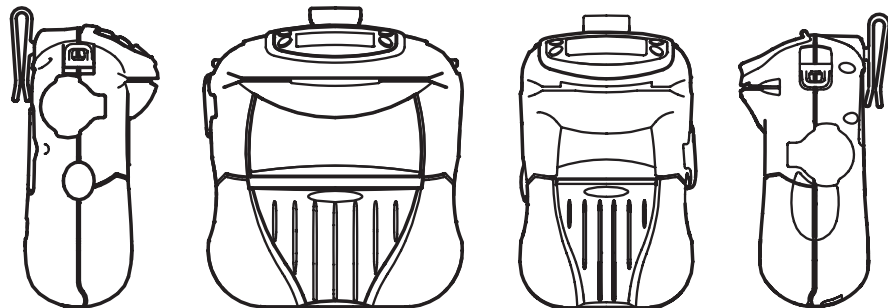




## Introduction

Thank you for choosing one of our Zebra RW Series™ Mobile Printers. These rugged printers will become productive and efficient additions to your workplace thanks to their innovative design. Because they are made by Zebra Technologies you can be assured of world-class support for all of your bar code printers, software, and supplies.



RW 420	RW 220
Media width: 2 in. [51 mm] to 4.12 in. [105 mm]	Media width: 1 in. [25.4 mm] to 2.37 in [60 mm].
L: 7.4 in. [188 mm]* W: 6.3 in. [160 mm] H: 3.7 in. [94 mm] max.* *w/ belt clip & card reader option	L: 6.8 in. [173.6 mm]* W: 4.4 in.[111.8 mm] H: 3.7 in. [94.1 mm]* *w/ belt clip & card reader option

This document provides an easy reference for operating and maintaining the RW Series of Mobile Printers.

Complete and current documentation for each model printer is provided by the RW Series User Guide available on the Internet at: [www.zebra.com/manuals](http://www.zebra.com/manuals).



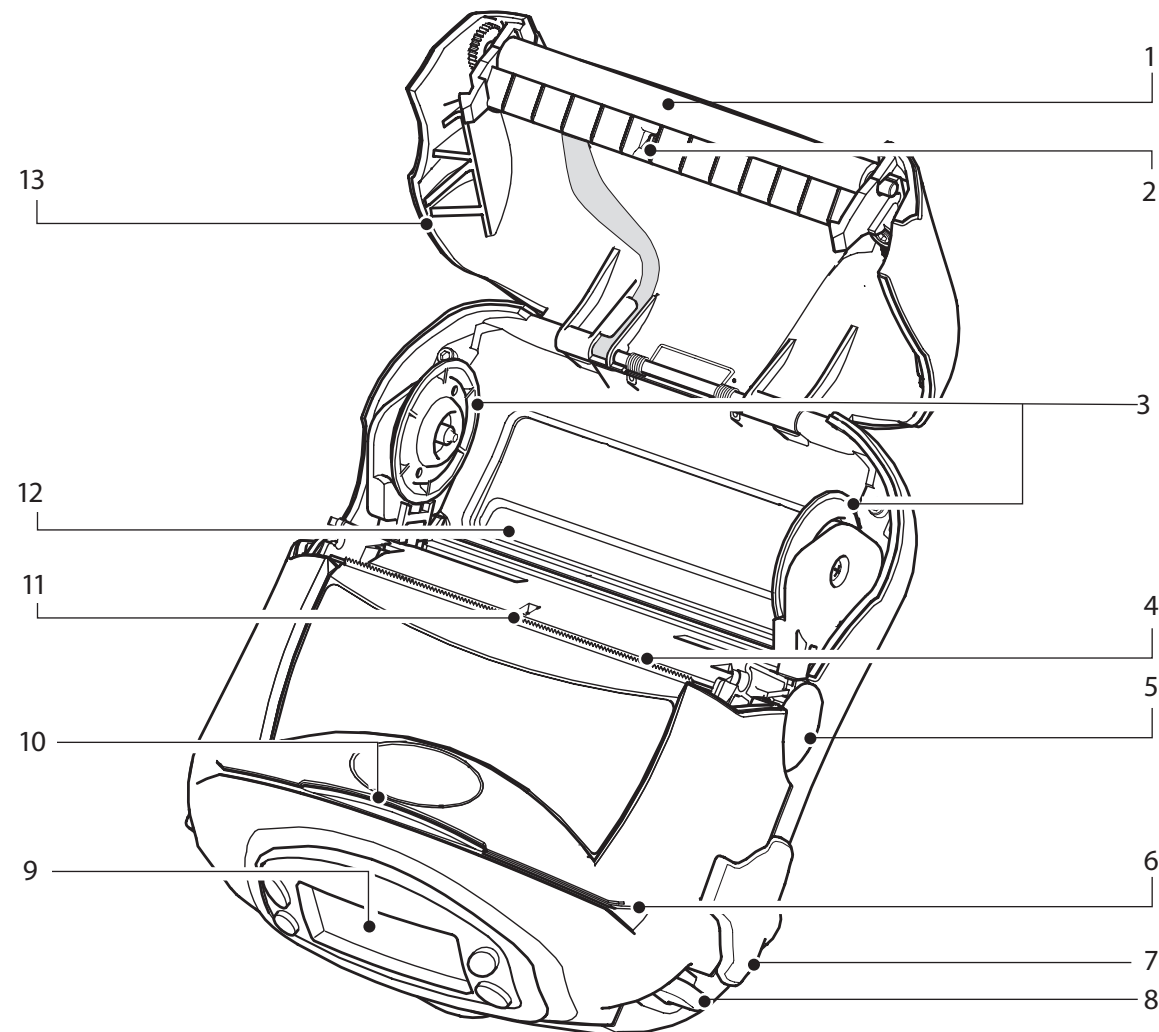
Always refer to the Important Safety Information data sheet shipped with each printer and the Technical Bulletin shipped with each battery pack. These documents detail procedures to ensure maximum reliability and safety while using this printer.



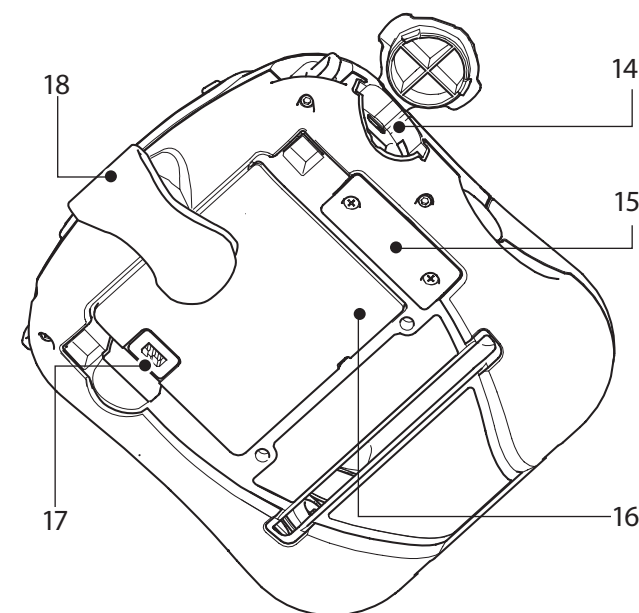
**BSR idware GmbH**  
Jakob-Haringer-Str.3  
A-5020 Salzburg  
Web: [www.bsr.at](http://www.bsr.at)

## RW Series Overview

(RW 420 Illustrated)



1. Platen Roller
2. Bar Sensor
3. Media Support Disks
4. Printhead
5. Latch Release Button
6. Magnetic Stripe Reader (MSR) Slot
7. Communications Port Door
8. "D" Rings
9. Control Panel
10. Smart Card Slot
11. Gap Sensor
12. Bottom Media Feed Slot
13. Media Cover



14. Communications Port
15. Docking Connector Cover
16. Battery
17. Battery Charging Receptacle
18. Belt Clip

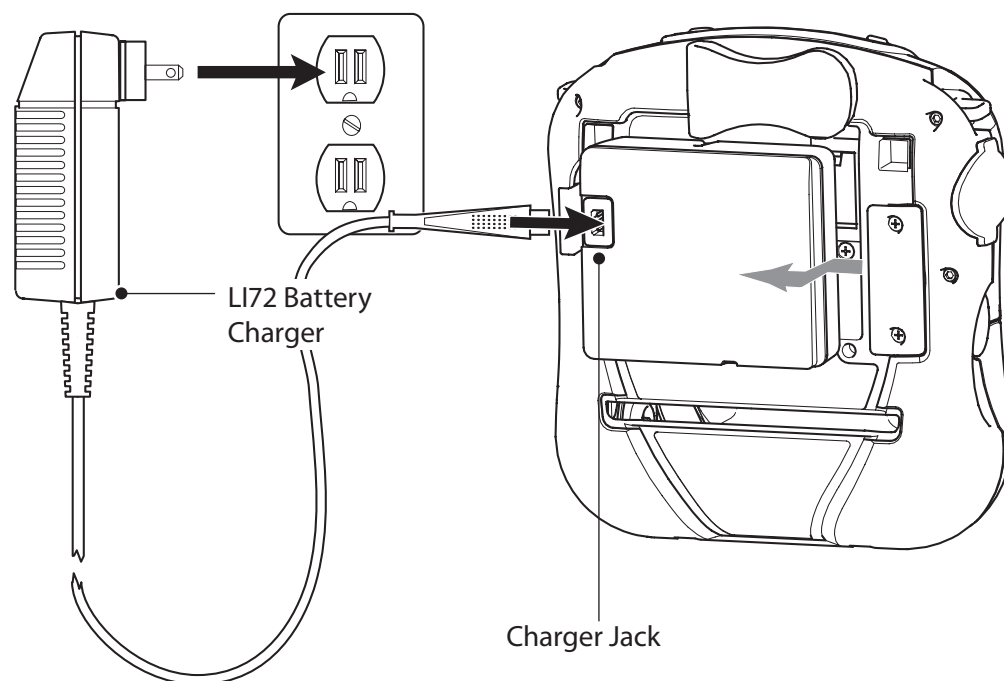
## Charge the Battery



Batteries are shipped uncharged. Remove protective shrink-wrap and labels from new battery packs and allow them to charge completely prior to initial use.



Do not charge the battery while using the printer!  
Charge the battery pack when removed from the Printer for best results.

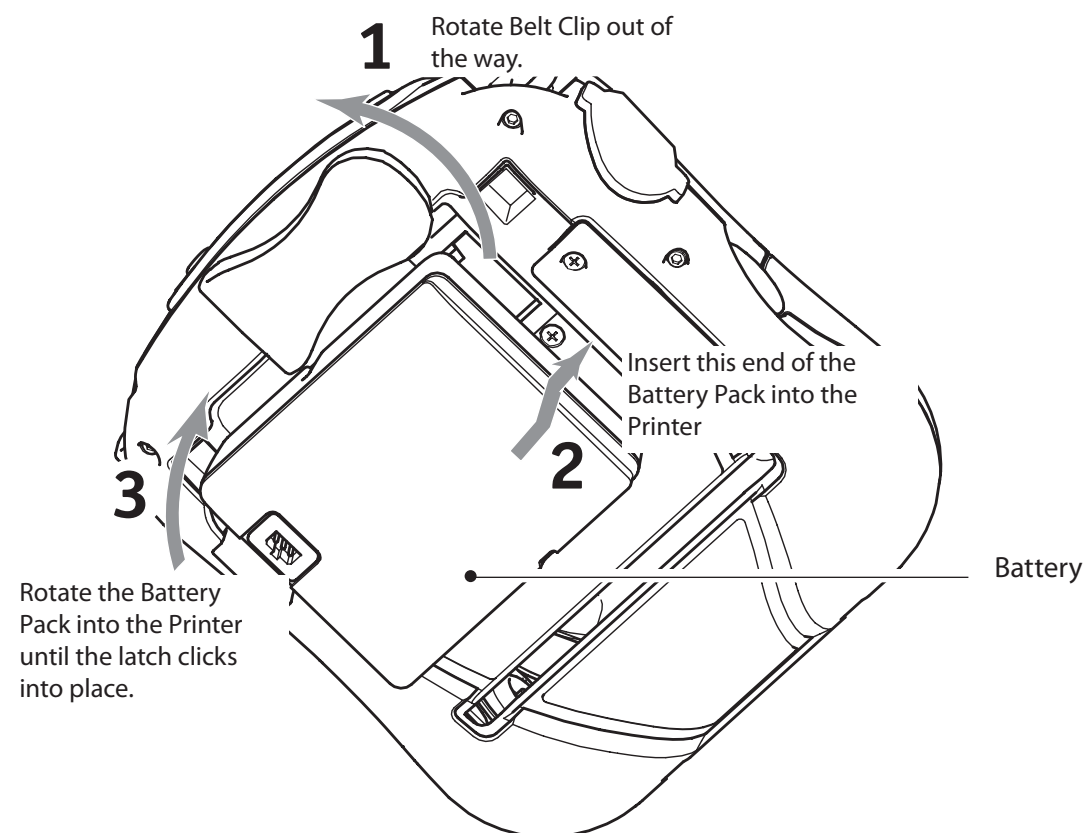


### Using the LI72 Single Charger

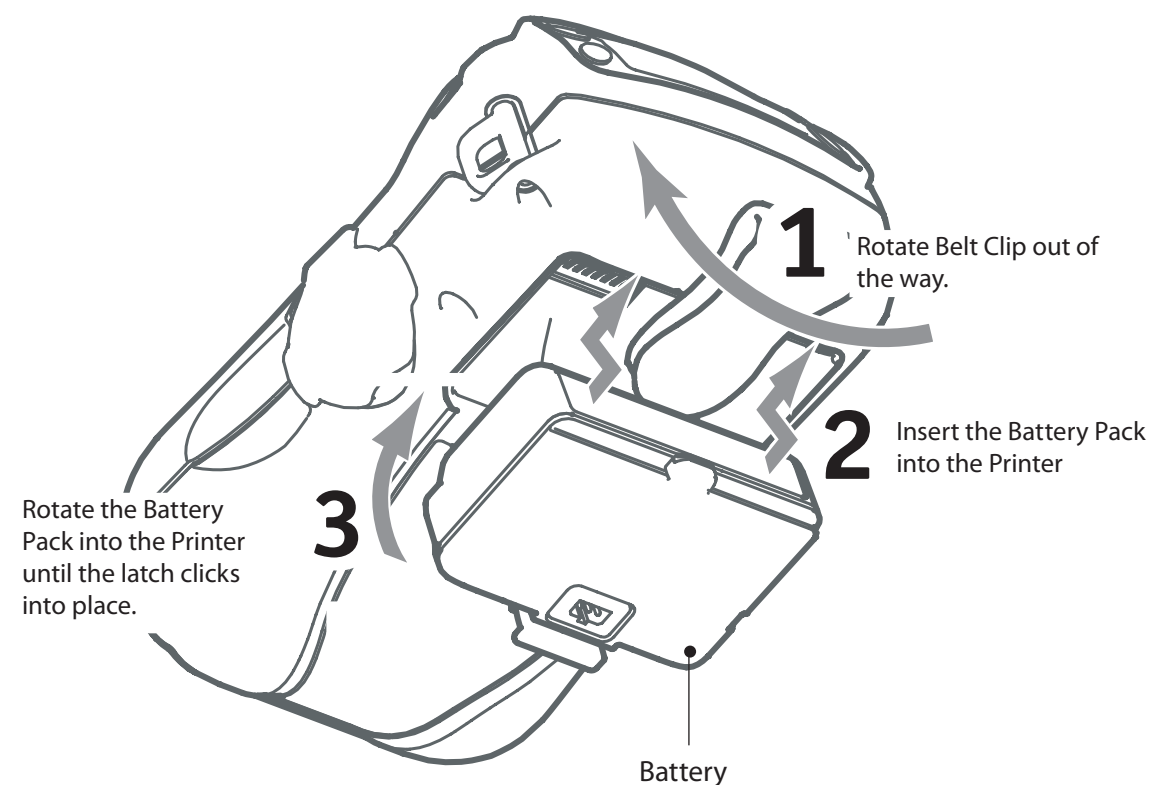
Insert the plug from the charger cable into the battery pack's charger jack. Plug the charger into the A.C. outlet. The light on the front of the charger will indicate the battery pack's charge status.

Consult the RW series User's Guide available at [www.zebra.com/manuals](http://www.zebra.com/manuals) for complete information on using the various versions of the Model LI72 Single Charger.

## Installing the Battery



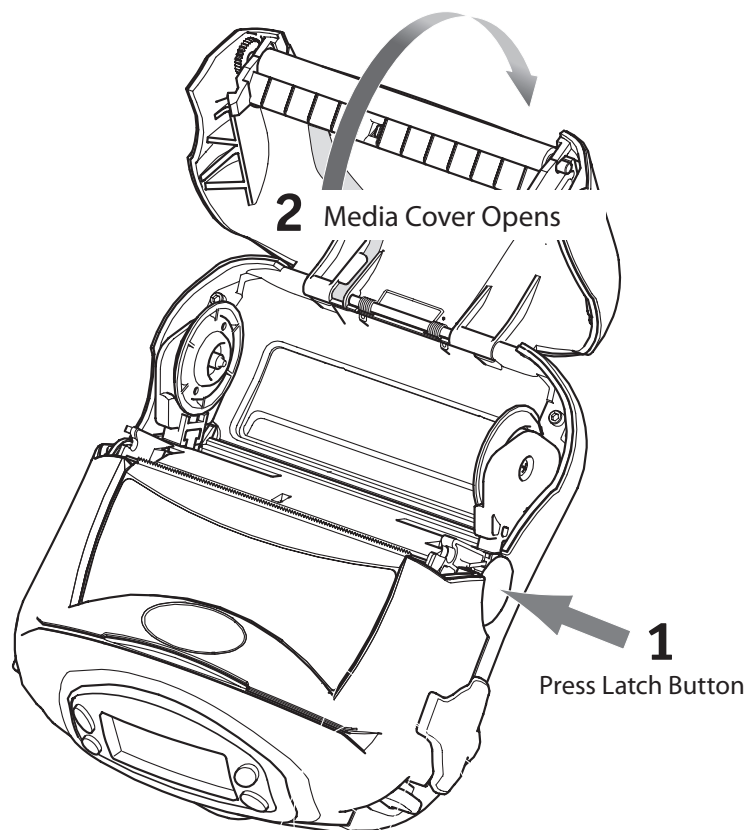
RW 420 Battery Installation



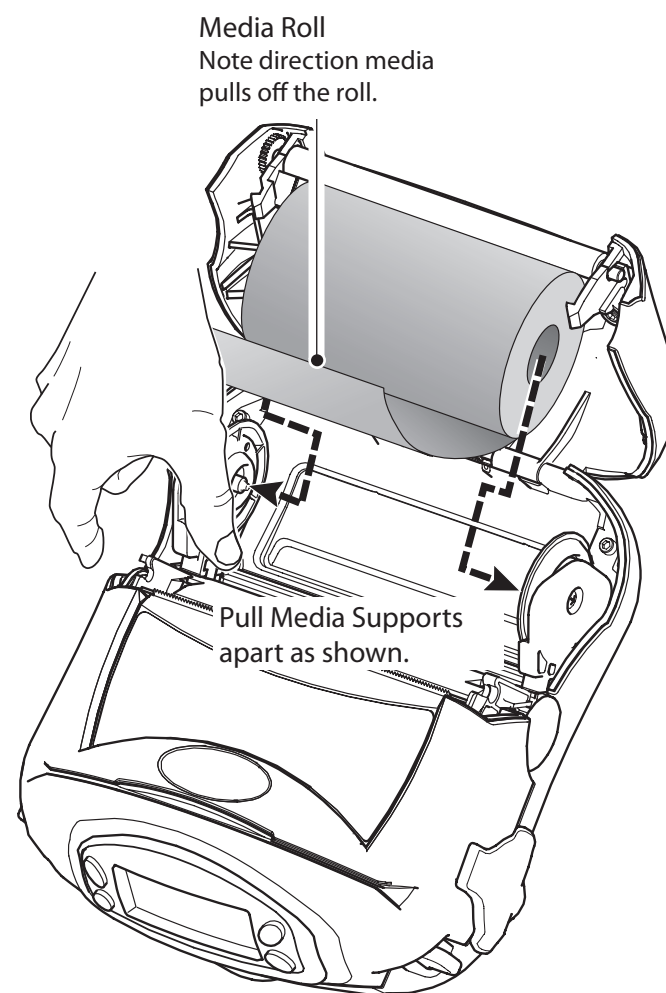
RW 220 Battery Installation

Section Continues

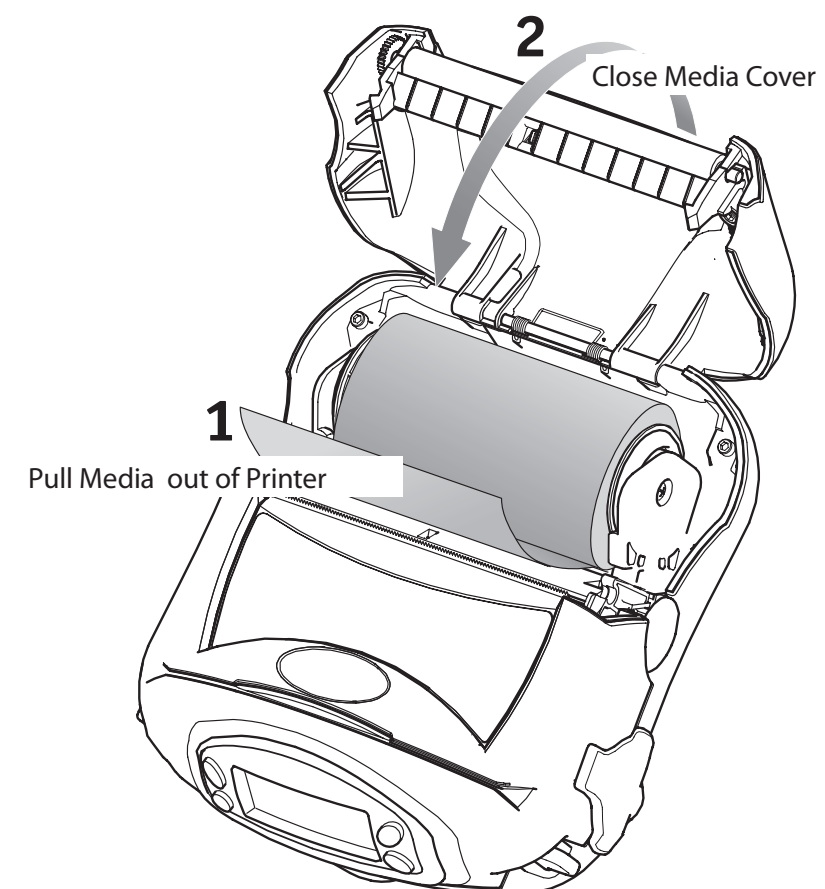
## Loading Media



Open the Media Cover



Load the Media Roll



Close the Media Cover

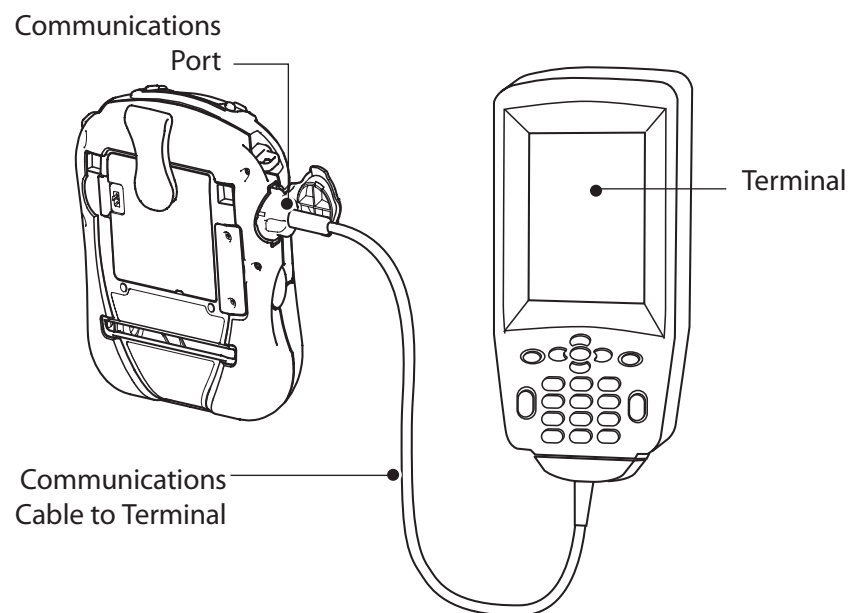
Section Continues



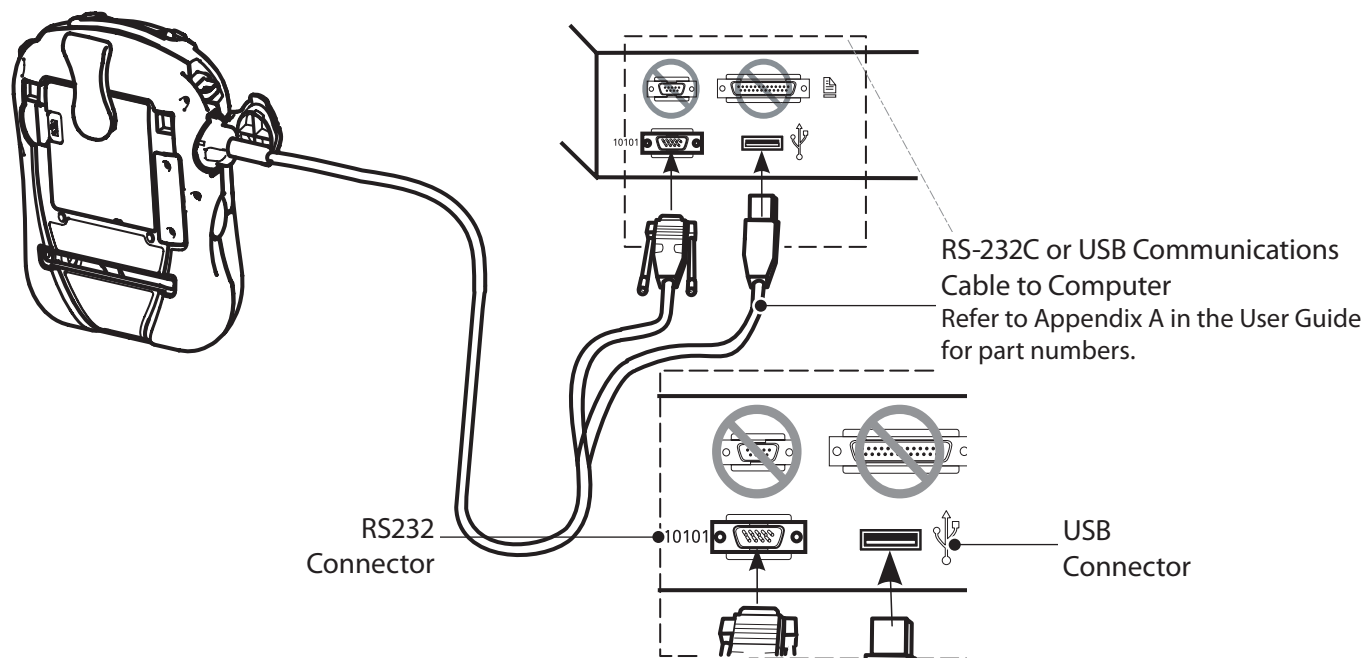
## Connect the Printer

### Connect The Printer With a Cable

You can connect your printer to a terminal or a PC using either RS232C or USB protocols. Refer to the Label Vista™ application available on the RW product CD or at [www.zebra.com/software](http://www.zebra.com/software) for help on setting up communications with your printer.



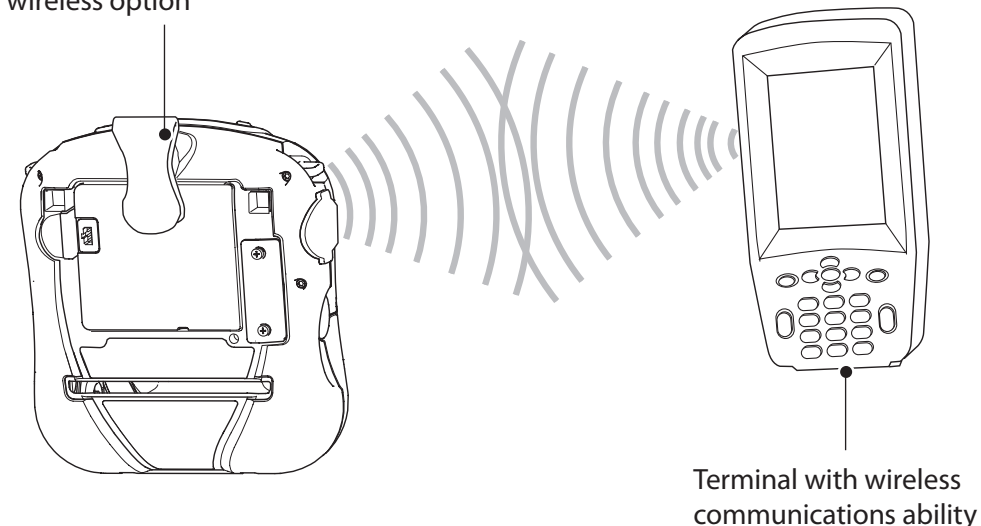
### Cable Communications with a Terminal.



### Cable Communications with a P.C.

If you are using a USB cable to connect to a PC you may need to install the Zebra Universal Driver available at: [www.zebra.com/drivers](http://www.zebra.com/drivers).

RW Series Printer with wireless option



### Connect the Printer by Infrared (IR) or Radio

If your RW series printer has the optional IR module, you can make wireless line-of-sight connections to other IR equipped devices using the standard IrDA protocol.

If your RW series printer has a radio option, you can connect wirelessly to either a terminal or a wireless network (WLAN.) Refer to the Mobile Printer Wireless Configuration Guide available on the product CD or at [www.zebra.com/utilities](http://www.zebra.com/utilities) for help on setting up wireless communications with your printer.

## Printer Controls

### LCD Keypad

**FEED BUTTON**

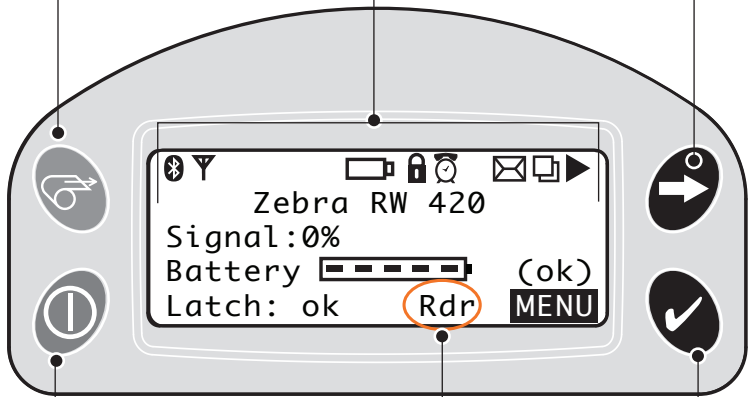
Press to advance the media one blank label or a software determined length of journal media.

**SCROLL BUTTON**

Press to scroll through the menu choices on the LCD.

**PRINTER STATUS ICONS**

Indicates the status of several Printer functions.



**POWER BUTTON**

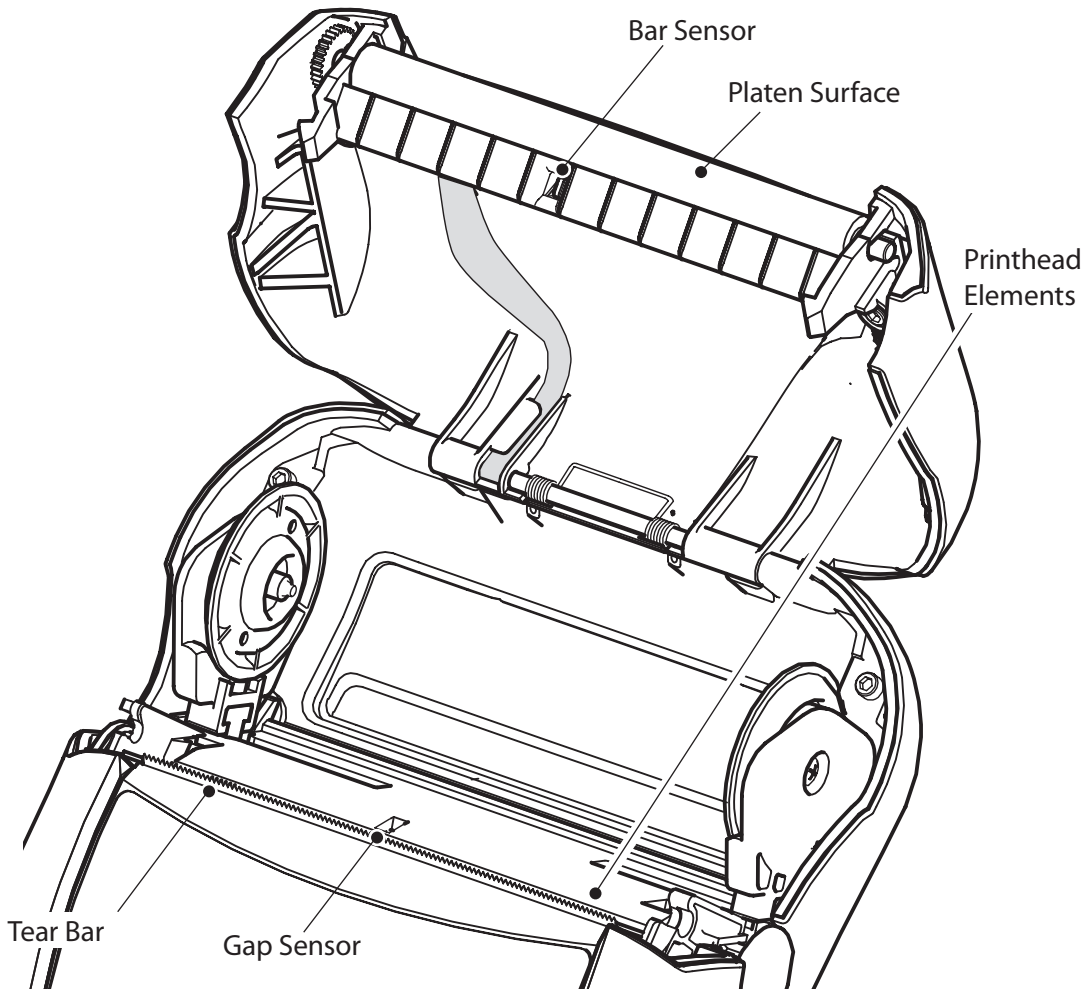
Press to turn unit on. Press again to turn unit off.

**SELECT BUTTON**

Press to select a menu choice on the LCD.

**MAG/SMART CARD READER INDICATOR**  
When "RDR" is displayed the Mag Stripe/ Smart Card reader is enabled.

## Cleaning the Printer



**Caution** • To avoid possible personal injury or damage to the Printer, never insert any pointed or sharp objects into the Printer.

Area	Method	Interval
Printhead	Use a Zebra cleaning pen or 70% isopropyl alcohol on a cotton swab to clean the print elements from end to end (the print elements are located in the thin gray line on the printhead).	After every five rolls of media (or more often, if needed)
Platen	Rotate the platen roller and clean it thoroughly with the cleaning pen or 70% isopropyl alcohol and a cotton swab.	
Tear bar	Clean thoroughly with the cleaning pen or 70% isopropyl alcohol and a cotton swab.	
Exterior	Water dampened cloth	As needed
Interior	Brush/air blow. Ensure the Bar Sensor and Gap Sensor windows are free of dust.	After every five rolls of media (or more often, if needed)

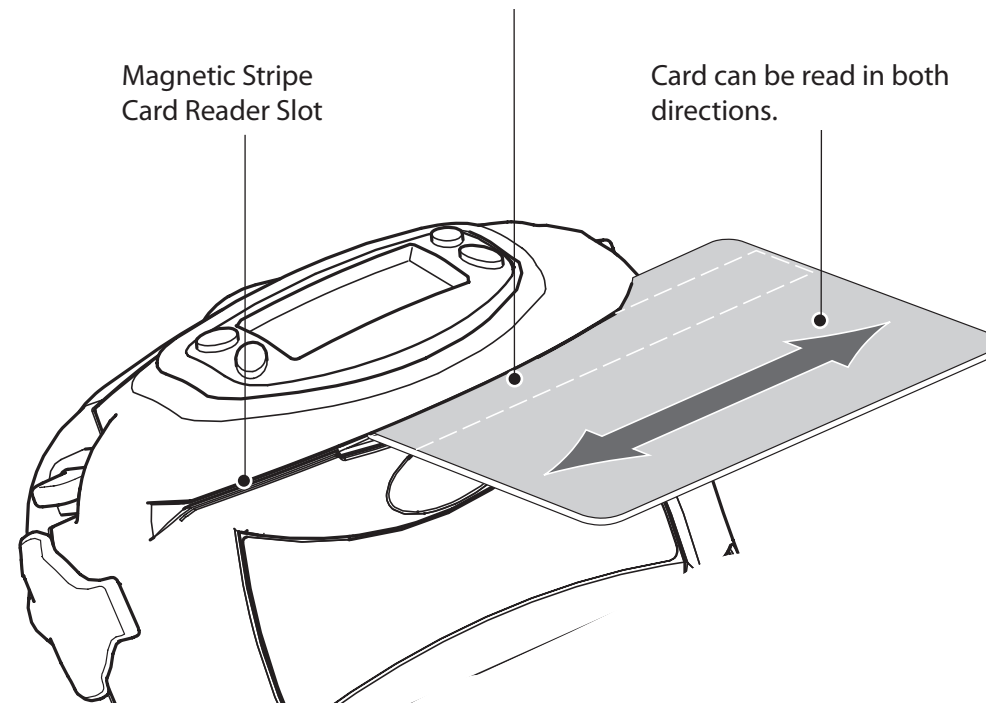
Section Continues

## Using the Magnetic Stripe Reader



The Magnetic Stripe and Smart Card Readers are an optional feature of the RW series. Your printer may be configured without them.

Place the Magnetic Stripe Card in the reader slot with the magnetic stripe facing the bottom of the printer as shown.



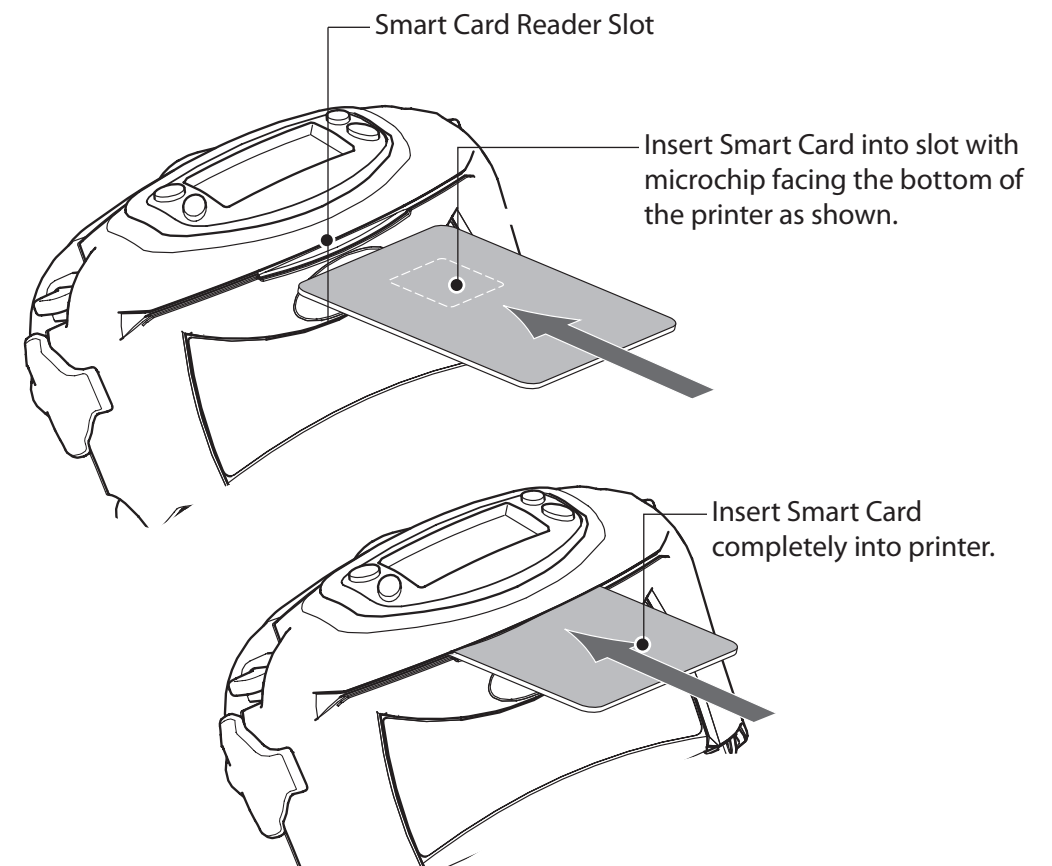
The status of the Magnetic Stripe Reader (MSR) is indicated in three possible ways:

- Reader status is displayed on the Main Menu LCD
- The LCD backlight flashes to indicate status (3 flashes = enabled, 2 flashes = disabled).
- Chimes indicates the reader status (3 chimes = enabled, 2 chimes = disabled).

The MSR is used as follows:

1. When the reader is enabled, place the card into the reader slot as shown above. The magnetic stripe must face the bottom of the printer, and be inserted into the card reader slot as shown above.
2. Slide the card through the slot in either direction. Depending on the application software, the printer will sound one chime when a scan is successful.
3. If the card did not read, slide it back through the slot in the opposite direction.

## Using the Smart Card Reader

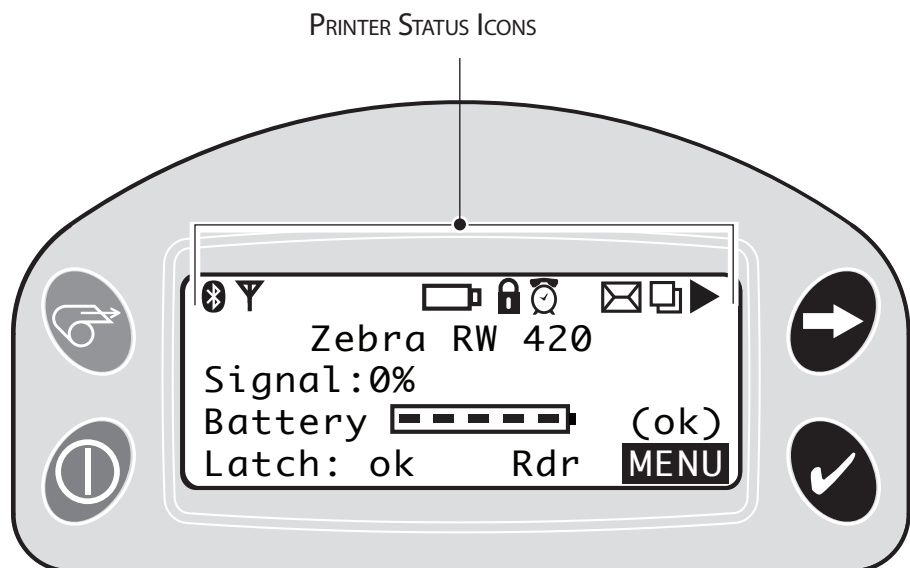


The optional Smart Card reader is used as follows:

1. The LCD will display "RDR" to indicate the Smart Card Reader is active. (Some reader applications may flash the display backlight and/or chime three times to indicate the reader status is "ready.") The printer is now acting only as a Smart Card reader connected to the host terminal; all other printer functions are suspended.
2. Insert the card into the reader slot as shown above. The microchip imbedded in the card must be oriented facing the bottom of the printer and must be completely inserted into the reader slot to scan successfully.
3. Depending on the application software, the printer will sound a chime after a successful transaction.
4. After the card has been successfully read the printer can resume normal printing operations and the Smart Card can be removed.

## Troubleshooting LCD Control Panel

The top of the display shows icons indicating various printer functions. Check the icon’s status and refer to the referenced Troubleshooting topic on the following pages.



Icon	Status	Indication	Ref. to Topic # on next page
	On	Bluetooth Link established	n/a
	Off	No Bluetooth Link	5
	On	Bluetooth link established	n/a
	Off	No Bluetooth link	5
	Flashing	Transmitting/Receiving data	n/a
	On	802.11x RF Link established	n/a
	Off	No 802.11x RF Link	5
	Flashing	Low Battery	3, 5, 6,
	Flashing	Head latch not closed	8, 10, 11
	Flashing	Indicates Printing activity	n/a
	Steady	Data processing in process	7
	Flashing	Out of Media	9,11
	Blank Screen	n/a	No application



RW series printers may be built with one of two LCD types. LCDs using the Bluetooth icon (highlighted by a gray background in the table above) will gradually replace LCDs with the “light bulb” icon indicating Bluetooth activity. Printers with either type of display will function identically.



## Troubleshooting Topics

### 1. No power:

- Check that battery is installed properly.
- Recharge or replace battery as necessary.

### 2. Media does not feed:

- Be sure printhead is closed and latched.
- Check spindle holding media for any binding.
- Ensure label sensor is not blocked.

### 3. Poor or faded print or icon flashing:

- Clean printhead.
- Check battery for possible damage. Recharge or replace as necessary.



Always dispose of batteries properly. Refer to Appendix E of the RW series User Guide for more information.

- Check quality of media.

### 4. Partial or missing print:

- Check media alignment.
- Clean printhead.
- Ensure printhead is properly closed and latched.

### 5. No print:

- Replace battery.
- Check cable to terminal.
- (Wireless units only) Restore wireless connection.

### 6. Reduced battery life:

- Check battery date code — if battery is one to two years old, short life may be due to normal aging.
- Replace battery.

### 7. Flashing icon:

- No application or application corrupted; program must be re-loaded.
- (Wireless units only): flashing error light indicates data transmission.

### 8. Flashing or icons:

- Check that media is loaded and that printhead is closed and securely latched.

### 9. Skips labels:

- Ensure correct media is being used.
- Ensure bar/ or gap sensor is not blocked.

### 10. Communication Error:

- Check media is loaded, head is closed and error light is off.
- Replace cable to terminal.



## 11. Label Jam:

- Open media cover.
- Generously apply alcohol to Printer in area of jammed label.

## 12. Blank LCD Screen:

- No application loaded or application corrupted: program must be re-loaded.

## 13. Magnetic Strip Card or Smart Card Won't Read

- Ensure the "RDR" text is displayed, indicating card reader is enabled.
- Ensure card is inserted with the magnetic stripe or microchip facing in the correct direction.
- Check card for excessive wear or damage to either the magnetic strip or the microchip.

## 14. Battery Pack Is Hard to Insert

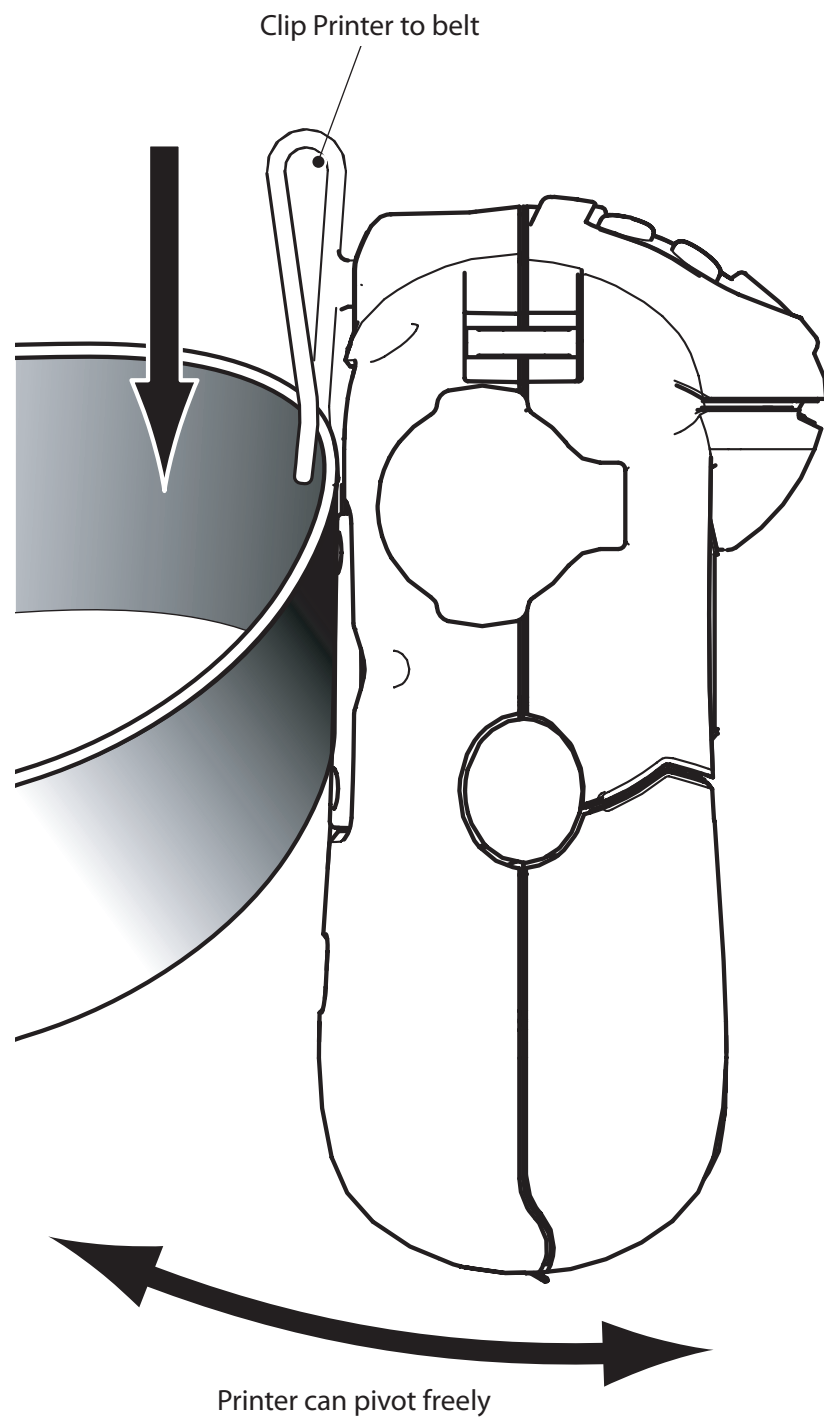
- Do not force the battery. Verify you have removed the protective shrink-wrap which protects the battery during shipping.
- The battery packs for the RW and QL series model printers are similar in size and shape, but not identical. Verify you are using the correct battery pack:

The RW 420 battery pack replacement part number is AK17463-005. The RW 220 battery pack replacement part number is AK18026-002.

## Using the Accessories

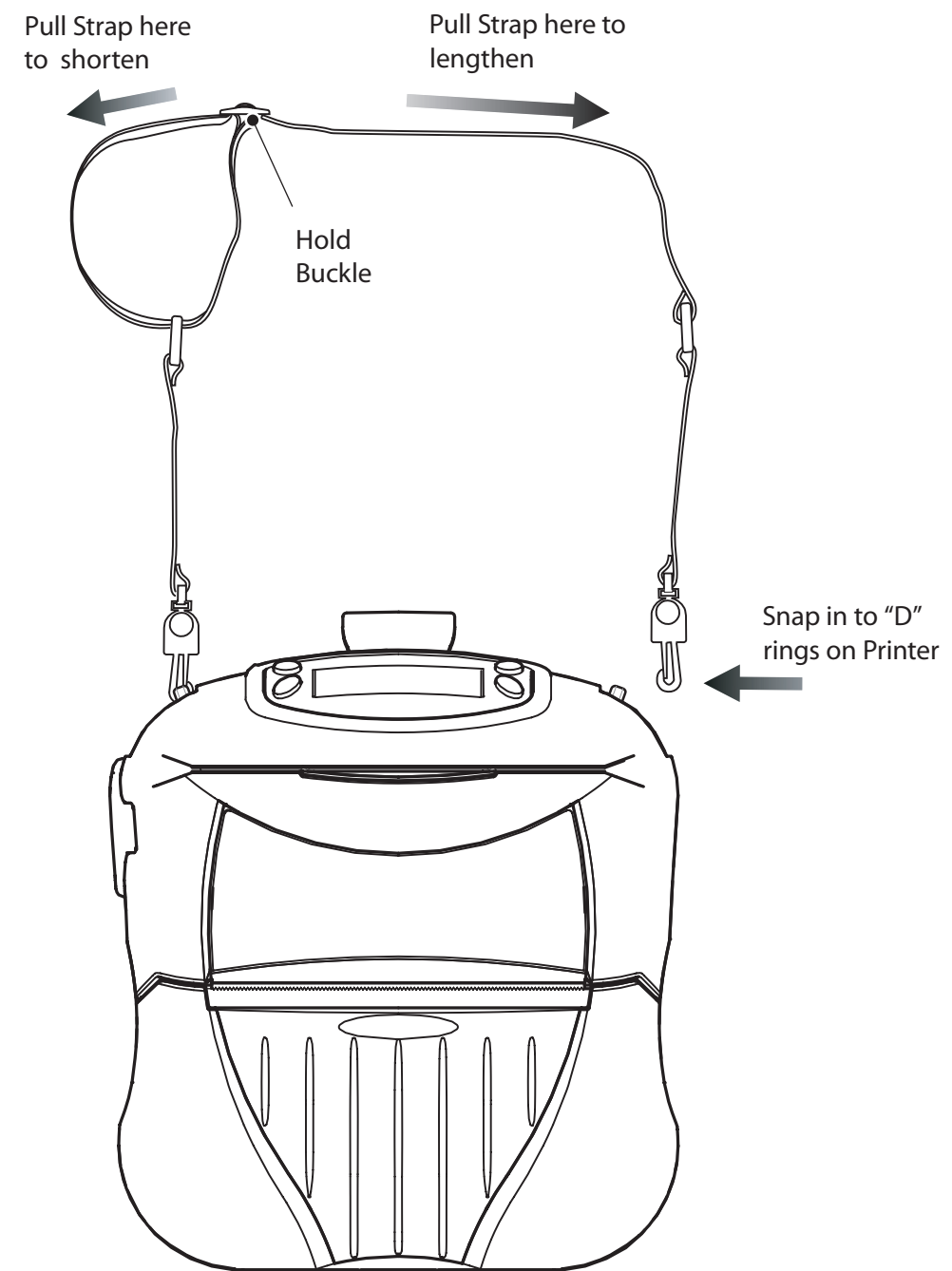
### Belt Clip (standard on all printers)

To use: hook the clip over your belt and ensure that the clip is securely attached to the belt. The belt clip will pivot to allow you to move freely while wearing the printer.



### Adjustable Shoulder Strap (optional)

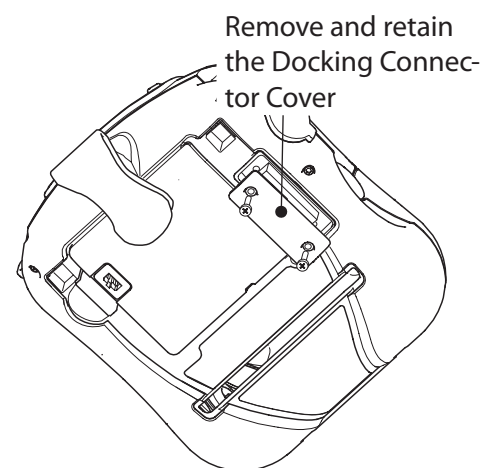
Refer to figure below. Snap each end of the shoulder strap into the "D" rings in the top of the printer. Hold the buckle and slide the strap as shown below until you achieve the desired length.



## Using the Accessories

### RW 420 Vehicle Cradle

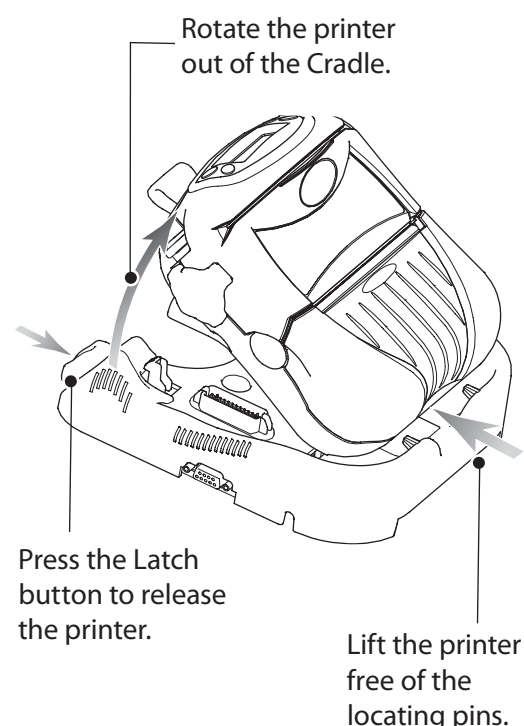
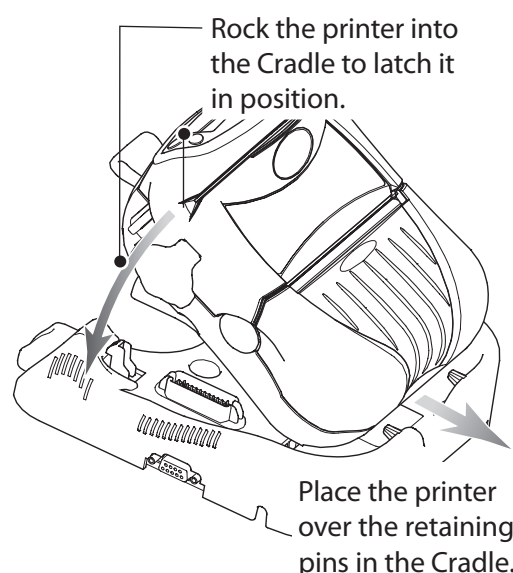
When the RW 420 Printer is “docked” in the Vehicle Cradle it can print, receive and transmit data and the cradle can charge the printer’s batteries. Refer to the documentation either in the Users Guide or supplied with the Cradle for more information.



#### Installing the Printer

- As a safety precaution, remove the shoulder strap prior to docking the printer.
- Remove the Docking Connector Cover from the bottom of the printer, and retain it for future use.

- Place the bottom of the printer over the two pins in the Cradle.
- Rock the top of the printer into the Cradle and press firmly until it latches in place.
- When the power indicator on the Cradle is lit turn the printer on.



#### Removing the Printer

- Turn the printer off.
- Push on the latch on the Cradle and rock the top of the printer away from the Cradle.
- Lift the printer out from the Cradle.

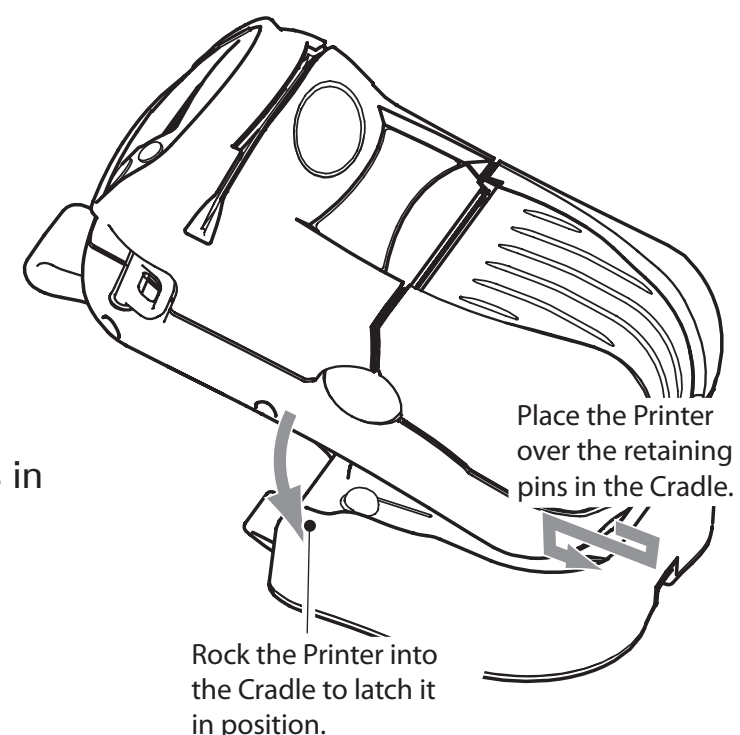
Replace the Docking Connector Cover if you will be using the printer for an extended period of time away from the Cradle.

### RW 220 Vehicle Cradle

The RW 220 can be used in conjunction with a docking Cradle. When the Printer is “docked” it can be powered by either its own battery or one of the RCL series of external chargers. Refer to the documentation supplied with the Cradle for more information.

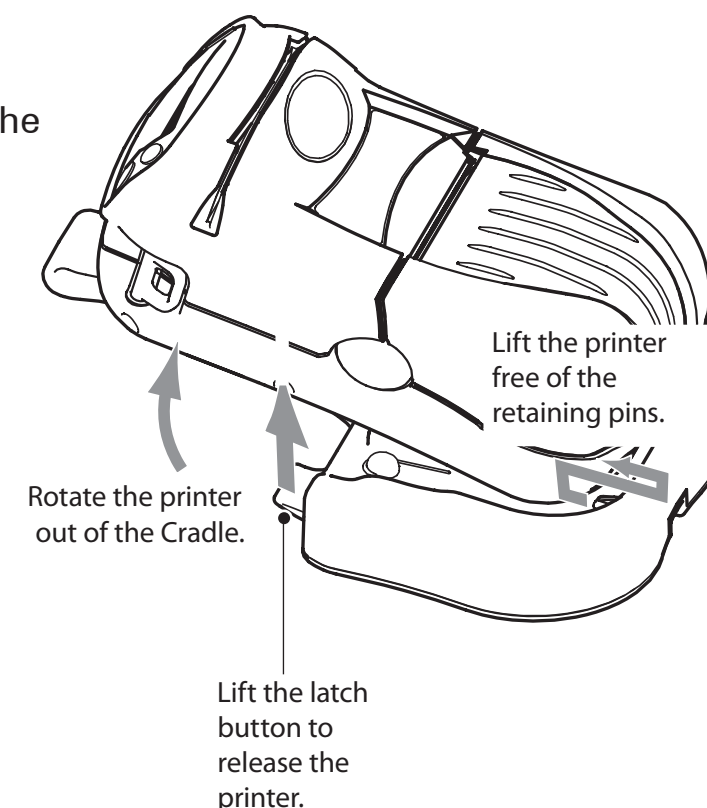
#### Installing the Printer

- Place the bottom of the printer over the two pins in the Cradle.
- Rock the top of the printer into the Cradle and press firmly until it latches in place.



#### Removing the Printer

- Turn the Printer off.
- Push on the latch on the Cradle and rotate the Printer away from the Cradle.
- Lift the Printer free of the cradle locating pins and out from the Cradle.





## Product Support

For product support, and the latest versions of all customer documentation, contact Zebra Technologies at: [www.zebra.com](http://www.zebra.com)  
Refer to Appendix D in the RW Series User Guide for more detailed contact information

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