print information one line (band) at a time. The information sent from the computer to the printer indicates exactly how each line should look and where each dot is positioned. This information is similar to a bitmapped graphic that specifies positions of individual dots of ink.

#### **Page Printers**

Page printers process and print information one page at a time. The information sent from the computer to the printer is sometimes in simple ASCII code, or more often, in a page description language. This information is a set of instructions that the printer must interpret to determine where the printer should position each dot. Some common page description languages include PostScript, CaPSL, and HP PCL.

## Line Printers and Processing

With line printers almost all of the processing burden falls on the computer. The printer needs to do very little additional processing of the information it receives from the computer-it simply executes the instructions it receives. This means a line printer needs very little processing power and memory.

Because most of the processing takes place on the computer, the speed of the computer's processor (386, 486, Pentium) and the amount of random access memory(RAM) on your computer have a significant influence on printing speed.

The faster the processor, and the more RAM you have, the faster you can print on your BJ-200ex Bubble Jet Printer.

#### Page Printers and Processing

With page printers, the computer and the printer share the processing load. The computer translates information from the application into the appropriate page description language and sends this to the printer. The printer processes this code into the specific printing instructions on where to put each dot on the page. This means that the printer itself must have a certain amount of processing power and memory to handle the instructions it receives from the computer.

Because processing takes place on both the computer and the printer, the speed of laser printing depends on the processor speed and RAM available on both the computer and the printer.

## **Congratulations**

You are now ready to start using your new printer. See Chapter 3, *Using the Printer*, for instructions on how to perform various printing operations.

# Chapter 3 Using the Printer

This chapter describes how to use the printer for all your printing operations, such as printing documents, single sheets, special papers, and envelopes. It includes how to print the self tests as well as print on legal size paper and print in landscape orientation. It also describes how to pause a print operation.

To ensure the best performance of your printer, you want to select the best paper and load it correctly. You can stack paper in the sheet feeder to load it automatically, or you can manually feed one sheet at a time. The path that the paper travelks through the printer is the same for automatic and manual feeding.

## Selecting Paper Types

One of the most important things you can to do assure the best possible performance of your bubble jet printer is to select the correct paper. Your printer produces letter quality output on most plain papers; it does not require special ink jet papers. However, the print quality varies with different paper types. Be sure to test a type of paper before you purchase a large quantity.

#### **Plain Papers**

The printer supports paper sizaes of letter, legal, A4, and B5 in portrait orientation. You can use regular copier paper, cotton bond papers, and typical letterhead. Always use paper without curls, folds, staples, or damaged edges.

#### **Transparencies**

The Canon transparency film (Q07-0001-M1) is recommended. It is available in letter size.

When selecting or loading paper, keep these guidelines in mind:

- Attempting to print on damp, curled, wrinkled, or torn paper can cause paper jams and poor print quality.
- Use cut-sheet paper only. You cannot use multipart paper.
- When using graph paper, the lines may not match because the 1/6-inch line spacing of the printer is slightly less than that of graph paper.

- If the print density of your page is very high, light paperstock may curl slightly due to the large amount of ink. If you need to print heavy graphics, try printing on heavier stock.
- Do not use thicker paper than meets the specifications for this printer. Printing with a paper that is thick enough to come in contact with the print head nozzles may damage the print head unit.

For complete paper specifications, see Appendix A, *Specifications*.

## **Before Loading Paper**

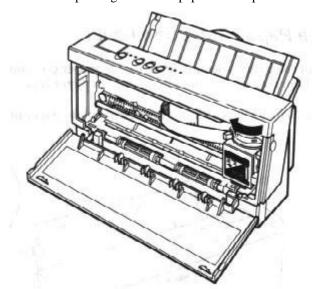
To ensure trouble-free paper handling, you'll want to set the paper thickness lever and paper selection lever before loading paper.

#### Setting the Paper Thickness Lever

You use the paper thickness lever to adjust the distance between the print head and the paper to accommodate different paper thicknesses. This distance is called the *print gap*.

Set the lever according to the thickness of the paper you are using:

• **Left** is for printing on normal paper or transparencies.



Right is for printing on thick paper or envelopes.





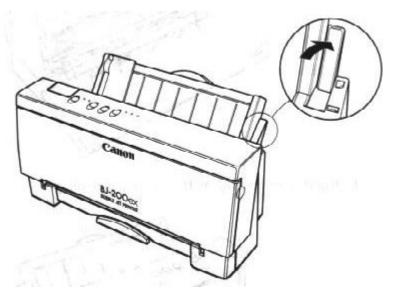
Always set the paper thickness lever before and after printing on thick paper or envelopes.

If you are printing documents with high density graphics or ink and the printed pages are smudges, try setting the paper thickness lever to the right position. This unit moves the print head unit further from the paper. Print quality may diminish slightly, but the smudges should go away.

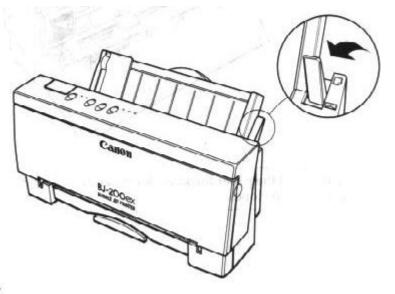
## Setting the Paper Selection Lever

Set the paper selection lever to the proper position before loading paper. There are two positions according to paper type:

• The **back** position is for normal plain paper or transparencies.



 The front position is for automatic loading of envelopes and for manually feeding any type of print media.

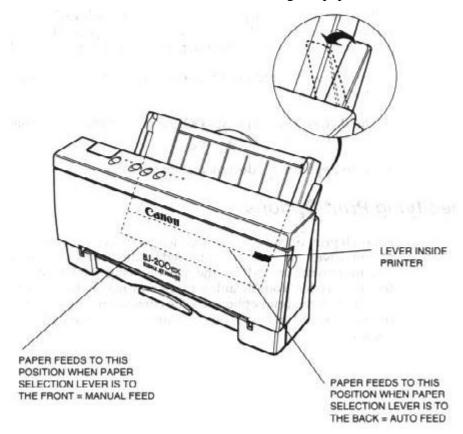




- Do not move the paper selection lever after loading paper in the sheet feeder.
- This lever is different from the lever on a typewriter or dot matrix printer. You need not pull it forward to load paper. You set the paper selection lever to the front position only when loading envelopes or when manually feeding paper. If it is set to the front position when you are automatically feeding stacks of normal paper, the printer may feed multiple sheets or jam.
- Be sure to remove any paper from the sheet feeder before setting the paper selection lever.

When the paper selection lever is in the back position, a lever inside the printer prevents the paper from advancing into the printer. When you move the paper selection lever to the front position, the lever inside the printer moves so that the single sheet being fed can advance into the printer.

It is important that you set the paper selection lever to the correct position based on how you plan to feed paper. Be sure to set the paper selection lever before loading paper and do not move the lever after loading the paper.



# Printer Settings for Various Print Media

The following table summarizes the printer settings for the various types of print media:

	Paper thickness	Paper selection	Loading
Paper type	lever	lever	method
Plain Paper	Left	Back	Automatic
Envelope	Right	Front	Automatic
Transparency	Left	Back or	Automatic
Transparency		Front	or Manual
Thick paper	Right	Back or	Automatic
		Front	or Manual

If you have a problem with the paper misfeeding, see Chapter 7, *Troubleshooting*, for possible solutions.

# **Printing Documents**

When you want to print a multiple page document, load a stack of papers in the sheet feeder. The printer automatically feeds each sheet when your software application tells it to start printing the page. How you actually print from within a program is dependent on the application. For example:

- In Microsoft Word for Windows, you select the Print command from the File menu.
- In Microsoft Word for MS-DOS, you select the Print command from the Command menu.

See your application's documentation for details.

# Specifying Print Options

For each print operation, you need to specify certain print functions in the printer driver. For example, you need to identify the size and type of paper you are printing on and that the paper is being loaded automatically from the sheet feeder. Your default settings may match the current print operation. If the print options for the current print operation are different from the default settings, you can change them from within your application.

## For example:

- In Microsoft Word for Windows 2.0, you can select Print Setup from the File menu and then select Setup from the Printer Setup dialog box. Windows displays the Canon BJ-200ex Setup dialog box in which you can define all your printer settings. See Chapter 4, *Using the Printer With Your Software*, for complete details on the printer settings you select using the Windows printer driver.
- In Microsoft Word for MS-DOS, you can select Print from the Command menu, and then select Options from the Print menu. The Print Options menu then allows you to define your printer settings.

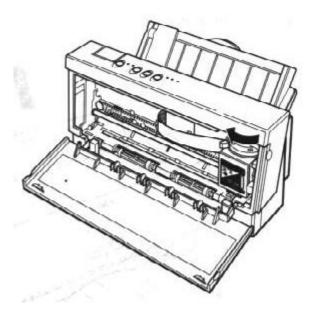
After making your print selections, you can prepare the printer for automatically feeding paper.

# Automatically Feeding Paper

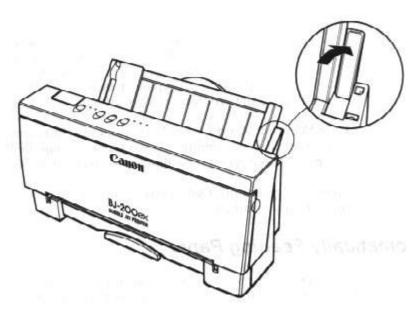
You can place approximately 100 sheets of plain paper (20 lb or 75 g/m²) in the sheet feeder at a time. (For instructions on automatically feeding special paper, see *Printing on Special Papers* later in this chapter.)

To automatically feed plain paper, follow these steps:

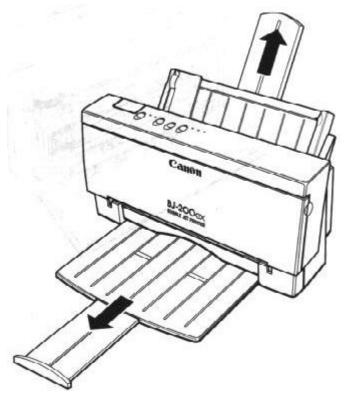
1. Make sure the paper thickness lever is left for printing on normal paper.



2. Make sure the paper selction lever is set to the back position.

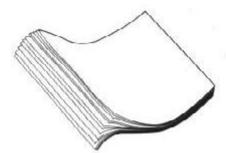


- 3. Extend the paper support and the paper output tray.
  - Pull the paper support up until it stops. The paper support keeps paper straight and limits the possibility of jams.
  - Extend the paper output tray.



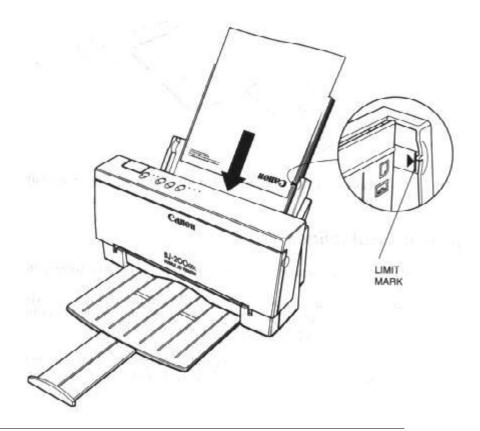
### 4. Fan the paper

- For best results, fan the paper before loading it
- Always fan a stack of paper along the edge that will feed into the printer first.



# 5. Slide the stack of paper into the printer until it stops.

- Align the edge of the paper with the right edge of the sheet feeder.
- Insert the paper so that the side you want to print on is facing you. If you are using a preprinted stock, such as letterhead, insert the top of the paper into the sheet feeder first.
- Make sure the stack of paper does not exceed the paper limit mark on the right side of the sheet feeder.

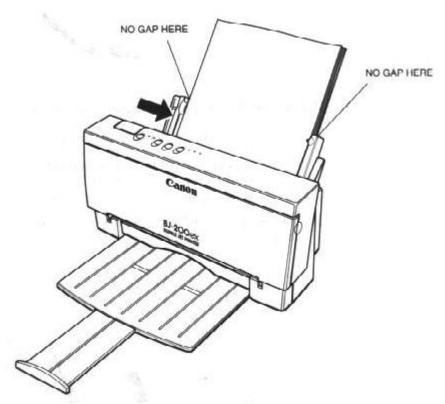




Do not force the paper into the printer.

# 6. Adjust the paper guide to the stack of paper.

- This keeps the paper feeding straight into the printer and reduces skewing.
- Be sure there is no gap between the paper guide and the edge of the stack of paper.

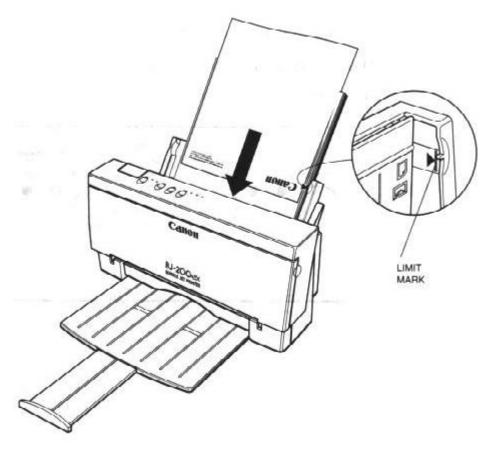


7. Make sure the printer is turned on and on-line. Start your print operation.

## **Auto Feed Guidelines**

When automatically feeding stacks of paper, follow these guidelines:

- Do not leave paper stacked in the printer for long periods of time; longer sheets of paper may become bent or curled over time. This may cause the paper to misfeed or jam.
- If your printed page contains lots of graphics, the ink on the page may be damp due to the print density. Remove the page right away and allow the ink to dry.
- The capacity of the paper output tray is 20 sheets of paper. To reduce paper jams, remove paper from the output tray before the count reaches 20.
- If paper curls after printing, remove it immediately; otherwise, paper jams may occur.
- The platen (a roller on the inside of the printer) may become inked if you print data beyond the width of the page. If this happens, clean the platen with a soft cloth. (For details on cleaning the platen, see Chapter 6, Maintaining the Printer.
- Depending on the density of your printed pages, the ink may need time to dry.
- Do not try to load paper into the sheet feeder beyond the paper limit mark (>|) on the right side of the sheet feeder; stacking too much paper may cause paper feeding or printing problems



• Make sure there are no gaps between the stack of paper and the paper guide nor the right edge of the sheet feeder.

# **Printing Single Sheets**

When you want to print a single page or thick paper, you can manually feed single sheets of paper.

# Specifying Manual Feed

In the Windows driver, you must select Manual Feed for the Paper Source.

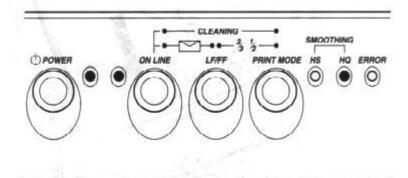
If you are using an MS-DOS application, your driver should have a manual feed selection. For example, in Microsoft Word, the Print Options menu includes a Paper Feed option for which you select Continuous or Manual.

# Manually Feeding Paper

You use the manual function when printing on heavier weight paper (up to 28 lb or 105 g/m²).

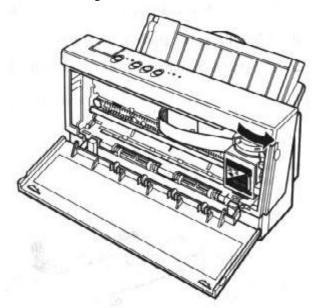
To manually feed a single sheet, follow these step:

- 1. Make sure the printer is turned on and on-line.
  - The POWER, ON LINE, and HQ lights are on

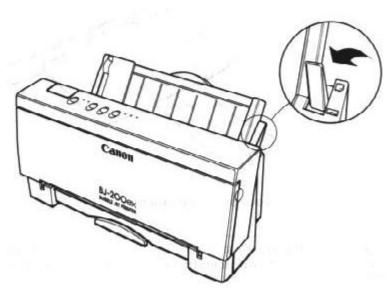


# 2. Open the top cover and check the paper thickness lever.

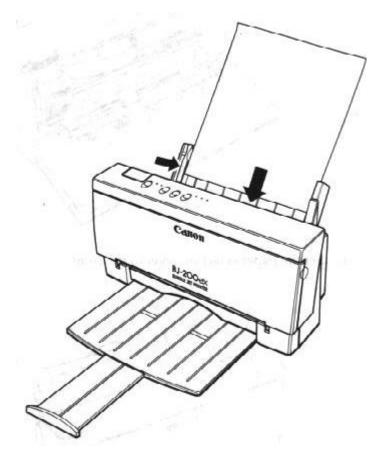
 If you are manually feeding thick paper or transparencies, set the paper thickness lever to the right.



3. Set the paper selection lever to the front.



- 4. Extend the paper support and the paper output tray.
- 5. Insert the single sheet.
  - Slide in the paper until it stops inside the sheet feeder and hold it for about two seconds.
  - Align the sheet with the right edge of the sheet feeder.
  - Adjust the paper guide to the sheet.
  - The printer automatically loads the paper into position.



### 6. Start your print operation.



- If you are using Windows, you must select Manual Feed using the BJ-200ex printer driver for the printer to accept manually fed paper.
- After printing on thick paper or envelopes, set the paper thickness lever (inside the printer) to the left before printing on normal paper.
- After manually feeding a sheet of paper or an envelope, set the paper selection lever to the back position.

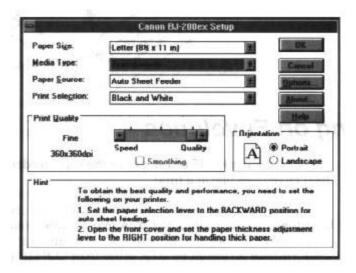
# **Printing on Transparencies**

You can stack approximately 40 transparencies in the sheet feeder. However, this special medium may not advance correctly under unusual environmental conditions (such as extreme temperatures and humidity). If you have trouble with transparencies becoming skewed or feeding multiple sheets, do not stack them in the sheet feeder. Load them manually as described earlier in the chapter.



Place at least one sheet of plain paper in back of a stack of transparencies.

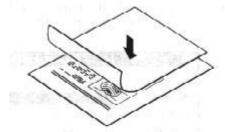
When you are ready to print on transparencies, open your document withing your software application and define any special print options you can from within your print driver. For example, if you are using Windows, you can specify the Paper Size, Media Type, Paper Source, Print Selection, and Print Quality from within the printer driver.



Once your software and driver are ready to print, you can set up the printer for auto feed or manual feed. Both methods are described earlier in this chapter.

Follow these guidelines when automatically feeding stacks of special paper.

- When automatically feeding transparencies, remove each sheet after it is delivered. Do not allow transparencies to stack up in paper output tray.
- Let the printed transparencies dry completely before storing them. The complete drying time required for Canon's transparencies is approximately 15 minutes.
- When a transparency has dried completely, cover its printed side with a sheet of plain (not coated) paper before stroing it; this is recommended even if you place the transparency in a clear file.



# Printing on Envelopes

You can stack up to 15 envelopes in the sheet feeder or you can manually feed envelopes one at a time.

U.S. Commercial number 10 (COM 10) envelopes and European DL envelopes are recommended. You may be able to stack envelopes of other sizes in the sheet feeder; however, Canon cannot guarantee consistent performance on envelope sizes other than COM10 and DL.

The following envelopes are not recommended because they may cause jams or smears, or may damage your printer:

- Envelopes with windows, holes, perforations, cutouts, and double flaps.
- Envelopes made with special coated paper or deeply embossed paper.
- Envelopes using peel-off sealing strips.
- Envelopes in which letters have been enclosed.

# Preparing Your Software

How you create envelopes within your software application depends on the application. See your application's documentation for details.

If you are using the BJ-200ex printer driver for Windows, change the Paper Size setting to Envelope.



Check your software to see if it prints envelopes in portrait or landscape orientation. It's a good idea to print on a sheet of paper before printing on an envelope to check the orientation.



Printing on envelopes in portrait orientation results in faster printing. However, several software packages, such as WordPerfect and Word for Windows, default to landscape orientation. This requires adjustments in the software to correctly print on envelopes with this printer. See Appendix B, *Application Notes*, for details.

# Turning On the Printer's Envelope Mode

If you are not using Windows and your software application does not have an envelope feature, you can turn on the printer's envelope mode using the operator panel. Follow these steps:

- 1. Make sure the printer is turned on and on-line.
- 2. Turn on the envelope mode:
  - Press and hold the LF/FF button and press the ON LINE button.

- The printer beeps once and the indicator light for the current print mode blinks rapidly.
- Press ON LINE to set the printer on-line.

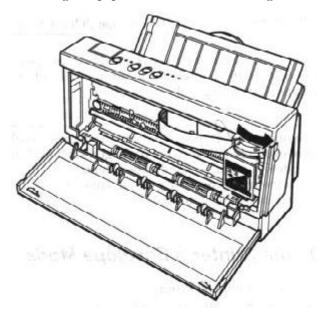


- Use the envelope mode only when you are loading envelopes; do not use this mode when loading regular or thick paper.
- Selecting envelope mode cancels reduction mode (if set).

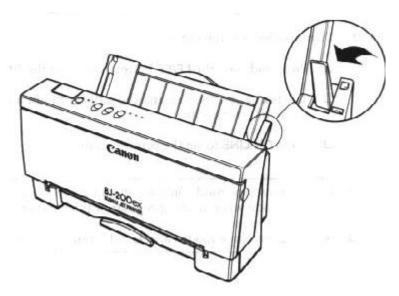
# Preparing the Printer

When you are ready to print on envelopes, follow these steps to stack envelopes in the sheet feeder. (You can also manually feed envelopes one at a time.)

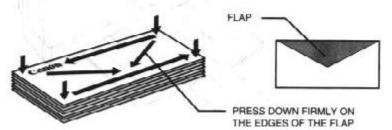
1. Set the green paper thickness lever to the right.



2. Set the paper selection lever to the front.

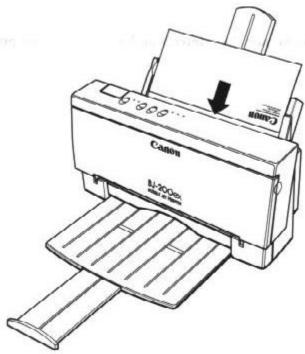


- 3. Move the paper guide to the left to match the width of the envelopes.
- 4. Extend the paper support and the paper output tray.
- 5. Prepare the envelopes.
  - Arrange the stack of envelopes on a firm surface and press down firmly on the edges to make the folds crisp.
  - Press around the envelopes to remove and curls and expel air from inside the envelopes.
  - Also, press firmly on the area that corresponds to the edges of the flap.

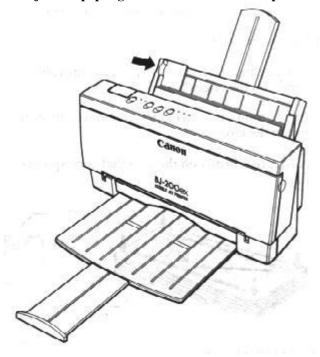


### 6. Insert the envelopes

- Slide the stack of envelopes into the sheet feeder until it stops.
- Align the stack of envelopes with the right edge of the sheet feeder.



7. Adjust the paper guide to the stack of envelopes.





When printing on COM10 envelopes, move the paper guide all the way to the left. Depending on the size and shape of your interface connector, the paper guide may touch it. If this causes the envelopes to misfeed, use an interface cable with a smaller connector.

8. Make sure the printer is on-line and start your print operation.

# **Turning Off Envelope Mode**

After printing on envelopes, follow these steps before loading normal paper again:

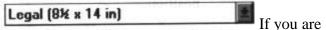
- 1. Set the paper selection lever (on the right side of the sheet feeder) to the back position.
- 2. Set the green paper thickness lever (inside the printer) to the left position.
- 3. If you enabled the envelope mode, disable it now.
  - Make sure the printer is on-line; then press and hold the LF/FF button and press the ON LINE button.
  - Press the ON LINE button to set the printer back on-line.
- 4. In your Windows driver, change the Media Size setting back to 8.5 x 11 inches or to the paper size you are using.

# Printing on Legal-size Paper

You can print on legal-size paper by selecting a page size of 8.5 x 14 from within your software application or from the printer setup program within the application.

For example, if you are using Windows, simply select Legal for your paper size in the Setup program:

### Paper Size:

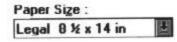


using Word for Windows, version 2.0, follow these steps to select the paper size:

- 1. From the top menu bar, select Format and then Page Setup.
- 2. In the Page Setup dialog box, select the Size and Orientation attribute button.



3. Select the Paper Size menu bar to choose different options and select Legal (8.5 x 14 in).



4. Select OK to verify the changes.

In some MS-DOS applications, you may need to specify the page length in lines per page. For letter-size paper, the page length is 64 lines, and for legal-size paper, the page length is 82 lines. If you are using an application that does not include a page setup or printer setup procedure, you may be able to use the ESCape sequence to specify your page length. Applications handle ESCape sequences differently, so refer to your application's software manual for instructions on sending commands.

The ESCape sequence for page length is ESC 0 n, where *n* is the page length in inches. For legal-size paper, the ESCape sequence is ESC 0 14 (27 67 0 14, decimal, or 1B 43 00 0E, hexidecimal).

When printing on legal-size paper, do not extend the paper output tray:



Remove each sheet as it is printed.

# **Printing in Landscape Orientation**

The BJ-200ex Bubble Jet Printer does not have built-in landscape fonts. However, you can print in landscape orientation through the Windows environment.

The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation

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PORTRAIT

LANDSCAPE

If you are not using Windows, you can consider many other software packages that offer landscape font capabilities, sucj as:

Quatro Pro 3.0 Lotus 2.4 Geoworks WordPerfect 6.0 for MS-DOS

The following font packages work with the specified software applications. (Product names may be trademarks of their respective companies.)

- WordPerfect 5.0 and 5.1
   Bitstream Facelift for WordPerfect
   More Fonts
   Fonts On the Fly
   The Publishers Power Pack
- Lotus 2.0, 2.1, and 2.2 Sideways
- Microsoft Windows 3.1
  Adobe Type Manager
  Bitstream Facelift for Windows
  The Publishers Power Pack
  TrueType Font Packs

Many other graphics software packages offer landscape printing. Call your specific software manufacturer to see if they offer landscape printing capabilities.

# Printing the Test Patterns

There are three test patterns that you can use to check the operation of the printer: the Self Test, the Font List, and the Demo Print. Use these test patterns to check the operation of the printer.

To print the test patterns, you must be automatically feeding paper. Make sure the paper selection lever is set to the back position.



Use letter-size or A4-size paper when printing the test patterns. If you attempt to print on a smaller sheet, ink will get on the platen. If this happens, see Chapter 6, *Maintaining the Printer*, for a description of how to clean the platen.

## Self Test

You can print the Self Test in both printer control modes: BJ-10 mode or Epson LQ mode. The printer prints a repeating pattern of characters in the default print mode and pitch.

In BJ-10 mode, the pattern is printed is Courier typeface at 10 cpi; the print mode is HQ. In Epson LQ mode, that pattern is printed in Roman typeface at 10 cpi; the print mode is HQ.

# Starting

To start the Self Test, follow these steps:

- 1. Press the POWER button to turn off the printer.
- Press and hold the ON LINE and PRINT MODE buttons, and press the POWER button until the beeper sounds once.
  - The printer starts to print the self test.

# Stopping

To stop the self test, press and hold the **ON LINE** and **POWER** buttons for one second. The printer stops printing, ejects the current sheet of paper, and goes back on-line.

In BJ-10 mode, the Self Test looks like this:

### BJ Mode Ver X.XX

```
DIP SW1-12 000000000000
```

In Epson LQ mode, the self Test looks like this:

```
LQ Mode Ver X.XX
 CG Ver X.XX
DIP 5#1-12 900000000010
```

## Font List

You can print this sample in both printer control modes: BJ-10 mode or Epson LQ mode. The printer prints all characters in the available print styles and pitches.

### Starting

To start the Font List, follow these steps:

- 1. Press the POWER button to turn off the printer.
- Press and hold the ON LINE button, and press the POWER button until the beeper sounds once.

The printer starts to print the Font List.

## Stopping

To stop printing the Font List, press and hold the **ON LINE** button for one second. The printer stops printing, ejects the current sheet of paper, and goes back on-line. In BJ-10 mode, the Font List looks like this:

### BJ Mode Ver X.XX

In Epson LQ mode, the pattern looks like this:

# 

### Demo Prints 1 and 2

You can print these samples in both printer control modes:BJ-10 mode or Epson LQ mode. Demo Print 1 shows normal mode and Demo Print 2 shows Smoothing mode. The Demo Prints describe a few of the printer's features in different languages.

### Starting

To start the Demo Prints, follow these steps:

- 1. Press the POWER button to turn off the printer.
- 2. To start Demo Print 1: press and hold the ON LINE button, and press the POWER button until the beeper sounds twice.
  - The two beeps are approximately three seconds apart.
  - The printer starts to print Demo Print 1.
- 3. To start Demo Print 2: press and hold the ON LINE button, and press the POWER button until the beeper sounds three times.
  - The first two beeps are approximately three seconds apart. The next beep is one second later
  - The printer starts to print the Demo Print 2.

## Stopping

To stop printing the Demo Print, press and hold the **ON LINE** button for one second. The printer stops printing, ejects the current sheet of paper, and goes back on-line. Demo print 1 looks like this:

# Canon Bubble Jet Printer BJ-200ex Imprimante Bulle d'encre BJ-200ex Bubble-Jet-Drucker BJ-200ex

High Quality Print:	720x360 dpi for high resolution laser quality text and graphics Now with superior grayscale printing through Windows driver.		
High Speed Print:	248 cps in High Speed mode and 204 cps in High Quality mode with output at up to 3.4 pages per minute for text printing.  Canon extended mode support Windows applications.  Canon BJ, IBM X24E and Epson LQ modes ensure support for almost every DOS application.		
Software Support:			
Fasy Paper Handling:	Built-in automatic sheet feeder holding up to 100 sheets of letter size or A4 size paper.		
Quiet Operation:	Approximately 42dB(A) noise level or less makes it perfect for your home or office.		

Demo Print 2 is similar to Demo Print 1 but shows the advantages of Smoothing mode. In Smoothing mode, the jagged edges and ragged stair-stepping curves of characters and graphics are polished and refined.

# Pausing a Print Operation

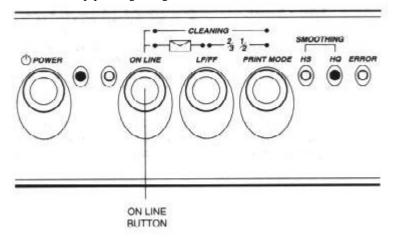
When the ON LINE light is on, the printer is on-line and ready to receive data from your computer. At this time, you can send print data from your computer to the printer.

While you are printing a document, you may want to pause the printer.

Follow these steps:

1. To pause printing while the printer is working, press the ON LINE button.

• The ON LINE light will go off; the printer will stop printing and go off-line.

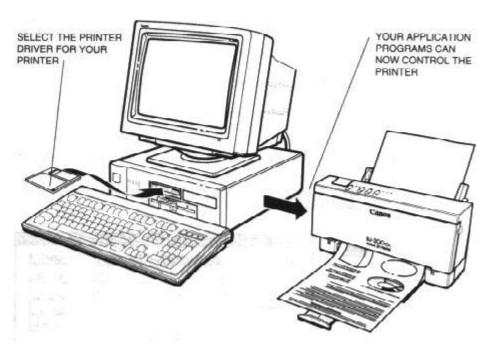


- 2. To start printing again, press the ON LINE button.
- 3. If data remains in the print buffer, the ON LINE light blinks.
  - To print the data, press the ON LINE button to set the printer off-line and then press the FF button.

# Chapter 4 Using the Printer With Your Software

Your printer will work with a wide variety of applications, such as spreadsheet, word processing, and graphics programs. This chapter describes how to set up your software applications for your printer.

Application programs include a group of programs, called printer drivers, that help the application communicate correctly with specific printers. Before using the printer with your application program, you need to tell the application what type of printer you are using by selecting the printer driver that corresponds to your printer.



Canon provides a BJ-200ex printer driver for Microsoft Windows. The easiest way to use your printer is to install the Windows driver and perform your print operations through the Windows environment.

If you are using Microsoft Windows, you have already installed the driver (as described in Chapter 2, *Setting Up the Printer*). Also, in the last chapter, *Using the Printer*, you learned that there are certain print options you can select through your printer driver.

If you are not using Windows, see the section *Setting Up MS-DOS Software Applications* (later in this chapter) for information on how to install another printer driver and select a printer control mode.

# **Printer Setup Within Windows**

After you install the Canon BJ-200ex printer driver, you can run the Windows Setup program to change printer settings.

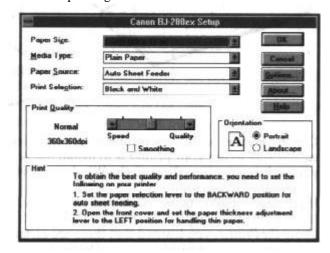
You can access the Setup program from the Printers dialog box in the Control Panel, or you can select the Print Setup option that is available from the File menu of most applications that run in Windows.



If the Print Setup option does not appear in the File menu for your application, refer to the user's manual supplied with the application. It should provide information about changing the printer setup parameters.

To configure your BJ-200ex printer driver, follow these steps:

- 1. Start the application you want to use in the Windows environment.
- 2. Open the document you want to print.
- 3. Choose Print Setup from the File menu. The Select Printer dialog box appears.
- 4. Click once on the Canon BJ-200ex printer name to select it.
- 5. Click on the Setup button. Windows displays the Canon BJ-200ex Setup dialog box.



From this screen, you can select the Paper size, Media Type, Paper Source, Print Selection, Print Quality, Resolution, and

- Orientation for your print job. You can use these options in any combination. see the next section for more detailed Information about the options.
- 6. Once you select the options you want to use, click on the OK button to close the Canon BJ-200ex setup dialog box, and then click on the OK button to close the Print Setup dialog box.

# **Selecting Printing Options**

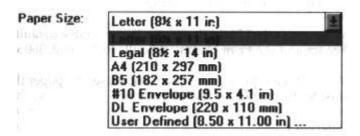
This section describes the printing options available to you through the BJ-200ex printer driver.



If other options appear in the dialog box, they are provided by the application you are using. Refer to that application's documentation for more information.

# **Paper Size option**

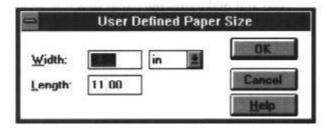
Click on the arrow next to the **Paper Size** setting to select one of the following paper sizes from the drop down list:





When printing on envelopes or thick paper, make sure the paper selection lever is set to the front position and the paper thickness lever (inside the printer) is set to the right.

If you select User Defined Size, the Setup program displays the following dialog box:

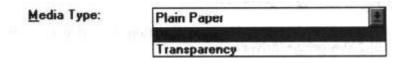


Select the unit of measure you are using (inches or millimeters), and then specify the width and length of your paper. The width can be from 4.1 to 8.5 inches (104.1 x

215.9 mm). The length can be from 4.1 to 14 inches (104.1 x 355.6 mm).

# Media Type option

Click on the arrow next to the **Media Type** setting to select one of the following types of paper from the drop-down list:



When you select the Media Type, the Windows driver changes printer modes. You can experiment with different settings to see the results you can achieve on different types of media. You may find that you can produce higher quality printing on plain paper using the Transparency mode. Because each situation is different, Canon cannot guarantee better output output for a particular medium other than the recommended choices.

## **Plain Paper**

This mode is for printing on ordinary paper. This selection sets the dots generated by the printer to yield the highest quality printed image for this type of paper with minimal bleeding.

- When you select Plain Paper, the Paper Source defaults to Auto Sheet Feeder and the Print Quality defaults to Normal, 360 x 360 dpi.
- When you are printing on plain paper, set the paper thickness lever (inside the printer) to the left position.

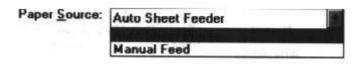
#### **Transparency**

This mode is for printing on transparency stock. Use the Canon Transparencies (Q07-0001-M1) to achieve the highest possible color fidelity.

- When you select Transparency, the Paper Source defaults to Auto Sheet Feeder and the Print Quality defaults to Fine, 360 x 360 dpi.
- When you are printing on transparencies, set the paper thickness lever (inside the printer) to the left.
- When manually feeding paper, change the Paper Source to Manual Feed and make sure the paper selection lever is set to the front position.

# Paper Source option

Click on the arrow next to the **Paper Source** setting to select one of the following paper sources from the drop-down list:





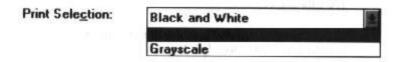
When using manual feed, it is a good idea to turn off the Print Manager in the Printers dialog box.

If you are feeding paper manually and using the spooler, the printer goes off-line before printing each page to allow you to insert paper.

When you select Manual Feed, be sure to set the paper selection lever on the printer to the front position.

# **Print Selection option**

Click on the arrow next to the **Print Selection** setting to select one of the following options from the drop-down list:



## **Black and White**

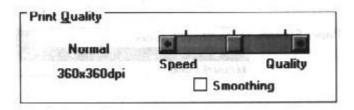
This option prints documents in black ink only. Use this setting when printing text files that have no graphic images.

### Gravscale

Use this option to produce graphic images in shades of gray.

# **Print Quality options**

Click on the **Print Quality** selections when you want to use:



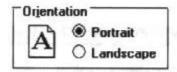
Adjust the Print Quality setting to match your printing needs:

 High speed (left position) - Use this mode for your fastest printing speed at a lower resolution of 180 x 180 dpi. This

- setting reduces the resolution to improve your application's processing time. Use this setting to print draft copies of your work.
- Normal (center) Use this mode for your best quality text and simple graphics. The printer prints at a resolution of 360 x 360 dpi.
- Fine (right position) Use this mode to intensify the printed image. The printer prints at 360 x 360 dpi but makes multiple passes as it prints; this produces very high quality but is slower than normal HQ mode. If you need very high quality print or are having problems with banding, try this selection.
- Smoothing (check box) Use this mode to print at the highest resolution, 720 x 360 dpi. You can select Smoothing with Normal only.

## Orientation option

Click on the **Orientation** setting you want to use:



The page orientation determines the direction of printing on the page:

The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation determines the direction of printing on the page. The page orientation

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PORTRAIT

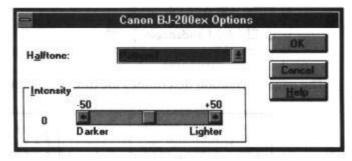
LANDSCAPE

### Other selections

- Click on Options to access the special options provided by the BJ-200ex printer driver for Windows. These options are discussed in the next section.
- Click on About to display copyright information regarding the Windows driver and its version number.
- Click on Help to enter the Help program. This program provides information to help you specify your printer settings.

# Special Options

The BJ-200ex printer driver for Windows provides several special options. From the Canon BJ-200ex Setup dialog box, click on the Options button.



These options allow you to select the halftone method you want to use, and increase or decrease the intensity of the printed images.

# Halftone

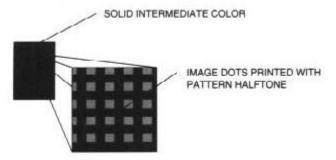
This option is available only when the Print Selection is grayscale.

When you click on the arrow next to the **Halftone** setting, you can select the following options:



### Pattern 1 and Pattern 2

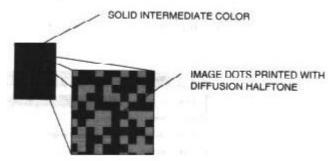
This setting uniformly aligns individual dots to create shades of gray. This method offers faster printing speed and is best suited for printing documents that contain large areas of solid color, such as bar charts and graphs.



### **Diffusion**

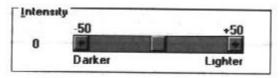
This setting randomly places individual dots to create shades of gray. By randomly placing dots, the printer can achieve subtle gradations. This method is best suited for printing documents that contain finely detailed graphics or photographic images.

Using diffusion slows the application release time because a larger, more complex page is generated by the software. This type of page requires more time to calculate as well as send to the printer. However, what you lose in print speed may be gained in quality. The diffusion setting may help eliminate banding problems when printing grays on all black images.



# Intensity

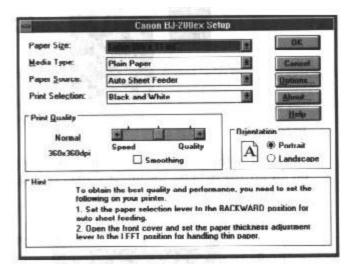
You can use this option to adjust the **Intensity** of the printed image. Click on the arrows to make the image darker or brighter, or drag the slider box right or left along the bar.



# Printing a Document

This procedure provides general steps for printing from the various applications you may run in the Windows environment. The exact steps for printing a document may vary depending on the application program you are using. Refer to your program's documentation for the exact printing procedure.

- 1. Start the program you used to create the document, and open the document you want to print.
- 2. Choose Printer Setup from the File menu.
- 3. Select the Canon BJ-200ex as your printer and select Setup.
- Make any adjustments as appropriate for printing your document, and select OK.



- 5. Select OK to close the Printer Setup window.
- 6. Choose Print from the File menu.
- 7. After making any necessary changes to the printing parameters, select OK to start the print job.



It's a good idea to turn off the Print Manager if you are feeding paper manually. To do so, clear the Use Print Manager check box in the Printers dialog box within the Control Panel.

If you are feeding paper manually and using the spooler, the printer goes off-line before printing each page to allow you to insert paper.

# Ways to Improve Print speed in Windows

To improve printing speed, you can try the following:

■ Turn off the Print Manager in the Windows Control Panel
This avoids the extra step of sending the print file to the Print
Manager and may increase your printing speed by as much as
25%, depending on the computer you are using. (See the next
section for details.)

# Use Print Manager

#### Add a permanent swap file in Windows

Under the 386 Enhanced icon in the Windows Control Panel, add or create a permanent swap file that is from 4 MB to 9 MB. The computer will be able to prepare the print file faster. See your Windows documentation for instructions.

### Avoid diffusion halftones

In the Options dialog box, choose Diffusion only when printing final output or photographic images. Choosing Pattern allows documents to print as much as 20% faster because the computer does not need to compute to "best possible position" for each dot.

## ■ Free up your memory

Use only one software program at a time and unload any screen saving utilities or programs stored in Windows background; this frees up more memory for Windows processing.

### Use Black and White when possible

If you will be printing text in black ink only, choose Black and White rather than Grayscale.

## Use high speed (draft) modes

The printer will need to image fewer dots.

## Add RAM to your computer

The computer will be able to prepare the print file faster.

Use a computer with a faster processor

The computer will be able to prepare the print file faster.

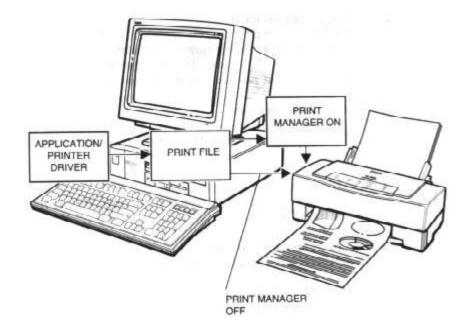
# Using the Windows Print Manager

The Print Manager is part of the Windows operating system and controls the printing of your files.

# **Background Printing**

When the Print Manager is active, the print file that your application and printer driver create is not sent directly to the printer. Instead, the print file is sent to the Print Manager. The Print Manager then sends the print file to the printer.

This means the Print Manager allows you to print in the background. Once the Print Manager receives the print file from the application, you can continue to use your computer for other work. The Print Manager will send the print file to the printer when it has the time and memory available to do so.



Because most of the print is actually the processing time needed for the computer to prepare the print file, background printing does not usually give you any real advantage.

# Foreground Printing

If the Print Manager is not active (turned off), the print file that your application and printer driver create is sent directly to the printer. This means you are printing in the foreground and you cannot use your computer for other work until you have finished printing.

Printing usually works best with the BJ-200ex when the Print Manager is turned off. You can turn off the Print Manager by using the Control Panel in the Main Group window. Select the Printers icon, then click on the X that is in the Use Print Manager check box. (This will make the X disappear.)

# Setting Up MS-DOS Application Programs

If you are not using Windows, follow the guidelines in this section for setting up our applications for use with the Bubble Jet Printer BJ-200ex. If you installed the Canon BJ-200ex Windows printer driver as described in the previous section and will be printing only under Windows, you can ignore this information.

Software applications are designed to work with specific hardware setups. Most Application programs include an installation program or routine that you run to identify the type of hardware you are using, such as your computer and printer. When you tell your application program what printer you are using, it installs a program, called a printer driver, that supports your printer.

# Selecting a Printer Driver

The installation programs for most applications offer a list of printer drivers form which to choose. If you find Canon BJ-200ex on the list, select it. This will give you the fullest range of features.

If you do not find one of these printers on the list, you can select a printer that will have nearly the same operating capabilities as the Bubble Jet Printer BJ-200ex.



Software developers continuously create printer drivers. If your application software does not list a Canon BJ-200ex driver, call your software application's technical support line and ask if a BJ-200ex driver is available. If they are unable to assist you, call the Canon help desk to see if a driver is available.

To use the printer in BJ-10 mode, select one of the following printers (they are listed in order of preference):

Canon BJ-200ex

Canon BJ-200

Canon BJ-230\*

Canon BJ-10e/BJ-10ex/BJ-20

IBM Proprinter X24E/XL24\*

IBM Proprinter X24/XL24E\*

Canon BJ-130e\*

IBM Proprinter\*

To use the printer in Epson LQ mode, select one of the following printers (they are listed in order of preference):

Canon BJ-200ex

Canon BJ-200

Canon BJ-230\*

Canon BJ-20 (LO)

Canon BJ-10e/BJ-10ex (LQ)

Epson LQ-510

Epson LQ-850

Epson LQ-500

Epson LQ-1050\* Epson LQ printer

\* These printers support paper that is wider than 8.5 inches. After selecting a printer, you can use software commands for all the standard printer functions through the application program. This includes bold or double-strike printing, underlining, subscripts, margin control, line-spacing control, and graphics.

## Selecting a Printer Control Mode

Your printer has two resident printer control modes:

- BJ-10 mode, which emulates the IBM Proprinter X24E
- Epson LQ mode, which emulates the Epson LQ-510 printer

You can select BJ-10 mode or Epson LQ mode with the DIP switches. BJ-10 modes is the default.

If you were able to select a Canon BJ printer or the IBM Proprinter X24E through your application program, you will want to use the printer in BJ-10 mode. This mode gives you the fullest range of features.

If your application program does not support the Canon BJ or the IBM Proprinter X24E printers, but does not support an Epson LQ printer, you can use the printer in LQ mode. You can also select a printer control mode based on specific text features you want to use in your document. If you will be printing only text (no graphics) or printing italic characters, select LQ mode if Epson drivers are available. If you plan to print both text and graphics, select BJ-10 mode.



If you will be printing in Windows, use the BJ-200ex printer driver for all your printing operations (text and graphics). The BJ-200ex Window driver prints all text graphically.

The following table lists the fonts and pitches that are available in each printer control mode.

	Printer control mode	
<b>Typeface</b>	BJ mode	Epson LQ mode
Prestige	12 cpi	10 cpi, 12cpi, 15 cpi, 17 cpi, 20 cpi, PS
Courier	10 cpi, 12 cpi, 17 cpi, PS	10 cpi, 12cpi, 15 cpi, 17 cpi, 20 cpi, PS
Sans Serif	Not available*	10 cpi, 12cpi, 15 cpi, 17 cpi, 20 cpi, PS
Draft (available in HS mode only)	Not available	10 cpi, 12cpi, 15 cpi, 17 cpi, 20 cpi, PS
Roman	Not available	10 cpi, 12cpi, 15 cpi, 17 cpi, 20 cpi, PS

Script	Not available	10 cpi, 12cpi, 15 cpi, 17 cpi, 20 cpi, PS
Orator	Not available	10 cpi, 12cpi, 15 cpi, 17 cpi, 20 cpi, PS
Orator-S	Not available	10 cpi, 12cpi, 15 cpi, 17 cpi, 20 cpi, PS

<sup>\*</sup> In Epson LQ mode, if you select Sans Serif, the printer uses the Gothic font.

The following table lists the print styles that are available in each printer control mode.

#### Printer control mode **Print style** BJ mode **Epson LQ mode** Italic No Yes **Emphasized** Yes (via ESC E sequence) Yes (via ESC E sequence) Double-high Yes (via ESC [ @ sequence) Yes (via ESC w sequence) Double-wide Yes (via ESC W sequence) Yes (via ESC W sequence)

To select the printer control mode, use DIP switch 11. Refer to Chapter 8, Customizing the Printer, for information on DIP switches.

Yes (via ESC [ K sequence)

# Setting Up WordPerfect for Your Printer

Slashed zero

This section contains the procedures you perform to install the Bubble Jet Printer BJ-200ex driver for WordPerfect, version 5.1 or 6.0, for MS-DOS. These instructions assume you have installed WordPerfect and are familiar with using it.

- 1. Make sure your computer is turned on.
- Make a backup copy of the diskette containing the Canon BJ-200ex printer drivers for WordPerfect (if you have not already done so). This is disk 2 of the Windows Driver and Visual Guide.
- 3. At the MS-DOS prompt, copy the WordPerfect driver, either 51BJ2E.ALL or 60BJ2E.ALL, to your WordPerfect directory. For example, if you are using WordPerfect 5.1 and your directory is WP51, you insert the diskette with the drivers into drive A and type this command:

#### COPY A:WP51BJ2E.ALL C:\WP51

If you are using WordPerfect 6.0 and your directory is wp60, insert the driver diskette into Drive A and type:

## COPY A:QP60BJ2E.ALL C:\WP60

- 4. Change to the WordPerfect directory and start WordPerfect by typing WP and pressing **Enter.**
- 5. At the document screen, press Shift + F7.

- 6. At the Print Options menu, type S to select printer.
- 7. At the Select Printer menu, type 2.
- 8. At the additional Printers menu, highlight the BJ-200ex driver and press **Enter.**



If you select the BJ-200ex LQ driver, make sure you set DIP switch 11 to ON for Epson LQ mode. See Chapter 8, Customizing the Printer, for details.

- 9. When the printer file name appears at the bottom of the screen, press **Enter.**
- 10. At the printer Helps and Hints menu, press F7.
- 11. At the printer Edit menu, press **F7.**
- 12. At the Select Printer menu, the BJ-200ex driver is highlighted; type 1 to select the driver.
- 13. Choose 7 to initialize the printer.
- 14. At the Print Option menu, make sure the selected printer is BJ-200ex. Then press **F7** to save all selections.

# Software and Printer Compatibility

Your software sends information and instructions to the printer over the cable that connects the printer to the computer. In addition to data, the instructions you send may include special command sequences known as control codes and ESCape sequences. These command sequences tell the printer such things as how many lines to skip and where to start printing.

Some control codes are standard throughout the microcomputer industry and are recognized by all printers. Two examples of these are form feed (FF) and line feed (LF).

ESCape sequences are unique to each printer emulation. ESCape sequences begin with the ESCape character (ESC) followed by one or more other characters.

The ESCape character tells the printer not to print the next character (s), but to use the information to perform a printing control task, such as printing in bold or underlining.

Most software programs automatically send control codes and ESCape sequences to the printer. However, some applications may require you to supply the commands. How you enter the control codes and ESCape sequences depends on your software program. Your software program may require you to enter the codes and sequences in a specific format, such as decimal rather than hexadecimal. For example, you can use only decimal format with MultiMate Advantage II, Professional Write, and PFS: First Choice.

Software printer drivers may override the printer control codes embedded in a document. This means the command will not take effect because of the way the application handled it.

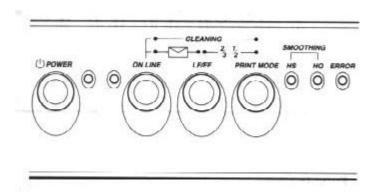


To determine if an application is overriding your commands, print the document using a generic driver and see if the correct commands are reflected in the printed copy. If they are, the application printer driver is overriding the commands.

If you would like to receive a list of the control codes and ESCape sequences the printer recognizes, you can use Canon's toll-free fax retrieval system to request the *BJ-200ex Printer Command Summary*. Call 1-800-526-4345 for details

# Chapter 5 Using the Operator Panel

This chapter provides information on using the operator panel located on the top of your printer. You can control basic printer operations and mechanics through the operator panel. The indicator lights reflect the currnet status and modes of the printer.



Most software applications, such as word processing, spreadsheet, and database programs, automatically handle the printer control operations. For example, your word processing program tells the printer what typeface to use, when to load a sheet of paper or when to perform a line feed.

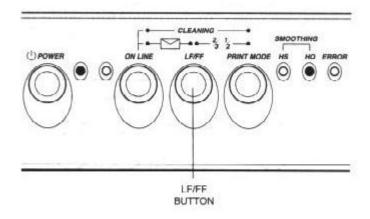
If, for some reason, your application program does not perform these basic functions, you can control them using the printer's operator panel. You can also select specific printer functions, such as print mode selection and print head cleaning.

Any setting you make with your softare application override settings mad with the operator panel.

In addition to the operations described in this chapter, you use the operator panel to turn the printer on and off (as described in Chapter 2, Setting Up the Printer) and to pause the printer (as described in Chapter 3, Using the Printer.)

# Feeding Paper

When the printer is off-line, you can use the **LF/FF** button to advance the paper in the printer. You can perform a line feed or a form feed, or you can eject a sheet of paper.



## Form feeding

If you are loading paper, make sure the printer is off-line. Press the **LF/FF** button to load the first sheet of paper to its top of form. (If you are running a software application, you don't need to perform this step. The application will tell the printer when to load paper.)

## Line feeding

When a sheet of paper is loaded and the printer is off-line, press the **LF/FF** button to advance the paper one line. Press the button repeatedly to feed many lines.

## **Ejecting paper**

To eject a sheet of paper, make sure the printer is off-line, then press and hold the **LF/FF** button for more than one second. The printer will eject the current sheet of paper.

# Selecting a Print Mode

Your printer incorporates two print modes that allow you to choose between print speed and print quality:

Print mode	Function	Speed at 10 cpi
HS	High speed and draft	248 cps
	quality printing	
HQ	High quality printing	204 cps
Smoothing	High quality print with	
	nolished edges	

You use the **PRINT MODE** button to select the current print mode when the printer is off-line. The default selection is HQ mode. Pressing the **PRINT MODE** button toggles from HQ to HS mode. The HS and HQ lights indicate which mode is selected.



The print mode may be overriden by your software application.

Select your print mode as follows:

- Use HQ mode for most of your printing needs. The printer automatically prints in HQ mode unless you change the mode with the PRINT MODE button.
- Use the smoothing mode when you are printing enlarged characters with an MS-DOS application. When Smoothing is enabled, the printer refines your output by polishing away the jagged edges and ragged stair-stepping curves of the characters. This results in sharp and crisp print at 720 x 360 dpi. The print speed is slower than HQ mode.
- Use the HS mode when you are printing draft documents. Your document will print faster but the print density will be less than in HQ mode. HS mode uses half the amount of ink as HQ mode.



Selecting reduction mode cancel Smoothing mode (if set).

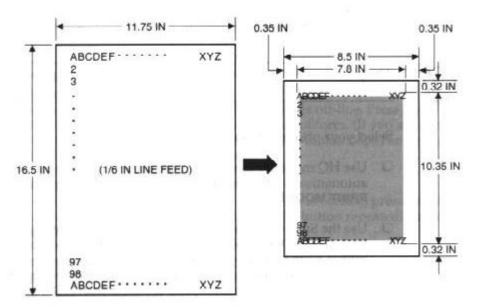
# Using the Reduction Modes

The printer supports two reduction modes for printing spreadsheets and other wide documents on regular paper. In reduction mode, the printer reduces the out put to two-thirds or one-half of its full size.

## Two-thirds Reduction Mode

In two-thirds reduction mode, the printer automatically sets the print dimensions as follows:

Top Margin:0.32-inchLeft margin:0.35-inchPrint width (max):7.8 inches

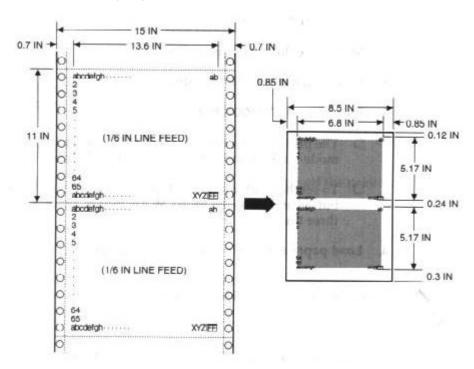


When using reduction mode, you must select the correct paper size within your application. In the example above, you would specify a paper size of 11.75 x 16.5 inches in your application. Be sure to account for your margins.

## One-half Reduction Mode

In one-half reduction mode, the printer automatically sets the print dimensions as follows:

Top margin: 0.12 inch
Left margin: 0.85 inch
Print width (max): 6.8 inches



When using reduction mode, you must select the correct paper size within your application. In the example above, you would specify a paper size of 15 x 11 inches in your application. Be sure to account for your margins.

## Selecting the Reduction Mode

We recommend that you use reduction mode with MS-DOS applications only (not Windows applications). Windows applications have a fit-to-page feature that is not compatible with reduction mode.

Before using reduction mode, make sure you set DIP switch 2 to ON to enable the text scale mode.

To select the reduction mode, follow these steps:

1. Make sure the printer is on-line.

- 2. Press and hold the **LF/FF** button.
- 3. Press the **PRINT MODE** button.
  - The printer beeps twice and the indicator for the current print mode blinks to indicate the printer is in 2/3 reduction mode.
  - To set the printer in 1/2 reduction mode, press and hold the LF/FF button and press the PRINT MODE button again. The printer beeps three times.
- 4. Load paper and begin your print operation.



This mode may be overridden by your software.

To disable reduction mode, press and hold the **LF/FF** button and press the **PRINT MODE** button (a third time). The printer beeps once. When the indicator for the current print mode (either HQ or HS) is on and not blinking, reduction mode is cancelled. You can also turn off the printer.



Selecting reduction mode cancels envelope mode (if set), and selecting envelope mode cancels reduction mode (if set).

# Performing Automatic Line Feeds

You can set the printer so that it performs an automatic line feed each time it receives a carriage return. Then, when the printer receives a carriage return code from the computer, it moves to the beginning of the next line.

You only need to set this function if you are using an application program that does not include a carriage return with a line feed.

To set the automatic line feed function, follow these steps:

- 1. Make sure the printer is turned off.
- Press and hold the ON LINE, LF/FF, and PRINT MODE buttons, and then press the POWER button until the beeper sounds

If you notice an extra blank line between each line printed, be sure to cancel this function.

To cancel the automatic line feed function, turn off the printer.

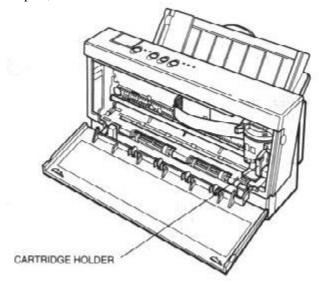
# **Chapter 6 Maintaining the Printer**

This chapter covers the care and maintenance of your Canon Bubble Jet Printer BJ-200ex. This includes guidelines, cleaning the printer, replacing the ink cartridge, and transporting the printer.

## **Printer Guidelines**

Follow these guidelines to avoid damage to your printer and harm to you or others:

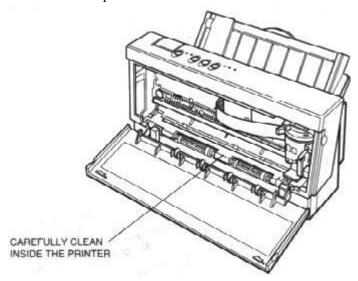
- Set the printer on a stable surface. Do not use an angled printer stand.
- Keep the front cover closed when printing.
- Do not set anything on top of the printer.
- Always use a three-wire, grounded power receptacle (electrical wall outlet with three holes) for your printer's power cord. Do not modify the cord to remove the ground pin.
- Make sure the power is off any time you connect or disconnect the power cord or interface cable.
- Do not move the mechanism that holds the ink cartridge. You may damage delicate mechanical parts.
- Do not touch the print area on the ink cartridge. If the ink spills, it is difficult to clean.



# Cleaning the Printer

Your printer requires little routine maintenance. Perform the following maintenance, as necessary, to keep your printer in good operating condition. Be very careful when cleaning the printer. Follow these steps:

- 1. Make sure the printer is turned off; then unplug it.
- 2. Clean the platen and its surrounding area inside the printer.
  - Use a soft cloth to remove any ink mist or paper debris.
  - Do not use any oil or cleanser inside the printer.
  - When cleaning inside the printer, avoid the area near the print head on the ink cartridge.
     Do not touch the print head. Ink may leak out and cause stains.
  - Do not use paper products (such as paper towels or tissues) to clean the inside of the printer. They may leave paper particles inside the printer.



- 3. Clean the exterior of the printer.
  - Use a soft cloth moistened with water.
  - Clean any smudges or dust.
  - Do not clean the exterior of the printer with volatile liquids such as thinners, benzine, or any spray type or chemical cleaners; doing so will damage the surface of the printer.
  - Do not submerge the printer in water.

# Replacing the Ink Cartridge

You use the BC-02 ink cartridge with this printer. Each ink cartridge can print about 400 to 500 letter-size pages (700,000 characters) in HQ mode and 800 to 1000 pages (1,400,000 characters) in HS mode. The actual amount varies according to the print density of a page. If you print a lot of graphics, you may to need to change cartridges more often.

You may need to replace the ink cartridge when the following condition exist:

- You have been using the cartridge for over one year.
- Your printed output is not crisp and clear, or there are gaps in the characters (missing dots).
- Your output has no ink on it.

If your print quality is not crisp and clear, see Chapter 7, *Troubleshooting*, for possible solutions. If the problem seems to be your ink cartridge, be sure to clean the print head before determining that you need to replace the cartridge, be sure to clean the print head before determining that you need to replace the cartridge. If you clean the print head several times and your print quality does not improve, you need to replace the cartridge. (The print head cleaning procedure is described later in this chapter.)



Print head cleaning is not a routine maintenance procedure. Only clean the print head if your print quality is inadequate.



The Bubble Jet Printer BJ-200ex was designed to be used exclusively with Canon ink cartridges. Other inks may damage the print head capping and cleaning devices in the printer. If you have problems that are caused by using third-party ink or ink cartridges, your warranty will be void.

## Ink Cartridge Guidelines

To avoid spilling ink, follow these precautions:

- Do not attempt to disassemble or refill the ink cartridge.
- Do not vigorously shake the ink cartridge while handling it.
- Do not unpack an ink cartridge until you are ready to install it.
- Do not remove the ink cartridge unless you need to replace it.
- Do not touch the print head on the ink cartridge or the sharp edges around it.
- Do not hold the ink catridge, or place it on a table, with the print head facing down, (except when you are installing it).



If spilled, the ink is difficult to clean. Therefore, it's a good idea to keep the ink cartridges out of children's reach.

## Using Ink

Ink formulation is the most critical component of a Bubble Jet printer. The ink you use must meet these guidelines:

- It must be able to be heated and cooled over 6,000 times per second without clogging.
- It must dry very quickly without bleeding into other colors.
- It must work with different media and software, while providing correct color matching with the printer driver.
- It must be environmentally friendly.

Canon has more engineers dedicated to providing the best results for output on Bubble Jet pritner than any other organization. Canon does not dissuade you from using ink made by third-party suppliers. However, we specifically design and warranty our products for our inks only. Canon cannot guarantee the quality or performance of your printer when you are using inks from other suppliers. In addition, if a problem emerges as a result of using ink from a supplier other than Canon, your warranty will be invalid. For optimum printing results, use only the Canon BC-02 ink cartridge.

# Installing the Ink Cartridge

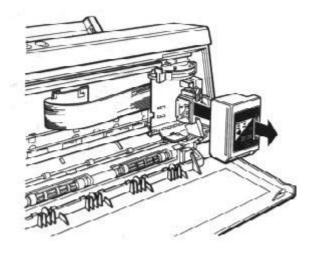


Canon makes numerous ink cartridges; the BC-02 cartridge is designed specifically for the BJ-200ex Bubble Jet Printer and is caution the only one you should use.

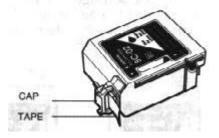


To install a new ink cartridge, follow these steps:

- Make sure the printer is turned off.
- Open the front cover.
- 3. Lift the green lock lever on the cartridge holder.
  - Slide the old ink cartridge out of the holder and dispose of it properly.



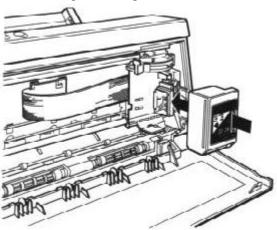
- 4. Take the new ink cartridge out of its protective packaging.
  - Slide off the orange protective cap from the print head and then remove the orange tape.





Install the ink cartridge immediately after removing it from its protective packaging.

- 5. Fit the ink cartridge over the yellow mounting base with the print head facing down.
  - When installed correctly, the label on the cartridge will be upside down.

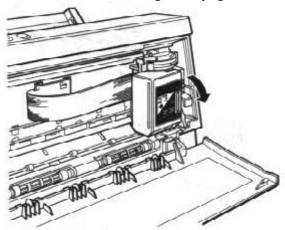




Avoid touching the yellow mounting base on which you place the cartridge--especially the circuit board on the side of the mounting caution base and the film cable that extends from the catridge holder.

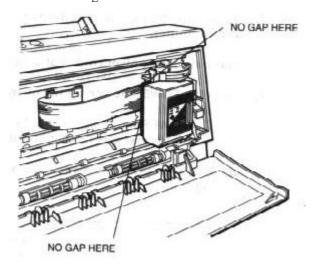
## 6. Push the lock lever down until it locks into place.

- Use one hand only to set the cartridge in place and press the lock lever down
- Make sure there is no resistance when you press on the lock lever. The lever should lock easily into place.
- If you hear snapping noises or feel any resistance as you press down on the lever, remove the ink cartridge and try again.



## 7. Be sure no gap exists between the ink cartridge and cartridge holder.

When secure, the ink cartridge makes contact with the circuit board inside the cartridge holder.





Do not move the ink cartridge after installing it. Moving the ink cartridge to the left and leaving it there may uncap the print head and cause it to dry out.

#### 8. Close the front cover.

When you are not using the printer, make sure the ink cartridge is in its home position, which is on the right side of the printer.

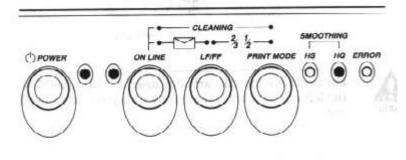


Always use the **POWER** button to turn off the printer. This ensures that the printer moves the print head to the home position and caps it.

## Cleaning the Print Head

The print head on a new ink cartridge needs to be cleaned to ensure the best possible print quality. The printer automatically cleans the print head when you follow these steps:

- 1. Make sure the printer is turned on and on-line.
- 2. Press the ON LINE and PRINT MODE buttons at the same time.
  - When the ON LINE light starts to blink, release the buttons.



The ON LINE indicator will blink for about 12 seconds while the printer cleans the print head. When complete, the ON LINE indicator stops blinking and goes off. Press **ON LINE** to resume printing.



Cleaning the print head consumes a small amount of ink. Repeating this procedure unnecessarily reduces the life of the cartridge.

## Storing Ink Cartridges

Follow these guidelines when storing your ink cartridges:

- Keep a new ink cartridge in its sealed container until you are ready to use it.
- Store the ink cartridge at room temperature.
- Install the ink cartridge in the printer immediately after you open the sealed container.
- After installing the ink cartridge, perform the print head cleaning procedure.

## Ink Cartridges Continually Run Out of Ink

If your ink cartridges seem to run out of ink before you think they should, make sure you are following these guidelines:

- Make sure you turn off the printer only when the ink cartridge is in the home position.
- Only transport the printer when the ink cartridge is in the home position. This caps the ink cartridge and prevents it from damage or drying out. Be sure to tape the ink cartridge in place.



This is not a portable printer. Take care when transporting it.

- Install an ink cartridge immediately after opening its protective packaging.
- Only clean the print head when you are having print quality problems.
- Never unplug the printer or use a power strip to turn off the printer when the printer's power is turned on.

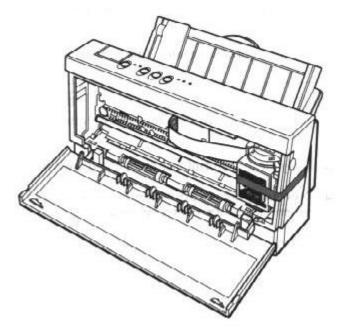
# Transporting the Printer



While the Bubble Jet Printer BJ-200e is small and compact, it is not a portable printer and you need to take care when transporting it. The printer's components, such as the sheet feeder, may become damaged if subjected to severe vibration during transportation. Also, your print head may dry out during travel (and become unusable) it it is not capped correctly.

If you plan to move the printer from one location to another, or if you want to store it, follow these steps:

- 1. Press the POWER button to turn off the printer. This moves the print head to the home position.
- 2. Remove any paper from the sheet feeder.
- 3. Detach the interface cable and the power cord.
- 4. Open the front cover.
- 5. Tape the ink cartridge to the side of the printer.



- 6. Close the front cover.
- 7. Return the paper rest and paper exit support to their original positions.
- 8. Repack the printer in its original packing materials.



Do not remove the ink cartridge from the printer or ship an ink cartridge from which you have removed the protective cap. An opened ink cartridge that is not installed in the printer may leak, and the print head may dry out. Also, if you do not tape the ink cartridge to the side of the printer, ink may spill into the printer.

# Chapter 7 Troubleshooting

This chapter contains information to help you solve printer problems. A problem may have one or a combination of causes, including a malfunction in your computer, software, the printer cable, or the printer. Many printing problems are related to how your software interacts with the printer.

If you can print a self test but the printer does not print or your printed output is not what you expect, the problem is with your computer, software, or cables. Check these items for a problem.

If your printer is not operating properly, try the suggestions in this chapter. Try the solutions in the order listed. The following list shows the problems covered here.

## Check List

## **ERROR Light Problems**

ERROR light is on

ERROR light is on - ON LINE, HO, and HS lights are blinking

#### **Operational Problems**

No power reaching printer

Data from computer in not printed

Ink cartridge moves, ink does not appear

Overall printing is slow from MS-DOS

Overall printing is slow from Windows

#### **Printing Problems**

Data from computer printed, but is not what you expected

Printed characters do not match characters on the screen

Printing Beyond Edge of Page

Printout Does Not Match Paper Size

Printing Incorrect Number of Lines on Page

Printer is not using font you selected with DIP switch settings

Printout curls

Computer Indicates a Device Time-out

## Paper Loading Problems

Paper is Loaded Skewed (Printing Is Skewed)

Paper Does Not Load Into Printer

Multiple Sheets Load Into Printer

Envelopes Do Not Load

Paper Does Not Eject After Printing

Repeated Paper Jams Occur

### **Print Quality Problems**

**Print Density Is Low** 

Print Is Not Clear

White Streaks or Missing Dots

Blurred or Smudged Ink

Splashed dots

Paper edge is soiled with ink

Output Appears Jagged

Windows Problems

Printer does Not Print or Prints Garbage

Printer does not print from Windows (but does print from MS-DOS)

Output is not as Expected

Extra Characters Appear on the Page

Fonts do not Print as Smoothly Rounded Characters

Cannot Print File sent from Remote Computer

Large Gaps appear Between Text or Graphics

Error occurs during Visual Guide Installation

Control Array Error occurs when Installing the Visual Guide

**Print Manager Problem Occurs** 

In WordPerfect, the BOX prints but the text does not

Clearing Paper Jams

If you have a problem with your printer and you cannot resolve it by referring to the information in this chapter, contact the Canon help desk at 1-800-423-2366 (U.S.A.) or 1-800-263-1121 (Canada). The staff at the help desk is trained in the technical support of Canon's products and should be able to help you with your problem. If your printer requires service, the staff at the help desk can provide you with the telephone number of your local Canon Authorized Service Facility (ASF).

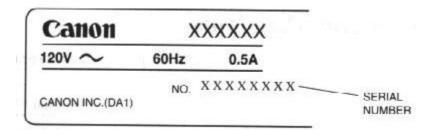


Attempting to repair the printer yourself may void the warranty.

Before contacting Canon, make sure you know the following information:

- Product name
- Serial number
- Place of purchase
- Nature of problem
- Steps you have taken to solve the problem and the results.

The serial number is located on the label on the back of the printer:



## ERROR Light Problems

The following table describes problems and solutions related to the ERROR light.

<u>Problem</u>	Cause	Solution
ERROR light is on	The printer may be	Check the sheet feeder. If the printer is out of paper, load
-	out of Paper.	paper into the sheet feeder and press the ON LINE button to continue printing.
	D 1	1 &
	Paper may be	Check the pirnter for a paper jam. If a paper jam has
	jammed in the	occured, clear it as described later in the chapter. (See the
	printer.	clearing Paper Jams section)
ERROR light is on - ON	A system error	Turn the printer off; wait 15 seconds and turn the printer
LINE, HQ, and HS lights are	may have occured.	back on.
blinking		If the common product and the Common halo deals

If the error persists, call the Canon help desk.

# **Operational Problems**

If you are having problems with the printer, check the problems and solutions listed in the following table.

	problems and solutions	s listed in the following thole.	
Problem No power reaching printer.	<u>Cause</u> The printer may not be turned on.	Solution Hold down the POWER printer button until the printer beeps.	
	The printer may not be securely plugged into the AC outlet.	Check the AC power cord connection.	
	The AC outlet may not be	Check the AC outlet.	
	supplying power.	Turn on the printer. When the printer is connected properly, the POWER, ON LINE, and HQ (or HS) indicators light, and the print head is in the home position. If nothing happens, call the Canon help desk.	
Data from computer is not printed.	The printer may be off line (ON LINE light off).	Press the ON LINE button to turn the printer on line (ON LINE light is on). If the printer does not come on line, check the ERROR light.	
printed.	The interface cable may not Check the interface cable connection. be securely connected to the printer and the computer.		
	-	Make sure the interface cable is a parallel interface cable.	
	The printer or computer may have been turned on when you connected the interface cable.	Turn off the printer and the computer, then turn them back on again.	
	The application may not be set up properly.	Check the computer or the application to see if the host is configured correctly: printer port, printer driver, print manager.	
Ink cartridge	The parallel port is disabled in your computer's CMOS memory. The ink cartridge may be	Check your computer's CMOS to see if the primary parallel port is set to LPT1. (Your computer should have a setup program that allows you to check the CMOS settings.)  Remove the ink cartridge and check that the tape is removed.	
moves, ink does not appear.	empty or may not be installed properly.	Reinstall the ink cartridge checking that it is securely latched in place. Make sure there is no gap	

between the ink cartridge and the holder.

Perform the print head cleaning procedure described in Chapter 6, Maintaining the Printer.

If cleaning the print head does not resolve the problem, your ink cartridge my be out of ink. Replace the ink cartridge and try printing again.

is slow from

Overall printing Smoothing mode may be enabled.

Disable the Smoothing mode.

MS-DOS.

High Quality mode may be Try turning off HQ mode via the operator panel.

enabled.

is slow from Windows.

Overall printing The Print Manager my be Make sure the Print Manager is turned off.

turned on.

Print options may be too complex.

In the Windows driver or your software application, set all print options to their defaults.

See page 75 for ways to improve speed.

# **Printing Problems**

If you are having printing problems, check the problems and solutions in the following table.

	and solutions in the following table.	
Problem Data from computer printed, but is not what you expected.	Cause There may be a communication problem between the printer and your computer.	Solution Check the computer or the application to see if the host is configured correctly: printer port, printer driver, print manager.
•	Cable connections may not be	Check that your cable connections are secure.
	secure.	NOTE: Make sure your interface cable is no longer than 6.6 feet. Avoid useing A/B switch boxes or switch boxes that have a total cable length of more than 6.6 feet.
	Printer control mode may not match the printer device. Previous software settings may not be cleared. Many graphics characters and special symbols are produced by different ASCII codes according to the type of printer and computer being used. Paper may not be aligned correctly in sheet feeder. Software settings may be incorrect. DIP switch 1 may be set incorrectly.	software settings before the print job started. Set the correct character table and printer control mode using the printer's DIP switches. For details on

For Letter size paper, set it to OFF.

For envelopes, set it to OFF.

For A4 size paper, set it to ON.

Printout does not Paper size selected in driver may match paper size. be incorrect.

> Paper width selected in driver may be incorrect.

DIP switch 3 may be set

Make sure the paper size you select within your printer driver matches the oreientation in which you load the paper in the printer.

Make sure the width of the paper on which you are printing matches the width defined by your software so the paper is always between the print head unit and the platen.

NOTE: If the print head unit does print on the platen, wipe it clean with a dry cloth. Also, feed a few sheets of paper through the printer to clean the ink off the platen. Check the setting of DIP switch 3. This DIP switch determines the page length:

For letter size paper, set it to OFF

For envelopes set it to OFF.

For A4 size paper set it to ON.

Check the top and bottom margin settings within your software application.

Make sure your paper is loaded correctly.

NOTE: If your application requires 66 lines per page, try setting DIP switch 2 to ON. This enables text scale mode. See Chapter 8, Customizing the Printer, for details on the

DIP switches.

Printer is not using font you selected with DIP switch settings.

Printout curls.

Printing

of lines on page.

incorrect number incorrecty.

Your software may be overriding the settings.

Margin settings may be incorrect.

Paper may not be loaded properly.

Change the initialization or setup string that your software sends. You may need to do this using a menu or scrren provided by your application software. See your application user's manual for information about how your software works with your printer.

Your page may include a dense amount of ink. A device time out occurs when

Remove the printout immediately and let it dry, then roll it in the direction opposite to the curl. Make sure the printer is turned on and on line. Check that the printer's interface cable is securely attached to both the printer and the computer.

Computer indicates device time out.

your computer sends data to the printer but the printer does not respond. The printer may be off, off line, or not connected to the computer.

Make sure paper is properly loaded in the sheet feeder.

Try the print operation again.

If you want your computer to continuously retry sending data to the printer's parallel port, add the following statement to your AUTOEXEC.BAT file:

MODE LPT1,,P

# Paper Loading Problems

If you are having paper loading problems, check the problems and solutions in the following table. After solving a paper loading problem, remove the paper and load it correctly. Then press the ON LINE button to set the printer on line again.

Any of the following paper loading problems may cause the paper to jam in the printer. See page 123 for complete instructions on how to clear a paper jam.

Problem Paper is loaded skewed (printing is skewed)	<u>Cause</u> Paper may not be stacked correctly in sheet feeder.	Solution Make sure the stack of paper is straight in the sheet feeder. Check that the paper rest is extended and the paper selection lever is back.
		Make sure the right side of the stack of paper is aligned against the right side of the sheet feeder and the left side is aligned against the paper guide.
		Make sure the paper exit path is clear.
Paper does not load into printer.	Paper selection lever may not be seated correctly.	Make sure the paper selection lever is set to the correct position:
		<ul> <li>For automatic loading of plain paper, set it to the back.</li> </ul>
		<ul><li>For automatic loading of envelopes, set it to the front.</li><li>For manually feeding paper, set it to the front.</li></ul>
		<ul> <li>For transparencies or thick paper, set it to the front.</li> </ul>
	Single sheets may not be feeding correctly.	When manually loading paper, be sure to insert a single sheet of paper all the way into the sheet feeder. If the paper is not inserted far enough, the printer cannot load it.
Multiple sheets load into printer	Sheets of paper may be sticking toghether. Paper selection lever may not be set correctly. Too much paper may be stacked in sheet feeder.	Make sure the paper is not sticking together. Be sure to fan the stack of paper before placing it in the sheet feeder. Check that the paper selection lever is back for automatic loading of paper.  Make sure the stack of paper does not exceed the paper limit mark on the right side of the sheet feeder. If necessary, remove a few sheets from the sheet feeder.
	Different types of paper may be stacked in sheet feeder.	Load just one type of paper.  Do not use curled or bent paper, which may fall into the manual feed slot and cause the paper to misfeed.
		Make sure you are laoding paper that matches the specifications of this printer. See Appendix
Envelopes do not load	Paper selection lever may not be set correctly.	A, <i>Specifications</i> , for details.  Make sure the paper selection lever is set to the front position.

Envelopes may not be Make sure the envelopes are loaded properly: loaded correctly. The top of the envelope goes in first. The flap is toward the sheet feeder. The right side of the envelope is aligned against the right side of the sheet feeder. The left side is aligned against the paper guide. (See Chapter 3, Using the Printer, for details) For manual loading, make sure the envelope mode in your Single envelopes may not be feeding correctly. printer driver or your software application. If necessary, enable envelope mode using the printer's operator panel. Envelope mode may not be Make sure you have set up envelope mode in your printer enabled. driver or your software application. If necessary, enable envelope mode using the printer's operator panel. NOTE: Use only commercial number 10 envelopes, which are 9.5 x 4.1 inches. Paper does not Your software application is Press the ON LINE button to set the printer off line. eject after printing not telling the printer to Press and hold the LF/FF button for one second eject the paper after to eject the paper. printing. To resume printing, press the ON LINE button. Repeated paper The paper you are using Fan the paper before stacking it in the sheet feeder. This may be causing the jams. keeps the sheets of paper from sticking together. jams occur Check that the paper you are using and your printing environment are within the specifications of the printer. See Appendix A, Specifications, for details.

# **Print Quality Problems**

If your print quality is not what you expect it to be, check the problems and solutions listed in the following table.

To clear paper jams, see page 123.

	the problems and solutions	the problems and solutions listed in the following table.		
Problem Print density is low	<u>Cause</u> You are using HS mode and not getting satisfactory darkness.	Solution Try HQ mode; the print density in HQ mode is higher than HS mode.		
Print is not clear	You are printing on the wrong side of the paper.	Paper has a right side for printing. If the print quality is not as clear as you would like it to be, try turning the paper over and printing on the other side.		
	Paper thickness lever may be set for the wrong type of paper.	Make sure the paper thicknes lever (inside the printer) is set for your paper type.		
	The paper you are using may not be supported by the printer.	Make sure you are using the recommended paper. See Appendix A, <i>Specifications</i> , for paper specifications.		
	The print head may need to be cleaned.	Clean the print head. See Chapter 6, Maintaining the Printer, for details.		
	You are not using a BC-02 ink cartridge.	Make sure you are using a BC-02 ink cartridge. If not, replace the ink cartridge with a BC-02.		
White streaks or missing dots	Ink nozzles on the print head may be clogged with dust.	Clean the print head. See Chapter 6, Maintaining the Printer, for details. Repeat cleaning if necessary.		
	The ink cartridge may be installed incorrectly.	Make sure the ink cartridge is installed correctly.		
	The print medium being used may not be acceptable.	Use only print media specified in the Selecting Paper Types section on page 35.		

The print head may be worn out.  Blurred or smudged ink  The sleected print mode may not match your needs.  The sleected print mode may not match your needs.  The print medium being used may not be acceptable.  The paper thickness lever may not be set correctly.  You may be printing on the wrong side of the sheet.  You are not using a BC-02 ink cartridge.  Splashed dots  The paper thickness lever may not be set correctly.  The paper thickness lever may not be closed with ink.  The paper thickness lever may not be closed with ink.  The paper thickness lever may not be set correctly.  Make sure the lever is left for plain paper, or envelopes.  Clean the printer, for details. Repeat cleaning if necessary.  Make sure the lever is left for plain paper and transparencies, or right for thick paper or envelopes.  Clean the		The print resolution set in the printer driver may be 180 dpi and the printer print mode may be HS mode.	When printing in Epson LQ mode, printing at 180 dpi in HS mode may cause white streaks. To remedy, select the HQ mode with the printer control panel.
Blurred or smudged ink match your needs.  The sleected print mode may not match your needs.  The print medium being used may not be acceptable. The paper thickness lever may not be set correctly.  Splashed dots The paper thickness lever may not be set correctly.  The paper thickness lever may not be set correctly.  Splashed dots The paper thickness lever may not be set correctly.  The paper thickness lever may not be set correctly.  Splashed dots The paper thickness lever may not be set correctly.  The paper thickness lever may not be set of paper through the printer.  Clean the print media specified in Selecting Paper or envelopes.  Clean the print media specified in Selecting Paper or envelopes.  Clean the print media specified in Selecting Paper or envelopes.  Clean the print media specified in Selecting Paper or envelopes.  Clean the print media specified in Selecting Paper or envelopes.  Clean the printer driver dialog box.  Clean the print media specified in Selecti		The print head may be worn out.	
not be acceptable. The paper thickness lever may not be set correctly.  You may be printing on the wrong side of the sheet.  You are not using a BC-02 ink cartridge.  Splashed dots The paper thickness lever may not be clogged with ink. The paper thickness lever may not be set correctly.  Paper ledge is soiled with ink  The resolution selected via printer driver may be 180 dpi.  Try using the Smoothing mode.  Output appears jagged  Try using the Smoothing mode.  Try using the Smoothing mode.  Output appears jagged  On Page 35.  Make sure the lever is left for plain paper, or transparencies. Set it to the right for thick paper or envelopes.  Paper has a right side for printing. If the print quality is not as clear as you would like, try turning the paper over and printing on the other side.  Make sure you are using a BC-02 ink cartridge. If not, replace the ink cartridge with a BC-02.  Clean the print head. See Chapter 6, Maintaining the Printer, for details. Repeat cleaning if necessary.  Make sure the lever is left for plain paper over and printing on the other side.  Make sure you are using a BC-02 ink cartridge. If not, replace the ink cartridge with a BC-02.  Clean the print head. See Chapter 6, Maintaining the Printer, for details. Repeat cleaning if necessary.  Make sure the lever is left for plain paper over and printing for details. Repeat cleaning if necessary.  Make sure you are using a BC-02 ink cartridge. If not, replace the ink cartridge with a BC-02.  Clean the print head. See Chapter 6, Maintaining the Printer, for details. Repeat cleaning if necessary.  Make sure you are using a BC-02 ink cartridge. If not, replace the ink cartridge with a BC-02.  Clean the print head. See Chapter 6, Maintaining the Printer, for details.  Feed a few sheets of paper through the printer.  Check your software application to see what printing resolution you have selected.  Printing at 180 dpi will give the output a jagged look. Changing the resolution to 360 dpi should correct this problem.			Select the print mode most suitable for your needs. When printing through the Canon BJ-200ex printer driver for Windows, select the suitable print mode from
The paper thickness lever may not be set correctly.  You may be printing on the wrong side of the sheet.  You are not using a BC-02 ink cartridge.  Splashed dots Ink nozzles on the print head may be clogged with ink.  Paper edge is soiled with ink  The paper thickness lever may not be set correctly.  The paper thickness lever may not be soiled with ink  The resolution selected via printer driver may be 180 dpi.  Try using the Smoothing mode.  Make sure the lever is left for plain paper, or transparencies. Set it to the right for thick paper or envelopes.  Paper has a right side for printing. If the print quality is not as clear as you would like, try turning the paper over and printing on the other side.  Make sure you are using a BC-02 ink cartridge. If not, replace the ink cartridge with a BC-02.  Clean the print head. See Chapter 6, Maintaining the Printer, or details. Repeat cleaning if necessary.  Make sure the lever is left for plain paper and transparencies, or right for thick paper or envelopes.  Clean the platen with a soft cloth (see chapter 6, Maintaining the Printer, for details).  Feed a few sheets of paper through the printer.  Check your software application to see what printing resolution you have selected.  Printing at 180 dpi will give the output a jagged look. Changing the resolution to 360 dpi should correct this problem.  Output appears jagged  Try using the Smoothing mode.  If you are printing double height or double width characters or graphics containing a lot of diagonal lines, use the Smoothing mode.			
You may be printing on the wrong side of the sheet.  You are not using a BC-02 ink cartridge.  Splashed dots  Ink nozzles on the print head may be clogged with ink.  The paper thickness lever may not be set correctly.  Paper edge is soiled with ink  The platen in the printer may be soiled with ink.  The resolution selected via printer driver may be 180 dpi.  The resolution selected via printer driver may be 180 dpi.  Poutput appears jagged  You are not using a BC-02 ink cartridge. If not, replace the ink cartridge with a BC-02.  Clean the print head. See Chapter 6, Maintaining the Printer, for details. Repeat cleaning if necessary.  Make sure the lever is left for plain paper and transparencies, or right for thick paper or envelopes.  Clean the platen with a soft cloth (see chapter 6, Maintaining the Printer, for details).  Feed a few sheets of paper through the printer.  Check your software application to see what printing resolution you have selected.  Printing at 180 dpi will give the output a jagged look. Changing the resolution to 360 dpi should correct this problem.  Output appears jagged  Try using the Smoothing mode.  If you are printing double height or double width characters or graphics containing a lot of diagonal lines, use the Smoothing mode.		The paper thickness lever may not	Make sure the lever is left for plain paper, or transparencies. Set it to the right for thick paper or
Splashed dots Splashed dots Ink nozzles on the print head may be clogged with ink. The paper thickness lever may not be set correctly.  Paper edge is soiled with ink The platen in the printer may be soiled with ink. The resolution selected via printer driver may be 180 dpi.  Output appears jagged  Clean the print head. See Chapter 6, Maintaining the Printer, for details. Repeat cleaning if necessary.  Make sure the lever is left for plain paper and transparencies, or right for thick paper or envelopes.  Clean the platen with a soft cloth (see chapter 6, Maintaining the Printer, for details).  Feed a few sheets of paper through the printer.  Check your software application to see what printing resolution you have selected.  Printing at 180 dpi will give the output a jagged look. Changing the resolution to 360 dpi should correct this problem.  Output appears jagged  Try using the Smoothing mode.  Ink nozzles on the print head. See Chapter 6, Maintaining the Printer, for details.  Clean the print head. See Chapter 6, Maintaining the Printer, for details.  Clean the platen with a soft cloth (see chapter 6, Maintaining the Printer, for details).  Feed a few sheets of paper through the printer.  Check your software application to see what printing resolution you have selected.  Printing at 180 dpi will give the output a jagged look. Changing the resolution to 360 dpi should correct this problem.  If you are printing double height or double width characters or graphics containing a lot of diagonal lines, use the Smoothing mode.			Paper has a right side for printing. If the print quality is not as clear as you would like, try turning the paper over
The paper thickness lever may not be set correctly.  Paper edge is soiled with ink.  The platen in the printer may be soiled with ink.  The resolution selected via printer driver may be 180 dpi.  The platen with a soft cloth (see chapter 6, Maintaining the Printer, for details).  The resolution selected a few sheets of paper through the printer.  The resolution vou have selected.  Printing at 180 dpi will give the output a jagged look. Changing the resolution to 360 dpi should correct this problem.	Splashed dots	cartridge. Ink nozzles on the print head may	replace the ink cartridge with a BC-02. Clean the print head. See Chapter 6, Maintaining the
Paper edge is soiled with ink  The platen in the printer may be soiled with ink.  Clean the platen with a soft cloth (see chapter 6, Maintaining the Printer, for details).  Feed a few sheets of paper through the printer.  Check your software application to see what printing resolution you have selected.  Printing at 180 dpi will give the output a jagged look. Changing the resolution to 360 dpi should correct this problem.  Output appears jagged  Try using the Smoothing mode.  If you are printing double height or double width characters or graphics containing a lot of diagonal lines, use the Smoothing mode.		The paper thickness lever may not	Make sure the lever is left for plain paper and
The resolution selected via printer driver may be 180 dpi.  Check your software application to see what printing resolution you have selected.  Printing at 180 dpi will give the output a jagged look. Changing the resolution to 360 dpi should correct this problem.  Output appears jagged  Try using the Smoothing mode.  If you are printing double height or double width characters or graphics containing a lot of diagonal lines, use the Smoothing mode.			
driver may be 180 dpi.  resolution you have selected.  Printing at 180 dpi will give the output a jagged look. Changing the resolution to 360 dpi should correct this problem.  Output appears jagged  Try using the Smoothing mode.  If you are printing double height or double width characters or graphics containing a lot of diagonal lines, use the Smoothing mode.			Feed a few sheets of paper through the printer.
jagged look. Changing the resolution to 360 dpi should correct this problem.  Output appears jagged  Try using the Smoothing mode.  If you are printing double height or double width characters or graphics containing a lot of diagonal lines, use the Smoothing mode.			
appears jagged characters or graphics containing a lot of diagonal lines, use the Smoothing mode.			jagged look. Changing the resolution to 360 dpi
		Try using the Smoothing mode.	characters or graphics containing a lot of diagonal lines,

# **Windows Problems**

The following table contains problems and solutions related to using your printer with Windows applications.

Problem Printer does not print or prints garbage.	<u>Cause</u> Cable connections may not be secure.	Solution Check that the cable and power cord connections are secure.
	Printer may not be turned on.	Turn on the printer.
	Printer driver may not be set up.	Make sure the printer driver is properly installed and set up. See Chapter 4, <i>Using the Printer With Your Software</i> , for details.
	Print Manager may be causing the problem.	Check Print Manager for stalled print jobs caused by printer not being ready to accept data. Delete all stalled jobs, make sure printer is on line, and try to print again. If errors continue, turn off Print Manager.

<b>D</b>	**	T. II.
Printer does not print from	Your computer is having a problem communicating	Follow these steps:
Windows (but	with the printer.	1. Select the Main group from the Program Manager.
does print from		2. Double Click on the Control Panel.
MS-DOS)		<ol> <li>Double Click on the Printer icon.</li> <li>Select the BJ-200ex.</li> </ol>
		5. Click on Connect.
		6. Click on the box next to Fast Printing Direct to Port
		to remove the X.
		<ol> <li>Click on OK.</li> <li>Click on Close.</li> </ol>
		9. Close the Control Panel.
		10. Try your print operation again.
		If problem persists, go back to step 5 (above) and
Outmut is mat as	Daintan dairean areas aret ha	change the connection from LPT1 to LPT1.DOS.
Output is not as expected	Printer driver may not be correct.	Make sure you have selected the Canon BJ-200ex setting in the Printer dialog box or from the printer setting for your
•		particular application.
Extra characters	Print Manager may be	Disable the Print Manager.
appear on page	causing problems.	If the image prints correctly with the Print Manger
		disabled, but you want to use the Print Manger to print in Windows, try the following:
		•
		Minimize all the current Windows applications.  Click on Print Managers a dialog box appears.
		<ol> <li>Click on Print Manager; a dialog box appears.</li> <li>Select END TASK.</li> </ol>
		4. Double Click on Program Manger.
		5. Select WINDOW
		<ul><li>6. Select MAIN</li><li>7. Double Click on Control Panel.</li></ul>
		8. Double Click on Printers
		9. Place and X in the box next to Print Manager.
		<ul><li>10. Select the Canon BJ-200ex</li><li>11. Select CONNECT</li></ul>
		12. Change the value in Device Time outs from 15 to 30
		seconds.
		13. Change the value in Transmission Retry from 45 to 90 seconds.
Fonts do not print	Bitmapped fonts designed	Make sure you installed an outline font manager, such as
as smoothly	for dot matrix printers do	Adobe Type Manager or Bitstream Facelift, or that you are
rounded	not print smoothly	choosing a TrueType font.
characters	rounded characters when used with high resolution	
	printers like the BJ-	
	200ex.	
	Certain MS fonts, such as MS Serif, will print	Choose another font.
	jagged.	
Cannot print file sent from remote	Software may not be configured correctly.	Check that all software is correctly configured for the network environment. For example, with a Novell network
computer	configured correctly.	you must include the Capture statement. Refer to the user's
•		manual supplied with your networking software for more
I amaa aasa assa s	Charle that the said a	information.  Change the Mein group icon in the Program Manger and open
Large gaps appear	Check that the video	Choose the Main group icon in the Program Manger and open

between text or graphics  Error occurs	driver is VGA.  Automatic line feed may be enabled. One or more visual basic	the Windows Setup icon. If the display driver is anything other than VGA, call the display manufacturer and request an updated display driver. In the meantime, install the standard VGA driver that came with Windows 3.1.  Make sure automatic line feed is disabled through the DIP switches. See Chapter 8, <i>Customizing the Printer</i> , for details. Follow these steps:
during Visual Guide installation	applications are running.	<ol> <li>In Windows, press and hold Ctrl and press Esc. A task list dialog box appears.</li> </ol>
		<ol><li>Highlight each task except Program Manager and select End Task.</li></ol>
		3. Now try to install the Visual Guide (see page 28).
	DDEML.DLL file is out	Follow these steps:
	of date.	1. In Windows, select the MAIN icon.
		<ol> <li>Double Click on File Manager.</li> <li>Select File and then search.</li> <li>Type: DDEML.DLL</li> <li>In the Start From line, type C:\ and click OK.</li> <li>Delete all occurrances of DDELM.DLL.</li> </ol>
		7. Now try to install the Visual Guide (see page 28).
Control Array error occurs when installing the Visual Guide	THREED.VBX file is causing a conflict with the new files.	If you are using MS-DOS 6.x or later, type the following command at the C:\prompt:  MOVE C:\WINDOWS\SYSTEM\THREED.VBX C:\WINDOWS
		If you are using MS-DOS 5.x or lower, type the following:  COPY C:\WINDOWS\SYSTEM\THREED.VBX  C:\WINDOWS  DEL C:\WINDOWS\SYSTEM\THREED.VBX
Print Manger Problems occur	The drive that contains the SET TEMP directory may not have enough available space.	Canon recommends that the drive have from 5 MB to 10 MB available.  To verify a proper SET TEMP statement, follow these steps:
		1. Exit Windows and go to the MS-DOS prompt.
		2. Type SET at the MS-DOS prompt. A list of statements should appear; look for the statement that

2. Type SET at the MS-DOS prompt. A list of statements should appear; look for the statement that says

SET TEMP = C:\WINDOWS

3. If this statement exists, verify that the directory exists by typing in the drive and directory location with the DIR command. For example:

DIR C:\WINDOWS

- 4. If the FILE NOT FOUND messge appears, then one of the following has occured:
  - The path was typed in incorrectly; simply type the path correctly.
  - The directory does not exist; edit

the AUTOEXEC.BAT file and change the directory to a valid directory; for example:
SET TEMP = C:\DOS

In WordPerfect, the BOX prints but the text does not The Fast Graphic Printing option needs to be enabled (5.2) or disabled (5.1).

The Fast Graphic Printing If you are in WordPerfect 5.1 for Windows and the BOX option needs to be prints but your text does not print, follow these steps:

- 1. Select File
- 2. Select Preferences
- 3. Uncheck the Fast Graphic Printing option for the Windows Printer Driver.

If you are in WordPerfect 5.2 for Windows, and the BOX prints but your text does not print, follow these steps:

- 1. Select File
- 2. Select Preferences
- 3. Check the Fast Graphic Printing option for the Windows Printer Driver

## Clearing Paper Jams

When a paper jam occurs, the ERROR light comes on and the printer goes off-line.

Clear the paper jam as follows:

- 1. Press the POWER button to turn off the printer.
- 2. Gently pull the paper out with one hand while holding down the printer with the other hand.



3. If the paper tears off inside the printer, open the front cover and remove the paper left inside the printer.

4. Press the POWER button to turn the printer back on. The POWER, ON LINE, and HQ (or HS or SMOOTHING) lights come on and the print head moves to the home position. The printer is now ready for printing.

If you are printing high density graphics when a paper jam occurs, feed at least two sheets of paper through the printer to clean the rollers.

If the platen is soiled, wipe it clean with a dry cloth.

# Chapter 8 Customizing the Printer

This chapter describes the factory default settings of the printer and the steps you follow to customize these settings for your particular printing needs.

You will find that the factory default settings provide features to meet most of your printing needs. With these settings, your printer emulates any Canon BJ printer and the IBM Proprinter X24E. This means you can use the printer with any software application that supports these printers.

Make sure the printer's settings match the requirements of your software application. If you have a unique printing requirement, you can customize the printer by changing the DIP switch settings as described in this chapter.

Your printer defaults to BJ-10 mode and provides numerous printing features in this mode. If your software application is designed to print only on an Epson LQ printer, you can use the DIP switches to change the printer control mode to Epson LQ.

You can also enable automatic emulation switching, which allows the printer to switch between BJ-10 mode and Epson LQ mode.

The DIP switches are located under the cover on the left side of the printer.

## Factory Default Settings

Text scale mode

Envelope mode

The following table shows the factory default settings of the printer:

<u>Function</u>	<u>Setting</u>
Printer control mode	BJ-10
Character Pitch	10 characters per inch (cpi)
Line spacing	6 lines per inch (lpi)
Print quality	High quality (HQ) mode
Beeper	Enabled
Automatic carriage return (CR)	Disabled (no CR with line feed)
Automatic line feed (LF)	Disabled (no automatic LF after CR)
Slashed zero	Disabled (zero not slashed)
Vertical tab stops	No vertical tabs set
Horizontal tab stops	Column 9 (then every 8th column)
Vertical margins	Top margin = first print line
	Bottom margin = page length
Horizontal margins	Left margin $= 0$
	Right margin = maximum print width
Page length	11 inches
Horizontal print position	Letter
Print direction	Bi-directional
Font typeface	Courier
Character set	Character Set 1
Code page	437 (IBM USA)
Buffer	Input = Approx. 41.2 KB
	Download = 0 KB

Disabled

Disabled

Smoothing mode Disabled
Reduction mode Disabled
Alternate Graphics Mode Disabled
Automatic emulation switching mode Disabled



The default setting is BJ-10 mode. If you change this to Epson LQ mode, the default settings also change.

# **DIP Switch Settings**

The DIP switch settings control various printer functions, such as the page length and character set you want to use. The printer functions defined by the DIP switches are determined by the printer control mode. The printer has two control modes:

- BJ-10 mode, which emulates the IBM Proprinter X24E
- Epson LQ mode, which emulates the Epson LQ printers

DIP switch 11 selects the printer control mode. When DIP switch 11 is OFF, the printer is in BJ mode (this is the default). When DIP switch 11 is ON, the printer is in Epson LQ mode.

## BJ-10 Mode

When the printer is in BJ-10 mode (DIP switch 11 is OFF), you can set the DIP switches to control the following functions:

<b>DIP</b> switch	<b>Function</b>	$\overline{\mathbf{OFF}}$	<u>ON</u>
1	Horizontal print	Letter size or	A4 size
	position	envelope	
2	Text scale mode	Disabled	Enabled
3	Page length	11 inches	Disabled
4	Character set	Set 1	Set 2
5, 6, 7	Code page	See following description	ons
8	Automatic carriage return (CR)	Line feed (LF only)	LF with CR
9	Alternate Graphics Mode (AGM)	Disabled	Enabled
10	Duffer size	Input: 62 KB	Input: 21 KB
10	Buffer size	Download: 0 KB	Download: 41 KB
11	Printer control mode	BJ-10 mode	Epson LQ mode
12	Automatic emulation switching	Disabled	Enabled

## DIP switch 1

Use this switch to change the horizontal print position according to the size of your paper. If you are using letter-size paper or COM 10 envelopes, set this switch OFF; the left margin will be 0.25 inch (6.4). If you are using A4-size paper or DL-size envelopes, set this switch ON; the left margin will be 0.13 inch (3.4 mm).

#### DIP switch 2

If you are using a software application that assumes 66 lines will fit on each page, set this switch to ON. The printer will reduce the line spacing by a factor of 14/15, which is from 62 lines per page to 66 lines per page if line spacing is set to 6 lines per inch (lpi).

## DIP switch 3

If you are using letter-size paper, set this switch OFF; this sets the page length to

11 inches. If you are using A4-size paper, set this switch ON; this sets the page length to 12 inches.

## DIP switch 4

When this switch is OFF, the printer uses Character Set 1. When this switch is ON; the printer uses Charater Set 2.

## DIP switches 5, 6, 7

These switches allow you to select the following code page tables.

	DIP switc	<u>ehes</u>	
<u>Character set</u>	<u>5</u>	<u>6</u>	<u>7</u>
437 (USA)	OFF	OFF	OFF
850 (Multilingual)	OFF	OFF	ON
850 (Multilingual)	OFF	ON	OFF
850 (Multilingual)	ON	OFF	ON
850 (Multilingual)	ON	ON	OFF
860 (Portuguese)	ON	ON	ON
863 (French Canadian)	OFF	ON	ON
865 (Norwegian)	ON	OFF	OFF

To see the samples of the character sets available with each code page table, use Canon's toll-free fax retrieval system. Call the Canon help desk and request the fax retrieval system; then request the *BJ-200ex Printer Command Summary*.

#### DIP switch 8

When this switch is OFF, the printer performs a normal line feed. Set this to ON if you want the printer to perform a carriage return after each line feed (LF + CR).

## DIP switch 9

Set this switch ON to enable Alternate Graphics Mode (AGM). In this mode, the printer accepts high-resolution, 24-dot, all-points-addressable (APA) graphics commands similar to those used with conventional 24-pin printers.

## DIP switch 10

When this switch is OFF, the printer allocates the entire buffer space (62 KB) to the input buffer. When you are using downloaded fonts, change this switch to ON; the printer will allocate 41 KB of buffer space for downloaded fonts.

## DIP switch 11

When this switch is OFF, the printer is in BJ-10 mode. When this switch is ON, the printer is in Epson LQ mode.

### DIP switch 12

Set this switch ON to enable automatic emulation switching mode. In this mode, the priter detects whether the codes being sent are BJ-10 mode or Epson LQ mode. It then selects the printer control mode to match the printer driver selected in the MS-DOS application.

When DIP switch 12 is OFF, the printer control mode is set by DIP switch 11 (OFF selects BJ-10 mode, ON selects Epson LQ mode).

Automatic emulation mode is applicable for MS-DOS applications only. When you are using Windows, the BJ-200ex printer driver for Windows selects the appropriate control mode regardless of the settings of DIP switches 11 and 12.

Setting DIP switch 12 ON reduces the input buffer by 21 KB.

When using Windows, set DIP switches 10, 11 and 12 OFF to maximize the size of your input buffer (62 KB).



- If the printer does not seem to be switching between BJ-10 and Epson LQ mode, disable this function and set DIP switch 11 to match your application's printer driver.
- If you are using a printer switching device, you must allow at least ten seconds for the printer to recognize an emulation change. If your printer switching device switched data in less than ten seconds, automatic emulation switching will not function properly.

## Epson LQ Mode

When the printer is in Epson LQ mode (DIP switch 11 is ON), you can set the DIP switches to control the following functions:

<b>DIP</b> switch	<b>Function</b>	OFF	<u>ON</u>
1	Horizontal print	Letter size or envelope	$\overline{A4}$ size
	position		
2	Text scale mode	Disabled	Enabled
3	Page length	11 inches	Enabled
4	Character Set	Italics	12 inches
5, 6, 7	International	See following descriptions	
	character set		
8, 9, 10	Typeface	See following descriptions	
11	Printer control	BJ-10 mode	Epson LQ
	mode		mode
12	Automatic	Disabled	Enabled
	emulation		
	switching mode		

#### DIP switch 1

Use this switch to change the horizontal print position according to the size of your paper. If you are using letter-size paper or envelopes, set this switch OFF; the left margin will be 0.25 inch (6.4 mm). If you are using A4-size paper or DL-size envelopes, set this switch ON; the left margin will be 0.13 inch (3.4 mm).

#### DIP switch 2

If you are using a software application that assumes 66 lines will fit on each page, set this switch to ON. The printer will reduce the line spacing by a factor of 14/15, which is from 62 lines per page to 66 lines per page if line spacing is set ot 6 lines per inch (lpi).

### DIP switch 3

If you are using letter-size paper, set this switch OFF; this sets the page length to 11 inches. If you are using A4-size paper, set this switch ON; this sets the page length to 12 inches.



In Epson LQ mode, you use this DIP switch with one-half reduction mode only.

## DIP switch 4

When this switch is OFF, the printer uses the Epson Italics character set, which includes italic characters. When this switch is ON, the printer uses the Epson

Graphics character set, which is the same as the MS-DOS code page 437 (this character set includes sysmbols, lines, corners, and European characters).

To see samples of the character sets available in Epson LQ mode, use Canon's toll-free fax retrieval system. Call the Canon help desk and request the fax retrieval system; then request the *BJ-200ex Printer Command Summary*.

## DIP switches 5, 6, 7

These switches allow you to select one of eight international character sets. These character sets provide you with the characters and sy\mbols used in other languages.

<u>DIP switches</u>		
<u>5</u>	<u>6</u>	<u>7</u>
OFF	OFF	OFF
OFF	OFF	ON
OFF	ON	OFF
OFF	ON	ON
ON	OFF	OFF
ON	OFF	ON
ON	ON	OFF
ON	ON	ON
	5 OFF OFF OFF OFF ON ON	5         6           OFF         OFF           OFF         ON           OFF         ON           ON         OFF           ON         OFF           ON         ON           ON         ON

## DIP switches 8, 9, 10

These switches allow you to select one of eight font typefaces.

	<b>DIP</b> switches		
<b>Typeface</b>	<u>8</u>	<u>9</u>	<u>10</u>
	OFF	OFF	OFF
Roman	ON	ON	OFF
	ON	ON	ON
Sans serif	OFF	OFF	ON
Draft	OFF	ON	OFF
Courier	OFF	ON	ON
Prestige	ON	OFF	OFF
Script	ON	OFF	ON
Orator	ON	ON	OFF
Orator-S	ON	ON	ON

#### DIP switch 11

When this switch is OFF, the printer is in BJ-10 mode. When this switch is ON, the printer is in Epson LQ mode.

## DIP switch 12

This switch enables or disables automatic emulations switching mode. (See page 129 for a description.)

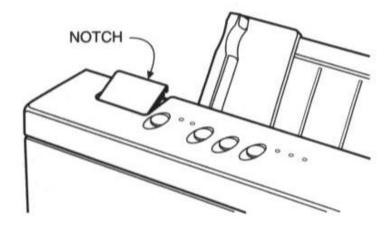
# Changing a DIP Switch Setting

The DIP switches are located to the left of the operator panel under a small cover.

A DIP switch is OFF when it is up, and ON when it is down. To change a DIP switch setting, follow these steps:

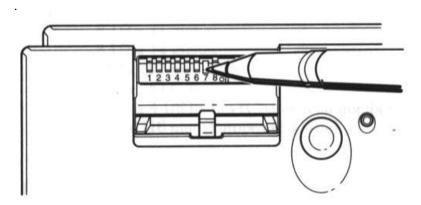
- 1. Make sure the printer is turned off.
  - The POWER light should be off.
  - If the power is on now, press the **POWER** button to turn off the printer.
- 2. Open the DIP switch cover on the top of the printer.

- Pull the cover toward you lifting from the notch at the top of the cover.
- You may need to use a thin object, such as a coin, to release the cover. The cover slides down into the printer.



## 3. Use a pointed object, such as a ballpoint pen, to change the DIP switch settings.

 A DIP switch is OFF when it is up, and ON when it down



## 3. Close the DIP switch cover after making your selections.

The new DIP switch settings take effect when you turn on the printer. If you turn off or reset the printer, or if the printer receives the Set Initial Conditions command from a software program, the printer resets its functions to the settings defined by the DIP switches.

# **Appendix A Printer Specifications**

This appendix lists the specifications of your printer.

# **Printing Method**

Bubble jet ink on-demand

# Paper Handling

Automatic feed

Manual feed

#### **Sheet Feeder Capacity**

Maximum thickness of stacked paper = 0.39 inch (10 mm)

Plain Paper: Approximately 100 sheets (20 lb or 75 g/m<sup>2</sup>)

Transparencies: 40 sheets

Envelope: 15 envelopes (U.S. Commercial number 10 or European DL)

Paper Size

 Letter:
 8.5 x 11 inches

 Legal:
 8.5 x 14 inches

 Ledger:
 11 x 17 inches

 A4:
 210 x 297 mm

 B5:
 182 x 257 mm

Envelope: 9.5 x 4.1 inches (U.S. Commercial number 10)

220 mm x 110 mm (European DL)

# Paper Type

Plain paper

Envelopes (Commercial number 10 or European DL)

OHP film / transparency film (Canon #Q07-0001-M1 or 3M CG-3480)

## Paper Weight

17 to 24 lb (64 to 90 g/m<sup>2</sup>) with automatic feed 17 to 28 lb (64 to 105 g/m<sup>2</sup>) with manual feed

#### Paper Thickness

Less than 0.008 in (0.2 mm)

#### **Printing Speed**

HS mode: 248 cps in 10 cpi, 496 cps in 20 cpi HQ mode: 173 cps in 10 cpi, 346 cps in 20 cpi SHQ mode: 124 cps in 10 cpi, 248 cps in 20 cpi

## **Print Width**

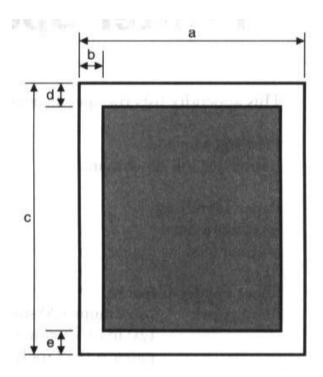
Maximum 8 in (203.2 mm)

# Line Feed Speed

Approximately 100 ms per line at 1/6-inch line in HQ and HS mode

#### **Printing Area**

Paper:



# Horizontal

a = 8.3 to 8.5 in (210 to 216 mm)

b = 0.25 in (6.4 mm) -- Letter-size paper

b = 3.4 mm (0.13 in) -- A4-size paper

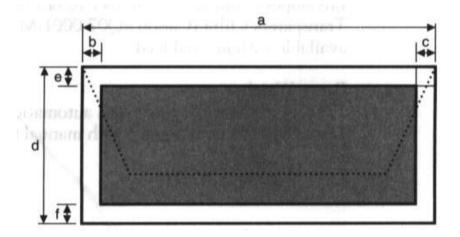
# Vertical

c = 11 to 14 in (279 to 356 mm)

d = 0.125 in (3.18 mm)

e = 0.3 in (7.6 mm)

# Envelopes:



# Horizontal

a = 9.5 in -- Commercial number 10

a = 220 mm for DL size

b = 0.25 in (6.4 mm)

c = 1.24 in -- Commercial number 10

c = 10.4 mm for DL size

#### Vertical

d = 4.125 in -- Commercial number 10

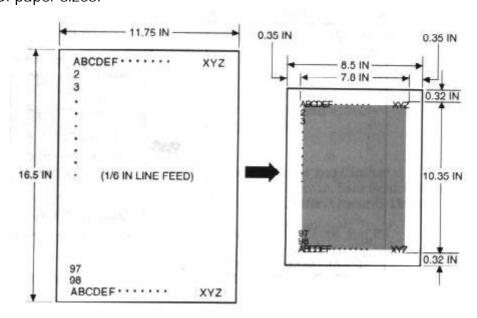
d = 110 mm for DL size

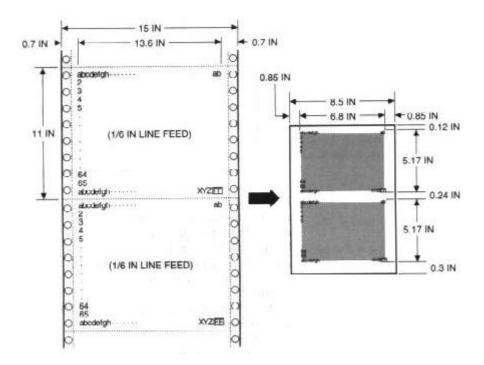
e = 0.67 in (17 mm)

f = 1.0 in (25.4 mm)

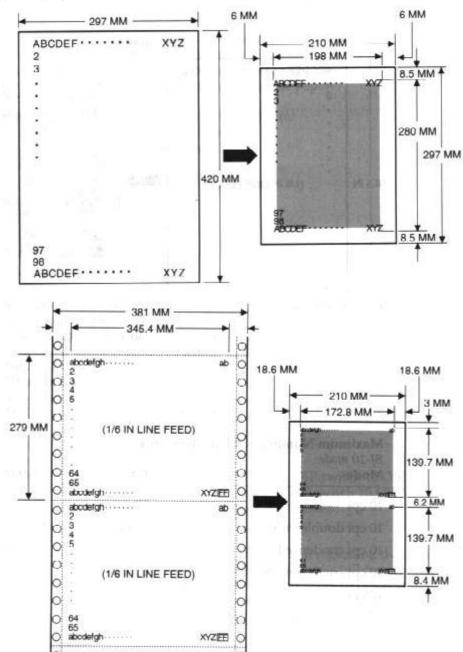
# **Reduction Mode**

# U.S. paper sizes:





# European paper sizes:



#### **Resident Printer Control Modes**

BJ-10 mode: IBM Proprinter X24E emulation Epson LQ mode: Epson LQ-510 emulation

**Line Feed Pitch** 

*BJ-10 mode:* 1/6", 1/8", *n*/60", *n*/72", *n*/180", *n*/216", and

n/360"

Epson LQ mode: 1/6", 1/8", n/180", and n/360"

(n: programmable)

**Printing Characters** 

Typeface: BJ-10 mode

Prestige and Courier

Epson LQ mode

Roman, Sans serif, Courier, Prestige, Script, Orator, Orator-S,

and Draft

Pitch: BJ-10 mode

10 cpi, 12 cpi, 17 cpi, and PS

Epson LQ mode

10 cpi, 12 cpi, 15 cpi, 17 cpi, 20 cpi, and PS

Cell 36 (h) x 48 (v) dot matrix in HQ mode

Composition: 18 out of 36 (h) x 48 (v) dot matrix in HS mode

Character Set: BJ-10 mode

IBM Character Sets 1 and 2 and 3 (Code Page 437, 850)

Epson LQ mode

Italics character set and Graphics character set

TrueType American Text BT, Americana Bold BT, BRoadway BT, Charter Typefaces Black BT, Charter Black Italic BT, Charter BT, Charter Italic

BT, Cloister Black Bt, Cooper Black BT, Dom Casual BT, English 157 BT, Franktur BT, Impress BT, Informal 011 BT, Poster Bondoni BT, Raleigh Demi bold BT, Schadow Black Condensed BT, Seagull Heavy BT, Staccato 555 BT, UMBRA

BT

# Maximum Number of Characters per Line

## BJ-10 mode

<u>Mode</u>	<b>Pitch</b>	Characters per line
10 cpi	10 cpi	80 cpl
10 cpi double-wide	5 cpi	40 cpl
10 cpi condensed	17 cpi	136 cpl
10 cpi condensed, double-wide	8.5 cpi	68 cpl
12 cpi	12 cpi	96 cpl
12 cpi double-wide	6 cpi	48 cpl
Proportional spacing	PS	Varies

# Epson LQ mode

<u>Mode</u>	<b>Pitch</b>	Characters per line
10 cpi	10 cpi	80 cpl
10 cpi double-wide	5 cpi	40 cpl
10 cpi condensed	17 cpi	136 cpl
10 cpi condensed, double-wide	8.5 cpi	68 cpl
12 cpi	12 cpi	96 cpl
12 cpi double-wide	6 cpi	48 cpl
12 cpi condensed	20 cpi	160 cpl
12 cpi condensed, double-wide	10 cpi	80 cpl
15 cpi	15 cpi	120 cpl
15 cpi double-wide	7.5 cpi	60 cpl
Proportional spacing	PS	Varies

**Graphic Image Print** 

Data format: Vertical 8, 24, and/or 48-dot format

Resolution: Horizontal 60, 120, 180, 240, or 360 dpi, and

720 dpi (720 in Smoothing mode only)

Buffer

BJ-10 mode

Input buffer: 62 KB (or 21 KB)

Download buffer: 0 KB (or 41 KB)

Epson LQ mode

Input buffer: 23 KB Download buffer: 39.4 KB

Automatic emulation mode
Input buffer: 21 KB

Download buffer: 41 KB (BJ-10 mode, DIP switch 10 ON)

0 KB (BJ-10 mode, DIP switch 10 OFF)

39.4 KB (Epson LQ mode)

**Interface** 

8-bit To receive information regarding the interface specifications, use parallel Canon's toll-free fax retreival system. Call the Canon fax retrieval

system at 1-800-526-4345; then request the BJ-200ex Interface

Specifications

Ink Cartridge

Type: BC-02 (single cartridge ink supply)

Ink color: Black

Print head: 64 bubble jet nozzles

Number of characters Approx. 700,000 characters/cartridge in HQ mode

printed: (5% coverage)

Approx. 1,400,000 characters/cartridge in HS mode

Ink amount: Approx. 0.9 oz (28g)

**Acoustic Noise Level** 

Approx. 42 dB(A)

**Operating Environment** 

Temperature: 41° F to 95° F (5° C to 35° C) Humidity: 10% to 90% RH (no condensation)

**Storing Environment** 

Temperature: 32° F to 95° F (5° C to 35° C) Humidity: 5% to 95% RH (no condensation)

**Power Source** 

USA/Canada AC 120V, 60Hz, 0.5A

**Power Consumption** 

7 watts maximum nonprinting

23 watts average printing

30 watts maximum printing

Dimensions

13.7 in (347 mm) W 7.6 in (193.5 mm) D

6.8 in (173 mm) H

Weight

Approx. 6.6 lb (3.0 kg)

# Appendix B Application Notes

This appendix contains information on using specific software applications with your Canon BJ-200ex Bubble Jet Printer. Many popular applications are covered here. Although the software versions described may not be the latest or may not be the version you have, these solutions presented may apply to other versions.

The information presented here represents Canon's answers to some frequently asked questions about using software packages with our printers. The information is presented in alphabetical order by software application.

# Printing Envelopes in Microsoft Windows AmiPro 3.0

To print envelopes in AmiPro 3.0, follow these steps:

- 1. From within AmiPro, select the Print envelope icon.
- 2. Select the number 10 envelope.
- 3. Click on OPTIONS
- 4. Click on ADJUST
- 5. Modify the margins as follows: Right 0.70 and Down 0.35
- 6. Click on OK to leave The Print Envelope Adjustments window.
- 7. Click on OK to leave the Print Envelope Options window.
- 8. Click on OK to print the envelope.

#### Microsoft Publisher

#### Method 1

To print envelopes in Microsoft Publisher, follow these steps:

- 1. Start Microsoft Publisher.
- 2. Select and run the Envelope Page Wizard design assistant.
- 3. From the Envelope Page Wizard, select the options you want.
- 4. After the envelope has been created, delete the text box that says: TIPS FOR PRINTING YOUR ENVELOPE
- 5. From the Edit menu, select All.
- 6. Click the group button to group the objects.
- 7. From the Edit menu, choose Copy objects.
- 8. From the File menu, choose New.
- 9. In the dialog box, select Start from scratch and Full page.
- 10. When prompted to save your changes, choose NO.
- 11. In the new document, form the Edit menu choose Paste objects.
- 12. Drag the group to a position 0.5 inches from the top of the page.
- 13. On the printer, move the paper selection lever to the envelope position; this is the front position.
- 14. On the printer, set the paper thickness lever to the envelope position; this is up.
- 15. Place the envelope in the sheet feeder (face up and top down).
- 16. Make sure the printer is on line.
- 17. In Publisher, form the File Menu choose Page setup.
- 18. Under Orientation, select Portrait.
- 19. Under Paper, select Letter 8.5 x 11.
- 20. From the File menu, choose Print.
- 21. Click OK.

#### Method 2

To print envelopes in Microsoft Publisher, follow these steps:

- 1. Start the Windows Control Panel.
- 2. Double click the printers icon.
- 3. Select the Canon BJ-200ex Bubble Jet Printer.
- 4. Set up the following options on the printer: Portrait, Envelope, and Manual feed.
- 5. Choose OK
- 6. Choose Set as default printer
- 7. Choose Close
- 8. Start Microsoft Publisher
- 9. Select and run the Envelope Page Wizard design assistant.
- 10. From the Envelope Page Wizard, select the options you want.
- 11. **IMPORTANT**: Do not, at any time, choose Print setup form the File menu or form the Page setup. If you do, the printer driver resets Orientation to Landscape and will not allow you to change it back. If this happens, you must run the Page Wizard again.
- 12. On the printer, set the paper selection lever to the envelope position; this is the front position.
- 13. On the printer, set the paper thickness lever to the envelope position; this is the right position.
- 14. Place the envelope in the sheet feeder (face up and top down).
- 15. Make sure the printer is on line.
- 16. From the File menu, choose Print.
- 17. Click OK

# Microsoft Word for Windows

#### Microsoft Word 6.0 for Windows

To print on envelopes in Microsoft Word 6.0 for Windows, follow these steps:

- 1. Select tools.
- 2. Select Envelopes and Labels
- 3. Click on the feed button
- 4. In the feed method, select the first envelope from the left
- 5. Click on the OK button
- 6. Click on Print

#### Microsoft Word 2.0 for Windows

If you are using Microsoft Word for Windows, version 2.0 and the Envelope Macro button in the button bar does not work, follow these steps to print envelopes correctly. First create the SetPrinterHeuristic dialog box:

- 1. Start Word for Windows 2.0 (if necessary).
- 2. From the top menu bar, choose File and then Open.
- 3. In the Open File dialog box, select Newmacro.doc (in the WINWORD directory) and choose OK.
- 4. When the Macro Name dialog box appears, select SetPrinterHeuristic and choose Install.
- 5. In the Install SetPrinterHeuristic to dialog box, select Normal from the Template list and then select Tools from the Menu list to place this option in the Tools menu.
- 6. Choose OK
- 7. In the top menu bar, choose File and then Close.

The SetPrinterHeuristic menu choice now appears each time you select Tools from the top menu bar when you are using a normal template. To verify this, open a new document and select Tools from the menu bar. The SetPrinterHeuristic choice appears as the last selection of the Tools menu.

To print on envelopes, follow these steps:

- 1. Type your destination address within your document and then highlight it.
- 2. In the top menu bar, select Tools and then select SetPrinterHeuristic.
- 3. In the Envelope orientation box, select the Force Portrait button.

- 4. If you are printing multiple envelopes, check on the Avoid Using Device Capabilities for Paper Sizes box. An X appears in the box. Now choose OK.
  - The Avoid Using Device Capabilities for Paper Sizes box affects all documents output to the printer. If you are not printing multiple envelopes, make sure this option is unchecked.
- 5. Make sure the printer is ready for printing envelopes.
- 6. From the button bar, choose the Envelope Macro button. The address appears in the Destination Address box.
- 7. Choose the Print button.

#### WordPerfect

#### WordPerfect 6.0

If you are using WordPerfect, version 6.0, you need to define your envelope size using the Envelope Macro Button. Follow these steps:

- 1. Click on the Envelope Macro.
- 2. Select Create New Definition.
- 3. Specify a Paper Name that you will recognize later; for example, BJENV.
- 4. For Paper Type, select Envelope.
- 5. For Paper Size, select #10 Env(9.5" x 4.1").
- 6. For Paper Location, select Autosheet Feeder.
- 7. For Orientation, disable Rotated Fonts and enable Wide Form.
- 8. Click on OK to close the Create New Definition box.
- 9. Enter the Sender and Addressee information and then click the Print button.
- 10. WordPerfect displays the message: Preparing Document for Printing
- 11. WordPerfect displays a warning; ignore this warning.

WordPerfect will now print your envelope.

You need not change the Page Layout or any other setting to accommodate envelopes.

#### WordPerfect 5.2

If you are using WordPerfect, version 5.2, follow these steps to print envelopes.

## First time printing envelopes:

If you are printing envelopes for the first time follow these steps:

- 1. Choose the Envelope Macro from the Main Screen. If the macro is not displayed, go to View and then to the Button Bar Setup. Select FEATURES.WWB and follow the steps for displaying the macro.
- 2. The first time you choose the Envelope Macro using either the WordPerfect driver or the Windows driver, a prompt tells you that this paper size does not exist and asks if you want to add it.
- 3. Choose Add.
- 4. Select Portrait orientation and Continuous paper feed. You see the Envelope Editor screen
- 5. Fill in the appropriate mailing address.
- 6. Make sure the box for Print Envelopes is checked and the Select Envelope Size is 9.5 x 4.12 inches.
- 7. You can also include a Return Address, change the margin settings, and/or change the font with which the envelope is printed. For Windows, the default font is a Windows font. You may want to select a TrueType font or another printer font.
- 8. After selecting all your options, choose OK. If you are using the Windows driver, you see this message:
  - Windows printer driver did not accept the requested paper size. Document will print on paper size the printer did select.
- 9. Choose OK to print the envelope. If you are using the WordPerfect driver, no message appears and the printer prints the envelope.

# Printing envelopes other than the first time:

1. Choose the Envelope Macro from the Main Screen.

- 2. If you have set up the envelope size, go to Layout and choose Page.
- 3. Choose Paper size, Make sure the size is 9.5 x 4.12 inches and the diagram shows the paper in wide format. If not, choose Edit and make the corrections.
- 4. Next, you see the Envelope Editor screen. Fill in the appropriate mailing address.
- 5. Make sure the box for Print Envelopes is checked and the Select Envelopes Size is 9.5 x 4.12 inches.
- 6. You can also include a Return Address, change the margin settings, and/or change the font with which the envelope is printed. For Windows, the default font is a Windows font. You may want to select a TrueType font or another printer font.
- 7. After selecting all your options, choose OK. If you are using the Windows driver, you see this message:

Windows printer driver did not accept the requested paper size. Document will print on paper size the printer did select.

8. Choose OK to print the envelope. If you are using the WordPerfect driver, no message appears and the printer prints the envelope.

# Works 3.0 for Windows

To print envelopes in Works 3.0 for Windows, follow these steps:

- 1. Select Tools.
- 2. Select Envelopes and Labels.
- 3. Create your Envelope.
- 4. Go to Page Setup.
- 5. Click on Source, Size, and Orientation.
- 6. Click on Reset.
- 7. Change the Paper Source to Auto Sheet Feeder.
- 8. Change the Paper Size to #10 Envelope (9.5 x 4.1).
- 9. Change the Orientation to Portrait.
- 10. Click on OK.

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