Zebra® EZ320™
Mobile Printer

User Guide

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- EN60950: 2006 Safety Standard
- Taiwan NCC
- China CCC
- China SRRC

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The following conventions are used throughout this document to convey certain information:

If you are viewing this guide online, click the underlined text to jump to a related Web site. Click on italic text (not underlined) to jump to that location in this manual.

Cautions, Important, and Note

Caution • Warns you of the potential for electrostatic discharge.

Caution • Warns you of a potential electric shock situation.

Caution • Warns you of a situation where excessive heat could cause a burn

Caution • Advises you that failure to take or avoid a specific action could result in physical harm to you.

Caution • Advises you that failure to take or avoid a specific action could result in physical harm to the hardware.

Important • Advises you of information that is essential to complete a task.

Note • Indicates neutral or positive information that emphasizes or supplements important points of the main text.

Introduction to the EZ320

Thank you for choosing our Zebra® EZ320™ Mobile Printer. This rugged printer is sure to become a productive and efficient addition to your workplace thanks to its innovative design. Because it is made by Zebra Technologies, you're assured of world-class support for all of your bar code printers, software, and supplies.

- This user's guide gives you the information you will need to operate the EZ320 printer.
- The EZ320 printer uses the CPCL programming language. To create and print labels using the CPCL language, refer to the Mobile Printing Systems CPCL Programming Guide and our ZebraDesigner™ Pro and Zebra Set-up Utilities programs which are all available at www.zebra.com.

Unpacking and Inspection

Inspect the printer for possible shipping damage:

- Check all exterior surfaces for damage.
- Open the media cover (refer to "Loading the Media" in the Getting Ready to Print section) and inspect the media compartment for damage.

In case shipping is required, save the carton and all packing material.

Reporting Damage

If you discover shipping damage:

- Immediately notify and file a damage report with the shipping company. Zebra Technologies Corporation is not responsible for any damage incurred during shipment of the printer and will not cover the repair of this damage under its warranty policy.
- Keep the carton and all packing material for inspection.
- Notify your authorized Zebra re-seller.

Figure 1: EZ320 Overview
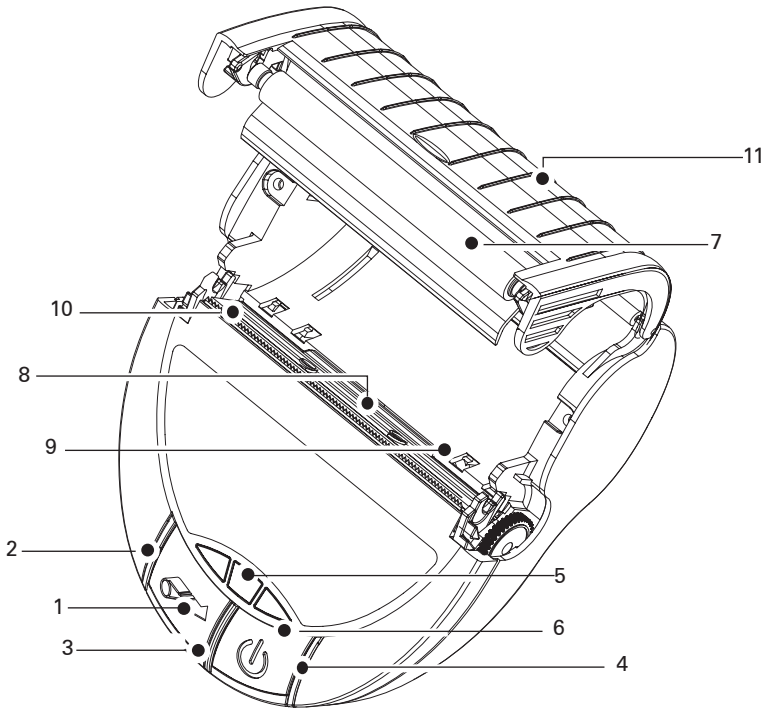
1. Paper Feed Button
2. Error Status Indicator
3. Bluetooth Indicator
4. Charge Indicator
5. Battery Status Indicator
6. Power Button
7. Platen
8. Printhead
9. Media/Black Bar Sensor
10. Tear Bar
11. Media Cover
12. USB Port
13. Battery Charging Receptacle
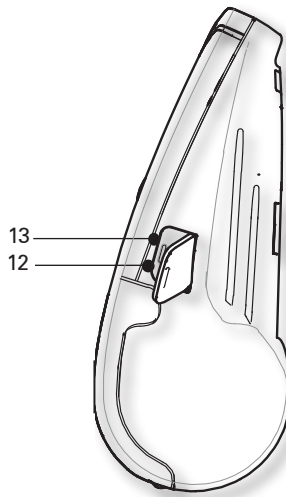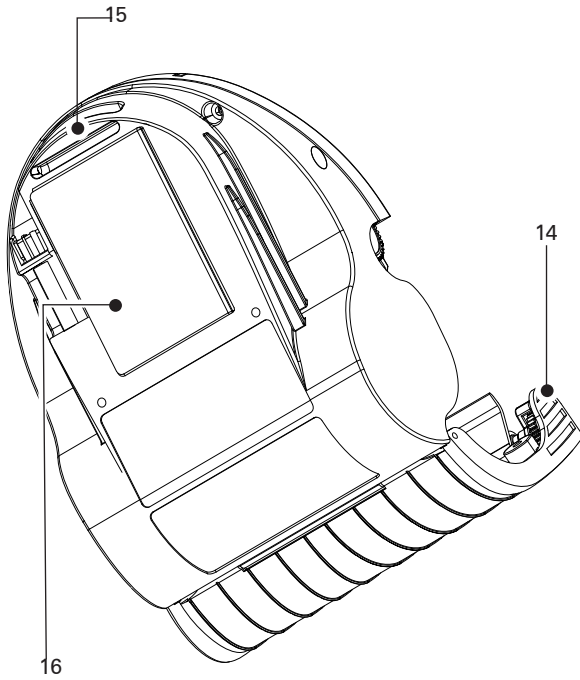
14.   Media Cover Tab
15.   Belt Strap Opening
16.   Battery Pack

Getting Ready to Print

Battery

Installing and Removing the Battery

> ⚠ Important • Batteries are shipped partially charged. Remove any protective packaging from new battery packs prior to use.

1. Insert the battery into the printer as shown in Figure 2 using the outline of the battery to match the outline of the battery compartment.
2. Rock the battery into the printer as shown until it locks in place.

When the battery is first installed, and the printer is turned on, the battery status indicators will light up to indicate if the battery is fully charged (see "Charging the Battery" below and "Operator Controls").

You must charge the batteries fully before using them for the first time.

Figure 2: Installing the Battery
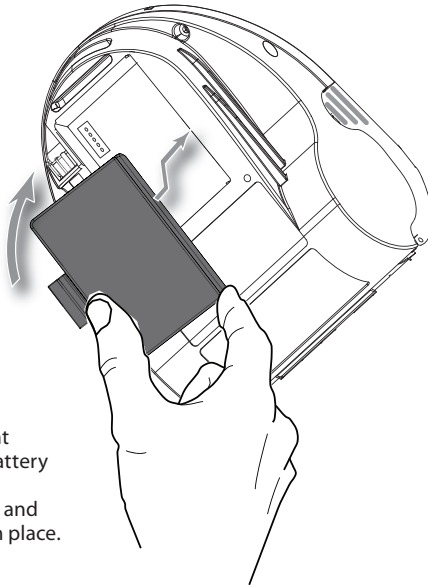
Insert the front edge of the battery in the battery compartment and lock the clip in place.

Figure 3: Removing the Battery

Press in on the locking clip to disengage the battery.
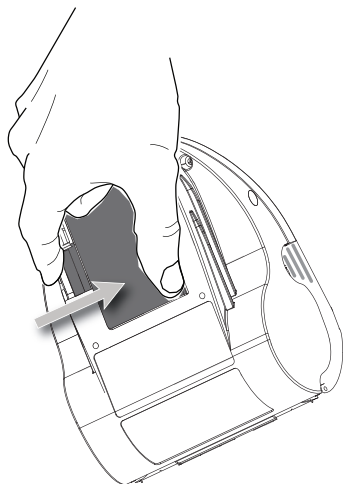
Lift up on the battery in the direction shown and remove from the battery compartment.
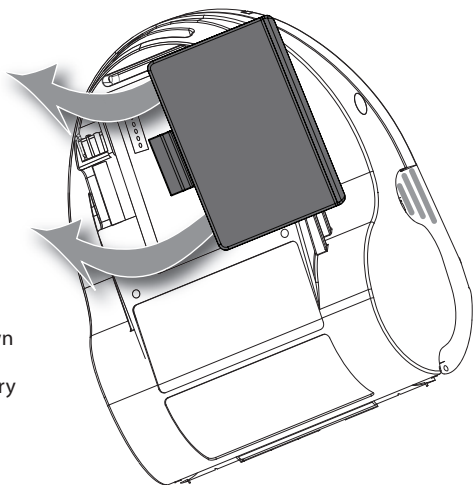
When the battery is first installed, the printer power and charge indicators should indicate the battery is not fully charged (see "Charging the Battery" below and "Operator Controls").

> **!** You must charge the battery fully before using the printer for the first time.

Charging the Battery
Preparing the Power Supply

Before charging the battery for the first time, you must prepare the Power Supply. Refer to Figure 4 below:

Figure 4: Preparing the Power Supply

1. Remove the power supply from its box. Remove and discard the shipping ring from the mains receptacle cavity.

2. Verify that the mains adapter shipped with your Printer is the correct one for your region.

China/Taiwan-220 VAC

Shipping Ring
Remove and discard

Mains Adapter
3. The mains adapter will be pre-installed into the Power Supply by hooking the top edge into the mains receptacle cavity, and rotating it until it snaps into place.

EZ320 Charger Power Supply p/n AT17947-1
100-240 VAC 50-60 Hz 0.6A Input; 12 VDC 1.25 A output

Plug into AC receptacle

Charger Jack
12 VDC

Charging the battery

Refer to Figure 5.

1. Plug the Charger Power Supply into the appropriate A.C. wall receptacle. Then insert the charge cable into the printer's charger jack.
2. The printer's charger indicator will indicate the status of the charger as follows:

• An amber light indicates the battery is charging, and that the battery is less than 90% charged.
• A green light indicates the battery is fully charged. The battery is ready for use.

Approximate Charge Times :

Batteries are fully charged after 2.5 hours from the low-battery shut-off state. Partially discharged batteries will take less time to charge.

NOTES: Use of the printer while charging will increase charge times.

Charge times are for completely discharged batteries.

As a safety feature the battery will stop charging after 4.5 hours regardless of the battery's charge state.

EZ320 Single Bay Charger

The Single Bay Charger is a charging system for use with the lithium-ion battery used in the EZ320 printer. The charger uses a 2 blade AC connector on the back of the charger that plugs into the wall outlet and will fully charge the battery in an average time of 2.5 hours.

Charging Status Indicators

The Single Bay Charger features two LED indicators, one green and one amber, which provide battery status to the user as described in the table below.

DC Power Input	Battery Status	Charging Indicator	Full Indicator
n/a	Battery Not Present	OFF	OFF
Present	Fully Charged	OFF	Green
Present	Charging	Amber	OFF

The amber LED will have battery charge icon ![charge icon] next to it to indicate that this is the charging status indicator. Likewise, the word "OK" will indicate that the green LED is the fully charged status indicator.

Figure 6: Docking Battery in Single Bay Charger

EZ320 Battery
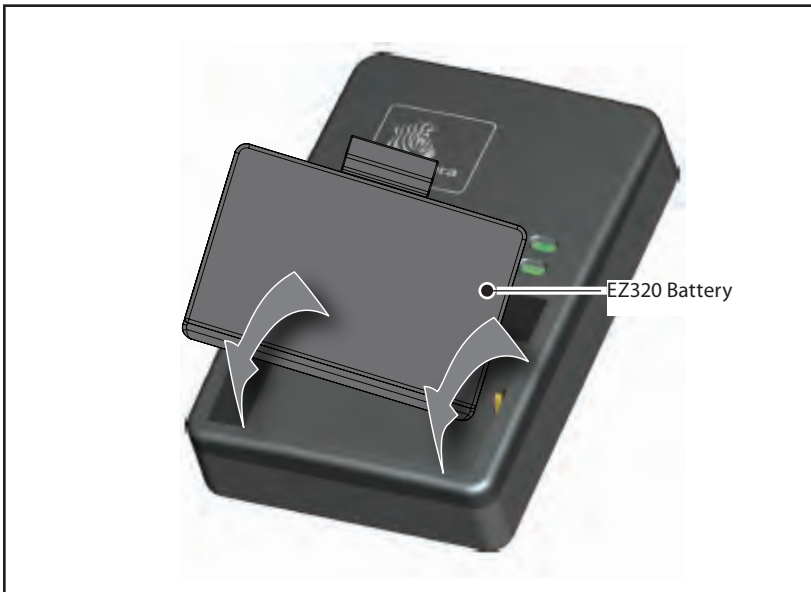
Battery Safety

⚠️ **Caution •** Avoid accidental short circuiting of any battery. Allowing battery terminals to contact conductive material will create a short circuit which could cause burns and other injuries or could start a fire.

❗ **Important •** Always dispose of used batteries properly. Refer to Appendix D for more battery recycling information.

⚠️ **Caution •** Use of any charger not approved specifically by Zebra for use with its batteries could cause damage to the battery pack or the printer and will void the warranty.

📖 Read carefully and always observe the safety guidelines for Li-Ion batteries provided with each Battery Pack.

Charger Safety

⚡ Do not place the Single Bay Charger in locations where liquids or metallic objects may be dropped into the charging bay.

Loading the Media (80 mm)

1. Open the Media Cover (see Figure 7)
- Firmly squeeze the Media Cover Tabs on either end of the Media Cover with your thumb and index finger. Pull up to open the Media Cover to reveal the media compartment.
2. Load the media (see Figure 8)
- Insert the roll of media into the media compartment. Ensure that the media pulls off the core in the direction shown in Figure 8.
3. Close the Media Cover (see Figure 9)
- Pull a short length of media out of the printer
- Close the Media Cover firmly and ensure it is securely latched on both sides..
- Press the Power button to turn on the printer and then press the Feed button. The printer will advance media until the Feed button is released. Verify the media is feeding properly and without binding or skewing sideways.

Figure 7: Opening the EZ320 Printer

Media Cover Tab

Media Cover Tab

Media Compartment
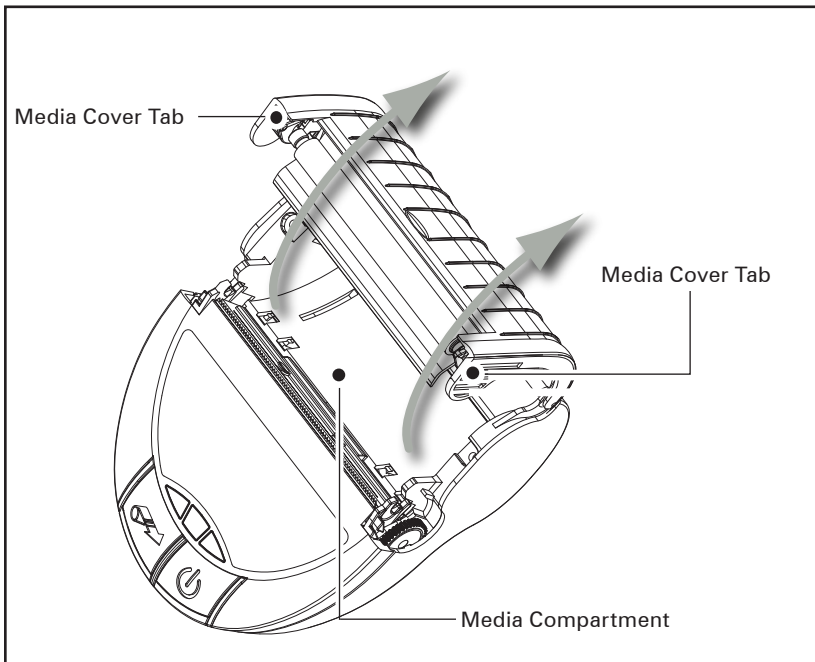
Figure 8: Installing Media

Media Roll

Note direction media pulls off the roll.
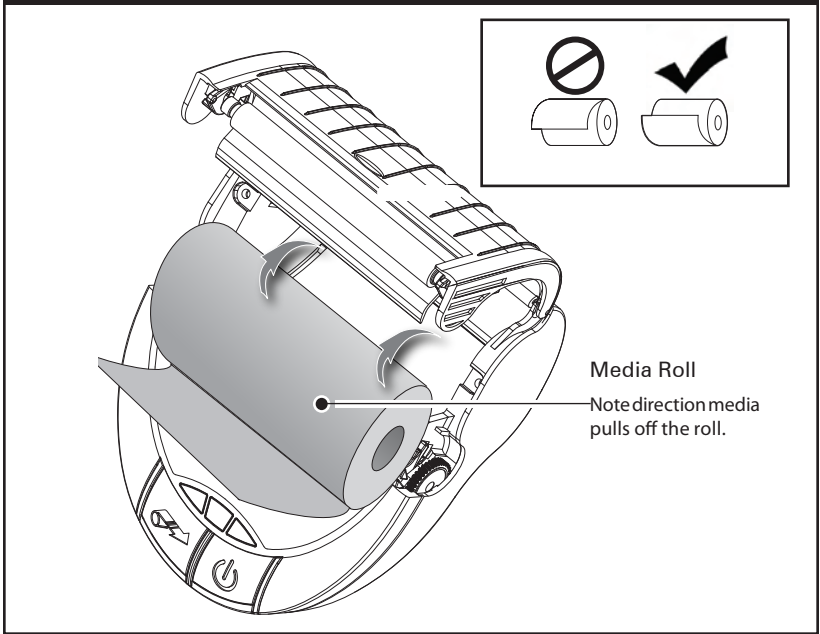
Figure 9: Closing the Media Cover

2

Ensure both sides of the media cover are securely latched when closed.

Media Cover

1 Pull a short length of media out of the printer

Feed Button
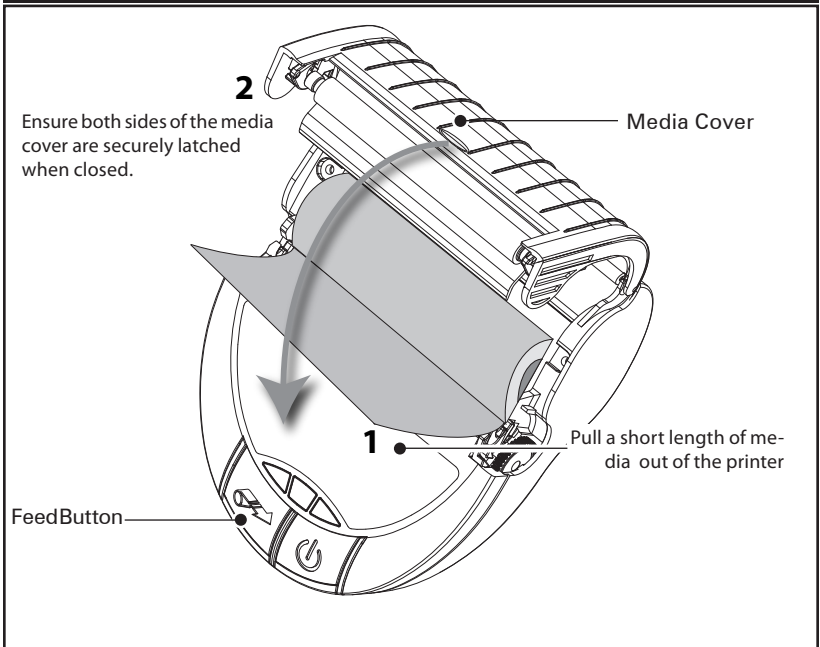
60 mm Roll of Media

The EZ320 printer also supports a 60 mm roll of media which requires the installation of two plastic media spacers. The media spacers are available through optional kit p/n P1031604. Contact Zebra Technologies for more information.

Media Black Bar Sensor

The EZ320 media black bar sensor default position for standard 80mm media is located on the right side of the media compartment when looking at the printer from the front (as shown below). There is also an alternate position for 80mm media on the left side and two (2) positions for 60mm media (one on the right side and one on the left). In all cases only one sensor position will be populated at a time. Which sensor position is populated is dependant on the size of the media and location of the black bar on the media. Descriptions of all four (4) positions are detailed below.

Figure 10: Black Bar Sensor Positions

Used with 60 mm paper, black bar on right.

Default position used with 80 mm paper, black bar on right (sensor not visible).

Used with 80 mm paper, black bar on left.

Used with 60 mm paper, black bar on left.
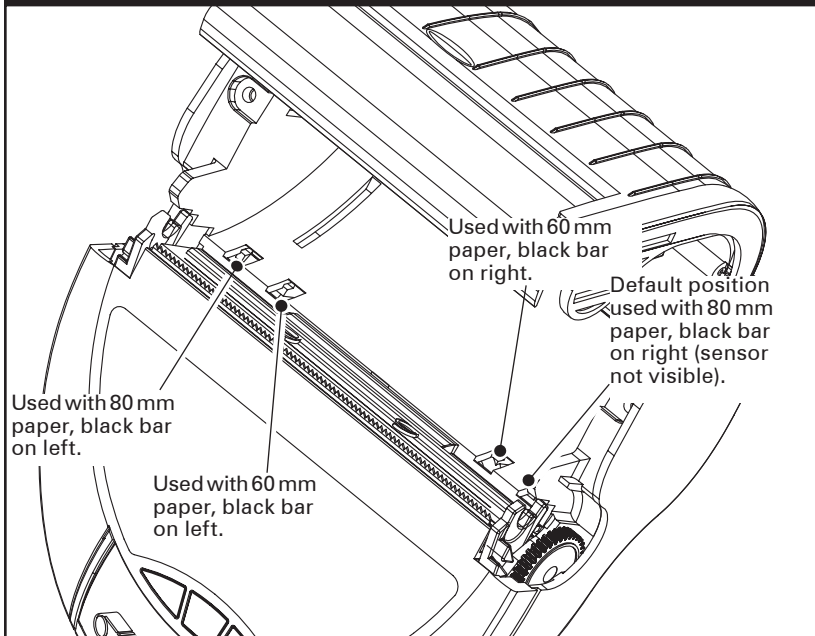
Operator Controls

EZ320 printer controls are detailed in Figure 11 on the following page.

The printer has two control buttons and four multipurpose indicators.

The Power Button turns the printer on and off.

The Feed Button advances a length of media until it is released.

The Green/Amber indicator to the left of the Power Button indicates the status of the printer's built-in charger:
- The indicator is off indicates the battery is not being charged.
- If the indicator is amber the battery is being charged.
- If the indicator is green, the battery is fully charged.

The Blue Bluetooth Indicator between the Power and Feed buttons has two states:
- A solid blue indicator means Bluetooth is connected and paired with no data transfer activity.
- A rapidly blinking blue light indicates a transfer of data.

The Amber Indicator to the right of the Feed button (Fig. 11) is an error indicator.
- An unlit indicator means there is no error condition and the printer can be used.
- A blinking (and beeping) indicator could mean one of three conditions exist, which will inhibit printer operation:
    1. There is no media loaded.
    2. The media cover is open.
    3. If both the above conditions are met and the error light is still flashing, there could be no firmware loaded in the printer, or the firmware could have become corrupted.

The Three Green LED's just above the product I.D. label is a battery status indicator.
- Three LED's lit represents 100% charge.
- Two LED's lit represents 66% charge.

- One LED lit represents 33% charge. This LED will be closest to the minus sign on the battery status icon and will blink and beep to alert the user of a low battery condition.

Figure 11: EZ320 Printer Controls

Bluetooth Indicator (Blue)
Solid blue indicates connected. Rapid blinking blue indicates data is being transferred.

Power Button
Press until power/battery lights turn on, then release. (Power on takes approx. 0.75 sec.) Press again to turn unit off.

Feed Button
Press to advance the media. Release to stop.

Charge Indicator (Green/Amber)
Solid green indicates a fully charged battery. Solid amber indicates the battery is charging.

Error Status Indicator (Amber)
When off Indicates normal operation. Blinking amber LED indicates either no media or that the media compartment is open and beeper will sound.

Battery Status Indicator
Three green LED's indicate battery's level of charge (i.e. 33%, 66%, 100%). LED closest to minus sign will blink green at low battery warning and beeper will sound.

Verify the Printer Is Working

Before you connect the printer to your computer or portable data terminal, make sure that the printer is in proper working order. You can do this by printing a configuration label using the "two key reset" method. If you can't get this label to print, refer to "Troubleshooting".

Printing a Configuration Label

1. Turn the printer off. Load the media compartment with journal media (media with no black bars printed on the back)
2. Press and hold the Feed Button.
3. Press and hold the Power button and keep the Feed button pressed.
4. When the printer turns on and printing starts, release the Power button and then release the Feed button.

The unit will print a line of interlocking "x" characters to ensure all elements of the print head are working, print out the version of software loaded in the printer and then print two reports.

The first report indicates model, ROM version, serial number, etc. The second report prints approximately 10 seconds after the first report and prints out more detailed information on the printer's configuration and parameter settings. If no second report appears, there is no application loaded. (See the Troubleshooting Section for sample printouts and a further discussion on how to use the configuration label as a diagnostic tool.)

Connecting the Printer

The printer must establish communications with a host terminal which sends the data to be printed. Communications occur in two basic ways:

- Via a cable using the USB 2.0 protocol. USB drivers are included in the Zebra DesignerDriver which can be downloaded from www.zebra.com.
- By means of a Bluetooth short range radio link.

Cable Communication

⚠️ Caution • The printer should be turned off before connecting or disconnecting the communications cable.

The mini USB Type B connector on the cable plugs into the printer. The connectors are keyed to assure correct alignment; do not try to force the cable if it does not plug in. The standard USB Type A end of the cable must be plugged into the USB port on a computer as shown in Figure 12. The EZ320 utilizes the USB Open HCI interface driver allowing it to communicate with Windows® based devices.

USB drivers are included in the Zebra Designer Driver which can be downloaded from the Zebra Web site. Other terminals or communications devices may require the installation of special drivers to use the USB connection. Consult the manufacturer for further details.

Figure 12: Communications with a P.C.

USBCommunications Cable to Computer
Refer to Appendix A for details.

Communications Port
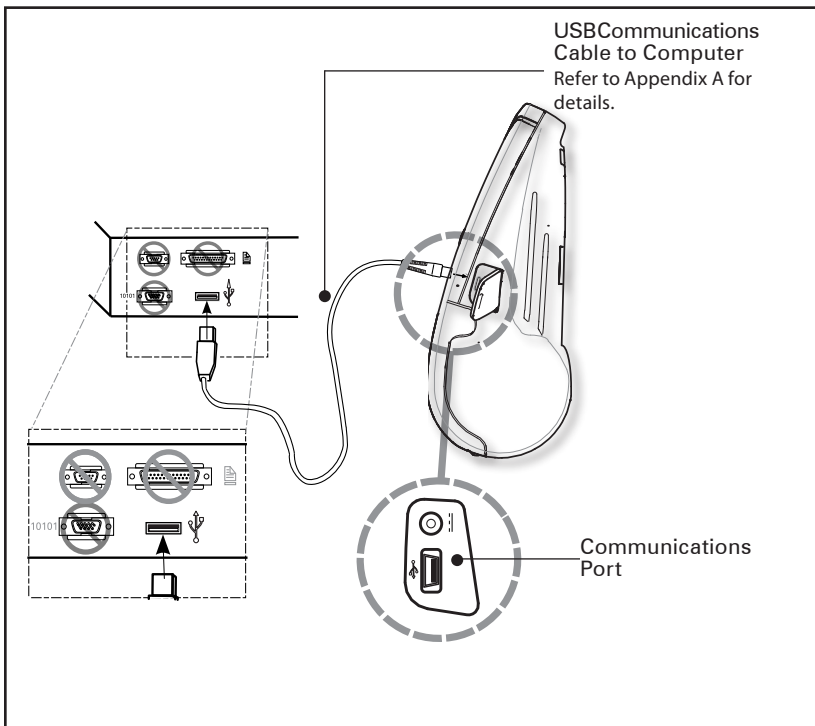
Wireless Communications with Bluetooth™

Bluetooth is a worldwide standard for the exchange of data between two devices via radio frequencies. Bluetooth radios are relatively low powered to help prevent interference with other devices running at similar radio frequencies. The range of a Bluetooth device is approximately 10 meters (32 feet). Both the printer and the device it communicates with must follow the Bluetooth standard.

Bluetooth Networking Overview

Each Bluetooth enabled EZ320 printer is identified by a unique Bluetooth Device Address (BDA) loaded into the printer when manufactured. The printer BDA can be obtained from the diagnostic report (see page 35). In order to exchange data, two Bluetooth enabled devices must establish a connection.

Bluetooth software is always running in the background, ready to respond to connection requests. One device (known as the master) must request a connection with another. The second device (the slave) then accepts or rejects the connection. A Bluetooth enabled EZ320 printer will act as a slave creating a Wireless Personal Area Network (WPAN) with the terminal sometimes referred to as a "piconet.".

About Bluetooth Security

The Bluetooth radio in this printer complies with the Bluetooth specification 2.0 + EDR and therefore supports security modes 1, 2, and 3. The end user can select the security mode at which the printer will operate by configuring this parameter using Zebra Setup Utility (ZSU).

- • Security Mode 1 is non-secure. Authentication and encryption functionality are bypassed. The printer is shipped with default Security Mode 1.
- • Security Mode 2 is a secure mode that requires authentication and encryption. This is considered a service level-enforced security where security procedures are initiated after the LinkManager Protocol (LMP) is established. This is the host controller (radio module) responsibility and happens at the lower layers of communication including radio and baseband.

- Security Mode 3 is the more secure method supported, also called link level-enforced security. A device initiates security procedures before a physical link is fully established. Security Mode 3 mandates authentication and encryption for all connections to and from the device. In Security Mode 3, the printer is not discoverable.
- Security Mode 4 is supported only by Bluetooth v2.1 + EDR. The EZ320 printer complies with Bluetooth v2.0 so it does not support Security Mode 4.

Certain Bluetooth parameters in the printer can be configured using Zebra Setup Utility (ZSU). ZSU can be downloaded free of charge from Zebra.com.

The Bluetooth settings that are configurable in the printer are: Authentication (ON/OFF), PIN (up to 16 digits), Discoverable (ON/OFF), Security Mode (1, 2, or 3 depending on the BT specification supported) and Friendly Name.

The printer default settings can be obtained from the diagnostic report (see page 35). The default "friendly name" of the printer is set as the printer's serial number. The friendly name can be configured to any value by using ZSU. The EZ320 default Bluetooth Authentication is setpin and requires a PIN to be entered. The default PIN is 1234.

Carrying the Printer

Belt Strap

Refer to Figure 13 below for instructions on how to secure the belt strap to the printer and belt.
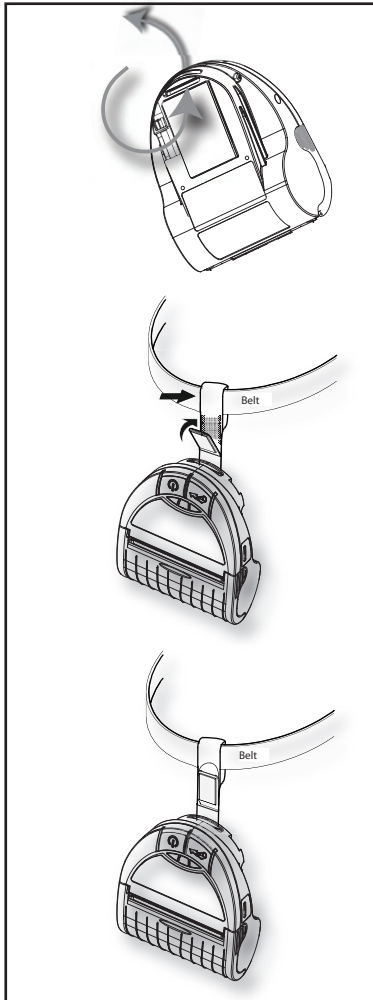
1) Insert the non-looped end of the belt strap through the slot in the bottom front of the printer.

2) Secure the non-looped end to other end of the belt strap using the two Velcro pads.

3) Slide the looped end of the strap over the belt as shown.

4) The printer should hang freely from the belt as shown.