Operator's Handbook

Monarch® 9860™ Printer

Ship From:
Dayton, Ohio

Ship From:
Dayton, Ohio

Ship From:
Dayton, Oh

AVERY
DENNISON
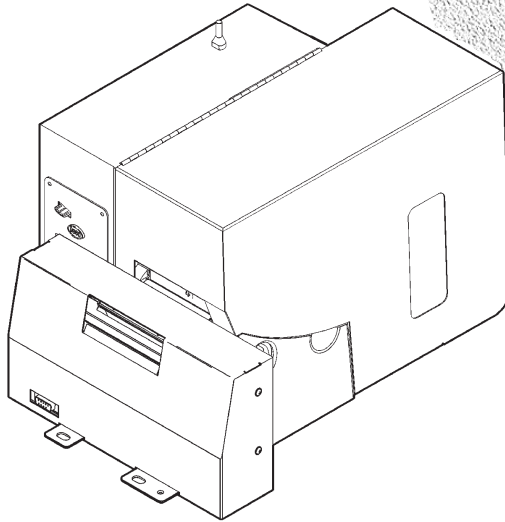
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WARNING

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

CANADIAN D.O.C. WARNING

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

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

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GETTING STARTED

The PAXAR® 9860™ printer lets you print text, graphics, and bar codes on thermal transfer (ribbon) and thermal direct labels and tags. The 9860 printer cuts tags as they are printed.

You can print on aperture, die cut, or black mark (non-indexed) supplies.

This chapter includes information about

◆ unpacking the printer.
◆ connecting the power cord.
◆ connecting the communication cable.

Audience

The *Operator's Handbook* is for the person who prints and applies labels.

Unpacking the Printer

After you unpack the printer, you should have the printer with a knife attached, a power cord, a ribbon take-up core (may already be on take-up reel), and an external keyboard. Keep the box and packaging material in case the printer ever needs repair.

Shipping the Printer

If you need to ship the printer to a different location:

1. Remove the ribbon roll, if one is loaded.
2. Remove the supply roll, if one is loaded.
3. Close the printhead by pressing down on the thumb well until you hear it click into place.

Thumb Well
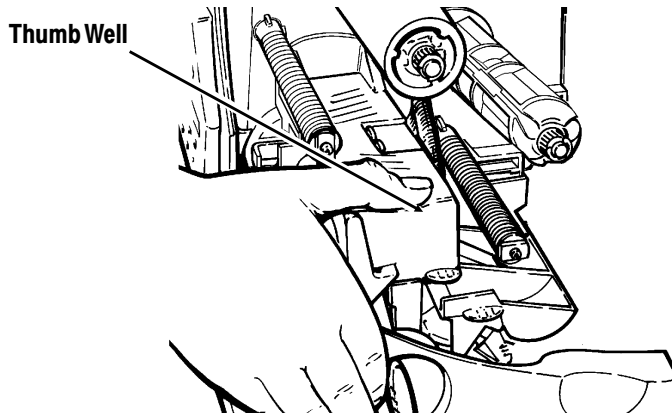
4. Place the printer in the original box and secure with packaging material. **Make sure the printer is adequately packed to avoid damage during shipment.** See Appendix B, "Accessories and Options" for the packaging materials part numbers.

9445™ Printer Online Emulation

The 9860 printer using 203 dpi (dots per inch) printing supports 94x5 emulation. You can send 94x5 data streams to this printer.

Refer to your 9445 *Programmer's Manual* for information about 94x5 data streams.

Ordering Programmer's Manuals

The *Packet Reference Manual*, which describes how to create format and batch packets for printing labels, how to configure the printer online, how to diagnose printer error messages, and how to perform other advanced techniques can be downloaded from our Web site (www.paxar.com). You can print this manual or order a hard-copy version (part number **TC9800PM**).

About Monarch® MPCL™ Toolbox Utilities

The Monarch® MPCL™ Toolbox utilities are available on our Web site and are free to download. This group of development utilities helps you configure the printer, customize fonts, and download files. Monarch MPCL Toolbox utilities are not label production software. Call Customer Service for information about label production software.

Connecting the Power Cable

The power supply automatically switches between 115V or 230V. No operator settings are required.

1. Plug the power cable into the socket. Plug the other end of the cable into a grounded electrical outlet.
2. Turn on the printer. Press (I) to turn on and (O) to turn off the printer.

Establishing Communications

Before the printer can accept print jobs from the host, you must:

◆ Connect the communication cable to the printer and to the host.

◆ Set the communication values on the printer to match those at the host. (Only required if you are using the serial port.)

◆ Make sure the printer is off before connecting the cable to the communication port.

Ask your System
Administrator which
method you will use to
communicate with the
host:

Serial Communication
9 to 25 pin cable
(Part #118364)
25 to 25 pin cable
(Part #118366)

Parallel Communication
IEEE-1284 or
Centronics® mode cable
(Part #118363)

Parallel Port

**Power Cable
goes here**

USB Port
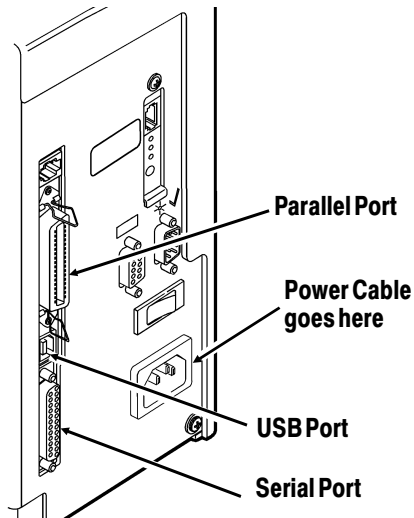
Serial Port

Connecting the Communication Cable

Connect the communication cable into the appropriate port.
Secure the cable with the connecting screws (serial) or spring
clips (parallel).

If you are communicating with the host through the serial port,
make sure the printer's communication values match those at the
host. The factory default values are 9600 Baud, 8 bit data frame,
1 stop bit, no parity, and DTR flow control.
The printer also has a USB (Universal Serial Bus) Version 1.1
communication port. Drivers are available on our Web site for a
variety of operating systems.

The printer supports a baud rate up to
115200. Make sure your host is capable of
communicating at the speed you
select for the printer.

LOADING SUPPLIES

This chapter describes how to load a roll of label or tag supply.

There are three types of supplies:

Thermal Direct   specially treated thermal supplies that do not use a ribbon for printing.

Thermal Transfer   standard supplies that require a ribbon for printing.

High Energy   scratch, chemical, and temperature resistant supplies that require a ribbon able to withstand high temperatures. See "Using a High Energy Ribbon" in Chapter 3 for more information.

If you are using thermal direct supplies, do not load a ribbon. If you switch from black mark to die cut supplies, make sure the printer's supply type is set correctly.

Loading Labels or Tags

Make sure the printer is configured for the correct supply type.

1. Open the cover.
2. Unlock the printhead by turning the retaining latch.
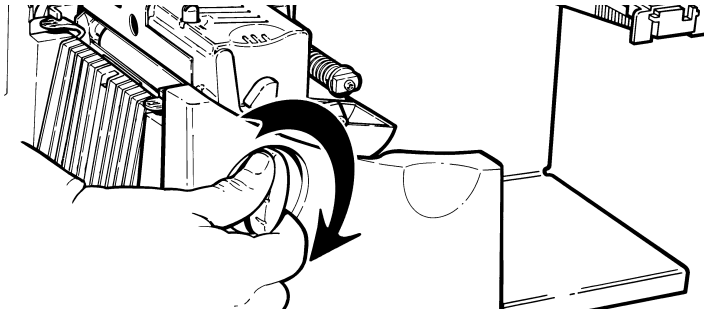
3. Lift printhead assembly using the printhead tab until the assembly locks into place.

Printhead Tab

Deflector Tab
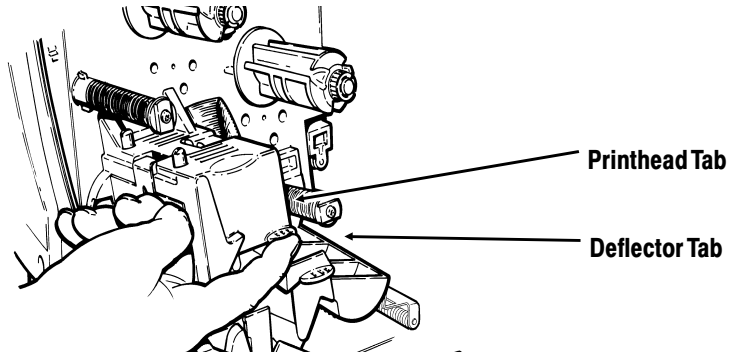
4. Place the roll of supply on the supply holder. For labels, the supply unrolls from the top or the bottom. For tags, make sure the supply unrolls from the bottom, because tag rolls are wound face in.

Do not pick up the printer
by the supply holder.

Supply Holder Guides
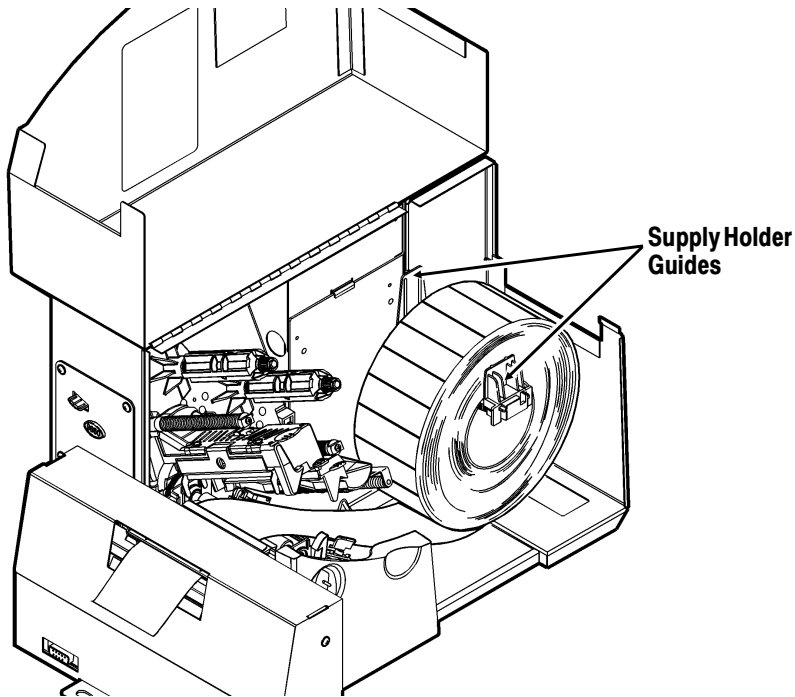
5. Adjust the supply holder guides so the sides barely touch the roll. Make sure the supply roll turns freely.

6. Push down on the supply lever to unlock the supply guides.

7. Lay the supply into the feed path. Tuck the supply under the nibs and in between the die cut sensor. **Do not feed supply between the supply roller and deflector.**

8. Feed the supply between the upper and lower knife guides. Make sure at least 0.5 inches of supply is through the knife.

9. Adjust the supply guides so they touch the supply. Push up on the supply lever to lock the supply guides into place.
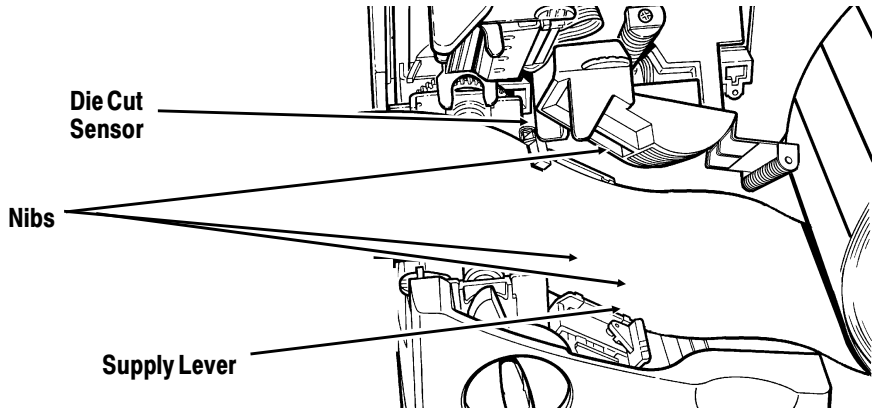
Die Cut Sensor

Nibs

Supply Lever

10. Hold the printhead assembly by the printhead tab while pressing down on the printhead release.
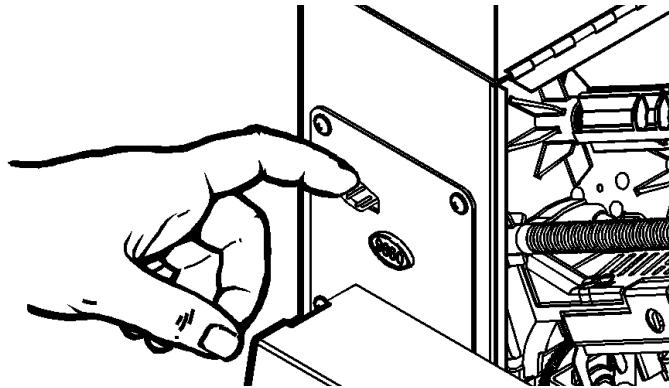
11. Close the printhead by pressing down on the thumb well until you hear it click into place.

Thumb Well
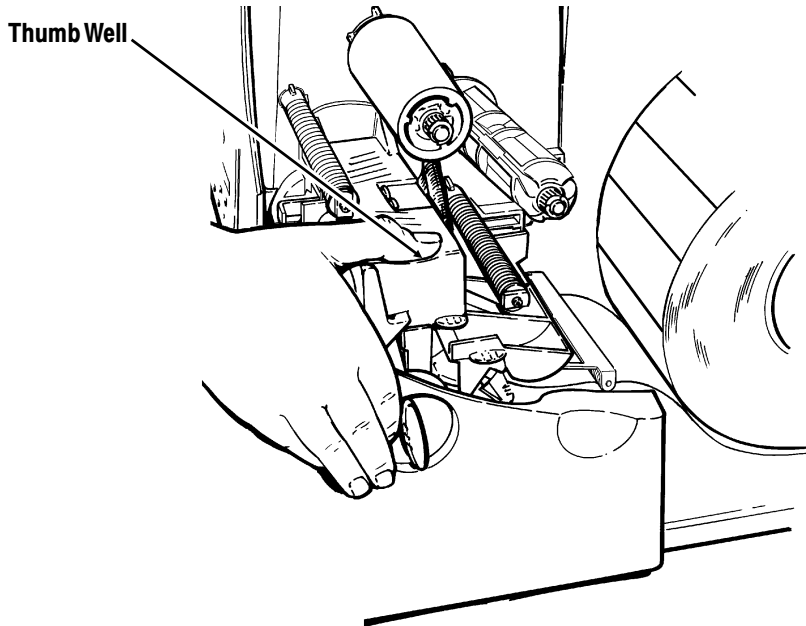
12. Close the cover.

13. On the keyboard, press **Feed** (●) to position the supply under the printhead.

You may need to adjust the wide/narrow knobs depending on the width of your supply. See "Adjusting the Wide/Narrow Knobs" for more information.

If the printer will be unused for extended periods of time, we recommend leaving the printhead unlatched.

Adjusting the Wide/Narrow Knobs

You may need to adjust the two wide/narrow knobs according to the width of your supply. For supply that is more than two inches, adjust the knobs to the wide setting. For supply that is two inches or less, adjust the knobs to the narrow setting.

You must adjust both of the knobs to the same position.

If you experience ribbon smudging in cold, dry environments, adjust the wide/narrow knobs to the wide setting.

For wide supplies, push down and turn the wide/narrow knobs clockwise with a screwdriver. For narrow supplies, turn the wide/narrow knobs counter-clockwise with a screwdriver until it pops back up.
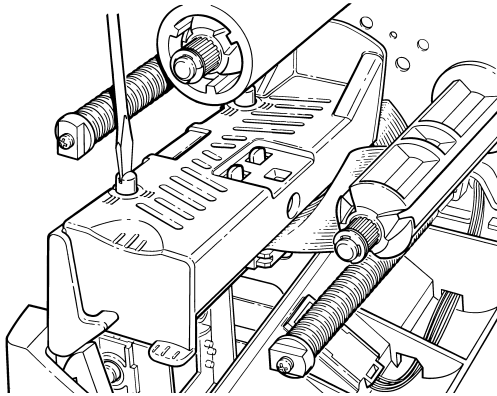
The adjustment is shown in the wide position.

LOADING RIBBON

This chapter describes how to load a ribbon roll.

There are different ribbon requirements for the three types of supplies:

Thermal Direct Supplies   do not use a ribbon for printing.

Thermal Transfer Supplies   require a ribbon for printing.

High Energy Supplies   require a ribbon able to withstand high temperatures.

If you are using thermal direct supplies, do not load a ribbon. If you are using high energy supply, be sure to use a high energy ribbon. See "Using a High Energy Ribbon" for more information. If you want to use a high energy ribbon, select high energy for the ribbon every time the printer is turned on.

Loading Ribbon

Make sure the printer is configured to use a ribbon.

To load ribbon:

1. Open the cover.

2. Unlock the printhead by turning the retaining latch.

3. Lift printhead assembly using the printhead tab until the assembly locks into place.

Printhead Assembly
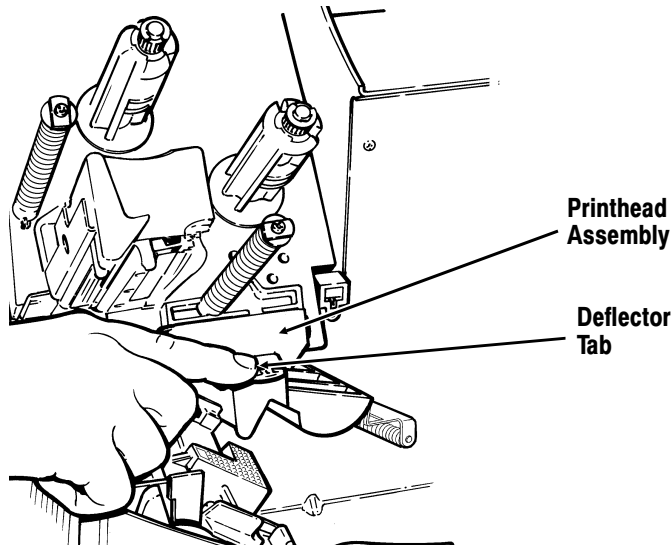
Deflector Tab

4. Push the deflector tab down.

5. Slide the extra ribbon core on the take-up reel as far as it will go with the "This End Out" writing facing out. Use your empty ribbon core as the take-up core. The take-up core only fits on the take-up reel one way. (An extra take-up core is available by ordering part number 117961.)

6. Remove the new ribbon from the package as shown. Do not wrinkle or crush the new ribbon.
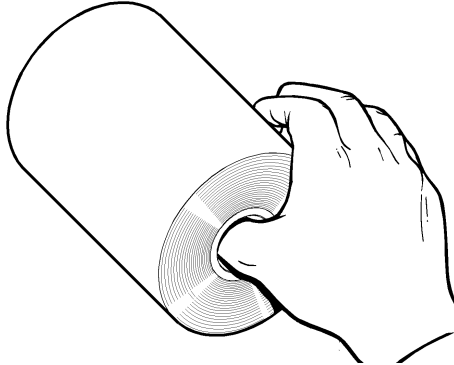
7. Slide the ribbon onto the back reel as far as it will go. The ribbon roll only fits on the reel one way. Carefully unwind a few inches of ribbon from the bottom of the roll.

8. Carefully feed the ribbon under both ribbon rollers and printhead as shown.

9. Align the ribbon and make sure it is straight and centered throughout the path.

10. Tape the ribbon to the take-up core. ***Do not tape the ribbon to the take-up reel.***

11. Rotate the take-up core until the leader is past the printhead.

Take-up Core

Take-up Reel

Ribbon Rollers
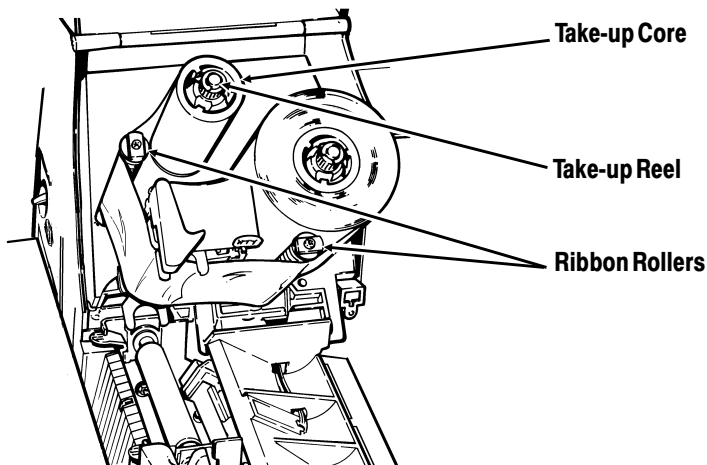
12. Remove any slack in the ribbon by turning the take-up reel clockwise.

13. Hold the printhead assembly by the printhead tab while pressing down on the printhead release.

14. Close the printhead by pressing down on the thumb well until you hear it click into place. Close the cover.

Thumb Well
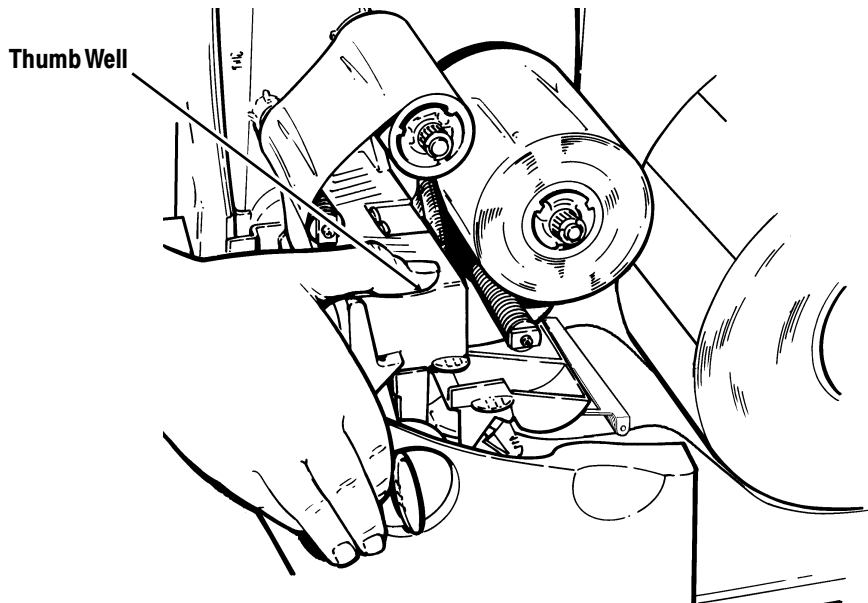
Using a High Energy Ribbon

High energy ribbon is an option for this printer. It enables you to print on high energy (TUFF-MARK®) supplies.

When you select high energy ribbon for the printer setting, you are setting the printer to a higher printing temperature. Select this setting only after you have loaded a high energy ribbon and supply or it may damage your printhead. Select a high energy ribbon every time you turn on the printer.

> The high energy setting is lost when you turn
> off the printer.

High Energy Ribbon Limitations

When using the high energy ribbon option:

◆ Use a print speed of 2.5IPS (inches per second).

◆ Printhead warranty is reduced to 100,000 inches.

◆ Serial bar codes cannot be printed.

◆ Do not use peel mode.

◆ No more than 20% of the supply should have print (black coverage).

CAUTION
The high energy ribbon may break or stick to the
supply when more than 20% of the supply
contains print.

◆ Only white high energy supply should be used for bar code printing.

◆ Reverse fonts cannot be used.

◆ A non-printing area of at least .1 inch (2.54 mm) must exist on the left and right edge of the ribbon.

◆ Do not print horizontal lines or bars.

◆ Graphics are limited.

CARE AND MAINTENANCE

4

This chapter tells you how to

◆ clear label jams and clean the printer

◆ replace a printhead

◆ adjust print contrast.

CAUTION

Do not use sharp objects to clean the printhead or touch the printhead with your fingers. This may damage the printer and require a service charge.

Clearing Label Jams

When you are printing and a jam occurs, an error appears on the keyboard. To clear the jam:

1. Turn off the printer and open the cover and printhead assembly.

2. If necessary, remove the supply roll and ribbon.

3. Remove the jammed supply and reload the supply roll.

4. Close the printhead assembly and turn on the printer.

5. On the keyboard, press **Feed** (●) to position the supply under the printhead.

Cleaning

The rate and frequency at which you print determines how often you must clean the printer.

You **must** clean the printhead as described below to maintain printhead life.

You may need to clean the printhead, sensor, and platen roller:

◆ if there is any adhesive build-up in the supply path.

◆ after printing approximately 3 rolls of thermal transfer/thermal direct/linerless supplies or after each ribbon.

◆ daily if your printer is in an excessively dirty, hot, or humid environment.

◆ when you see voids or streaking in the print as shown.

When you are using higher speeds (with 203 or 300 dpi), and/or increased print contrast, we recommend cleaning the printhead after each ribbon with isopropyl alcohol. If you still notice build-up on the printhead or black streaks on your supply, use the enclosed printhead CLEAN-STRIP.

Voids

Streaks

1. Turn off the printer and open the cover and printhead assembly.

2. Remove the label roll and ribbon (when cleaning the printhead).

3. Press down on the exit cover tabs to open the exit cover on the front of the printer.

4. Clean the platen roller when you see significant adhesive build-up or a label is wrapped around the platen roller. Use a dry, soft-bristle brush, such as a toothbrush, to clean either the standard (black) or linerless (red/orange textured) platen roller.

If the brush does not remove all the adhesive

◆ Use isopropyl alcohol ONLY on the standard (black) platen roller.
Moisten a cotton swab with isopropyl alcohol and run the cotton swab across the platen roller. Turn the platen roller with your finger to make sure the platen roller is clean all the way around.
After cleaning, feed several inches of supply through without printing to remove any remaining isopropyl alcohol.

◆ call Service to clean the linerless (red/orange textured) platen roller.

_____

DO NOT use alcohol or solvents on linerless (red/orange textured) platen rollers.

5. Moisten a cotton swab with isopropyl alcohol. Rub the cotton swab across the peel bar and remove any build-up.

6. Moisten another cotton swab with isopropyl alcohol. Rub the cotton swab across the printhead and remove any build-up. You may need to use a printhead CLEAN-STRIP if the printhead is extremely dirty or you see streaks on the supply.
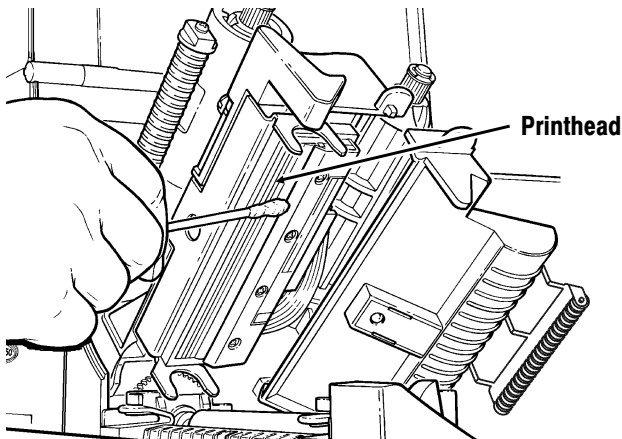
Printhead

7. Rub the cotton swab across the supply sensor and die cut sensor and remove any build-up.

Die Cut Sensor

Supply Sensor
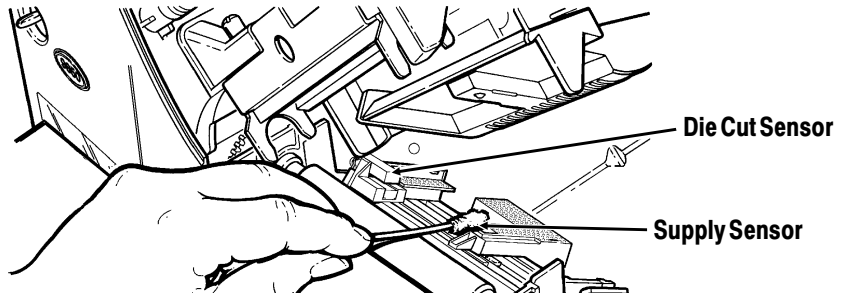
8. Clean the build-up in the supply path.
9. Let the printer dry before you reload supplies.
10. Close the cover and printhead assembly.
11. Turn on the printer.
12. On the keyboard, press **Feed** (●) to position the supply under the printhead. Resend your format, batch, and check digit packets.
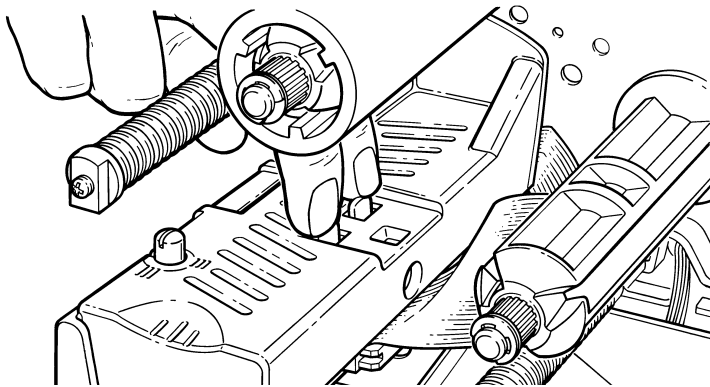
Replacing the Printhead

You may have to replace the printhead if it is damaged or worn-out. For example, you may see 616 (bad dot or dots) or 768 (printhead failure) error codes. See Appendix B, "Accessories and Options" for the printhead part number.

CAUTION

The printhead is sensitive to static electricity, which can damage the printhead or reduce its life. Ground yourself by touching some metal, such as the printer's metal base, before touching the printhead. Clean the printhead to remove any salt or oil left from handling prior to operation.
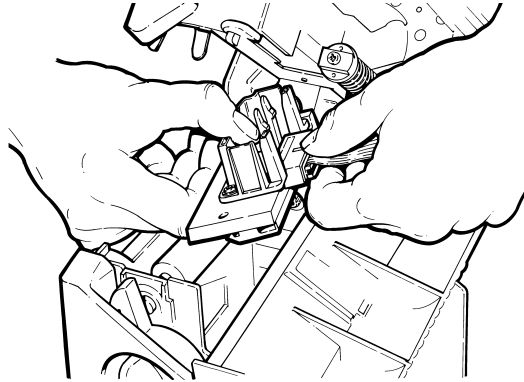
To replace the printhead:

1. Turn off the printer.
2. Open the cover.
3. Unlock the printhead by turning the retaining latch.
4. Press forward and down on the two latches on top of the printhead assembly as shown. The printhead will drop down.

5. Lift the printhead assembly using the printhead tab and push back until the printhead assembly clicks into place.

6. Carefully unplug the cable from the printhead as shown. The printhead is sensitive to static electricity, which can damage the printhead or reduce its life. Ground yourself by touching some metal, such as the printer's metal base, before touching the printhead.

7. Carefully plug the cable into the new printhead.

8. Align the new printhead with the tabs.

Do not touch here
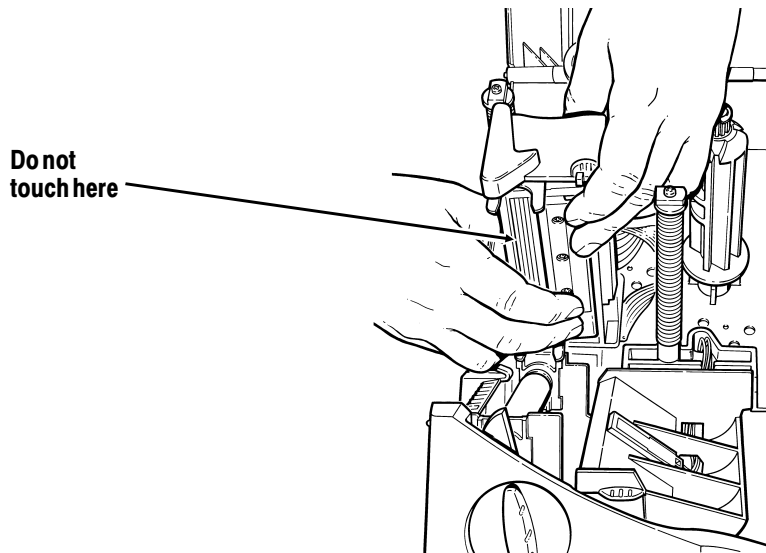
9. Snap the printhead into place.

Make sure the printhead cable does not touch
the ribbon roll.

10. Clean the new printhead with a cotton swab dipped in
    isopropyl alcohol to remove any salt or oil left from handling.

11. Let the printhead dry and reload your supplies.

12. Close the printhead assembly and the cover. Turn on the
    printer.

13. On the keyboard, press ● to position the supply under the
    printhead.

SETTING BATCH OPTIONS

You can select Batch Options to change which prompts appear during Batch Entry mode and set default values for those prompts. Customizing which prompts appear during batch entry can reduce the time it takes to enter data for a format. If you set a new default value for an option, that value is used even if the prompt is not displayed. If you do not change a default value for an option, the system default is used if the prompt is not displayed.

The following chart shows the menu structure. The black boxes show where you are; the bordered boxes show how you got there.

MAIN MENU

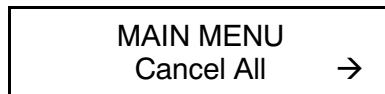| CANCEL ALL | PRINT MODE | BATCH ENTRY | REPEAT BATCH | BATCH OPTIONS | SETUP | SCRIPTS | DIAG. |

Using the Keyboard

If the keyboard displays **PRINT MODE Ready** when you turn on the printer, press ● to display the Main menu.

To display menu options, press ⊖ or ⊕.

When the screen displays a right arrow, press ⊕ to display more options.

```
          MAIN MENU
          Cancel All        →
```

When the screen displays a left arrow, press ⊖ to display more options.

```
┌─────────────────────────────────┐
│         MAIN MENU               │
│   ←      Diagnostics            │
└─────────────────────────────────┘
```
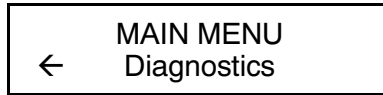
When the screen displays a left and a right arrow, press either ⊖ or ⊖ to display more options.

```
┌─────────────────────────────────┐
│         MAIN MENU               │
│   ←     Print Mode        →     │
└─────────────────────────────────┘
```

When you see the menu option you want, press ● to select it.

Exiting an Option

To exit an option, press ● **once. You will exit to the next higher menu.**

If you press ● from a menu, your settings
are not saved. Your settings are only saved
when you press ● from a menu.

Refer to the keyboard's *Operating Instructions* for more information.

Option	Default
Clear Fields	No
Number of Parts	1
Print Multiple	1
Quantity	1
Cut Option	No
Cut Multiple	1
Cut Last Ticket	No

Use the following steps to customize which prompts appear
during batch entry and to specify defaults for these prompts.

1. Press ● at the Main menu, when you see Batch Options. If
   you have password protection enabled, you will see

```
Enter Password:
_ _ _ _ _ _ _
```

2. Press ● three times and then press ●. See Chapter 12,
   "Diagnostics and Troubleshooting" for more information about
   password protection.

```
Clear Fields?
Prompt?  Yes
```

3. Decide if you want to see this prompt in Batch Entry mode
   and press either ⊖ or ⊕ to display your selection. Press
   ●.

```
Clear Fields?
              No          →
```

4. Decide if you want to change the default (No) and press
   either ⊖ or ⊕ to display your selection. Press ●.

```
Number of parts
Prompt?  Yes
```

5. Decide if you want to see this prompt in Batch Entry mode
   and press either ⊖ or ⊕ to display your selection. Press
   ●.

```
Number of parts
[1/5]:  +1
```

6. Decide if you want to change the default (1) part printed
   across the supply. Press ⊕ to change the number of parts
   (1-5). Press ●.

```
Cut Option
Prompt?  Yes
```

7. Decide if you want to see this prompt in Batch Entry mode and press either ⊖ or ⊖ to display your selection. Press ●.

```
Cut Option
          No          →
```

8. Decide if you want to change the default (No) and press either ⊖ or ⊖ to display your selection. Press ●.

```
Cut Multiple
Prompt?  Yes
```

9. Decide if you want to see this prompt in Batch Entry mode and press either ⊖ or ⊖ to display your selection. Press ●.

```
Cut Multiple
1 _ _ _ _ _ _ _ _
```

10. Decide if you want to change the default (1) tag printed before cutting. Enter a quantity (1-32000). Press ●.

To cut between batches, make the Cut Multiple the same as the print quantity.

```
Cut Last Ticket?
Prompt?  Yes
```

11. Decide if you want to see this prompt in Batch Entry mode and press either ⊖ or ⊖ to display your selection. Press ●.

```
Cut Last Ticket?
          No          →
```

12. Decide if you want to change the default (No) and press either ← or → to display your selection. If you select "Yes," the last tag in the batch is cut. The printer must feed one or two tags past the printhead to cut the last tag in the batch. Press ⬤.

```
Cut After Batch?
Prompt?  Yes
```

13. Decide if you want to see this prompt in Batch Entry mode and press either ← or → to display your selection. If you select "Yes," the last tag in the batch is cut. The printer must feed one or two tags past the printhead to cut the last tag in the batch. Press ⬤.

```
Cut After Batch?
         No          →
```

14. Decide if you want to change the default (No) and press either ← or → to display your selection. If you select "Yes," the knife cuts before the first tag and cuts after batch, so the tags are cuts in strips. Press ⬤.

```
No Cut Before?
Prompt?  Yes
```

15. Decide if you want to see this prompt in Batch Entry mode and press either ← or → to display your selection. Press ⬤.

```
No Cut Before?
         No          →
```

16. Decide if you want to change the default (No) and press either ← or → to display your selection. If you select "Yes," the knife does not cut before the first tag in a batch, but does cut between each tag and after the last tag in a batch. Press ⬤.

```
Quantity?
Prompt?  Yes
```

17. Decide if you want to see this prompt in Batch Entry mode and press either ⊖ or ⊕ to display your selection. Press ●.
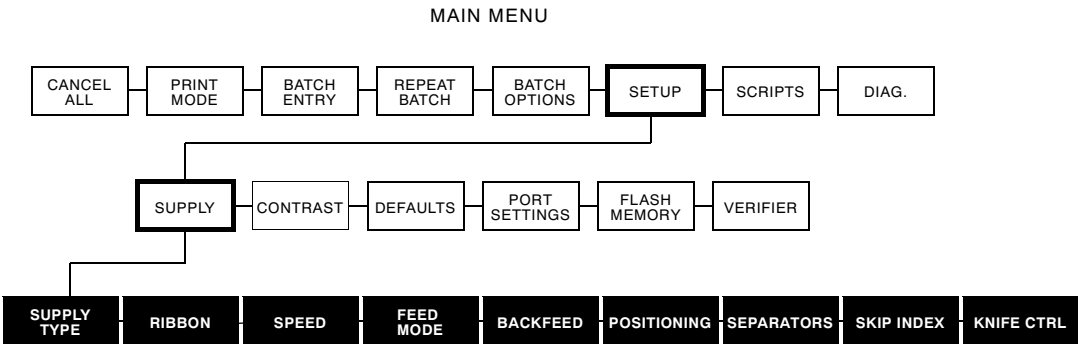
```
Quantity
1 _ _ _ _ _ _ _ _
```

18. Decide if you want to change the default (1) for the quantity of tags to print in a batch. Enter a quantity (1-32000). Press ●.

After setting the batch options, you are ready to use Batch Entry mode to enter data for your formats. Refer to your keyboard's *Operating Instructions* for more information.

SETTING SUPPLY OPTIONS

This chapter explains how to use the printer's external keyboard to set the following supply options: supply type, ribbon, speed, feed mode, backfeed, print position, supply position, margin position, cut position, dispense position, backfeed distance, separators, skip index mode, and knife control. This chapter also explains how to adjust the print contrast.

MAIN MENU

CANCEL ALL	PRINT MODE	BATCH ENTRY	REPEAT BATCH	BATCH OPTIONS	SETUP	SCRIPTS	DIAG.

SUPPLY	CONTRAST	DEFAULTS	PORT SETTINGS	FLASH MEMORY	VERIFIER

SUPPLY TYPE	RIBBON	SPEED	FEED MODE	BACKFEED	POSITIONING	SEPARATORS	SKIP INDEX	KNIFE CTRL

You may need to set supply options when you change supplies. The options are listed in the table below.

Option	Choices	Default
Supply Type	Aperture/Die Cut/Black Mark/Continuous	Die Cut
Ribbon	No/Yes/High Energy	Yes
Speed	2.5/4.0/6.0/8.0/Default	Default
Feed Mode	Continuous/On-Demand	Continuous
Backfeed	Off/On/Extended	Off
Print Position	-99 to 99	0
Supply Position	-300 to 300	0
Margin Position	-99 to 99	0
Cut Position	-300 to 300	0
Dispense Position	50 to 200	65
Backfeed Distance	10 to 200	65
Separators	No/Yes/Long	No
Skip Index	No/Yes	No
Knife Control	-20 to 20	0
Contrast	-699 to 699	

To exit an option without changing the setting, press ●.

Supply Type

You can print on aperture, black mark, die cut, or continuous supplies. You have to tell the printer which supplies you are using.

> If you are using edge aperture supplies, use the die cut setting. If you are using center aperture supplies, use the aperture setting.

To change the setting, from the Main Menu, select Setup, then Supply. If password protection in enabled, press ● three times, then press ● before you see the Setup Menu options. Then, follow these steps.

1. Press ⊝ or ⊕ until you see

```
┌─────────────────────────────────┐
│            SUPPLY               │
│  ←      Supply Type      →      │
└─────────────────────────────────┘
```
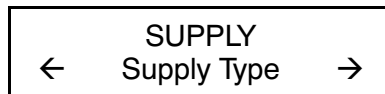
2. Press ● to set the supply type option. The current setting is displayed, for example:

```
┌─────────────────────────────────┐
│          SUPPLY TYPE            │
│  ←      Black Mark       →      │
└─────────────────────────────────┘
```

3. Press ⊝ or ⊕ to see the other options. After you display the option you want, press ●. Press ● until you see the Main Menu.
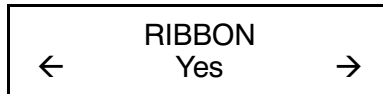
Ribbon

You have to tell the printer if your supplies require a ribbon. To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press ⊖ or ⊖ until you see

```
        SUPPLY
        Ribbon        →
```

2. Press ● to set the ribbon option. The current setting is displayed, for example:

```
        RIBBON
   ←    Yes           →
```

3. Press ⊖ or ⊖ to see the other options. After you display the option you want, press ●. Press ● until you see the Main Menu.

If you set the Ribbon option to "Yes," install a
ribbon before printing.
If you want to use a high energy ribbon,
select high energy for the ribbon every time
the printer is turned on.

Speed

You can change the print speed for bar codes or graphics. If you
select "default" for speed, formats with serial bar codes
automatically print at 2.5 ips and formats with parallel bar codes
print at 6.0 ips. This printer allows cutting 1.2 inch (30 mm) feed
length tags at 8.0 ips; however, optimal cut quality may not be
achieved.

To change the setting, from the Main Menu, select Setup, then
Supply. Then, follow these steps.

1. Press ⬅ or ➡ until you see

    ```
    ┌─────────────────────────────┐
    │            SUPPLY           │
    │      ←     Speed      →      │
    └─────────────────────────────┘
    ```
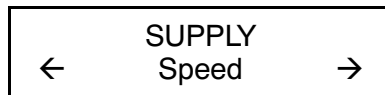
2. Press ⬤ to set the speed option. The current setting is
    displayed, for example:
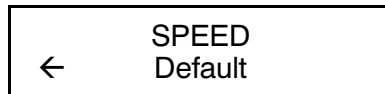
    ```
    ┌─────────────────────────────┐
    │            SPEED            │
    │      ←     Default          │
    └─────────────────────────────┘
    ```

3. Press ⬅ or ➡ to see the other options. After you display the
    option you want, press ⬤. Press ⬤ until you see the Main
    Menu.

    _____

    For additional high speed printing information,
    see Chapter 11, "Printing."

Feed Mode

Use continuous mode printing and indexed (black mark, aperture, etc.) supplies with the knife.

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press ⟵ or ⟶ until you see

```
                SUPPLY
    ←       Feed Mode        →
```

2. Press ● to set the feed mode. The current setting is displayed, for example:
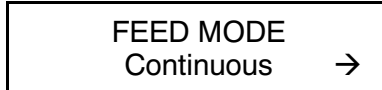
```
              FEED MODE
            Continuous      →
```

3. Press ⟵ or ⟶ to see the other option. After you display the option you want, press ●. Press ● until you see the Main Menu.

Backfeed

This printer always uses extended backfeed operation whether this option is selected or not. Backfeed works by advancing each printed tag to the desired dispense position. Extended backfeed feeds a tag far enough out to be cut and backfeeds the next tag to the printhead line. Extended backfeed eliminates *printed* tags being left between the printhead and knife. Extended backfeed works with the selected cut modes. Refer to the optional *Packet Reference Manual* to learn how to define the Backfeed Control Packet.

Extended backfeed **does not** work with non-indexed (continuous) supply. Do not use backfeed with supplies less than 0.75 inches.

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press ⊖ or ⊖ until you see

    ```
    ┌─────────────────────────┐
    │         SUPPLY          │
    │  ←     Backfeed      →  │
    └─────────────────────────┘
    ```

2. Press ● to set the backfeed option. The current setting is displayed, for example:

    ```
    ┌─────────────────────────┐
    │        BACKFEED         │
    │  ←       On          →  │
    └─────────────────────────┘
    ```

3. Press ⊖ or ⊖ to see the other options. After you display the option you want, press ●. Press ● until you see the Main Menu.

Positioning

This menu includes selections to change the print, supply, margin, cut, and dispense positions along with the backfeed distance.

When you see

```
Enter print pos
[-99/99]:  +0
```

Feed (⬤) acts as a toggle switch to change the value by 10 or 1. For example, to make the print position 23 (from the default of 0), press ⬤, then press ⊖ twice (20), press ⬤ again and press ⊖ three times (23).

Print Position

This function adjusts where data prints vertically on the supply. Adjust the print if it is too close to the top or bottom of the supply, or overtypes the pre-printed area. One dot is 0.0049 inch.

◆ If the data is too close to the bottom, increase the number.

◆ If the data is too close to the top, decrease the number.
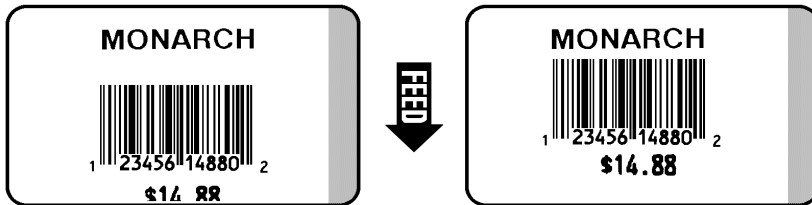
Changing this setting only affects new formats sent to the printer.

To change the setting, from the Main Menu, select Setup, Supply, then Positioning. Then, follow these steps.

1. Press $\ominus$ or $\ominus$ until you see

> POSITIONING
> ←   Print Pos   →

2. Press ●. The current setting is displayed, for example:

> Enter print pos
> [-99/99]: +0
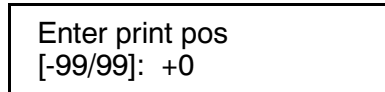
3. Press $\ominus$ or $\ominus$ to change the print position. Pressing $\ominus$ decreases the value (moves the image down); $\ominus$ increases it (moves the image up).

4. Press ● when the number you need appears. Press ● until you see the Main Menu.

Supply Position

This function adjusts the machine to print at the vertical 0,0 point on the supply.

The supply position adjustment should only be made on inital printer setup. For format adjustments, change the print position.

You may need to adjust the supply in or out to allow

◆ tags and labels to be removed.

◆ die cut labels to be removed easily.

The adjustments are in dots (0.0049 inch).

◆ Increase the number to feed more supply out of the chute.

◆ Decrease the number to feed less supply out of the chute.

This option takes effect on the next label or tag printed. Changing supply position may also affect print position.

To change the setting, from the Main Menu, select Setup, Supply, then Positioning. Then, follow these steps.

1. Press ⊖ or ⊖ until you see

```
        POSITIONING
  ←      Supply Pos      →
```

2. Press ●. The current setting is displayed, for example:

```
  Enter supply pos
  [-300/300]:  +0
```

3. Press ⊖ or ⊝ to change the supply position. Pressing ⊖ decreases the value (feeds less supply); ⊝ increases it (feeds more supply).
4. Press ● when the number you need appears. Press ● until you see the Main Menu.

Margin Position

This function adjusts where the format prints horizontally on the supply. The adjustments are in dots (0.0049 inch), which is the smallest measurement the printer recognizes.

The width of the print area depends on your supply size. Maximum width is four inches. When you move the image to the right or left on the supply, avoid moving the image too close to either edge, because it may not print.

```
GREEN 3041 091589

║║║║║║║║║║║║║║
0 ║12345║67890║5
PERSONAL SIZE
```

```
        GREEN 3041 091589

        ║║║║║║║║║║║║║║
      0 ║12345║67890║5
        PERSONAL SIZE
```

Print too far to the left.   **Print too far to the right.**

◆ If the data is too close to the left side, increase the number.

◆ If the data is too close to the right side, decrease the number.

Changing this setting only affects new
formats sent to the printer.

To change the setting, from the Main Menu, select Setup, Supply, then Positioning. Then, follow these steps.

1. Press ⊖ or ⊖ until you see

```
         POSITIONING
   ←      Margin Pos      →
```

2. Press ●. The current setting is displayed, for example:

```
   Enter margin pos
   [-99/99]:  +0
```

3. Press ⊖ or ⊖ to change the margin position. Pressing ⊖ decreases the value (moves the image toward the left side of the supply); ⊖ increases it (moves the image toward the right side of the supply).

4. Press ● when the number you need appears. Press ● until you see the Main Menu.

Cut Position

This function adjusts where the tag is cut. The printer adjusts the cut position according to the black marks on the supply. You may need to adjust for aperature supplies. Increase to move the cut up; decrease to move the cut down.

To change the setting, from the Main Menu, select Setup, Supply, then Positioning. Then, follow these steps.

1. Press ⊖ or ⊖ until you see

```
         POSITIONING
   ←        Cut Pos        →
```

2. Press ●. The current setting is displayed, for example:

> Enter knife adj
> [-300/300]: +0

3. Press ⊖ or ⊕ to change the cut position. Pressing ⊖ decreases the value (moves the cut down); ⊕ increases it (moves the cut up).

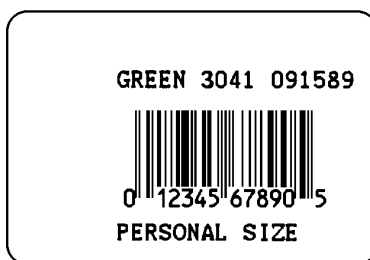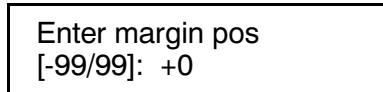4. Press ● when the number you need appears. Press ● until you see the Main Menu.

Dispense Position

This function adjusts the stopping point of the label.

To change the setting, from the Main Menu, select Setup, Supply, then Positioning. Follow these steps.

1. Press ⊖ or ⊕ until you see

> POSITIONING
> ←   Dispense Pos   →

2. Press ●.

> DISPENSE POS
> [50/200]: +65

3. Press ⊖ or ⊕ to change the dispense position. Pressing ⊖ decreases the value; ⊕ increases it.

4. Press ● when the number you need appears. Press ● until you see the Main menu.

Backfeed Distance

This is the amount to move the label backwards. The backfeed distance can not be greater than the dispense position. If you make the backfeed distance greater than the dispense position, the dispense position automatically changes to match the backfeed distance. The backfeed distance should equal the dispense position.
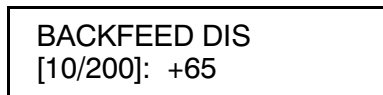
To change the setting, from the Main Menu, select Setup, Supply, then Positioning. Follow these steps.

1. Press ⊖ or ⊕ until you see

```
        POSITIONING
    ←    Backfeed Dis
```

2. Press ●.

```
    BACKFEED DIS
    [10/200]:  +65
```
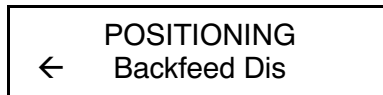
3. Press ⊖ or ⊕ to change the dispense position. Pressing ⊖ decreases the value; ⊕ increases it.

4. Press ● when the number you need appears. Press ● until you see the Main menu.

Batch Separators

A batch separator is an extra tag printed in between batches with a pinstripe pattern. If you select "Long" for the separator, a double-length (two tags) separator prints. For non-indexed supply, the batch separator is always six inches long. If you have the Paxar® 932™ stacker installed, the batch separator is 3.66 inches long. The name of the batch is shown on the batch separator.
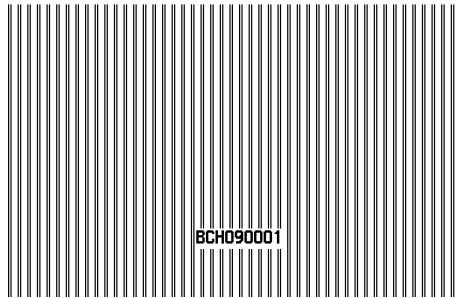
Batch Separator

Changing this setting only affects new
formats sent to the printer.

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press ← or → until you see

```
          SUPPLY
  ←      Separators      →
```
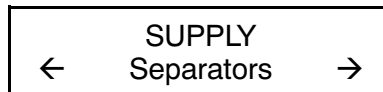
2. Press ⬤ to set the batch separators option. The current setting is displayed, for example:
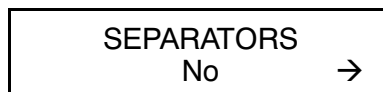
```
        SEPARATORS
           No         →
```

3. Press ← or → to see the other options. After you display the option you want, press ●. Press ● until you see the Main Menu.

Skip Index

You can use the skip index mode to skip (or ignore) a sense mark and print an image over multiple labels, if necessary. For example, if you have 4.0" long supplies loaded, but your image is 8.0" long, enable skip index mode to print the 8.0" long image on two labels. The image length is determined by the format header. See your System Administrator or the optional *Packet Reference Manual* for more information. The skip index feature is useful when you have a **single** format that contains two labels, such as a shelf label and a carton label.

> When designing the format, make sure text or graphics do not print in the gap of label rolls.

To change the setting, from the Main menu, select Setup, then Supply.

1. Press ← or → until you see

```
               SUPPLY
   ←        Skip Index
```
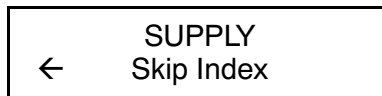
2. Press ● to set the skip index mode. You will see the current setting, for example:

```
           SKIP INDEX
              No            →
```

3. Press ← or → to see the other options. After you display the option you want, press ●. Press ● until you see the Main menu.

Knife Control

You may notice unevenly cut tags on one end or the other of your supply (one end may appear longer than the other). Use the knife control adjustment to balance the cut tag length from tag-to-tag.

You may need to make this adjustment

◆ on initial printer setup.

◆ if you load a different supply type (thickness) from the last ones printed.

◆ when you change the print speed.

◆ when you change to a different tag size from the last ones printed.
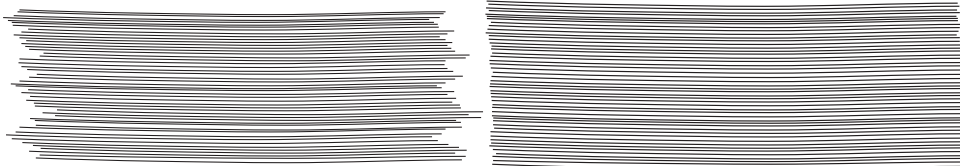
Before Knife Control   **After Knife Control**

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

    ```
    SUPPLY
    ←    Knife Ctrl
    ```

2. Press ⬤. The current setting is displayed, for example:

    ```
    Enter knife ctrl
    [-20/20]:  +0
    ```
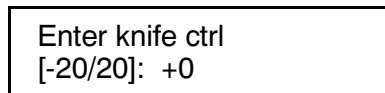
3. Press ⊖ or ⊕ to change the knife control. You may need to experiment and cut a few test tags to check the tag cut length. Pressing ⊖ decreases the value; ⊕ increases it.

> Depending on how unevenly the tags are cut,
> always start with a small number, such as
> +- 1 or 2.

4. Press ● when the number you need appears. Press ●
   until you see the Main Menu.

Setting Contrast

The print contrast controls the darkness of the printing on your
supply. The range is **-699** to **+699** and the default is **0**. You may
need to increase the print contrast for linerless supplies. Having
the correct print contrast setting is important because it affects
how well your bar codes scan and how long your printhead lasts.

MAIN MENU

| CANCEL ALL | PRINT MODE | BATCH ENTRY | REPEAT BATCH | BATCH OPTIONS | **SETUP** | SCRIPTS | DIAG. |

| SUPPLY | **CONTRAST** | DEFAULTS | PORT SETTINGS | FLASH MEMORY |
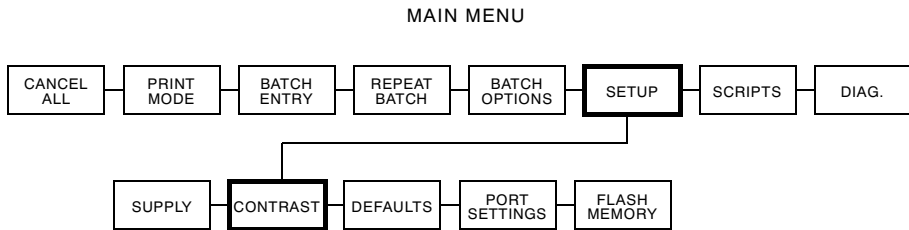
High contrast settings may

◆ require additional printhead cleaning.

◆ create bar code growth, leading to reduced scanning.

1. From the Main Menu, press ⊖ or ⊕ until you see

```
            MAIN MENU
   ←         Setup          →
```

2. Press ●. You will be at the Setup menu. Press ⊖ or ⊕
   until you see

```
             SETUP
   ←        Contrast        →
```
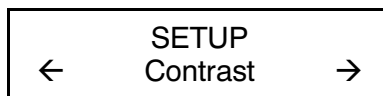
3. Press ●. The current setting is displayed, for example:

> Enter contrast
> [-390/156]: +0

4. Press ⊖ or ⊕ to change the contrast. Pressing ⊕ darkens the print; ⊖ lightens the print.

Feed (●) acts as a toggle switch to change the value by 10 or 1. For example, to make the contrast 50 (from the default of 0), press ●, then press ⊕ five times (50).

5. Press ● to select either "Yes" or "No" to print a test label and check the print contrast. Press ●.

6. Press ● until you see the Main Menu.

We recommend you check the bar code print quality with a bar code verifier. If you do not have a bar code verifier or scanner, check the bar code visually. A bar code that is in spec has complete bars, clear spaces, and small alphanumeric characters look complete. An in spec bar code may not look as good as one that is too dark, but it has the highest scan rate.

| **Dark** | **IN SPEC** | **Light** |

SETTING DEFAULTS

This chapter explains how to select the monetary sign, secondary sign, decimal places, slashed zero, power-up mode, prompt set, and flash storage.

MAIN MENU

| CANCEL ALL | PRINT MODE | BATCH ENTRY | REPEAT BATCH | BATCH OPTIONS | SETUP | SCRIPTS | DIAG. |

| SUPPLY | CONTRAST | DEFAULTS | PORT SETTINGS | FLASH MEMORY | VERIFIER |

| MONETARY SIGN | SECONDARY SIGN | DECIMAL PLACES | SLASHED ZERO | POWER-UP MODE | PROMPT SET | FLASH STORAGE |
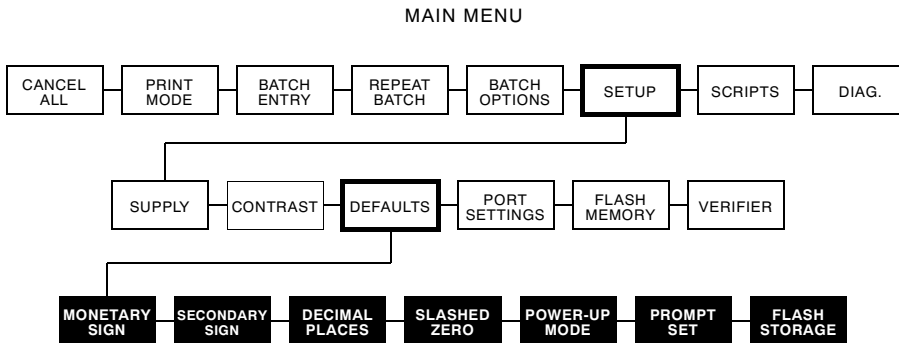
You can set your printer configurations to fit your daily operation, using either the offline menus or the online configuration option. After an option is selected in the online configuration or offline Setup Menu, the option is saved when the printer is turned off.

The monetary formatting options are listed in the table below.

Option	Choices	Default
Monetary sign	None/USA/UK/Japan/ Germany/France/Spain/ Italy/Sweden/Finland/ Austria/India/Russia/ Korea/Thailand/China/Euro-Dollar	USA
Secondary Sign	No/Yes	No
Decimal Places	0/1/2/3	2
Slashed Zero	No/Yes	No
Power-up Mode	Online/Offline	Online
Prompt Set	English/French/German/ Spanish-ES/Japanese/Portuguese/ Italian/Swedish/Spanish2-MX/ Danish/Dutch/Finnish/Norwegian	English
Flash Storage	Disabled/Enabled	Disabled

The monetary sign, secondary sign, and decimal places options are used in conjunction with option **42**. Refer to the optional *Packet Reference Manual* for more information.

The settings for Monetary Sign, Secondary Sign, Slashed Zero, and Decimal Places are applied when a format is downloaded. Changing the settings does **not** affect batches already in the printer.

Monetary Sign

You can also select **None** if you do not want a monetary sign to print in price fields. The monetary signs available for 15 countries are shown in the table below.

Country	Currency	Description
USA	$	dollar
UK	£	pound
Japan	¥	yen
Germany	DM	deutsche mark
France	F	franc
Spain	P	peseta
Italy	L.	lira
Sweden	Kr	krona
Finland	MK	markka
Austria	S	schilling
India	Rs	rupee
Russia	Pб	ruble
Korea	₩	won
Thailand	฿	baht
China	¥	yuan
Euro-Dollar	€	euro-dollar

To change the setting, from the Main Menu, select Setup, then Defaults. If password protection in enabled, press ● three times, then press ● before you see the Setup Menu options.

Then, follow these steps. To exit an option without changing the setting, press ●.

1. Press ⊖ or ⊕ until you see

```
            DEFAULTS
   ←    Monetary Sign    →
```

2. Press ●. The current setting is displayed, for example:

```
         MONETARY SIGN
   ←          USA          →
```
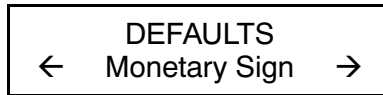
3. Press ⊖ or ⊕ until you see the country's monetary sign you want.
4. Press ●. Press ● until you see the Main menu.

Secondary Sign

If you select USA as the monetary sign, you can print amounts less than $1.00 either by using a dollar sign and decimal ($0.30) or by using a cent sign (30¢).

◆ If you set the secondary sign option to **No**, prices under $1.00 will print like this: **$ .45**

◆ If you set the secondary sign option to **Yes**, prices under $1.00 will print like this: **45¢**

The same option applies to the appropriate secondary sign for monetary signs other than USA.

To change the setting, from the Main Menu, select Setup, then Defaults. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

```
            DEFAULTS
   ←    Secondary Sign    →
```

2. Press ●. The current setting is displayed, for example:

```
            SECONDARY SIGN
                No          →
```
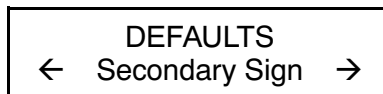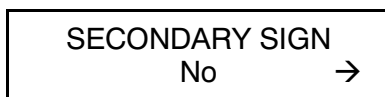
3. Press ⊖ or ⊕ until you see the option you want. Then press
     ●. Press ● until you see the Main menu.

Decimal Places

You can set the printer for 0, 1, 2, or 3 places after the decimal in
a price field. In U.S. currency, you might print prices like this:
$24.00 (**2** decimal places) or like this: $24 (**0** decimal places).

1. Press ⊖ or ⊕ until you see
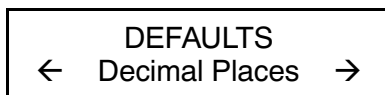
```
                DEFAULTS
          ←   Decimal Places   →
```

2. Press ●. The current setting is displayed, for example:

```
            DECIMAL PLACES
          ←         2          →
```
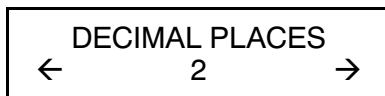
3. Press ⊖ or ⊕ until you see the option you want. Then press
     ●. Press ● until you see the Main menu.

Slashed Zero

The slashed zero feature lets you select how you want the zero
character printed; either without a slash, 0 or, with a slash, ø.

Standard or reduced fonts print the slashed zero character (ø).
Bold and OCR fonts print the standard zero (0) only. The slashed
zero selection will **not** be in effect until the format is sent to the
printer again. If you change the way zero is printed, you must
resend your formats.

To change the setting, from the Main Menu, select Setup, then Defaults. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

```
          DEFAULTS
    ←    Slashed Zero    →
```

2. Press ●. The current setting is displayed, for example:

```
       SLASHED ZERO
           No         →
```
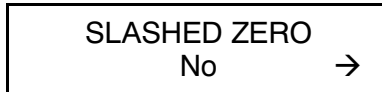
3. Press ⊖ or ⊕ until you see the option you want. Then press ●. Press ● until you see the Main menu.

Power-Up Mode

Power-up mode lets you decide how your printer starts each time you turn it on. If you want the printer to be ready to start printing when it is turned on, use the Online power-up mode. If you want the operator to perform some other task first, use the Offline power-up mode.

To change the setting, from the Main Menu, select Setup, then Defaults. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

```
          DEFAULTS
    ←   Powerup Mode    →
```

2. Press ●. The current setting is displayed, for example:
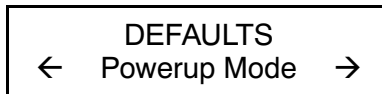
```
       POWER UP MODE
          Online        →
```
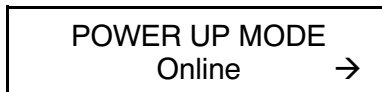
3. Press ← or → until you see the option you want. Then press
● . Press ● until you see the Main menu.

Prompt Set

Prompt set determines which language displays on the printer's
menu. You can select English, French, German, Spanish-ES,
Japanese, Portuguese, Italian, Swedish, Spanish 2-MX, Danish,
Dutch, Finnish, and Norwegian. Some prompts may remain in
English, even if you select a different language.

To change the setting, from the Main Menu, select Setup, then
Defaults. Then, follow these steps.

1. Press → until you see

```
            DEFAULTS
  ←       Prompt Set         →
```

2. Press ● . The current setting is displayed, for example:

```
          PROMPT SET
          English           →
```
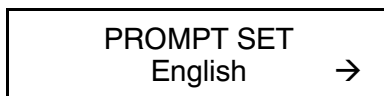
3. Press ← or → until you see the option you want. Then press
● . Press ● until you see the Main menu.

This option only affects the displayed
prompts. It does not change what is printed
by the printer.

Flash Storage

Flash storage allows packets (with "R" or "N" selectors) to be stored in flash memory, instead of volatile RAM. Packets stored in flash memory are saved when the printer is turned off. However, flash memory storage is limited.

You must format flash memory before enabling this option. Formatting flash memory is only required once during initial printer setup.

To change the setting, from the Main Menu, select Setup, then Defaults. Then, follow these steps.

1. Press ⊖ until you see

```
          DEFAULTS
    ←    Flash Storage
```

2. Press ●. The current setting is displayed, for example:

```
      FLASH STORAGE
      Disabled        →
```

3. Press ⊖ or ⊖ until you see the option you want. Then press ●. Press ● until you see the Main menu.

COMMUNICATION VALUES

This chapter tells you how to set the serial or parallel communication values. These values provide the link for normal online printing.

MAIN MENU

```
┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐
│ CANCEL  │ │ PRINT   │ │ BATCH   │ │ REPEAT  │ │ BATCH   │ │  SETUP  │ │ SCRIPTS │ │  DIAG.  │
│   ALL   │ │ MODE    │ │ ENTRY   │ │ BATCH   │ │ OPTIONS │ │         │ │         │ │         │
└─────────┘ └─────────┘ └─────────┘ └─────────┘ └─────────┘ └─────────┘ └─────────┘ └─────────┘
                                                                 │
        ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
        │  SUPPLY  │ │ CONTRAST │ │ DEFAULTS │ │   PORT   │ │  FLASH   │ │ VERIFIER │
        │          │ │          │ │          │ │ SETTINGS │ │  MEMORY  │ │          │
        └──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘
                                      ┌──────────┐ ┌──────────┐
                                      │  SERIAL  │ │ PARALLEL │
                                      │   COMM   │ │   COMM   │
                                      └──────────┘ └──────────┘
```
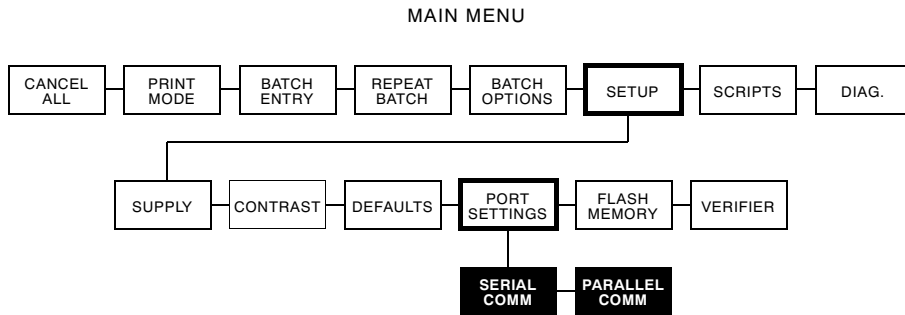
You need to set your Serial Comm values to match your computer's online communications. Before entering the communication values, see your System Administrator.

The serial communication values are listed in the table below.

Option	Choices	Default
Baud rate	1200/2400/4800/9600/19200/ 38400/57600/115200	9600
Word length	7/8	8
Stop bits	1/2	1
Parity	None/Odd/Even	None
Flow control	None/Xon/Xoff/DTR/CTS	DTR
Reset	No/Yes	No

Baud Rate

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. If password protection in enabled, press ● three times, then press ● before you see the Setup Menu options. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

```
┌─────────────────────────────┐
│        SERIAL COMM          │
│        Baud Rate      →      │
└─────────────────────────────┘
```

2. Press ●. The current setting is displayed, for example:

```
┌─────────────────────────────┐
│         BAUD RATE           │
│   ←       9600        →      │
└─────────────────────────────┘
```

3. Press ⊖ or ⊕ to display the baud rate you need, then press ●. Press ● until you see the Main Menu.

Word Length

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

```
┌─────────────────────────────┐
│        SERIAL COMM          │
│   ←     Word Length   →      │
└─────────────────────────────┘
```

2. Press ●. The current setting is displayed, for example:

```
┌─────────────────────────────┐
│        WORD LENGTH          │
│   ←          8               │
└─────────────────────────────┘
```

3. Press ⊖ or ⊕ to display the word length you need, then press ⬤. Press ⬤ until you see the Main Menu.

Stop Bits

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

```
       SERIAL COMM
  ←       Stopbits        →
```

2. Press ⬤. The current setting is displayed, for example:

```
        STOPBITS
            1              →
```
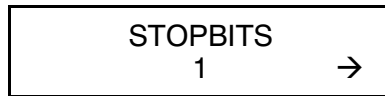
3. Press ⊖ or ⊕ to display the number of stop bits you need, then press ⬤. Press ⬤ until you see the Main Menu.

Parity

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

```
       SERIAL COMM
  ←        Parity         →
```

2. Press ●. The current setting is displayed, for example:

```
PARITY
None          →
```

3. Press ⊖ or ⊘ to display the parity you need, then press ●.
   Press ● until you see the Main Menu.

Flow Control

To change the setting, from the Main Menu select Setup, Port
Settings, then Serial Comm. Then, follow these steps.

1. Press ⊖ or ⊘ until you see

```
SERIAL COMM
←    Flow Control    →
```

2. Press ●. The current setting is displayed, for example:

```
FLOW CONTROL
←        DTR        →
```

3. Press ⊖ or ⊘ to display the flow control you need, then
   press ●. Press ● until you see the Main Menu.

   XON is 17; XOFF is 19. Set flow control to DTR for PC
   computers (unless you have XON/XOFF software).

Reset to Default Values

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps.

1. Press ⊖ until you see

```
┌─────────────────────────────┐
│        SERIAL COMM          │
│    ←       Reset            │
└─────────────────────────────┘
```

2. Press ●.

```
┌─────────────────────────────┐
│      Are you sure?          │
│        No          →        │
└─────────────────────────────┘
```
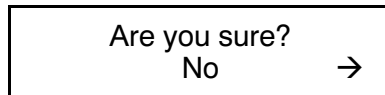
3. Press ⊖ or ⊕ to make your selection, then press ●. If you select "Yes," the following defaults are restored: 9600 baud, No parity, 8 bit word length, and 1 stop bit.

4. Press ● until you see the Main Menu.

Parallel Communications

The parallel communications menu allows you to set the values for the active parallel port. The values are listed in the table below.

| Option	Choices	Default
Port	External/Internal	External
Mode	Compatible/IEEE-1284	Compatible (Centronics mode)

Port

To change the setting, from the Main Menu select Setup, Port Settings, then Parallel Comm. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

```
PARALLEL COMM
Port            →
```

2. Press ⬤.

```
PORT
External        →
```

3. Use ⊖ or ⊕ to select either "External" or "Internal." Press ⬤. The internal port is used for printer options installed inside the printer, such as the Ethernet communication port. The external port is used to connect a printer cable or external device directly to the parallel port.

4. Press ⬤ until you see the Main Menu.

Mode

To change the setting, from the Main Menu select Setup, Port
Settings, then Parallel Comm. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

    ```
    PARALLEL COMM
    ←       Mode
    ```

2. Press ⬤.

    ```
    MODE
    Compatible      →
    ```
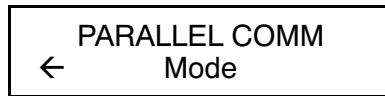
3. Use ⊖ or ⊕ to select either "Compatible" or "IEEE1284."
    Press ⬤. Use compatible mode for a computer connection
    to the printer with a parallel cable. Use IEEE-1284 for
    bi-directional Ethernet communications. See Appendix B,
    "Accessories and Options" for more information about
    Ethernet options.

4. Press ⬤ until you see the Main Menu.

USING FLASH MEMORY

<div style="text-align: right">

9

</div>

This chapter explains how to format flash memory, check the available flash memory, and pack flash memory. This chapter also explains how to enable the verifier.

MAIN MENU

```
CANCEL    PRINT    BATCH    REPEAT    BATCH     SETUP    SCRIPTS    DIAG.
 ALL      MODE     ENTRY    BATCH    OPTIONS
```

```
SUPPLY   CONTRAST   DEFAULTS   PORT      FLASH     VERIFIER
                              SETTINGS   MEMORY
```

```
FORMAT    UNUSED    PACK
FLASH     FLASH    FLASH
```
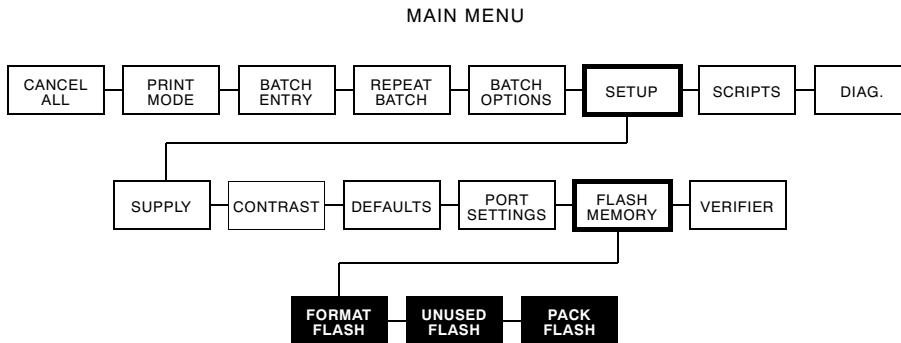
The flash memory options are listed in the table below.

Option	Choices	Default
Format Flash	No/Yes	No
Unused Flash	NA	NA
Pack Flash	No/Yes	No

Formatting Flash Memory

Before storing packets in flash memory, downloading a script, or if the printer's firmware is updated, you must format the flash memory. **Formatting flash memory is only required once during initial printer setup**.

When you format flash memory, the script and any downloaded TrueType® fonts saved in the printer's flash memory are deleted and must be resent to the printer.

To format flash memory, from the Main Menu, select Setup. Then, follow these steps.

1. Press ⊖ or ⊖ until you see

```
        SETUP
←   Flash Memory    →
```

2. Press ●.

```
   FLASH MEMORY
   Format Flash    →
```

3. Press ●.

```
   Are you sure?
   No              →
```
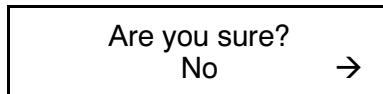
4. Press ⊖ to display "Yes" and press ●.

```
CREATING FLASH
FILE SYSTEM 1
```

The printer's flash memory is cleared and reformatted. *This process may take several minutes.* The printer reboots automatically after formatting flash memory. You need to resend any fonts you want to use to flash memory again. You return to the "Print Mode Ready" menu.

Checking Available Flash Memory

If you receive errors when downloading a script or other packets, make sure you have enough flash memory available.

When you format flash memory, the script and any downloaded TrueType fonts saved in the printer's flash memory are deleted and must be resent to the printer.

To check available flash memory, from the Main Menu, select Setup. Then, follow these steps.

1. Press ⊖ or ⊖ until you see

```
        SETUP
←    Flash Memory    →
```

2. Press ●.

3. Press ⊖ or ⊕ until you see

```
              FLASH MEMORY
 ←          Unused Flash      →
```

4. Press ●. You see the number (in bytes) of available flash memory.

```
              Unused Flash
       ←        1006216_
```
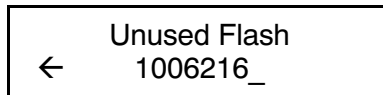
5. Press ● until you see the Main menu.

Packing Flash Memory

Packing flash memory permanently removes any deleted files from memory. Periodically select this option to "clean up" the printer's memory. Any deleted files are removed from memory when you pack flash.

To pack flash memory, from the Main Menu, select Setup. Then, follow these steps.

1. Press ⊖ or ⊕ until you see

```
                 SETUP
      ←       Flash Memory      →
```

2. Press ●.

3. Press ⊖ or ⊕ until you see

```
              FLASH MEMORY
       ←         Pack Flash
```

4. Press ●.

```
┌─────────────────────────────────┐
│        Are you sure?            │
│           No          →         │
└─────────────────────────────────┘
```
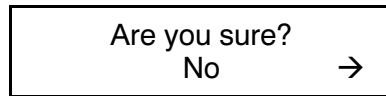
5. Press ⊖ to display "Yes" and press ●.

All the deleted files in flash memory are permanently erased.

6. Press ● until you see the Main menu.

Verifier

The verifier scans and checks the quality of bar codes as they are printed. The optional verifier must be purchased separately. The verifier scans parallel bar codes; it can not scan serial bar codes.

The verifier must be enabled and set up before you can scan bar codes. For additional set up procedures, refer to your verifier's *Operating Instructions*.

To enable the verifier, from the Main Menu, select Setup, then Verifier. Then follow these steps.

1. Press ⊖ or ⊖ until you see

```
┌─────────────────────────────────┐
│          VERIFIER               │
│          State        →         │
└─────────────────────────────────┘
```

2. Press ●. The current setting is displayed, for example:

```
┌─────────────────────────────────┐
│          VERIFIER               │
│          Disabled     →         │
└─────────────────────────────────┘
```

3. Press ⊖ or ⊖ to see the other option. After you display the option you want, press ●. Press ● until you see the Main Menu.

USING SCRIPTS

This chapter explains how to load, enable, and delete scripts. You can also enable status polling and immediate commands.

Using the Scripts menu requires custom software from Paxar. It allows you to print data streams written for other printers.

Ignore these menus if you do not use Scripts.

MAIN MENU

| CANCEL ALL | PRINT MODE | BATCH ENTRY | REPEAT BATCH | BATCH OPTIONS | SETUP | SCRIPTS | DIAG. |

| LOAD SCRIPT | ENABLE SCRIPT | SCRIPT INFO | DELETE SCRIPT | STATUS POLLING | IMMED COMMANDS |
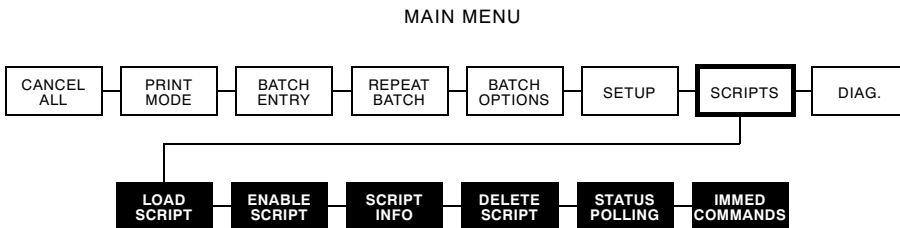
Initial Script Startup Procedures

Before you can start using a script, check the following items:

◆ Check to see if a script is already loaded in the printer. See "Viewing Script Information" to continue.

◆ Format flash memory, if needed. See "Formatting Flash Memory" in Chapter 9.

◆ Download a script to the printer, if needed. See "Downloading a Script" to continue.

Viewing Script Information

1. To see if your printer has a script loaded from the Main menu, press ← or → until you see

```
           MAIN MENU
    ←        Scripts        →
```

2. Press ●. If password protection in enabled, press ● three times, then press ● before you see the Scripts Menu options.

3. Press ← or → until you see

```
            SCRIPTS
    ←       Script Info      →
```
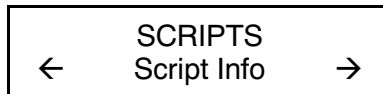
4. Press ●. What you see next depends on the script. If no script is loaded, you see "No script present." If a script is loaded, you see the script name and version number, for example,

```
            MYSTORE
          Version 1.0
```

If a script is already loaded, see "Enabling a Script," to continue. If you need to download a script, see "Formatting Flash Memory" in Chapter 9.

Downloading a Script

Follow these instructions to download a script from the MS DOS prompt. Set the communication parameters using the MODE command. Then, prepare the printer to accept a script.

1. From the printer's Script Menu, press ⊖ or ⊕ until you see

```
        SCRIPTS
        Load Script      →
```

2. Press ●.

```
        Script Load
        Ready
```

Only one script can be loaded in the printer at a time.

When downloading a script, if you receive an error:

◆ Check the available flash memory. See "Checking Available Flash Memory" in Chapter 9.

◆ Format flash memory. See "Formatting Flash Memory" in Chapter 9.

After downloading a script, if the script does not appear to be loaded, try formatting flash memory and download the script again.

Enabling a Script

The script must be enabled before you can use it.

To enable or disable a script:

1. From the Script Menu, press ⬲ or ⬳ until you see

```
                SCRIPTS
    ←       Enable Script      →
```

2. Press ⬤.

```
             Enable Script?
    ←             Yes
```
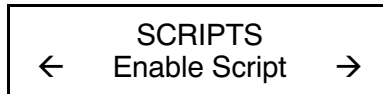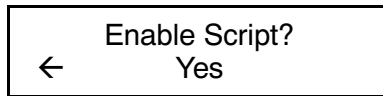
3. Use ⬲ or ⬳ to select either "Yes" or "No" and press ⬤. Selecting "Yes" starts the script. Selecting "No" stops the script. If you select "Yes," when you turn off the printer and turn it back on, the script automatically starts.

   Once the script is enabled, you will see

```
              Print Mode
    S           Ready
```

   The "S" in the lower left-hand corner of the screen indicates the printer has a script loaded and enabled (the script is running).

Deleting a Script

You can delete a script from the printer's memory.

To delete a script:

1. From the Script Menu, press ⟵ or ⟶ until you see

```
┌─────────────────────────────────┐
│            SCRIPTS              │
│  ←      Delete Script     →     │
└─────────────────────────────────┘
```

2. Press ●.

```
┌─────────────────────────────────┐
│          Are you sure?          │
│  ←          Yes                 │
└─────────────────────────────────┘
```
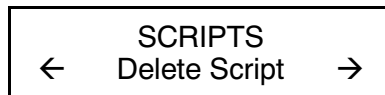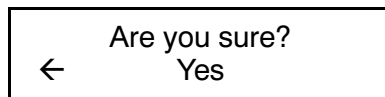
3. Use ⟵ or ⟶ to select either "Yes" or "No" and press ●.
    Selecting "Yes" deletes the current script.

    The flash memory used by the script is not
    available for other scripts or fonts until the
    flash memory is reformatted. However, when
    you format flash memory, you must resend
    the script and any downloaded fonts to the
    printer.

4. Press ● until you see the Main Menu.

Enabling Status Polling

Status polling allows you to obtain information about the
readiness of the printer and the current (or last received) print
job. Your System Administrator can enable status polling while
the printer is running in Script mode.

To enable status polling:

1. From the Script Menu, press ⟵ or ⟶ until you see

```
                   SCRIPTS
           ←    Status Polling    →
```

2. Press ●.

```
                Enable Polling
                    No          →
```
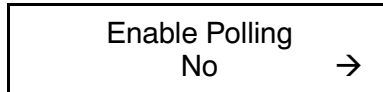
3. Use ⊝ or ⊕ to select either "Yes" or "No" and press ●.
   The default is "No."

Enabling Immediate Commands

Your System Administrator can use immediate commands to reset
the printer or cancel and repeat batches.

To enable immediate commands:

1. From the Script Menu, press ⊝ or ⊕ until you see

```
                   SCRIPTS
           ← Immed Commands
```

2. Press ●.

```
                Enable Immed?
                    No          →
```
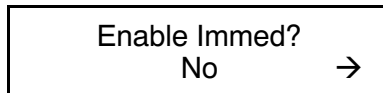
3. Use ⊝ or ⊕ to select either "Yes" or "No" and press ●.
   The default is "No."

4. Press ● until you see the Main Menu.

P R I N T I N G

This chapter explains how to

◆ use on-demand mode printing.

◆ print an error label.

◆ print, pause, restart, cancel, and repeat a batch.

You can send format, batch, and graphic data to the printer from a host. When the printer receives the data, batches begin printing automatically. The optional *Packet Reference Manual* tells how to create, store, and download the data necessary to print batches. You can also use the Monarch® MPCL™ Toolbox utilities to create and download packets.

MAIN MENU

CANCEL ALL	PRINT MODE	BATCH ENTRY	REPEAT BATCH	BATCH OPTIONS	SETUP	SCRIPTS	DIAG.
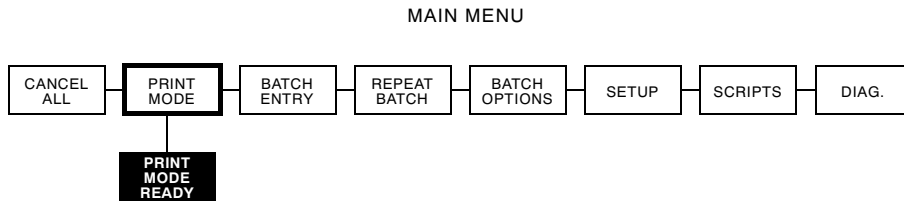
PRINT MODE READY

Printing

Before you print, make sure the printer is connected and ready to receive data.

1. Turn on the printer. Your printer is ready to receive and print batches when you see "PRINT MODE   Ready" on the keyboard.

2. Download a format and a batch. Refer to the optional *Packet Reference Manual* for information on downloading print jobs.

3. The printer prints the format.

4. Remove the printed supply.

> If the printer will be unused for extended
> periods of time, we recommend leaving the
> printhead unlatched.

Printing an Error Label

If the printer displays a data error (errors
0-499), press **Feed** (●) to print an error
label and continue printing. See your
System Administrator about the error label.

```
MONARCH MARKING
MODEL : M9860 S/W :  Version 1.0

FORMAT NAME : 40200
BATCH NAME  :
PACKET TYPE : F
FIELD TYPE  : C
LINE #      : 9
ERROR #     : 18
```
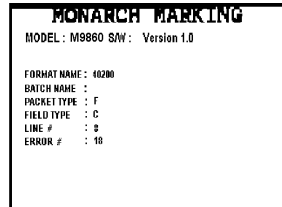
Pausing a Batch

You can pause printing by pressing Pause (●). You may want to
interrupt a batch to make adjustments for:

◆ Loading a different roll of supply or a ribbon. See Chapter 2,
  "Loading Supplies" or Chapter 3, "Loading Ribbon."

◆ Adjusting the supply position or contrast using the Setup
  menu. See Chapter 6, "Setting Supply Options."

When you press ● you will see

```
        PAUSE MENU
  ←     Print Mode      →
```
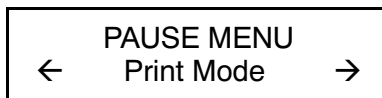
You can press ● to resume printing or press ⊖ or ⊕ to display
the Pause Menu options.

The following chart shows the Pause Menu options.

PAUSE MENU

| CANCEL | CANCEL | PRINT | **RESTART** |
| BATCH | ALL | MODE | **BATCH** |

Restarting a Batch

You can reprint a paused batch from the beginning (using the original quantity).

1. When you press ⊘, you will see

```
        PAUSE MENU
  ←     Print Mode      →
```

2. Press ⊖ or ⊕ until you see

```
        PAUSE MENU
  ←    Restart Batch    →
```
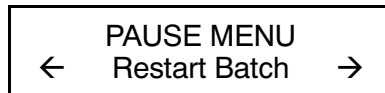
3. Press ⬤. The batch starts printing from the beginning.

Canceling a Paused Batch

You can cancel a paused batch, delete a format, graphic, or font in memory, or all the batches waiting to print.

Before any format, graphic, or font in memory
can be deleted, you must cancel all batches.

PAUSE MENU

CANCEL BATCH	CANCEL ALL	PRINT MODE	RESTART BATCH
	CANCEL BATCH		
	CANCEL FORMAT		
	CANCEL GRAPHIC		
	CANCEL FONT		
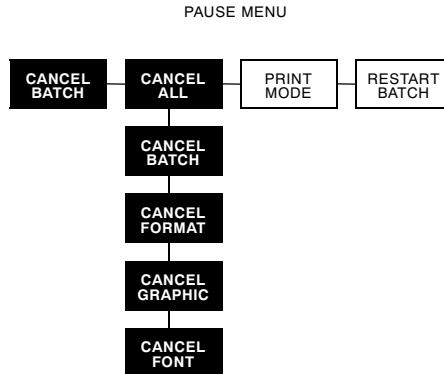
You can cancel a batch by pressing ● while the batch is printing, or you can use the Pause menu to cancel a batch.

1. Press ● to interrupt printing.

PAUSE MENU
← Print Mode →

◆ If you want to cancel only the paused batch, skip step 3.

◆ If you want to cancel all the batches, skip step 2.

2. To cancel only the paused batch, press ← or → until you see

PAUSE MENU
Cancel Batch →
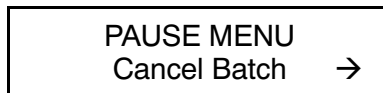
Then press ●. The batch is deleted and the printer prints any remaining batches.

3. To cancel all the batches (including the paused batch), press ⊖ or ⊖ until you see

```
          PAUSE MENU
  ←       Cancel All        →
```

and press ●.

```
        Cancel Batches?
           No          →
```
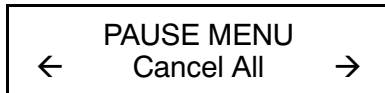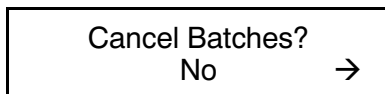
4. You can

◆ exit without canceling any batches. Press ● or press ⊖ to display "No" and then press ●. The printer returns to the Pause menu. Press ⊖ or ⊖ to select another function from the Pause Menu, or to return to Print Mode and print all the batches.

◆ cancel all batches in the print queue. Press ⊖ to display "Yes," then press ●.

```
        Cancel Format?
           No          →
```
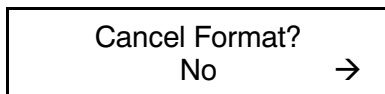
Press ⊖ or ⊖ then press ●.

If password protection is enabled, you will be prompted to enter a password before the formats, graphics, and fonts are deleted. Press ● three times and then press ●.

All formats are deleted. If you enter the wrong password, you return to the Main menu. For more information about password protection, see "Using Password Protection" in Chapter 12. If password protection is disabled, you will see

```
        Cancel Graphic?
           No          →
```
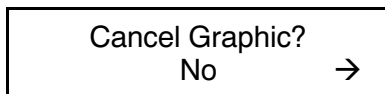
Press ⊖ or ⊖ then press ●.

```
┌─────────────────────────────────┐
│        Cancel Font?             │
│          No            →        │
└─────────────────────────────────┘
```

Press ⊖, then press ●. You return to the Pause menu. **If you select "Yes," these prompts delete ALL formats, graphics, and/or fonts in the printer.**

5. Press ⊖ or ⊖ to select another function from the Pause menu, or to return to Print mode.

Repeating a Batch

Before you start printing a new batch, you can reprint the last batch. The batch can be either the last one you printed completely or one that you canceled after starting to print.

MAIN MENU

```
┌────────┐ ┌───────┐ ┌───────┐ ┌───────┐ ┌────────┐ ┌───────┐ ┌────────┐ ┌───────┐
│ CANCEL │ │ PRINT │ │ BATCH │ │REPEAT │ │ BATCH  │ │ SETUP │ │SCRIPTS │ │ DIAG. │
│  ALL   │ │ MODE  │ │ ENTRY │ │ BATCH │ │OPTIONS │ │       │ │        │ │       │
└────────┘ └───────┘ └───────┘ └───────┘ └────────┘ └───────┘ └────────┘ └───────┘
```

1. From the Main Menu, press ⊖ or ⊖ until you see

```
┌─────────────────────────────────┐
│        MAIN MENU                │
│    ←   Repeat Batch    →        │
└─────────────────────────────────┘
```

2. Press ●.

```
┌─────────────────────────────────┐
│  Printing                       │
│  xxxx of xxxx                   │
└─────────────────────────────────┘
```

The number increments until the entire batch has printed. When it is finished, you will see

```
┌─────────────────────────────────┐
│        PRINT MODE               │
│         Ready                   │
└─────────────────────────────────┘
```

Offline Printing

Refer to the keyboard's *Operating Instructions* for more information about offline printing and batch entry.

Special Printing Considerations

Keep in mind the following special printing considerations.

Maximum Print Speed	Printing Method	Printhead Density	Knife
2.5/4.0/6.0 ips (inches per second)	Thermal Direct Thermal Transfer	203/300 dpi dots per inch	Supported
8.0 ips	Thermal Direct Thermal Transfer	203/300 dpi	Supported

♦ 94x5 emulation is not supported using 300 dpi.

♦ The maximum supply and image length with the optional 300 dpi printhead is 12.0 inches (305 mm).

♦ The recommended minimum cut feed length is 1.5 inches (38 mm).

♦ You may need to clean the printhead and platen roller more frequently when printing at high speeds. See Chapter 4, "Care and Maintenance," for more information.

Printing TrueType® Fonts

TrueType® fonts are available on this printer. TrueType fonts are scalable and the characters print smoothly, without the jagged edges you see on bitmap fonts. When downloading a TrueType font, you download the entire font. You cannot specify a subset (particular characters or point size) of the font.

These font files may be very large and image slower than bitmap fonts. The size of the font file, in bytes, is the minimum amount of memory you must have available for fonts in the printer's memory.

Your System Administrator may need to reconfigure the printer's memory to use downloaded TrueType fonts. Refer to the optional *Packet Reference Manual* (available on our Web site) to learn how to reconfigure the printer's memory. After reconfiguring memory, resend the font, format, and batch packets.

The printer can accept a TrueType font file that has been converted to Hex or Run-Length encoding using the version of Font Utility. Font Utility is available on our Web site (www.servisource1.com). Font Utility is a part of the Monarch MPCL Toolbox Utilities. You can also use a wide variety of Code Pages with International (Turkish, Latin, Spanish, etc.) characters. Using TrueType fonts allows you a greater range of fonts for your formats. TrueType fonts are designed to be regionally specific; therefore, all Code Pages may not be supported in a given font. Check with your System Administrator if you need to use TrueType fonts.

Licensing Your Fonts

We provide the Font Utility to help you create and download international code pages/characters. However, it is your responsibility to license the fonts you purchase and download to your printer. Contact your font supplier for licensing information.

Additional fonts that are compatible with this printer can be purchased from:

The Electronic Font Foundry
11 Silwood Road
Ascot
SL5 OPY
England
(0)1344 875 201
www.eff.co.uk

DIAGNOSTICS & TROUBLESHOOTING

This chapter explains how to perform simple diagnostic functions such as checking the software version, the supply quality, printing test labels, and using password protection. It also contains basic troubleshooting information.

MAIN MENU

```
┌─────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌─────────┐  ┌────────┐
│ CANCEL  │──│ PRINT  │──│ BATCH  │──│ REPEAT │──│ BATCH  │──│ SETUP  │──│ SCRIPTS │──│ DIAG.  │
│  ALL    │  │  MODE  │  │ ENTRY  │  │ BATCH  │  │OPTIONS │  │        │  │         │  │        │
└─────────┘  └────────┘  └────────┘  └────────┘  └────────┘  └────────┘  └─────────┘  └────────┘
```

```
          ┌─────────┐  ┌───────────┐  ┌─────────┐
          │ VERSION │──│ USER DIAG.│──│ SERVICE │
          │         │  │           │  │  DIAG.  │
          └─────────┘  └───────────┘  └─────────┘
```

```
     ┌─────────┐  ┌────────┐  ┌──────────┐
     │ SUPPLY  │──│  TEST  │──│ PASSWORD │
     │ QUALITY │  │ LABEL  │  │          │
     └─────────┘  └────────┘  └──────────┘
```
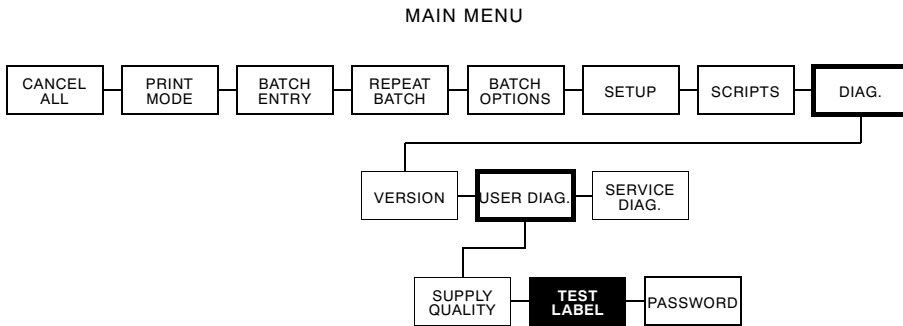
Factory Set Password

The password to access diagnostics is ● ● ● ●.

Checking the Software Version

1.   From the Diagnostics Menu, press ⊖ or ⊕ until you see

```
┌─────────────────────────┐
│      DIAGNOSTICS        │
│      Version      →     │
└─────────────────────────┘
```

2.   Press ●.

```
┌─────────────────────────┐
│      Model M9860        │
│        V 1.0            │
└─────────────────────────┘
```
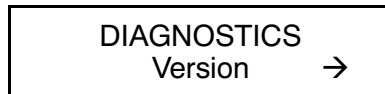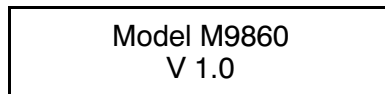
Line one lists the printer model number (M9860) and line two gives the version of software in the printer.

Printing a Test Label

1. From the Diagnostics Menu, press ⊖ or ⊖ until you see

```
┌─────────────────────────────────┐
│          DIAGNOSTICS            │
│   ←       User Diag      →      │
└─────────────────────────────────┘
```
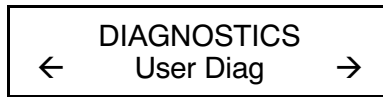
2. Press ● and ⊖ until you see

```
┌─────────────────────────────────┐
│          USER DIAG              │
│   ←       Test Label            │
└─────────────────────────────────┘
```
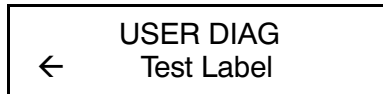
3. Press ●. The following test labels print.

The first label shows the printer's configuration by packet (A-G). The second label shows the model number, software version, stock count, voltage, print contrast, printhead resistance, number of bad dots, and installed options. The test label also shows an inch count for the high energy ribbon. This information will help Technical Support diagnose the problem. Refer to the optional *Packet Reference Manual* for more information about the test label.

You can also print a test label by pressing ⊖ and ⊖ at the same time. Hold for one second and release. If test labels do not print, call Technical Support.

Checking Supply Quality

The printer continuously stores data from the most recent 16 supplies printed to check the reflectivity of the sensor marks on the supply. Before you check your supply quality, print a batch of supplies or test labels.

1. From the Diagnostics menu, press ⊖ or ⊕ until you see

```
        DIAGNOSTICS
   ←      User Diag        →
```

2. Press ⬤. You will be at the User Diagnostics menu. Press ⊖ or ⊕ until you see

```
        USER DIAG
     Supply Quality      →
```

3. Press ⬤. If you have not printed any labels, the message "No data! Press Enter" appears. You will also see the "No data! Press Enter" message if you are using continuous (non-indexed) supplies.
   If you have printed labels since turning on the printer, you will see

```
      Len   Min   Max  OK
   ← 1568   034   124  Y →
```

The Len listing is the length of the loaded supply in dots.

The Max listing should always be greater than the Min listing. The OK listing tells whether the sense mark on the supply passed a detection test. Press ⊖ or ⊕ to see the other readings.
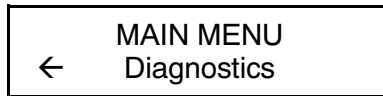
Using Password Protection

The password protection feature prevents formats, graphics or fonts from accidentally being deleted from the printer's memory. *It also limits access to the Setup and Scripts menus.*

Enabling the Password (System Administrators only)
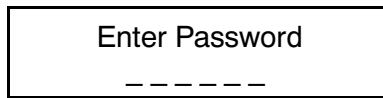
A System Administrator can enable the password that must be entered before formats, graphics or fonts can be deleted.

1. From the Main Menu, press ⟵ or ⟶ until you see

> MAIN MENU
> ⟵   Diagnostics

2. Press ⬤. You will see

> Enter Password
> – – – – – –
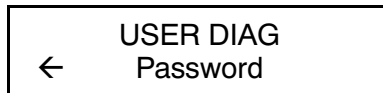
3. Enter the password: press ⬤ three times and then press ⬤.
   If you enter the wrong password, you return to the Main Menu.

4. From the Diagnostics Menu, press ⟵ or ⟶ until you see
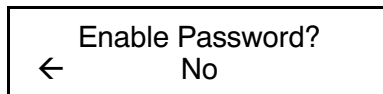
> DIAGNOSTICS
> ⟵   User Diag

5. Press ⬤. Then, press ⟵ or ⟶ until you see

> USER DIAG
> ⟵   Password

6. Press ⬤. You will see

> Enable Password?
> ⟵   No

The default for password protection is "No," so you will always see "No" even if passwords are enabled.

7. If you do not want the user to enter a password before they can delete formats, graphics, fonts, or access to the Setup and Scripts menus, press ●. You return to the User Diagnostics Menu.
   OR
   Press ⊝ to display "Yes" and press ●. The password protection is enabled for formats, graphics, fonts, and access to the Setup and Scripts menus. You return to the User Diagnostics Menu.

8. Press ● twice to exit to the Main Menu.

When password protection is enabled, a password is not required to clear bathces, but it is needed to clear formats, graphics, and fonts.

Service Diagnostics

The Service Diagnostics menu can only be accessed by a Paxar Representative, because it requires a separate password. If you need to call Technical Support, print a test label first.

Troubleshooting

This section helps you correct some problems that may occur.

Problem	Action
Error message appears during startup.	Turn off the printer, wait fifteen seconds and then turn on the printer. Call Technical Support if the error message reappears.
Does not print.	Check supply.
	Check ribbon.
	Send a corrected format and batch packet.
Does not feed.	Set wide/narrow knobs correctly.
Partially printed data.	Clean the printhead.
	Send a corrected format packet.
Printing shadows or smears.	Clean the printhead.
	Change supply.
	Check ribbon.
Light printing.	Change supply.
	Adjust the print contrast.
	Check wide/narrow knobs.
	Check ribbon.
Heavy printing.	Clean the printhead.
	Change supply.
	Adjust the print contrast.
	Check wide/narrow knobs.
	Check ribbon.
Voids in printing.	Clean the printhead.
	Change supply type.
	Check ribbon.
Serial bar codes do not scan.	Leave printhead unlatched when not in use.
	Use a print speed of 2.5 IPS.
	Adjust the print contrast.

Problem	Action
Backing paper is wrapped around platen or peel roller.	Carefully remove the backing paper. Make sure the backing paper tears at the saw-toothed tear edge when using backfeed and peel mode.
Blank labels print or 750 series errors.	Clean supply sensors.
When downloading a script, the printer errors.	Check the available flash memory. Format flash memory or clear NVRAM.
After downloading a script, the script does not appear to be loaded.	Try formatting flash memory. Then, download the script again.

If you cannot fix a problem, call Technical Support.

Error Messages

You may receive the following types of error messages:

◆ Data Errors

◆ Communication Errors

Some errors numbered 400-438 and 500-574 are internal software errors. Errors numbered 900-999 are hard printer failures. If you cannot clear an error, turn off the printer, wait several seconds and then turn on the printer. For a complete list of errors, refer to the optional *Packet Reference Manual* available on our Web site. Call Technical Support if you need additional assistance.

Common Errors

Errors 001 to 405 and 429 to 435 are data errors. This type of error indicates that incorrect data was sent to the printer, and the printer is ignoring it. Your System Administrator should correct the packet and send it back to the printer.

Error	Description/Action
002	Name must be **1** to **8** characters inside quotes.
005	Supply width is invalid.
018	Code page selection defined in the field must be **0** (Internal), **1** (ANSI), **100** (Macintosh), **101** (Wingdings), **102** (UNICODE), **103** (BIG5 for UNICODE), **104** (GB2312 for UNICODE), **105** (SJIS for UNICODE), **106** (GB2312), **107** (BIG5), **437** (DOS Page 437), **850** (DOS Page 850), **852** (Latin 2), **855** (Russian), **857** (Turkish), **860** (Portuguese), **1250** (Latin 2), **1251** (Cyrillic), **1252** (Latin 1), **1253** (Greek), **1254** (Turkish), **1255** (Hebrew), **1256** (Arabic), **1257** (Baltic), or **1258** (Vietnamese).
025	Data length is too long.
101	Format referenced by batch not in memory.
400	Invalid character following **{**.
403	Field separator was not found.
409	Printer memory is full. Delete unnecessary formats or graphics from memory.
410	Parity mismatch.
411	Framing error (baud rate mismatch).
412	Flow control mismatch.
413	Online receive buffer is full. Check for a flow control problem.
611	Font, bar code, or density in the batch does not fit the format.
612	The data in this line of the batch is either missing or does not match the format.

613   Reference point off supply.

614   Portion of field off supply or there may be an invalid
        character in the packet.

703   The printer sensed a calibration of different-sized black
        marks. Make sure the correct supply type is loaded.

704   Printer has not sensed a supply mark within the
        specified number of inches or is out of supplies. Check
        the supply tracking, supply marks, black mark sensor
        position, and supply roll for binding. Press ● and try
        to continue printing. Change supply.

750   Printhead is overheated. Turn off the printer.

751   Printer did not sense a black mark when expected. For
        errors 751-753, check the supply tracking, supply
        marks, black mark sensor position, and supply roll for
        binding. Press ● and try to continue printing. Change
        supply.

752   Printer sensed a mark in the wrong place.

753   Printer sensed a mark that is too long.

754   Check for a ribbon jam or remove any slack in the
        ribbon by turning the take-up reel clockwise. Load a
        new ribbon.

755   Printhead is open. Close the printhead.

756   Load supplies.

757   Load supplies (supply length mismatch), because the
        calibrated supply length differs by plus or minus .25
        inches from the format. Press ●.

758   Either the supply is not seen or the on-demand sensor
        is broken. Check for a label jam, clear the supply path,
        or reload supplies. This error may occur if you remove
        a label too quickly in the on-demand mode.

763   Waiting to dispense label. Press ●.

764   Verifier scan error (bad scan). Press ● to clear the
           error and continue printing. The printer does not
           recalibrate after this error.

765   The printhead has less than 8 bad dots. The printer
           can shift bar code fields to avoid bad dots. You may
           need to press ● to continue printing. Print a test label
           to confirm the number of bad dots.

768   Printhead has more than 8 bad dots within the format
           area or is not connected. Connect the printhead.

772   Verifier failure. The verifier detected three or more bad
           scans in a row. Press ● to clear the error and
           continue printing. The printer does not recalibrate after
           this error.

773   Verifier is enabled, but not connected. Make sure the
           I/O cable and/or serial cable is connected to the verifier.
           Refer to your verifier's *Operating Instructions* for more
           information.

791   The printer has an error pending. Turn off the printer.
           Wait 15 seconds (until the power light is completely
           dim) and turn it back on. Resend the packets.

SPECIFICATIONS

Printer

Height:	13 inches (330 mm)
Width:	15 inches (381 mm)
Depth:	20.5 inches (521 mm)
Weight:	45 lbs. (20 kg)
Shipping Weight:	52 lbs. (24 kg)
Power Source:	90-264 VAC with autoselect 50/60Hz
Operating Limits:	For Thermal Transfer (ribbon) 40° to 95° F (4° to 35° C) For Thermal Direct 40° to 104° F (4° to 40° C)
Printhead:	Thermal at 4 inches (102 mm) wide 203 dpi (8.0 dots per mm) **OR** 300 dpi (11.8 dots per mm) This option must be purchased separately.
Print Speed:	2.5 ips (64 mm) default for all serial bar codes, 4.0 ips (102 mm), 6.0 ips (152 mm) default for parallel bar codes, or 8.0 ips (203 mm) See Chapter 11, "Printing" for special considerations when printing at speeds greater than 6.0 ips.
Printing Method:	Thermal Transfer (ribbon) or Thermal Direct
Maximum Print Area:	4.0 inches x 16.0 inches (102 mm x 406 mm) with 203 dpi 4.0 inches x 13.0 inches (102 mm x 330 mm) with 300 dpi

Knife Style: Linear

Tag Cut Dimensions

Widths: 1.0 inches to 4.0 inches (25 mm to 102 mm)

Lengths: 1.5 inches to 16.0 inches (38 mm to 406 mm)
This printer allows cutting 1.2 inch (30 mm)
feed length tags at 8.0 ips; however, optimal
cut quality may not be achieved.
NOTE: The maximum cut tag length using
the stacker is 3.66 inches (93 mm).

Batch Separator: 3.66 inches (93 mm)

Cut Angle: 1 degree (plus or minus) from 90 degrees
with respect to the edge.

Supplies

For high temperature or high humidity environments, contact
Paxar for supply recommendations. Aperture supplies are tags or
labels with holes (or openings) in them. The supply is sensed
using the holes. The holes can be only on the edge or in the
center of the supply.

Center Aperture   **FEED**   **Edge Aperture**
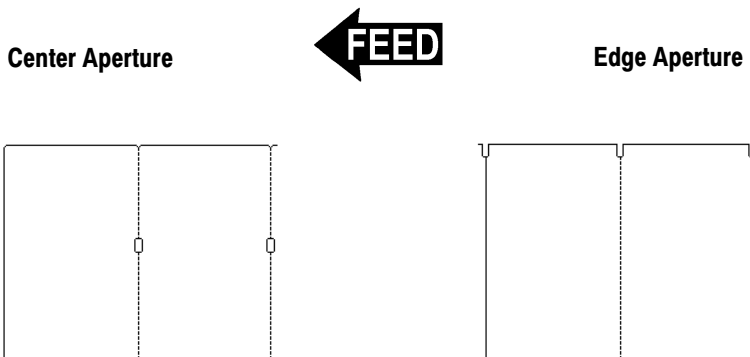
| **Supply Types:** | Thermal Transfer or Direct |

| **Supply Widths:** | 0.75 inches (19 mm) minimum |
| | 4.25 inches (108 mm) maximum |

Supply Lengths:	0.32 inches (8 mm) minimum
	See "Tag Cut Dimensions" for minimum and
	maximum cut tags
	17.5 inches (445 mm) maximum

Total Thickness:	9 mils to 12 mils (tags)
	5.5 mils to 12 mils (labels)
	Do not cut labels.

Ribbon Specification

Do not leave ribbon in sunlight, high temperatures or humidity.

Ribbon Type: Standard or High Energy

Ribbon Widths	Use with Max. supply width
1.5 inches (38 mm)	1.3 inches (33 mm)
1.8 inches (46 mm)	1.5 inches (38 mm)
2.3 inches (58 mm) standard or high energy	2.0 inches (51 mm)
3.3 inches (84 mm)	3.0 inches (76 mm)
4.3 inches (110 mm) standard or high energy	4.0 inches (102 mm)

Ribbon Length: 23,600 inches (600 meters)

About Ribbons

The width of the ribbon must be greater than the supply width.
Since some supplies are more abrasive to printheads than others,
using a ribbon wider than your supply helps protect the printhead.
Replacement printheads are expensive.

Cable Pinouts

The following tables show the connector pins for a 9-pin to 25-pin (118364) cable or a 25-pin to 25-pin cable (118366).

9-Pin (F)	To	25-Pin (M)
CD 1		20 DTR
RD 2		2 TD
TD 3		3 RD
DTR 4		8 CD
SGND 5		7 SGND
DSR 6		6 DSR
RTS 7		4 RTS
CTS 8		5 CTS
N/C 9		1 Shield Drain Wire

25-Pin (F)	To	25-Pin (M)
FG 1		1 FS
TD 2		2 TD
RD 3		3 RD
RTS 4		4 RTS
CTS 5		5 CTS
DSR 6		6 DSR
SG 7		7 SG
CD 8		8 CD
N/C 20		20 DTR

ACCESSORIES & OPTIONS

B

Accessories

◆ 938™ Verifier

◆ 932™ Stacker

◆ Replacement Printhead Kits:
12055101 203 dpi
12055201 300 dpi

◆ High Energy Supplies (TUFFMARK®)

◆ Ribbon Take-Up Core (11796120, 30, or 40; available in 2",
3", or 4" widths)

◆ Monarch® MPCL™ Toolbox (utilities to configure the printer,
download fonts, and design formats)
Available on our Web site (www.servisource1.com)

◆ External LAN Print Server Supports Ethernet and TCP/IP:
RJ-45 Connector (10BaseT) 11753101
BNC Connector (10Base2) 11753102

◆ External Ethernet Print Server supports TCP/IP (11753105)

◆ Printhead CLEAN-STRIP (120350) or Printhead Cleaning Pen (114226)

◆ Cables: 9-pin to 25-pin (118364), 25-pin to 25-pin (118366)

Factory-Installed Options

◆ 7410™ Print Server for 802.11b wireless networks (also supports wired
Ethernet printing).

◆ 300 dpi printhead (120552)

◆ Internal TwinAx/CoAx Protocol Converter (117532)
also Service-installable)

◆ Internal Ethernet Print Server supports TCP/IP (11753104)

Packaging Materials

If you need to ship the printer to a different location and do not have the original packaging, use the following part numbers to order the appropriate packaging materials.

Printer	Description and Qty.
00067201	Carton (1)
00067202	Bottom Pad (1)
00067203	Top Pad (1)

Ethernet Information

Paxar® offers internal and external Ethernet connectivity solutions. These solutions make it easy to set up, manage, and monitor a printer linked to an Ethernet connection. The print server provides multiprotocol capabilities for users with Windows® 95/98/2000 or Windows NT®, TCP/IP, and NetWare®. Software is available on our Web site (www.paxar.com) to configure the print server. It can also be configured using HP Jet Admin™ or HP Web JetAdmin™ software.
Configuration information prints automatically if the Ethernet print server senses a hardware error. To print configuration information on demand, press the *Test* button on the side of the external Ethernet print server unit or use the configuration utility provided for your network operating system. The configuration label prints in MPCL format. **The configuration label is best displayed using 4" wide by 6" long labels**. If the label is too small, some information may print outside the label edges.

RF Information

We offer the 7410 Print Server that communicates with printers on an 802.11b wireless network. You can use the print server in ad-hoc (peer-to-peer) or infrastructure (access point) wireless mode. In addition, the wireless print server includes a unique dual-mode built-in wired Ethernet connection. You can switch between wired and wireless mode without any loss of data.

GLOSSARY

The following terms will help you use this manual.

continuous mode   Mode in which the printer prints all the labels in the batch without stopping.

download (send)   Transmission of data from the host to your printer.

format   Supply layout or design, which the *System Administrator* downloads as a format packet to your printer.

host   Any mainframe, minicomputer, data collect terminal, or personal computer sending data to the printer.

LCD   Display on the printer used to indicate printer conditions and problems.

leader   Wrap around a new roll of ribbon with printing on it.

on-demand mode   Mode in which the printer stops after each label to allow you to remove it.

print job (batch)   Actual data printed on a label or tag. The host may download the print job together with the format, or as a separate packet. The print job is also called a "batch."

online   Direct communication between a computer and the printer.

Supply Sensor   Senses whether supply is loaded or needs to be loaded in the printer. Located in the supply path.

Supplies   Labels used for printing.

System Administrator   Person responsible for creating and downloading packets.

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