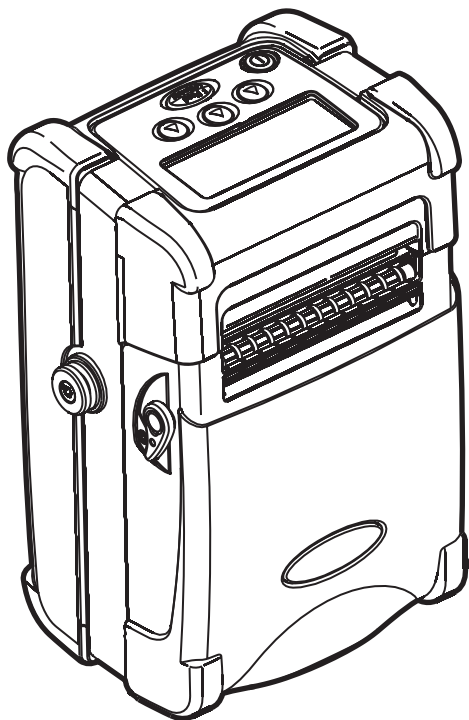


Operator's Handbook



Monarch®
9433™
Sierra Sport3™
Printer



Each product and program carries a respective written warranty, the only warranty on which the customer can rely. Paxar reserves the right to make changes in the product, the programs, and their availability at any time and without notice. Although Paxar has made every effort to provide complete and accurate information in this manual, Paxar shall not be liable for any omissions or inaccuracies. Any update will be incorporated in a later edition of this manual.

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WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. 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.

RF Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference including interference that may cause undesired operation of the device.

CANADIAN D.O.C. WARNING

This digital apparatus does not exceed the Class B 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 B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

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Avery Dennison Printer Systems Division
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Miamisburg, Ohio 45342

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GETTING STARTED

1

The Monarch® Sierra Sport3™ 9433™ printer is a portable, thermal-direct printer that prints on tags, labels, or receipt paper.

Note: Information in this document supercedes information in previous versions. Check our Web site for the latest documentation and release information.

Using This Manual

Following is a summary of the contents of this manual.

	Chapter	Contents
1	Getting Started	Information you should know before using the printer.
2	Loading Supplies	How to load and remove supplies.
3	Care & Maintenance	Clearing supply jams and cleaning the printer.
4	Troubleshooting	Common problems and their solutions.
A	Specifications	Printer and supply specifications.
B	Accessories	Printer accessories and part numbers.
C	Printer Options	Available printer options.

Audience

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

Additional Documentation

A *Quick Reference* for this printer is available in the box. A *Programmer's Manual* and *System Administrator's Guide* are available on Web site (www.paxar.com).

Printer Utilities

The Monarch® MPCL™ Toolbox utilities are also 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.

Unpacking the Printer

After you unpack the printer, you may have (depending on your order):

- ◆ a 9433 printer
- ◆ one or more batteries
- ◆ an AC power adapter
- ◆ a shoulder/hand strap
- ◆ a communications cable
- ◆ a 3-inch core (for fan-fold supplies)

Note: When unpacking, make sure you look through all of the packaging material for items. Keep all packaging material in case you need to move or return the printer.

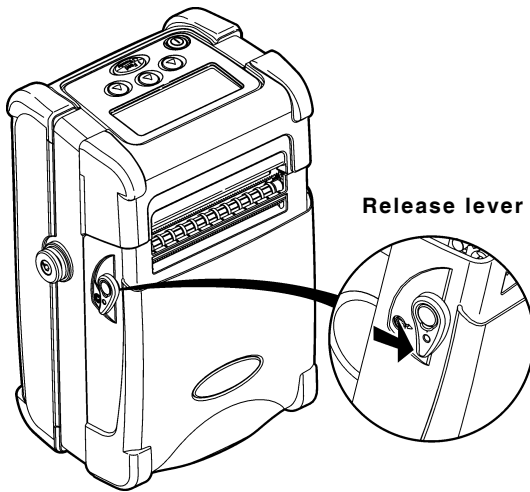
If any items are missing, contact Paxar at the number listed on the back of this manual for replacement items.

Installing the Battery

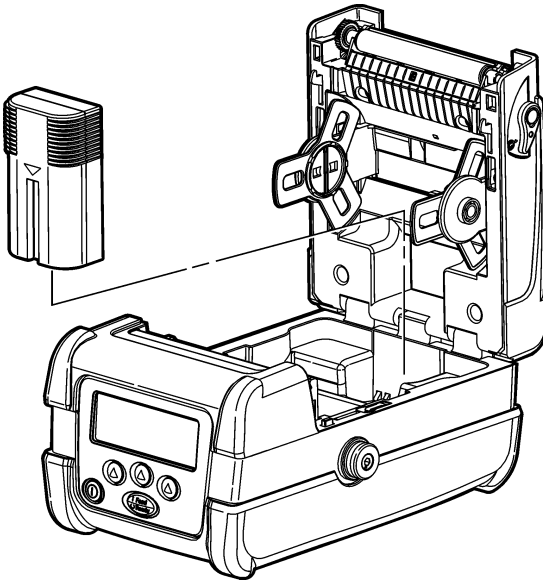
The printer uses a 7.4V Lithium Ion battery. The battery can be installed with or without supplies loaded.


Note: Make sure you charge the battery before using it.

1. Pull the release levers located on both sides of the printer to open the supply door.

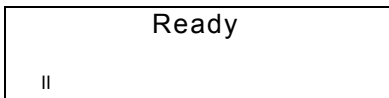


2. Insert the connector end of the battery into the printer.



3. Close the supply door until the release levers click into place.
4. Turn on the printer by pressing and holding  until the display turns on.

The display flashes printer version information, battery charging status, and then you see



Battery and Safety Information

- ◆ You must charge a battery before using it. For optimal battery life, charge the battery *within three months of receipt*.

Warning: Use only Monarch chargers (Monarch® 9462™ Single Station Charger or the Monarch® 9465™ Four Station Charger) designed for Lithium Ion batteries when charging. The battery might explode if placed on a different charger.

- ◆ Take the battery out of the printer when storing the printer for a month or longer.
- ◆ The optimal battery storage temperature is 50°F - 73°F (10°C - 23°C). For more information about storage temperatures, see Appendix A, “Specifications.” The battery may lose its charge capacity permanently if stored at temperatures less than 32°F (0°C) or greater than 104°F (40°C). For longest life, the battery should be stored in a cool, dry place.
- ◆ The recommended temperature for charging is 68°F - 77°F (20°C - 25°C).
- ◆ Charging time is approximately 1 to 3 hours.
- ◆ Recycling Information - **Do not** throw in trash. Recycle to your local regulations. The Rechargeable Battery Recycling Corporation (RBRC®) is a non-profit organization created to promote recycling of rechargeable batteries. For more information about how to recycle batteries in your area, visit www.rbrc.org. Batteries can also be returned postage-paid to: ERC; 200 Monarch Lane Door #39; Miamisburg, OH 45342.

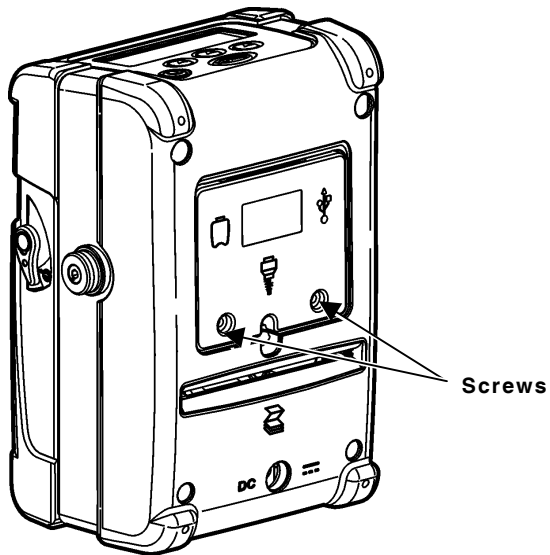
Note: **Do not** disassemble, short-circuit, heat above 80°C, or incinerate the battery. It may explode.

- ◆ The battery should be charged immediately for long-term storage, or after the battery has been exhausted from a printing session. Frequent charging will prolong battery life and has no negative effects.
- ◆ **Do not** let the battery get wet or come into contact with metal objects.
- ◆ **Do not** use a battery with a cracked case.
- ◆ It is normal for battery capacity to decrease up to 20% over the first 300 cycles of use.
- ◆ The printer uses battery power even when the printer is not printing. Remove the printer's battery and place it on a charger when the printer is not in use.
- ◆ Many factors affect the battery's performance, including the quantity of labels printed, intervals of batches printed, percentage of black per label, and power management.

Connecting the Communications Cables

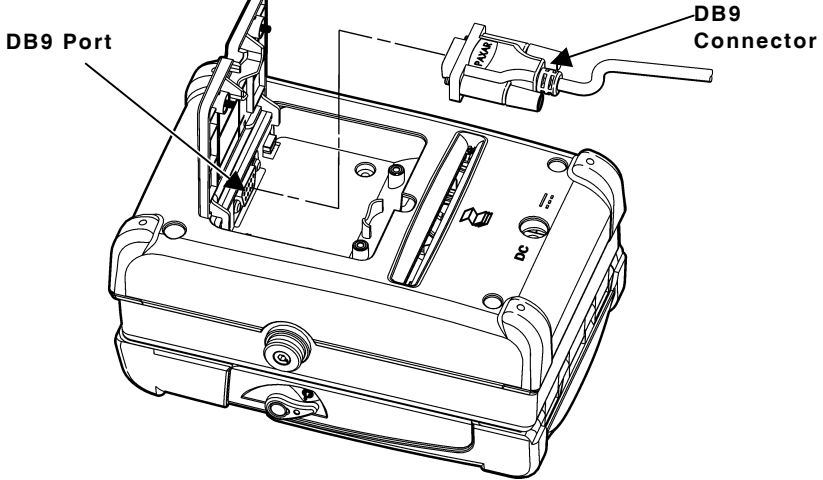
9-pin serial communication cables and USB cables are available. For best results, use only Monarch® cables. See Appendix B, "Accessories" for part number information.

Open the hinged cable door by loosening the two Philips screws and lifting up on the door.

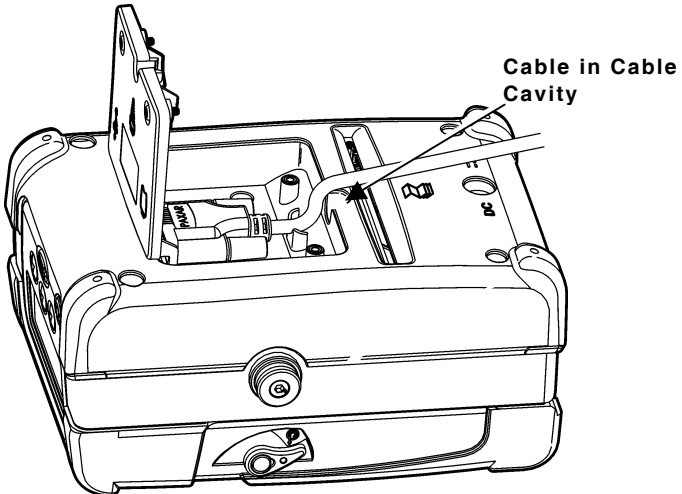


Serial Cable

1. Plug the DB9 connector into the DB9 port.



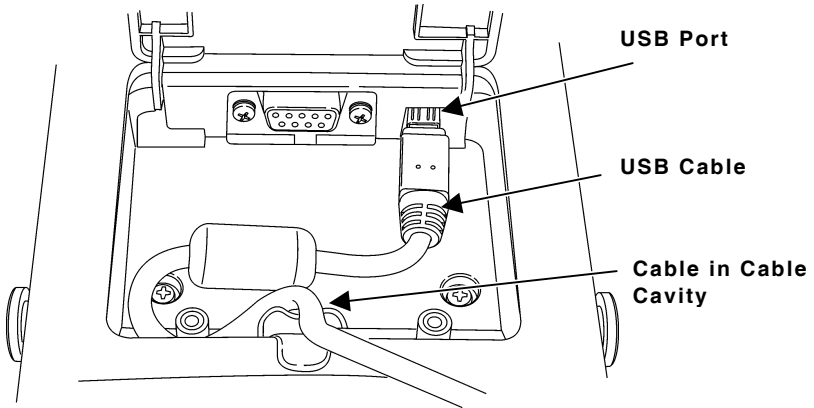
2. Place the cable in the cable cavity.



3. Close the hinged cable door and tighten the screws.

USB Cable

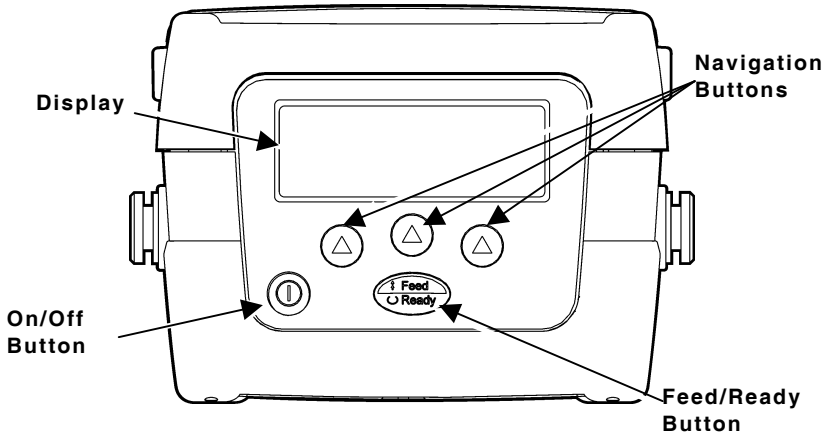
1. Plug the USB cable into the USB port.



2. Lock the cable in place by placing it behind the left screw post and into the cable cavity as shown.
3. Closed the hinged cable door and tighten the screws.


Using the Display and Buttons

- ① Turns the printer on and off.
- ⬆️ Advances the supply or returns the display to the next higher menu.
- ⬆️ Three navigation buttons for selecting options on the display.

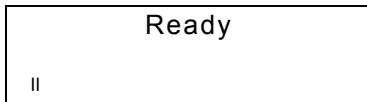


Printing

The host sends online packets containing print jobs to the printer. Make sure supplies are loaded.

1. Turn on the printer by pressing and holding  until the display turns on.

The display flashes printer version information, battery charging status, and then you see



2. Download a format and a batch.

For information on creating packets and downloading print jobs, refer the *Programmer's Manual*, available on our Web site.

The printer prints either a continuous strip of supplies or one at a time (on-demand mode).

3. Remove the printed supplies.

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LOADING SUPPLIES

2

This chapter describes how to load supply for

- ◆ non-peel mode (prints a continuous strip of supply)
- ◆ peel mode (prints and separates the label from the liner).

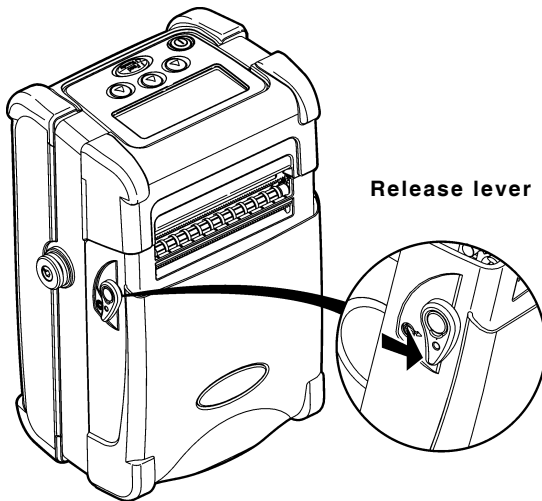
Loading tips:

- ◆ Whenever you open and close the supply door, press  to advance the supply.
- ◆ The printer may be on or off when loading supplies.

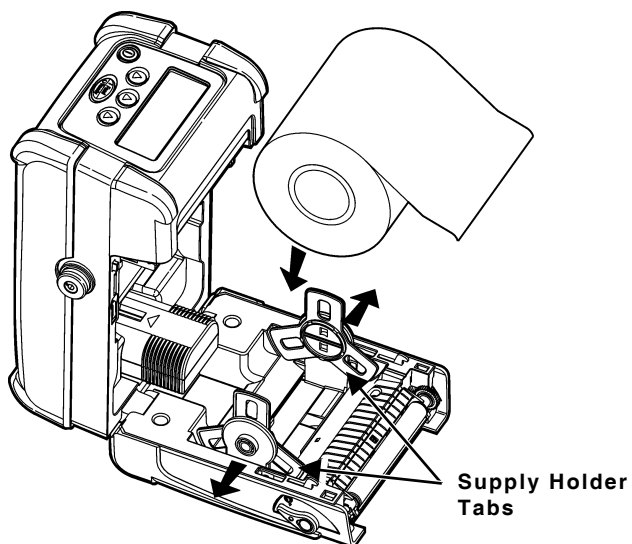
Loading for Non-Peel Mode

Use these instructions to load labels, tags, and receipt paper to print in a continuous strip.

1. Pull the release levers located on both sides of the printer to open the supply door.

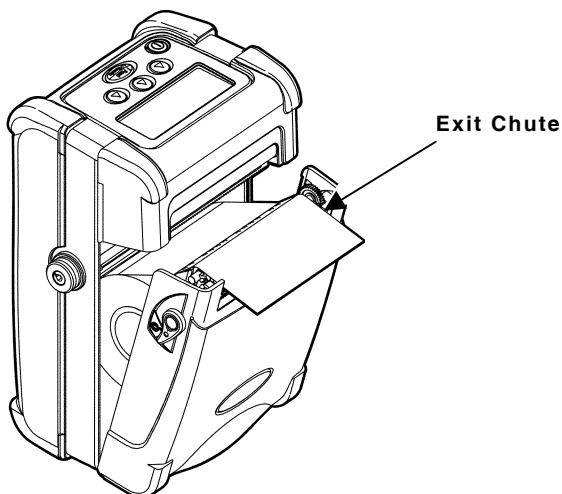



2. Remove the tape from a new roll of supply.
3. Push apart the supply holder tabs to widen the supply holders. Insert a roll of supplies.

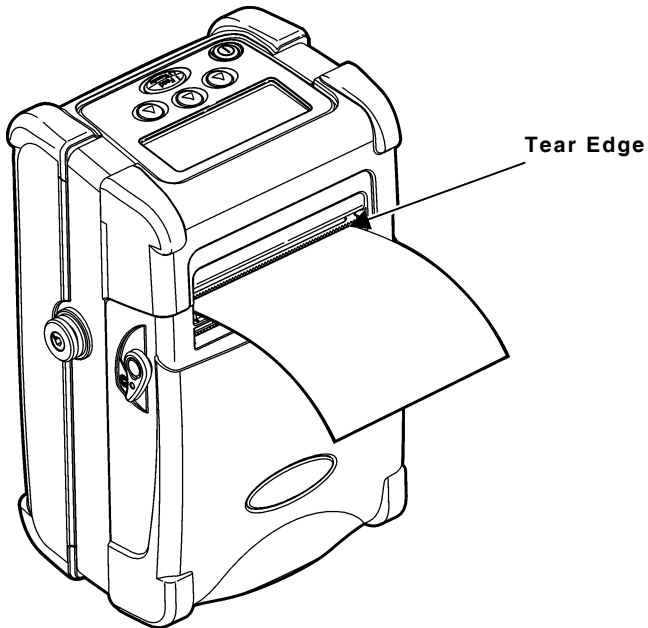


Note: The supply should unwind from the top with the loose end of the supply feeding through the exit chute.

4. Pull out enough supply to lay across the exit chute and raise the supply door back to the upright position as shown.



5. Close the supply door until the release levers click into place.
6. Press  to advance the supply. If you receive a supply error, see Chapter 4, "Troubleshooting," for more information.



Caution: Do not touch the tear edge. You may cut yourself.

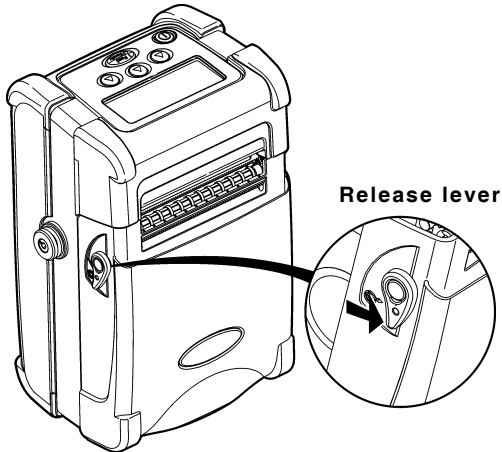
Tearing the Supplies

Tear the supply from the right or left using the tear edge as a guide.

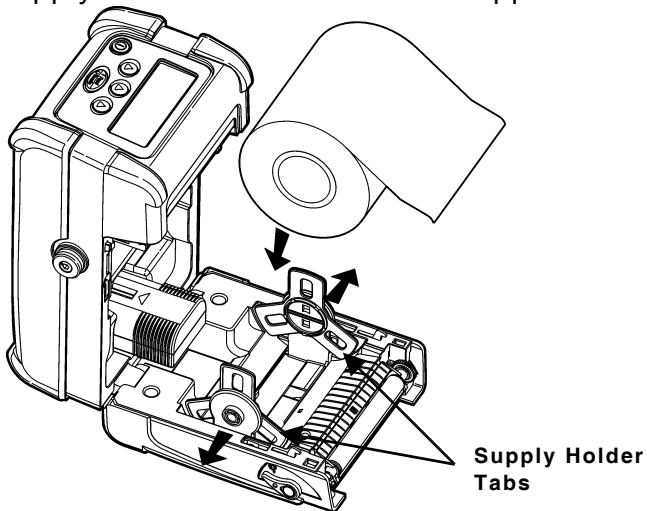
Note: Do not pull straight up on the supply. You may lose registration.

Loading for Peel Mode

Use these instructions to print labels and separate them from the liner (on-demand).

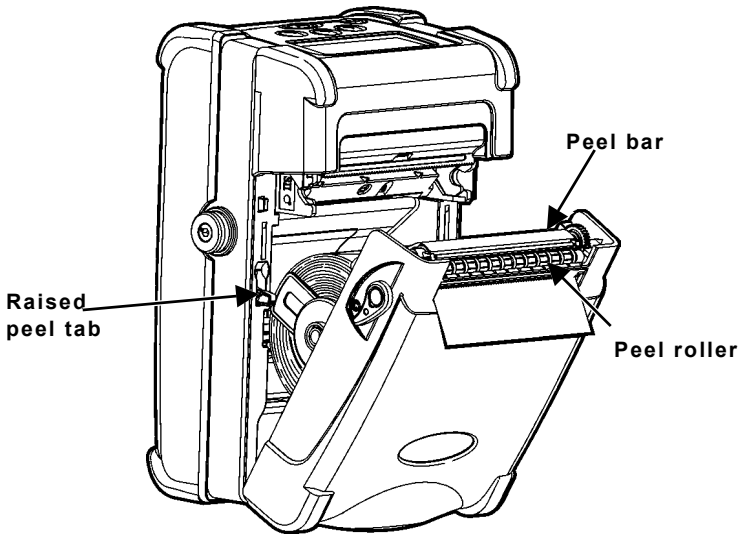



1. Pull the release levers located on both sides of the printer to open the supply door.
2. Remove the tape from a new roll of supply.
3. Push apart the supply holder tabs to widen the supply holders. Insert a roll of supplies.

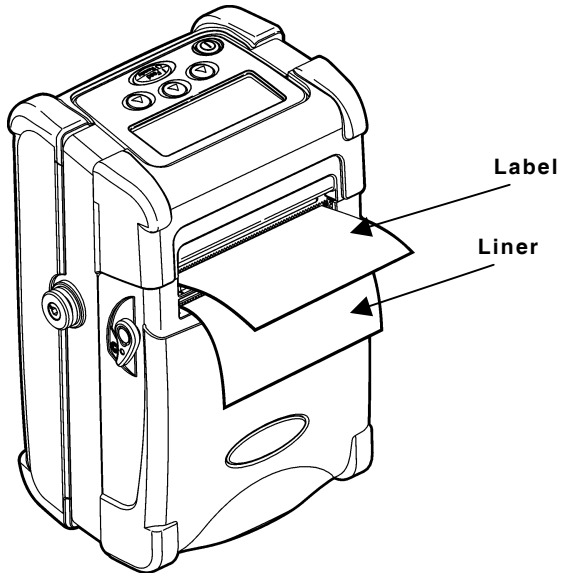


Note: The supply should unwind from the top with the loose end of the supply feeding through the exit chute.

4. Raise the peel tabs on both sides of the printer.
5. Remove a couple of labels from the liner. Feed the liner over the platen roller, over the peel bar, and under the peel roller.



6. Close the supply door until the release levers click into place.
7. Lightly tug on the liner to remove the slack.
8. Press  to advance the supply. If you receive a supply error, see Chapter 4, "Troubleshooting," for more information.

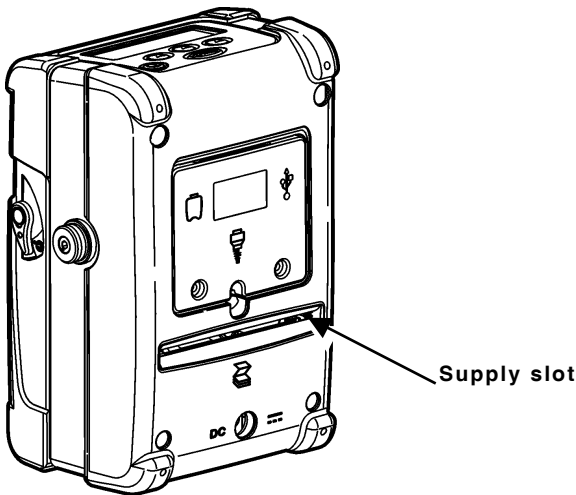


The liner separates from the label.

Loading Fan-Fold Supplies

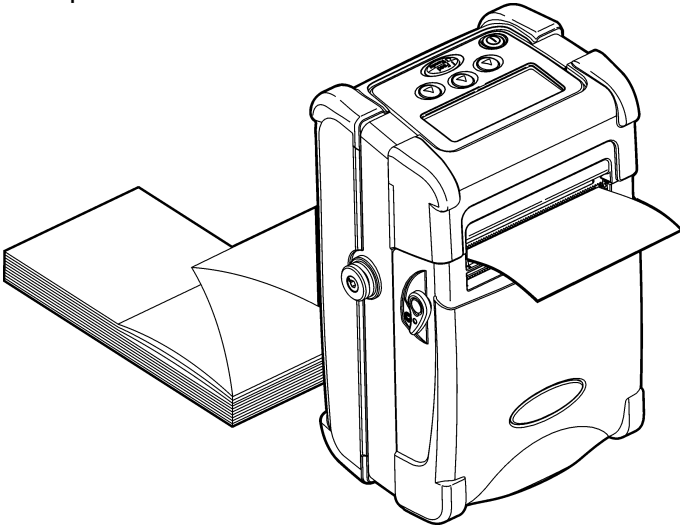
Use these instructions to load fan-fold supply.


- 1.** Pull the release levers located on both sides of the printer to open the supply door.
- 2.** Insert the 3-inch core in between the supply holder tabs to open them to their widest position.
- 3.** Place a stack of fan-fold supplies behind the printer, printing side up.
- 4.** Slide the supply guides, located inside the printer on each side of the external supply slot, out to their widest position.
- 5.** Feed the fan-fold supply, printing side up, into the supply slot on the back of the printer.

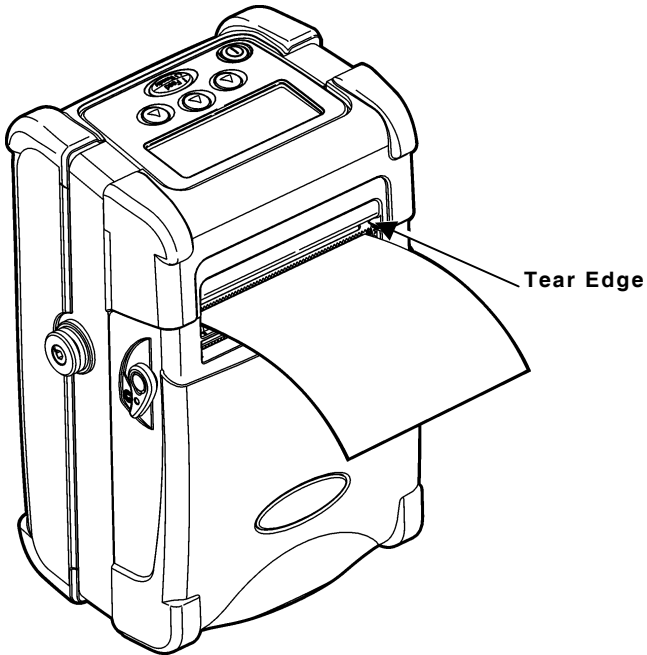


- 6.** Center adjust the supply guides so that they barely touch the edge of the supply.
- 7.** Pull out enough supply to lay across the exit chute.

8. Close the supply door until the release levers click into place.



9. Press  to advance the supply. If you receive a supply error, see Chapter 4, “Troubleshooting,” for more information.



Caution: Do not touch the tear edge. You may cut yourself.

Tearing the Supplies

Tear the supply from the right or left using the tear edge as a guide.

Note: Do not pull straight up on the supply. You may lose registration.

CARE & MAINTENANCE

3

This chapter explains how to

- ◆ clean the printhead, platen roller, and supply sensors
- ◆ clear label jams.

Caution: **Do not** touch the printhead with your fingers. The printhead may be hot after printing and may burn you. Wait until the printhead is cool before cleaning.
Do not use sharp objects around the printhead. This may damage the printhead and require a service charge.

Cleaning

Your printing rate and frequency determines how often you must clean the printer.

You may need to clean the printhead and platen roller

- ◆ after using seven to ten (7-10) rolls of supplies
- ◆ in extreme temperatures, humid conditions or a dirty environment
- ◆ when you see voids in the print as shown
- ◆ after a label jam.



You may have to clean the supply sensors more often if you receive supply error messages frequently.

Use any of the following items to clean the printhead:

- ◆ A soft cloth moistened with isopropyl alcohol.

Caution: Use isopropyl alcohol on the interior areas only, never on the exterior.

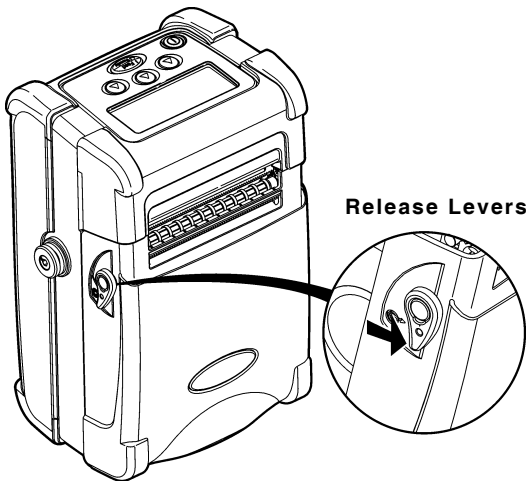
- ◆ A Monarch Cleaning Pen (part number 114226).

To clean the printhead, platen roller, and supply sensors:

1. Turn off the printer by pressing and holding ⓐ until the display is blank.

Note: Do not use sharp objects to remove adhesive or label particles from the printhead area.

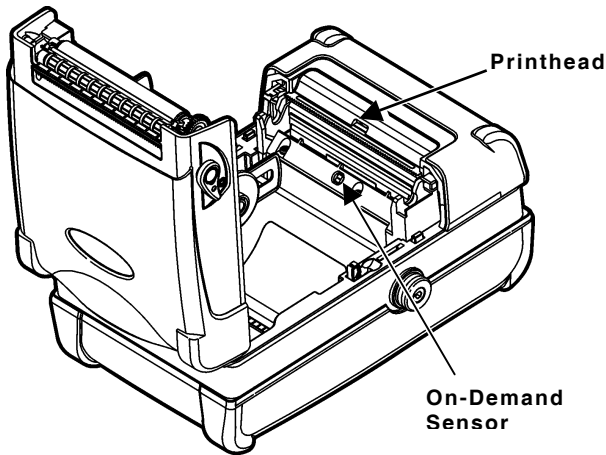
2. Pull the release levers located on both sides of the printer to open the supply door.



3. Lay the printer on its back.

4. Clean the printhead with a clean soft cloth moistened with isopropyl alcohol, a cleaning pen, or a small brush.

Note: The printhead is sensitive to static electricity, which can damage the printhead or reduce its life. Ground yourself by touching a metal surface before cleaning the printhead.

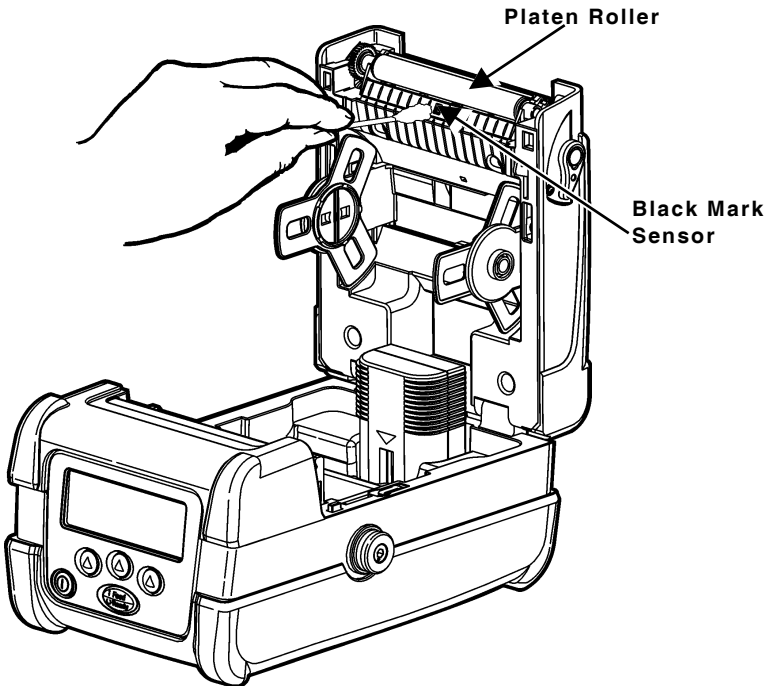


5. Clean the on-demand sensor with a clean soft cloth, a cotton swab moistened with isopropyl alcohol, or a cleaning pen.

6. Clean the platen roller with a clean soft cloth moistened with isopropyl alcohol or a cleaning pen.

Turn the platen roller with your finger to clean the entire surface.

7. Clean the black mark sensor with a clean soft cloth or cotton swab moistened with isopropyl alcohol or a cleaning pen.



8. Reload the supply.
9. Close the supply door until the release levers click into place.
10. Turn on the printer by pressing and holding **Ⓢ** until the display turns on.

3-4 Operator's Handbook

Clearing Label Jams

When you are printing and a jam occurs, a supply error message appears. To clear the jam:

- 1.** Turn off the printer by pressing and holding ① until the display is blank.
- 2.** Pull the release levers located on both sides of the printer to open the supply door.
- 3.** If necessary, remove the roll of supplies.
- 4.** Remove the jammed supplies and reload the supply.
- 5.** Close the supply door until the release levers click into place.
- 6.** Turn on the printer by pressing and holding ① until the display turns on.

3-6 Operator's Handbook

TROUBLESHOOTING

4








This chapter lists some of the common printer problems and their possible solutions. If these solutions do not work, call Service at the number listed on the back of this manual.

Problem	Solution
Printer does not feed or print. OR Print has voids or is too light	Use a fully charged battery.
	Close the supply cover completely.
	Load supply properly. See Chapter 2, " <i>Loading Supply</i> " for more information.
	Clean the printhead. See Chapter 3, " <i>Care and Maintenance</i> " for more information.
	Run the printer diagnostic tests. Refer to the <i>System Administrator's Guide</i> for more information.
Printer turns off while printing and/or the display goes blank.	Recharge the battery.
	Resend the format.
	Check your format for unnecessary thick horizontal lines. The maximum black to white print ratio for each label/tag is 25%.
Supply does not calibrate properly.	Check the on-demand, black mark, die cut, or non-indexed sensors. Refer to the <i>System Administrator's Guide</i> for more information.

Common Errors

The following is a list of common printer errors you may receive. If you receive a message not listed here, see your System Administrator or call Service at the number listed on the back of this manual.

Error	Description
025 Invalid Length	String length is outside the range 0 to 2710 .
101 Invalid/Missing	The format referenced by batch is not in memory.
409 Memory Full	The printer memory is full. Delete unnecessary formats or graphics from memory.
410 Parity	Parity mismatch. Check your parity settings at the printer and at the host.
411 Framing	Framing error (baud rate mismatch). Check your baud rate settings at the printer and at the host.
413 Overrun	Online receive queue is full. Check for a flow control problem.
611 Error Loading	Font, bar code, or density in the batch does not fit the format.
612 Invalid Data	The data in this line of the batch is missing or does not match the format.
613 Invalid Data	Reference point off supply.
614 Invalid Data	Portion of field off supply or there may be an invalid character in the packet.
703 Check Supply	The printer sensed a calibration of different-sized black marks. Make sure the correct supply is loaded.

Error	Description
704 Check Supply	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  under x to clear the error. Change supply.
750 Hot Head	Printhead is overheated. Press  under x to clear the error. Turn off the printer to let the printhead cool. If error persists, call Service.
751 Check Supply	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  under x to clear the error and try to continue printing the batch. Change supply.
752 Check Supply	Printer sensed a mark in the wrong place. Press  under x to clear the error.
753 Check Supply	Printer sensed a mark that is too long. Press  under x to clear the error.
756 Load Supplies	Load supplies. Press  under x to clear the error.
757 Load Supplies	Load supplies (supply length mismatch), because the calibrated supply length differs by plus or minus 0.25 inches from the format. Press  under x to clear the error.

Error	Description
758 Check Supply	Either the supply is not seen or the on-demand sensor is broken. Press ▲ under x to clear the error. Check for a label jam, clear the supply path, or reload supplies. This error may occur if you remove a label too quickly in on-demand mode. The printer does not recalibrate after this error.
762 Low Battery	Recharge the battery. Press ▲ under x to clear the error.
763 Remove Label	Waiting to dispense label. Press ▲ under x to clear the error.
765 Check Printhead	The printhead has less than four bad dots. The printer can shift bar code fields to avoid bad dots. Press ▲ under x to clear the error and continue printing.
768 Check Printhead	Printhead has more than 10 bad dots or is not connected. Connect the printhead. Press ▲ under x to clear the error.
791 Error Pending	The printer has an error pending. Turn off the printer. Wait 15 seconds and turn it back on. Resend the packets.

If you see a System Error Vector ## on the display, call Service for instructions. If you need to return the printer to Paxar, use the original packaging.

SPECIFICATIONS



This appendix includes information about printer specifications and cable pin-outs.

Printer Specifications

Height:	3.5" (89 mm)
Width:	5.25" (133 mm)
Depth:	7.25" (184 mm)
Weight (with Battery and Supplies):	2.47 lb. (1.12 kg)
Shipping Weight (no supplies):	3.35 lbs. (1.5 kg) - depends on options shipped with printer.
Display:	2-line graphical LCD with backlight
Printhead:	3.0" (76 mm) 203 dpi (8 dots per mm)
Memory:	2 MB SDRAM 4 MB Flash
Power:	7.4V Lithium Ion battery
Battery Life:	4000" of 25% black supplies at 3ips.

Operating Limits (Printer): 32° to 109° F (0° to 43° C)
Storage 14° to 122° F (-10° to 50° C)

Relative Humidity (Battery and Printer): 5% to 90%
non-condensing

Printing Method: Thermal Direct

Recommended Duty Cycle: 33% Duty Cycle (5 minutes out of 15 minutes time intervals). On-demand or intermittent printing has no restrictions.

Supply Specifications

Supply Types: Labels, tags, or receipt paper

Supply Widths: 0.5" (13 mm) minimum
2.99" (76 mm) maximum

Supply Lengths: 0.375" (9.5 mm) minimum
12.0" (305 mm) maximum

Max. Print Area: 3.0" (76 mm) x 12" (305 mm)

Cable Pin-outs

ANSI/EIA-232-D

Contact #	Description
6	DSR (Data Set Ready)
1	Reserved - Do not connect
4	DTR (Data Terminal Ready), or +5V if selected
5	Signal Ground
2	Received Data (RXD)
3	Transmitted Data (TXD)
8	Clear to Send (CTS)
7	Request to Send (RTS)
9	No connect

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ACCESSORIES



This appendix lists the accessories that work with your printer and briefly describes them.

Use these part numbers when ordering an item. Call Paxar at the number listed on the back of this manual to order parts or supplies.

Accessory Items	Part Number
Single Station Battery Charger	M09462
Four Station Battery Charger	M09465
Spare Battery	12009502
Serial Cable - DB9 to 9-pin	12665914
USB Cable	125859
3-inch Core	90096
Shoulder Strap	119998
Hand Strap	120277
Cleaning Pen	114226
<i>Operator's Handbook</i>	TC9433OH
<i>Programmer's Manual</i>	TC9433PM
<i>System Administrator's Guide</i>	TC9433SA

Single Station Battery Charger

The Monarch® 9462™ Single Station Battery Charger charges one battery at a time. See Chapter 1 for more information about the battery. For more information about the Single Station Battery Charger, refer to *9462 Operating Instructions* included with the charger.

Four Station Battery Charger

The Monarch® 9465™ Four Station Battery Charger charges the individual batteries or the printer with a battery installed. Full charging of a battery takes between 1.5 hours and 3 hours. For more information about the Four Station Charger, refer to the *9465 Operating Instructions* included with the charger.

Carrying Accessories

A shoulder strap and hand strap are available for carrying the printer. Refer to your *Operating Instructions* provided with each strap for more information.

PRINTER OPTIONS



This appendix lists the options that may be installed in your printer.

- ◆ Linerless
- ◆ Bluetooth®

Linerless

The printer is configured to use supplies without the backing paper. This option is available at the time of order.

Bluetooth®

Bluetooth wireless technology provides a low power-consuming method to communicate between devices. It has a maximum range of 30 feet (10m). Our Bluetooth device connects to your printer's serial port and conforms to V2.0 of the Bluetooth specification. The printer defaults to receiving unencrypted data for the Bluetooth device. See the *System Administrator's Guide* for more information about Bluetooth.

C-2 Operator's Handbook

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