RF LINK OPERATING INSTRUCTIONS

The Monarch® RF link 7400™ radio frequency (RF) device provides a cable-less solution to communications between the following Symbol® data collection terminals:

- PDT 3100 series
- LDT/LRT 3800 series
- PDT 6800 series

and the following Monarch® printers:

- Rascal®
- Sierra Sport™ 2
- Renegade® 4

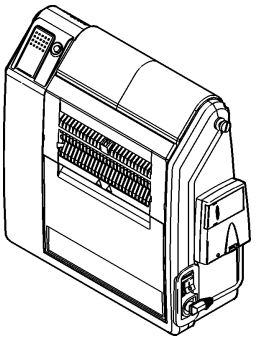
RF link has one module for each unit (printer and terminal). The units can communicate up to 3 meters apart.

Unpacking RF link

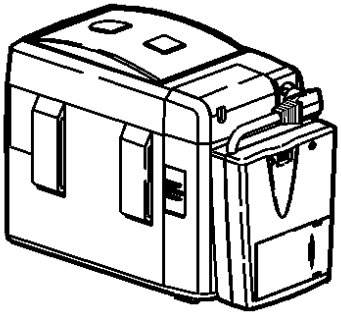
When you unpack RF link, save the box and packing material. You need these items if you return RF link to Monarch for service. See "Troubleshooting" for more information.

Module/Unit Diagrams

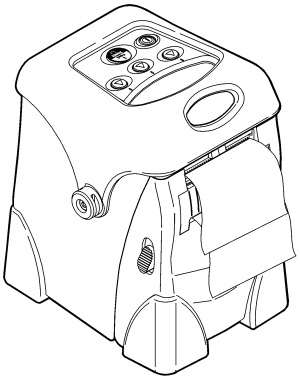
Following are diagrams of the available units with RF link modules attached.



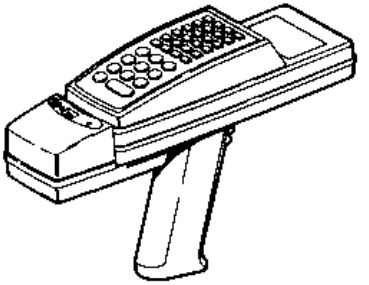
Renegade 4 Printer (also available with an internal module)



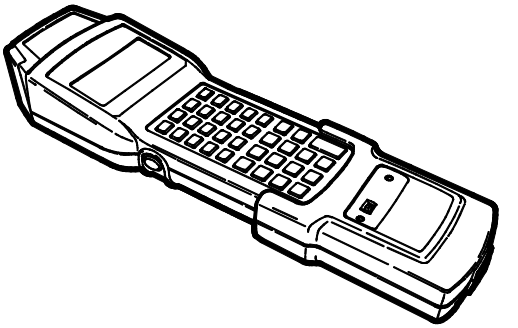
Rascal Printer



Sierra Sport 2 Printer (internal module only)



LDT/LRT 3800 and PDT 6800



PDT 3100

Installing RF link Modules

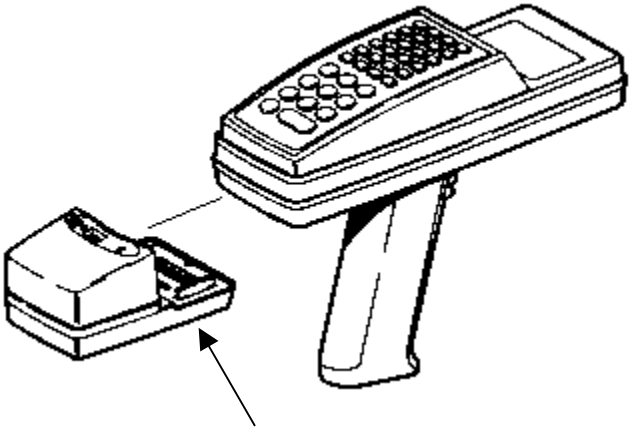
The modules fit differently on their units because of each unit's unique features. Therefore, the module installation instructions differ with each unit.

LDT/LRT 3800 and PDT 6800

To install the RF link module onto the LDT/LRT 3800 and PDT 6800:

1. Insert a 9-volt (PP3) battery in the module. See “Inserting Batteries” for more information.

2. Squeeze both sides of the module and snap it into the slots beneath the terminal (below the keyboard).



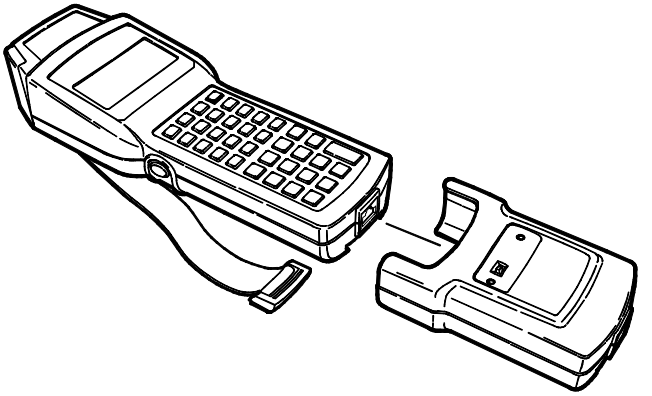
Squeeze here (and on other side).

PDT 3100

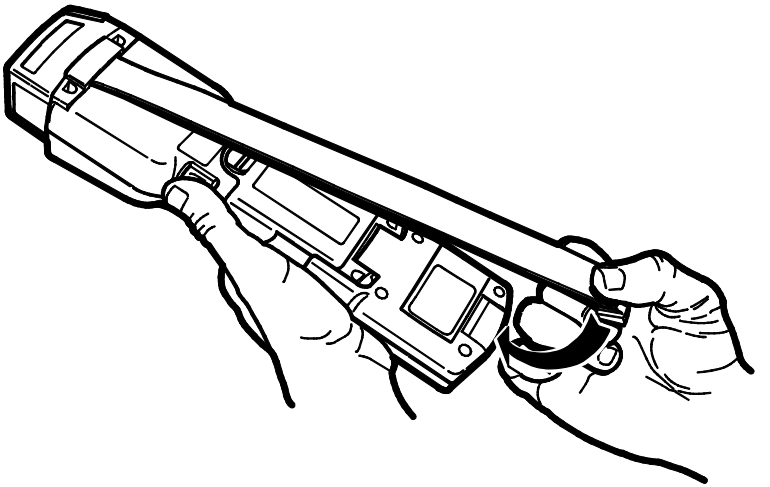
To install RF link onto the PDT 3100:

1. Insert a 9-volt (PP3) battery in the module. See “Inserting Batteries” for more information.
2. Hold the terminal in your hand so the keypad is facing down and the display is away from you.
3. Pull on the elastic hand strap and unlatch it from the slot just above the open connector.
4. Turn the terminal over so the keypad is facing up.
5. Hold the module in your other hand so the LEDs are facing up and the open connector is close to you.

6. Insert the module onto the end of the terminal.



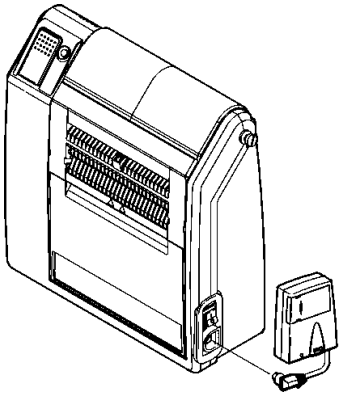
7. Turn the module/terminal unit over. Then, latch the end of the elastic hand strap into the slot above the open connector (at the end of the module).



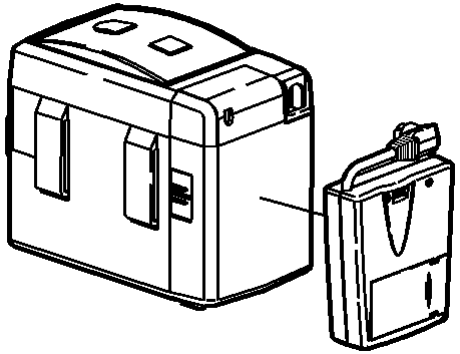
Printers

To install external RF link modules onto the printers:

1. Insert a 9-volt (PP3) battery in the module. See “Inserting Batteries” for more information.
2. Attach VELCRO® to the serial port sides of the printer and the external module. Place the VELCRO so the cable on the module can reach the serial port.
3. Using the VELCRO, attach the module to the printer. Note that on the Renegade 4 printer, you must place the module so the cable faces down. On the Rascal printer, place the module so the cable faces up.



9490 Printer



9450 Printer

4. Insert the cable from the module into the printer’s serial port.

Inserting Batteries

To insert a battery into the external RF link module:

1. Carefully slide the battery door (located on the bottom of the terminal module and the non-VELCRO side of the printer module) to the right. You will hear a click.
2. Open the door to the left. It does not detach from the module.
3. Keeping the door pulled out, insert the battery in the compartment. Orient the battery so the top faces right, and the + contact (the smaller one) faces up.
4. Close the door.

Linking RF link Units

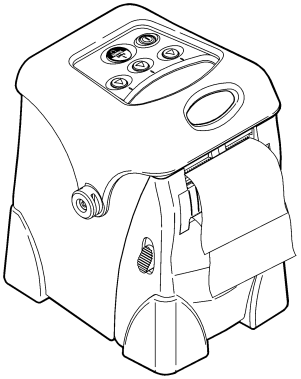
Link procedures vary, depending on the printer you are using and whether the module is internal or external.

Before linking any units, set the communication parameters on the data collection terminal to:

- DTR flow control
- 8 data bits
- No parity
- 9600 baud
- 1 stop bit.

See the data collection terminal's documentation to learn how to set these parameters.

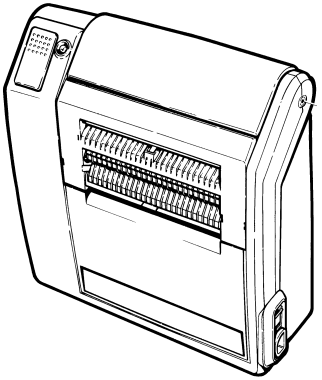
Sierra Sport 2 Printers



To link a Sierra Sport 2 printer to a data collection terminal:

1. Turn off the printer and the terminal's RF link module.
2. Turn on the printer.
3. Turn on the terminal's RF link module.
4. When a link is established, the RF link module's LED blinks, and **RF Ready** appears on the printer's screen.

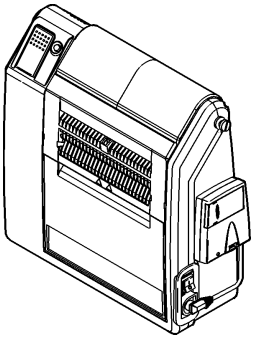
Renegade 4 Printers with Internal Modules



To link a Renegade 4 printer (with an internal RF link module) to a data collection terminal:

1. Turn the printer, terminal, and the RF link modules off.
2. Turn on the printer. The green LED on the side of the printer turns on.
3. Wait for the printer's LED (near the trigger) to blink once.
4. Turn on the terminal's RF link module. The green LED turns on. Then, the LEDs on both modules start blinking.
5. Turn on the terminal.

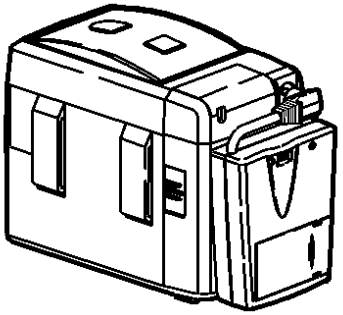
Renegade 4 Printers with External Modules



To link a Renegade 4 printer (with an external RF link module) to a data collection terminal:

1. Turn the printer, terminal, and the RF link modules off.
2. Turn on the printer.
3. Wait for the printer's LED (near the trigger) to blink once.
4. Turn on the printer's RF link module. The green LED turns on.
5. Turn on the terminal's RF link module. The green LED turns on. Then, the LEDs on both modules start blinking.
6. Turn on the terminal.

Rascal Printers



To link a Rascal printer to a data collection terminal:

1. Turn the printer, terminal, and the RF link modules off.
2. Turn on the printer.
3. Turn on the printer's RF link module. The green LED turns on.
4. Turn on the terminal's RF link module. The green LED turns on. Then the LEDs on both modules start blinking.
5. Turn on the terminal.

Operating RF link

To operate RF link:

1. Initialize the printer/terminal connection (see "Linking RF link" for more information).
2. Use the printer and the terminal as you normally would.

NOTE: You can walk out of the 3-meter range and scan up to 4 items. When you walk back into the 3-meter range, the printer prints those labels.

There are no software configurations or commands to change the operating parameters.

NOTE: Internal RF link modules have their own communications port. If you are using an internal module, do not use the printer's external port.

Also, there are no problems using multiple printer/terminal pairs in the same area. Linking enables the two modules to talk only to each other during that link. Modules can be linked differently at other times.

Powering RF link

RF link runs on batteries, although in certain cases, the printer can power it alone.

Battery Life

Alkaline batteries run for approximately 120 hours and rechargeable batteries run for approximately 14 hours. These numbers vary depending on the size of transactions and the number of times a message is re-sent.

Printer Power Source

If the printer has +5v available on the serial connector (refer to the Operator's Handbook for the printer), it can power the RF link module. The correct wiring harness allows for this feature. The internal RF link module (which is factory-installed) uses the printer supply voltage for operation.

Removing RF link Modules

As mentioned in the installation section, the modules fit differently on their units because of each unit's unique features. Therefore, the module removal instructions also differ with each unit.

LDT/LRT 3800 and PDT 6800

To remove the module from the LDT/LRT 3800 and PDT 6800:

1. With one hand, hold the terminal upside down so your palm covers the keypad.
2. Grab the module with your other hand.

3. Squeeze both sides of the module, and firmly pull the module straight up. You will hear a loud snap when it comes apart from the terminal.

NOTE: This step may be difficult the first few times you try it.

PDT 3100

To remove the module from the PDT 3100:

1. Pull on the elastic hand strap and remove the latch from the slot.
2. Let go of the hand strap and gently pull the module off the terminal.
3. Latch the hand strap into the slot at the end of the terminal.

Printers

To remove the modules from the printers, gently remove the cable from the port, and pull the module away from the VELCRO on the side of the printer.

Troubleshooting

If you have problems getting the terminal and printer to communicate via RF link, follow this flowchart.

Because data is handled in a different manner with an RF unit (as opposed to using a cable) there may be some differences in processing time. This situation depends on your data.

NOTE: Internal RF link module's yellow LED indicates a fault occurred. The symbol next to that LED is:

If the printer and terminal are not communicating, try each of the following items:

- Change or recharge the batteries.
- Correct the orientation of the batteries in the compartment.
- Re-link the printer and terminal.
- Move the modules closer than three meters apart.
- Move the terminals and the printers around to find the best relative position between the two.
- Swap in new printers and terminals to narrow the problem down to a particular unit.

Returning RF link to Monarch

If you determine there is still a problem with your RF link modules after you perform the troubleshooting procedure, call Monarch at the phone number listed at the end of these instructions. The person you speak with may decide that you must return RF link to Monarch. When you send it back, use the original packaging (box and packing material) and include these Operating Instructions.

Use the following address:

Monarch ERC
200 Monarch Lane
Door 39
Miamisburg, OH 45342

The warranty does not apply if you do not follow these instructions.

FCCID: GU67400-433

Canadian Certification Number: 15021021494A

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.

The Monarch® RF link 7400™ radio frequency device is a cable-less solution for communications between data collection terminals from Symbol® Technologies, Inc. and printers from Monarch Marking Systems, Inc. This solution uses the PDT 3100 series, LDT/LRT 3800 series, and PDT 6800 series data collection terminals and the Rascal® 9450™, Sierra Sport™ 2 9460™, and Renegade® 4 9490™ printers.

This solution is available for use in the United States, Canada, and EC countries in Europe.

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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For supplies, service, or assistance call:

TOLL FREE:
1-800-543-6650 (In the U.S.A.)
1-800-263-4650 (In Canada)