QUICK REFERENCE

This *Quick Reference* contains supply loading and general maintenance procedures for the Monarch® 9855® RFID printer. Additional RFID documents are available on the Monarch® Printer's Documentation CD-ROM and on our Web site (www.monarch.averydennison.com). Refer to the *RFID Setup Utility* at http://www.servisource1.com/prnutil/rfidsetup for illustrations to determine which type of RFID supplies you are using and basic printer configuration information. For information about creating formats, configuring the printer, or programming the printer, refer to the *Packet Reference Manual* available on our Web site.

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

The limited warranty on knives used in or with RFID printers is one (1) year from the date of shipment, or 500,000 cuts, whichever occurs first.

RFID Overview

Your printer has been engineered to program (encode) an RFID (Radio Frequency Identification) label (commonly called "RFID tags") before the label's format is printed. RFID tags contain an embedded RFID inlay (chip and antenna).

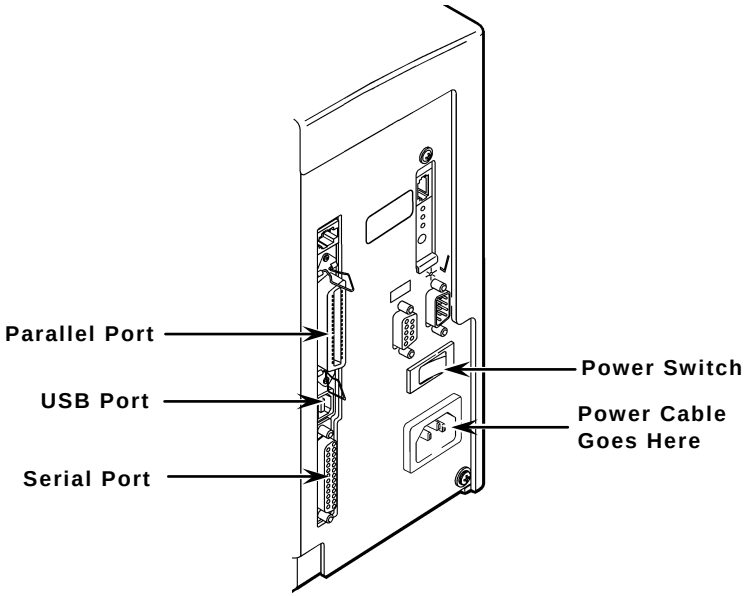
RFID is only available using die cut or black mark supplies. Linerless supplies are not currently supported. The RFID printer is also capable of printing standard (non-RFID) supplies.

The printer supports Class 1 Generation 2 (C1Gen2) protocol encoding.

Connecting the Cables

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

1. Review the safety information in the *Regulatory Compliance* document included with your printer.
2. Plug the power cable into the socket. Plug the other end of the cable into a grounded electrical outlet.
3. 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 (9600, N, 8, 1, DTR). Set the communication values on the printer to match those at the host.
   The printer also has a USB (Universal Serial Bus) version 2.0 communications port, which is compatible with version 1.1. Drivers are available on our Web site for a variety of operating systems.



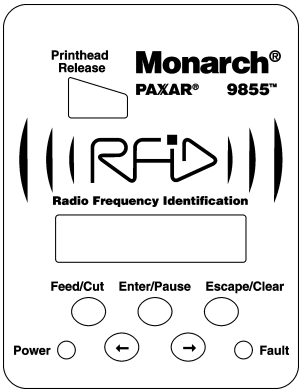
4. Turn on the printer. Press (I) to turn on and (O) to turn off the printer.

Using the Control Panel

The control panel has a two-line LCD display, two status lights, and five buttons. The control panel displays error codes/messages, and allows you to setup/configure the printer.

Power: The printer shows a steady green light when it is on.

Fault: The printer shows a steady amber light when it is out of labels or ribbon, or when you have a supply jam.



Feed/ Cut: Prints a label in the on-demand mode, feeds a blank label if there is no print job, and prints a label with error information that is useful to your System Administrator if an error is displayed. When the printer is offline, changes the displayed value by one or ten.

Enter/ Pause: Pauses the current print job or resumes a paused print job. Selects the displayed menu item.

Escape/ Clear: When an error is present, clears the error. When a job (batch) is printing, cancels the print job (batch). Enters the offline menu mode or returns the display to the next higher menu.

← Displays the previous menu item.

→ Displays the next menu item.

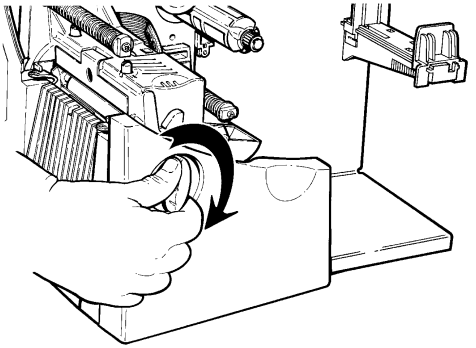
← and → Prints a test label when you press the buttons at the same time. Hold for one second and release.

Loading RFID Labels

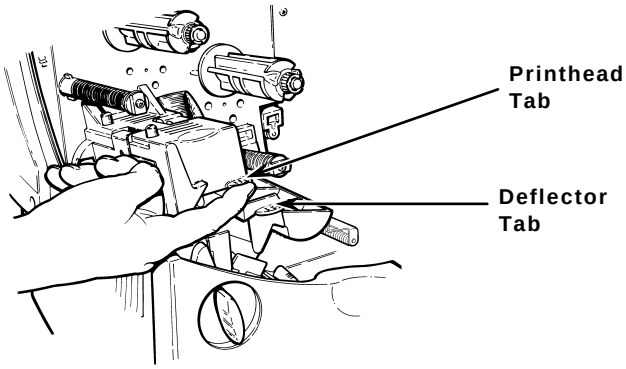
The RFID supplies are sensitive to static electricity and can be damaged by static electricity. Ground yourself by touching some metal, such as the printer's metal base, before handling the supplies.

Refer to the *9855 Operator's Handbook* for additional supply loading instructions if using non-RFID supplies in your RFID printer.

1. Open the cover.
2. Unlock the printhead by turning the retaining latch.

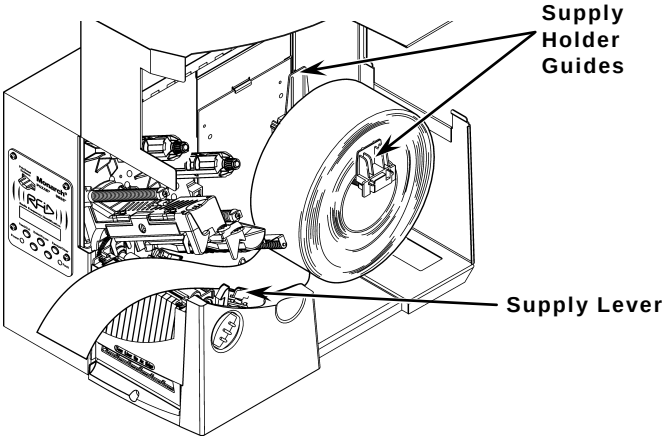


3. Lift the printhead assembly using the printhead tab until the assembly locks into place.
4. Place the roll of supply on the supply holder. For labels, the supply unrolls from the top or the bottom. For tags, make sure the supply unrolls from the bottom, because tag rolls are wound face in. **Do not pick up the printer by the supply holder.**



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

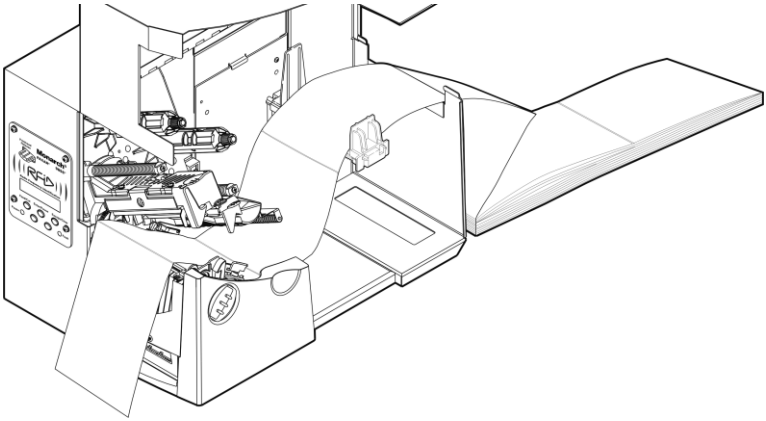
   If you are using fan-fold supplies, place the supply stack behind the printer, label side facing up.



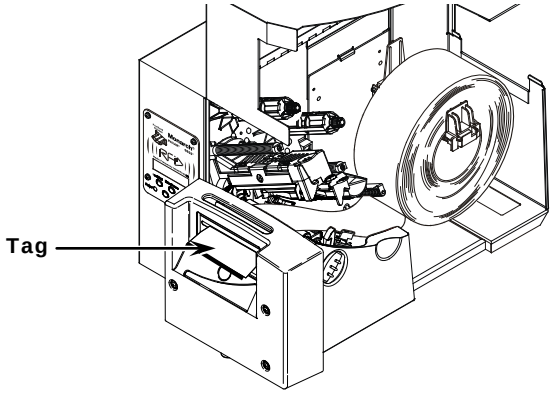
6. Push down on the supply lever to unlock the supply guides.

7. Lay the label strip across the supply guide so that a few inches extend past the front of the printer. Tuck the supply under the nibs and in between the die cut sensor. *Do not feed supply between the supply roller and deflector.*

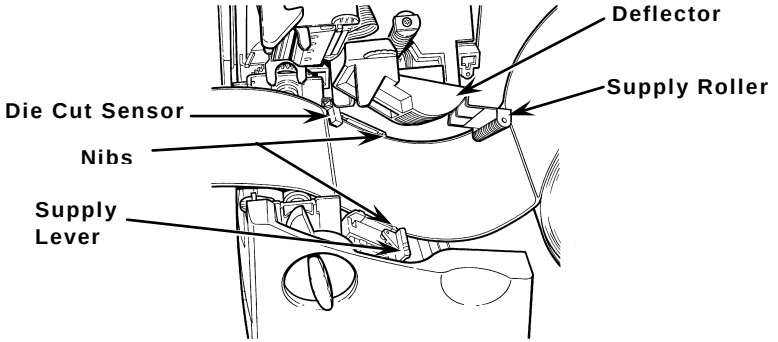
   For fan-fold supplies, lay the label strip over the supply holder and across the supply guide so that a few inches extend past the front of the printer. Tuck the supply under the nibs and in between the die cut sensor.



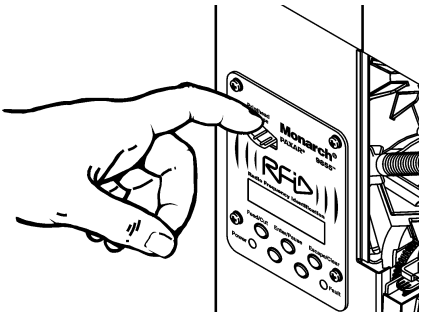
8. **For tag supplies using the optional knife**, feed the supply through the knife. Make sure at least 0.5 inches of supply is past the knife.



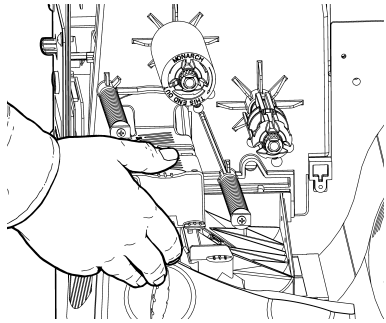
9. Adjust the supply guides so they touch the supply. Push up on the supply lever to lock the supply guides into place.



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



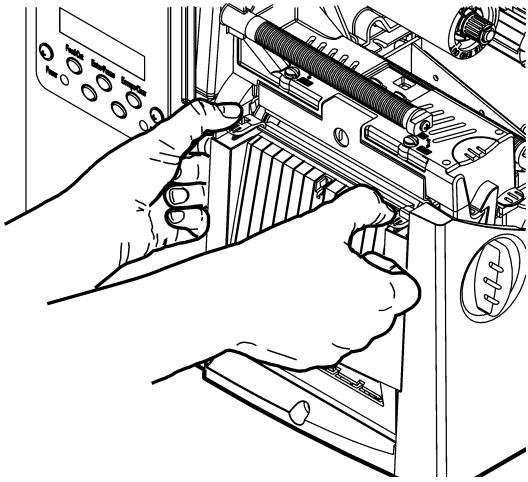
11. Close the printhead by pressing down on the thumb well until you hear it click into place.
12. Close the cover.
13. Press **Feed/Cut** several times to feed at least three labels/tags to properly position the supply and the ribbon.



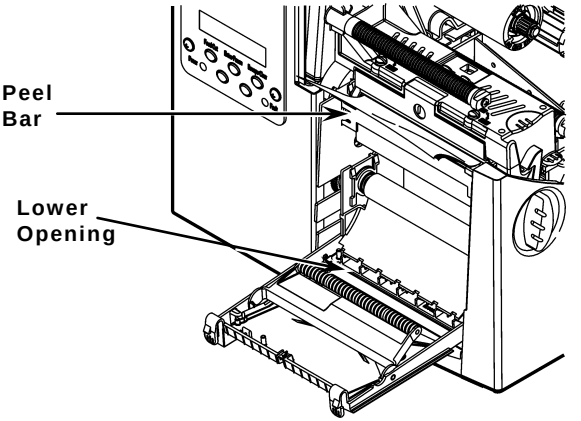
Loading Labels for the Optional Peel Mode

Peel mode (on-demand) must be purchased separately. In peel mode, the printer separates the backing paper from the label. The next label is not printed until the completed one is removed from the printer. Make sure the printer is configured for on-demand mode and the correct supply type is installed. The minimum feed length is 1.5 inches for peel mode. Hold the leading edge of peeled labels when printing labels longer than six inches. You must use non-perforated supplies for peel mode. Follow the steps for loading supplies from the previous section. Then, follow these steps after you close the printhead.

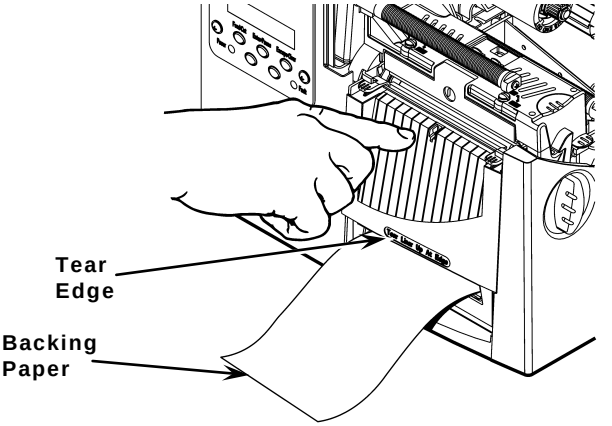
1. Remove the labels from the first 10 inches of the backing paper.
2. Press down on the exit cover tabs to open the exit cover on the front of the printer.



3. Feed the backing paper over the peel bar.



4. Feed the backing paper through the lower opening of the exit cover. Close the exit cover. Pull down on the backing paper to remove any slack.



When removing the backing paper, pull up across the saw-toothed tear edge. Make sure the backing paper tears at the edge.

5. Close the printer's cover.

6. Press **Feed/Cut** several times to feed at least three labels/tags to properly position the supply and the ribbon.

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.

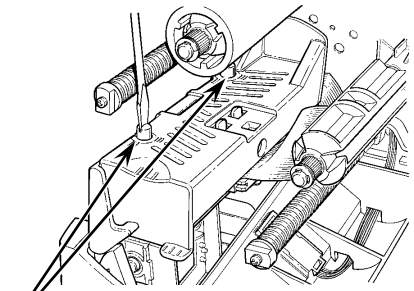
You must adjust both of the knobs to the same position.

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.

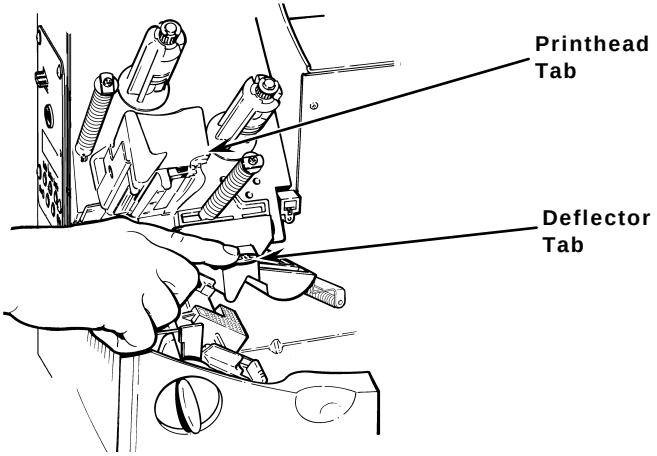
The adjustment is shown in the wide position.



Wide/Narrow Knobs

Loading Ribbon

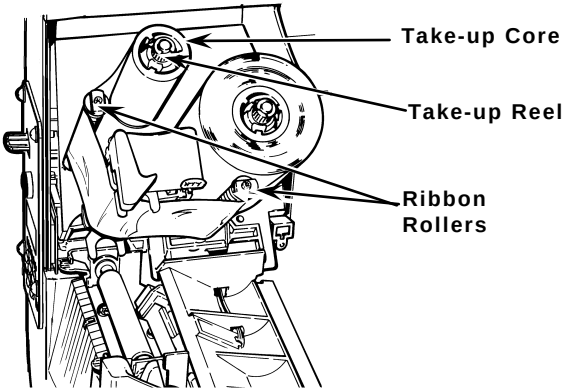
1. Open the cover.
2. Unlock the printhead by turning the retaining latch.
3. Lift printhead assembly using the printhead tab until the assembly locks into place.
4. Push the deflector tab down.



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

Note: Make sure the “This End Out” writing is facing out. The ribbon roll only fits on the reel one way.

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



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.
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.
15. Press **Feed/Cut** several times to feed at least three labels/tags to properly position the supply and the ribbon.

Printing

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

When you turn on the RFID printer, “Monarch Initializing” flashes briefly and then you see “Print Mode Ready.” If an error occurs while the printer is initializing, the error message flashes briefly on the display and then you see “Print Mode Ready.” The printer displays “Not available” when you try to select the RFID menus if the module is inoperative.

The printer accepts RFID and non-RFID batches once you see “Print Mode Ready.”

1. Download a format and a batch. Refer to the *Packet Reference Manual* for information on downloading print jobs.
2. The printer prints a strip of labels or labels in on-demand mode. If printing RFID supplies, you see

   ```
   RFID Printing...
     1 of 10
   ```

   If the RFID tag is not programmable for any reason, the label may print with an overstrike pattern, indicating that it should not be used. Your System Administrator should set the desired Error Action accordingly.

   When printing on non-RFID supplies, you may also see a label with an overstrike pattern. Do not use that label. When using “overstrike” as the Error Action, the data prints on the non-RFID label, but there is no data printed on the RFID label.

   Note: The RFID printer pauses while programming the RFID tag.
3. Remove the printed labels. If the printer will be unused for extended periods of time, we recommend leaving the printhead unlatched.

Clearing Jams

When you are printing and a jam occurs, the **Fault** light on the printer's front panel blinks.

1. Turn off the printer and open the cover and printhead assembly.
2. If necessary, remove the label roll and ribbon.
3. Remove the jammed labels and reload the label roll.
4. Close the printhead assembly and turn on the printer.
5. Press **Feed/Cut** several times to feed at least three labels/tags to properly position the supply and the ribbon.

Cleaning

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

CAUTION: Do not use sharp objects to clean the printhead or touch the printhead. This may damage the printhead and require a service charge.

The rate and frequency at which you print determines how often you must clean the printer. 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 three rolls of thermal transfer/thermal direct supplies or after each ribbon.

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

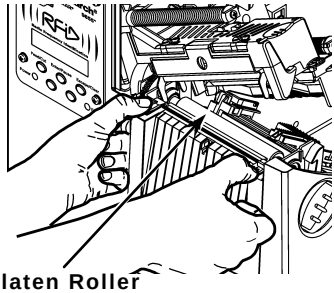
if you frequently receive supply error codes or when you see voids or streaking in the print as shown.

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.

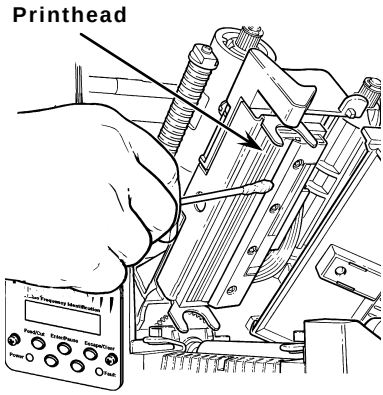
4. Clean the platen roller when you see significant adhesive build-up or a label is wrapped around the platen roller. Use a dry, soft-bristle brush, such as a toothbrush, to clean the platen roller.



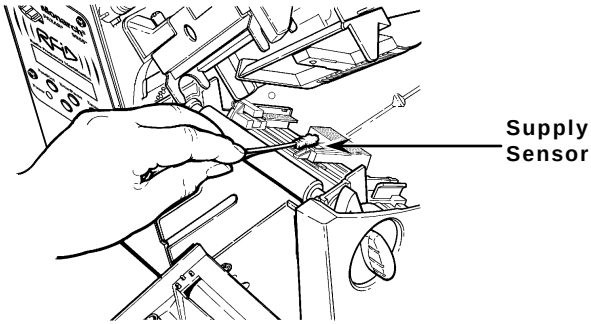
If the brush does not remove all the adhesive, use isopropyl alcohol on the platen roller. Moisten a cotton swab with isopropyl alcohol and run the cotton swab across the platen roller.
Turn the platen roller with your finger to make sure the platen roller is clean all the way around. After cleaning, feed several inches of supply through without printing to remove any remaining isopropyl alcohol.

5. Rub the cotton swab moistened with isopropyl alcohol 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.



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



8. Clean the build-up in the supply path.
9. Let the printer dry before you reload supplies.
10. Push on the exit cover firmly to close it. Both latches will click into place. Close the cover and printhead assembly.
11. Turn on the printer and press **Feed/Cut** several times to feed at least three labels/tags to properly position the supply and the ribbon. Resend your format, batch, and check digit packets.

Troubleshooting

This section lists common problems and their solutions. For more detailed information, refer to the *Operator's Handbook* available on our Web site.

Problem	Action
Error message appears during startup	Turn OFF the printer, wait fifteen seconds and then turn ON the printer. Call Service.
Does not print.	Check supply and ribbon, send a corrected format and batch.
Does not feed.	Set wide/narrow knobs correctly.
Partially printed data.	Clean printhead, send a corrected format packet.
Printing shadows/ smears. Light or Heavy Printing.	Clean printhead, change supply/ribbon, adjust print contrast, check wide/narrow knobs.
Voids in printing.	Clean printhead, change supplies.
Serial bar codes do not scan.	Unlatch printhead when not in use, set print speed to 2.5 IPS, adjust print contrast.
Backing paper is wrapped around platen/peel roller.	Carefully remove the backing paper. Tear backing paper at the tear edge in peel mode.
Blank labels print or 750 errors.	Clean supply sensors.
Printer does not read or program the RFID tag.	See your System Administrator.

Common Errors

If the action does not resolve the problem, call Service.

Error	Action
002	Name must be 1 to 8 characters inside quotes.
005	Supply width is invalid.
018	Code page selection defined in the field is invalid.
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	Delete unused formats or graphics from memory.
410	Parity mismatch.
411	Framing error (baud rate mismatch).
412	Flow control mismatch.
413	Check for a flow control problem.
611	Font, bar code, or density in the batch is invalid.
612	The batch data is missing or invalid.
613	Reference point off supply.
614	Field off supply or invalid character in packet.
703	Calibration error. Load the correct supply type.
704	Supply error. Press **Escape/Clear**. Load supply.
751	Supply error. Press **Escape/Clear**. Load supply.
752	Printer sensed a mark in the wrong place.
753	Printer sensed a mark that is too long.
754	Ribbon jam. Load ribbon.
755	Printhead is open. Close the printhead.
756	Load supplies.
757	Load supplies. Press **Feed/Cut**.
758	Check for a label jam or reload supplies.
763	Waiting to dispense label. Press **Feed/Cut**.
765	Less than 8 bad dots in format area. Press **Escape/Clear**.
768	More than 8 bad dots in format area. Replace or connect printhead.

RFID Errors

See the *RFID Application Notes* for more information. Check with your System Administrator about the format. The printer does **not** recalibrate (feed a blank label) after an RFID error.

Error	Description/Action
052	Data type in the RFID Data Field is invalid.
053	The starting block in the RFID Data Field is invalid.
226	Rule Record Line xx. Upload device is invalid.
228	Memory class identifier is invalid.
229	Byte code is invalid.
230	Lock code is invalid.
715	Invalid data length/data mismatch in the RFID Data Field. This error also occurs when there is an error in the Expanded C1Gen2 fields.
732	RFID Hardware Error. A non-RFID printer received a format containing an RFID Data Field.
740	Command, hardware, or memory allocation error.
741	RFID tag missing - not found in the area inside the printer where the RFID tag is programmed. Check supply loading. Make sure the RFID tag was not moved out of the programmable range.
742	Tag erase failed. The RFID tag was found in the RF Field, but could not be erased.
743	Program tag failed. The RFID tag was found in the RF Field, but could not be programmed.
744	Tag locked fail. The RFID tag is unable to be programmed because it is already locked.
746	Lock tag fail. The RFID tag has not been locked to prevent reprogramming.
747	Time out failure. An RFID command (read, program, etc.) has failed to complete in the maximum amount of allowed time.
748	Invalid data length/data mismatch from RFID interrogator module.
749	RFID Verify Fail. The RFID verification process failed after writing (programming) tag.