ZD500 Series™ Quick Reference Guide

Use this guide to operate your printer on a daily basis. For more detailed information, refer to the *ZD500 Series™ User Guide*.

Printer Features

Figure 1 shows features on the outside and Figure 2 shows features inside the media compartment of your printer. Depending on the printer model and the installed options, your printer may look slightly different.
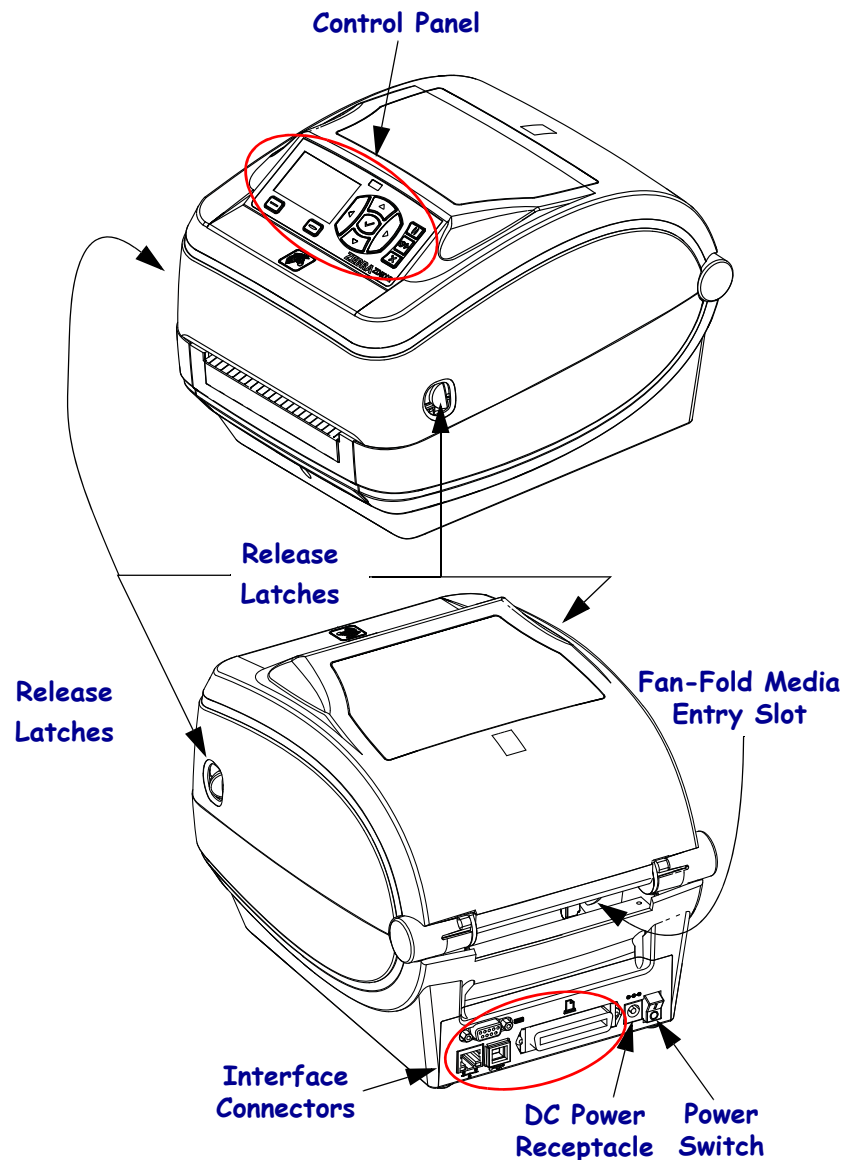
Figure 1 • Printer Features
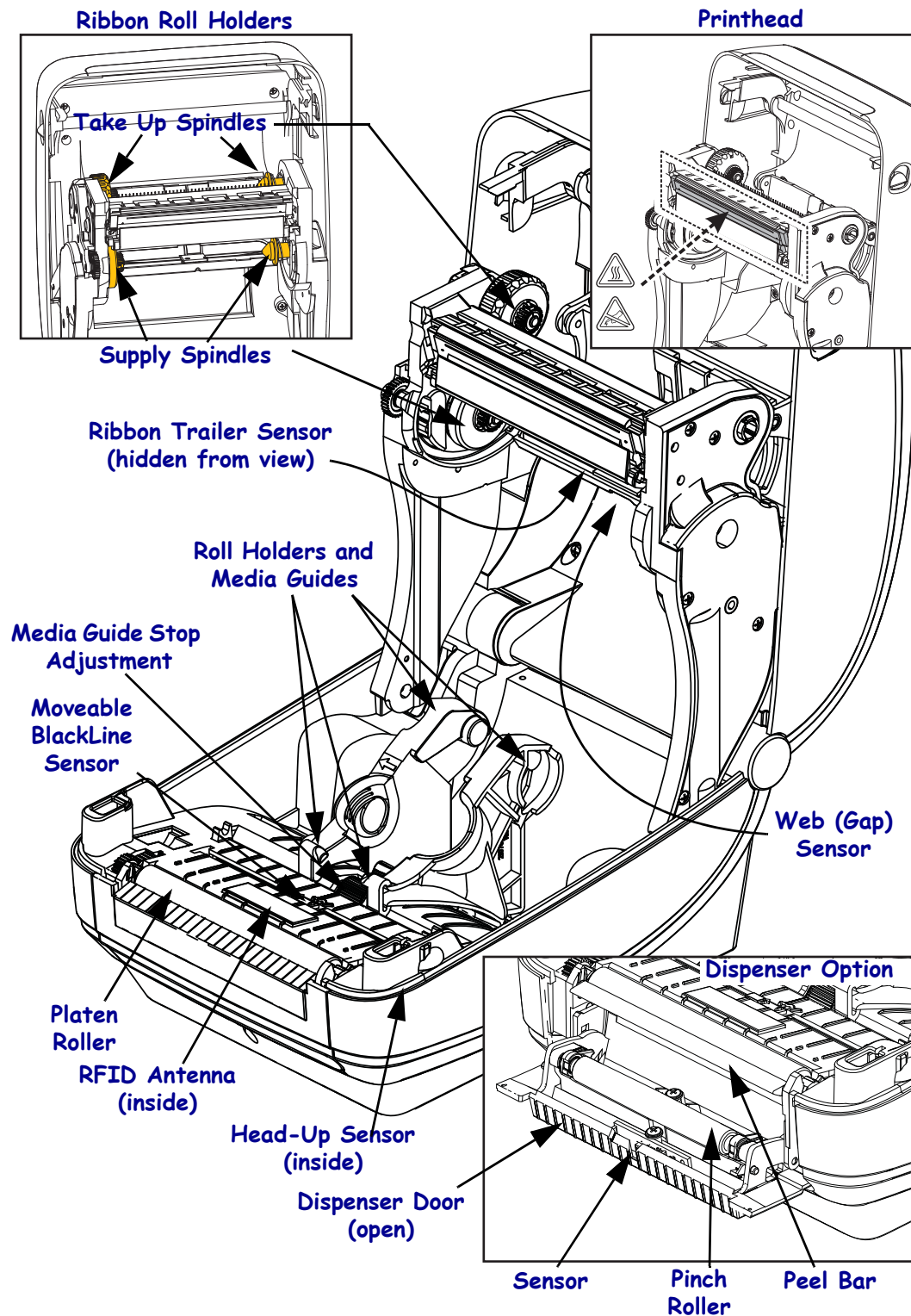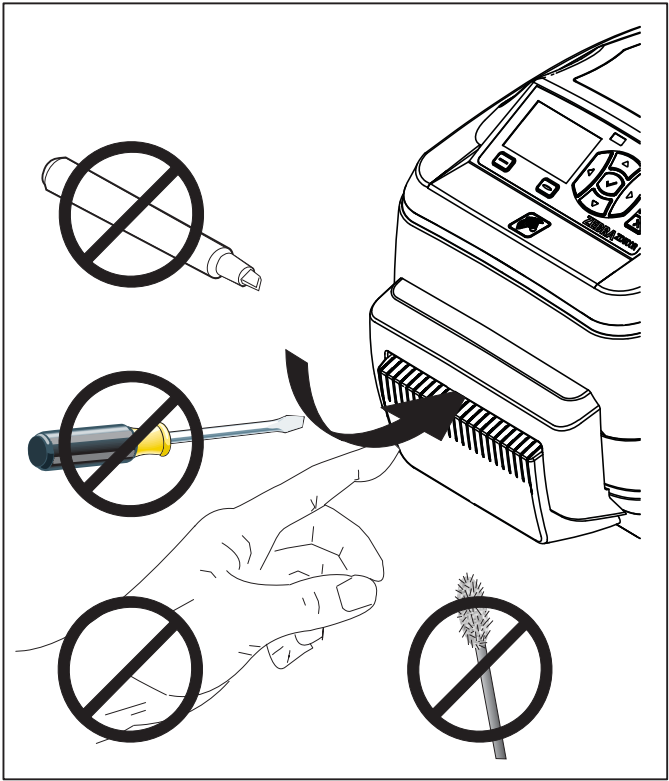
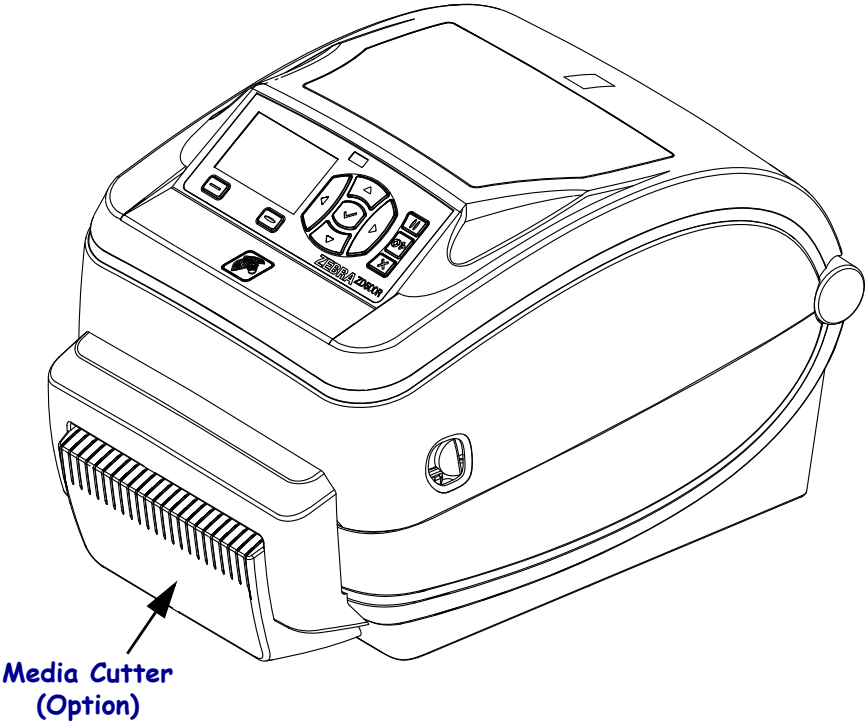**Figure 2 • Printer Features Continued**

Ribbon Roll Holders

Printhead

Take Up Spindles

Supply Spindles

**Ribbon Trailer Sensor
(hidden from view)**

**Roll Holders and
Media Guides**

**Media Guide Stop
Adjustment**

**Moveable
BlackLine
Sensor**

**Web (Gap)
Sensor**

**Platen
Roller**

**RFID Antenna
(inside)**

**Head-Up Sensor
(inside)**
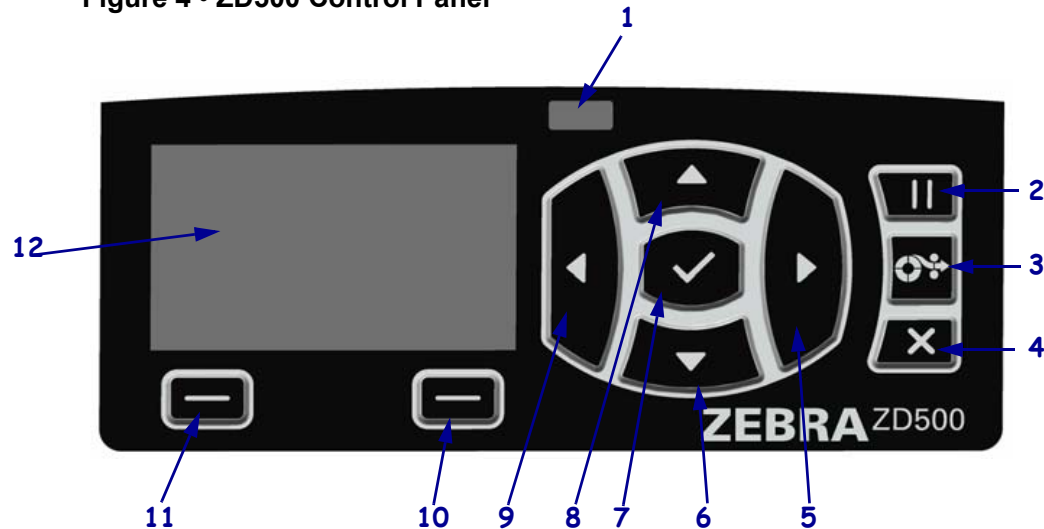
**Dispenser Door
(open)**

Dispenser Option

Sensor

**Pinch
Roller**

Peel Bar

Figure 3 • Printer Features - Cutter Option

Media Cutter (Option)

Control Panel

The control panel indicates the printer's operating status and allows the user to control basic printer operation.

Figure 4 • ZD500 Control Panel

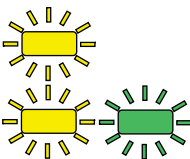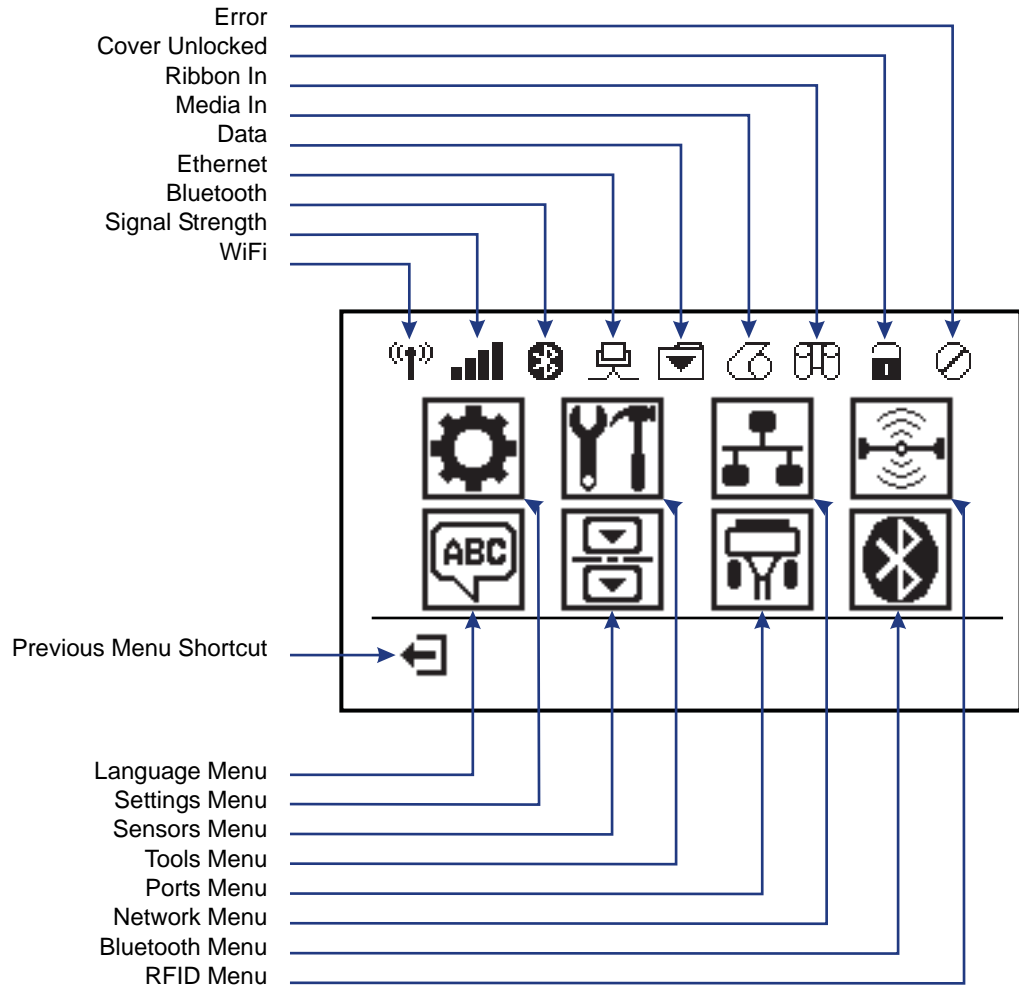| 1	**STATUS light**	Shows the current status of the printer. For more information, see Table 1 on page 5.
2	The **PAUSE button** starts or stops printer operation when pressed.	
3	The **FEED button** forces the printer to feed one blank label each time the button is pressed.	
4	The **CANCEL button** cancels print jobs when the printer is paused.	
5	The **RIGHT ARROW button**, which is active only in the menu system, navigates to the right.	
6	The **DOWN ARROW button** changes the parameter values. Common uses are to decrease a value or to scroll through choices.	
7	The **OK button** operates as follows: • When on the Home screen, pressing OK enters the menu system. • When in the menu system, pressing OK accepts the values shown.	
8	The **UP ARROW button** changes the parameter values. Common uses are to increase a value or to scroll through choices.	
9	The **LEFT ARROW button**, which is active only in the menu system, navigates to the left.	
10	**RIGHT SELECT button**	These buttons execute the commands shown directly above them in the display.
11	**LEFT SELECT button**	
12	The **display** shows the printer's operating status and allows the user to navigate the menu system.	

Table 1 • Printer Status Indicator Light

	STATUS light steady green The printer is ready.
	STATUS light steady amber This indicator light on steady indicates one of the following: • The printer is not ready. • The printhead is over temperature. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.
	STATUS light flashing amber This indicator light flashing indicates one of the following: • The printhead is under temperature.
	STATUS light steady red This indicator light on steady indicates one of the following: • The media supply is out. • The ribbon supply is out. • The printhead is open. • Cutter malfunction. The printer needs attention and cannot continue without user intervention.
	STATUS light flashing red This indicator light flashing indicates one of the following: • The printer is unable to correctly identify the printhead type. • The main logic board (MLB) is over temperature. • The printhead is extremely over temperature. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool. The printer needs attention and cannot continue without user intervention.
	STATUS light flashing amber followed by alternating amber/ green This status light condition indicates the printer is in Forced Download Mode. Forced Download Mode is used to download new firmware to the printer. This mode should only be used by trained personal.

Control Panel Display Menu and Status Icons

Figure 5 • Typical Home Menu

Error
Cover Unlocked
Ribbon In
Media In
Data
Ethernet
Bluetooth
Signal Strength
WiFi

Previous Menu Shortcut

Language Menu
Settings Menu
Sensors Menu
Tools Menu
Ports Menu
Network Menu
Bluetooth Menu
RFID Menu

Printer Control Panel Display

The printer's control panel includes a display, where you can view the printer's status or change its operating parameters. In this section, you will learn how to navigate through the printer's menu system and change values for menu items.

After the printer completes the power-up sequence, it moves to the Idle Display (Figure 6). If a print server is installed, the printer cycles through the information shown and the printer's IP address.

Figure 6 • Idle Display
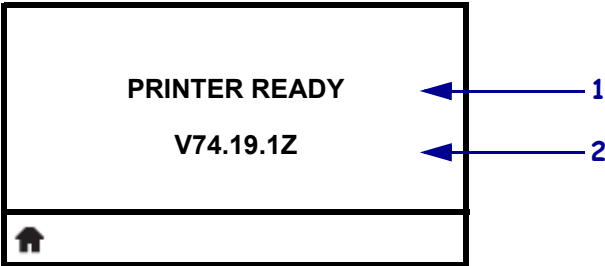
1	The printer's current status
2	Information that you set through *Idle Display*
🏠	Home menu shortcut

The printer's operating parameters are organized into several user menus, which you can access through the printer's Home menu (Figure 7). For detailed information about changing the printer settings, see the *ZD500 Series Users Guide.*
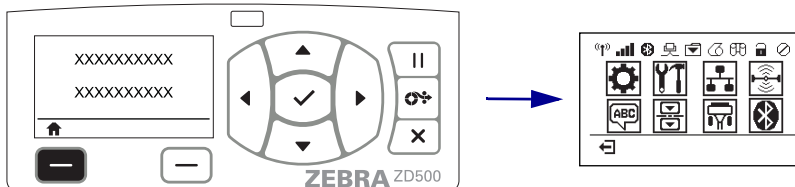
Figure 7 • Home Menu
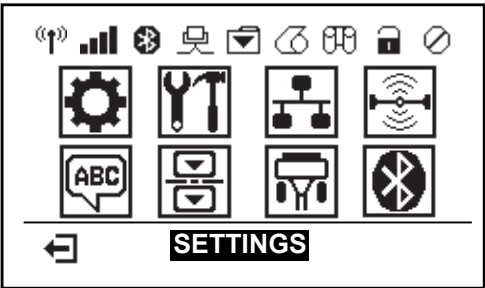
⚙	See *SETTINGS Menu.*	⌨	See *LANGUAGE Menu.*
🛠	See *TOOLS Menu.*		See *SENSORS Menu.*
	See *NETWORK Menu.*		See *PORTS Menu.*
	See *RFID Menu*.	ⓧ	See *BLUETOOTH Menu.*
←	Exit and return to the Idle Display		

Navigating through Screens in the Menu

Table 2 shows navigating through the screens in the control panel display.
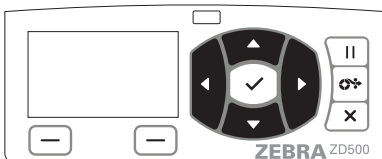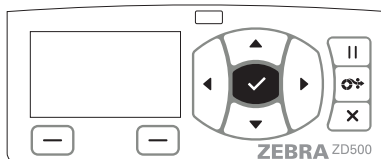
Table 2 • Navigation

Idle Display

At the Idle Display (Figure 6 on page 7), press **LEFT SELECT** to go to the printer's Home menu (Figure 7 on page 7).
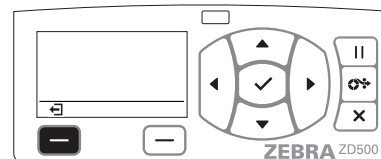
Home Menu

To move from icon to icon in the Home menu, press the **ARROW buttons**.

When an icon is selected, its image reverses to highlight it.

To select the highlighted menu icon and enter the menu, press **SELECT (✓) button**.

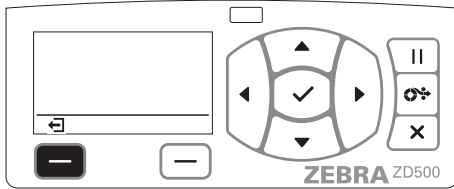Press **LEFT SELECT** to exit the Home menu and return to the Idle Display.
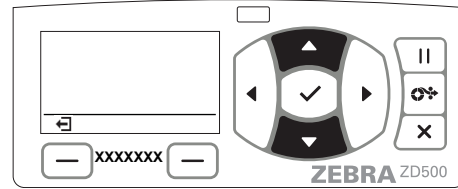
 SETTINGS menu icon

 SETTINGS menu icon highlighted and active for selection.

Note • The printer automatically returns to the Idle Display after 15 seconds of inactivity in the Home menu.
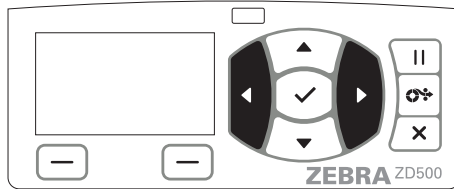
Table 2 • Navigation

User Menus

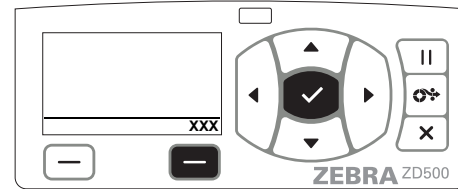|	
Press **LEFT SELECT** to return to the Home menu.	▼ and ▲ indicate that a value can be changed. Any changes that you make are saved immediately. Press the **UP ARROW** or **DOWN ARROW** to scroll through accepted values.
To scroll through the items in a User menu, press the **LEFT ARROW** or **RIGHT ARROW**.	A word in the bottom-right corner of the display indicates an available action. Press **SELECT (✓) button** or press **RIGHT SELECT** to perform the action shown.

Note • The printer automatically returns to the Home menu after 15 seconds of inactivity in a User menu.

Setting the Printer Menu and Report Display Language

The printer supports many languages for menu display, time and date format, and configuration reports.

The primary method used to configure language is the control panels menu. Use the following procedure to set your printer's language when the printer is turned on and in the 'Ready' state.

1. Press the menus 'Home' (⌂) button.

2. Navigate to the 'LANGUAGE' (🔤) menu button and press the 'Select' (✓) button.

3. Use the 'Up' (▲) and 'Down' (▼) navigation arrows to browse the languages.

4. Stop browsing when you have found the language you wish to use for operating the printer. The language displayed will be your selected language.

Control Panel Menu Map

- ☐ Home Menu Items
- ☐ Menu Item also in other Menus
- ☐ Printer Option. May not be present.
- ☐ Go to next Menu group

Printer Ready

V74.xx.xxZ

Settings	Tools	Network	RFID	Language (Menu)	Sensors	Ports	Bluetooth

| Settings	Tools	Network		RFID	Language	Sensors	Ports	Bluetooth
Darkness	Print Information	Active Print Server		RFID Status	Language	Sensor Type	Baud Rate	Bluetooth Address
Print Speed	LCD Contrast	Primary Network		RFID Calibrate	ZPL Override	Manual Calibration	Data Bits	Mode
Media Type	LCD Backlight	Wired IP Address	WLAN IP Address	RFID Read Data	Command Character	Print Information	Parity	Discovery
Print Method	Idle Display	Wired Subnet Mask	WLAN Subnet Mask	RFID Test	Control Character	Label Sensor	Host Handshake	Connected
Tear Off	Power Up Action	Wired Gateway	WLAN Gateway	RFID Program Position	Delimiter Char	Take Label	Parallel Mode	BT Spec Version
Print Width	Head Close Action	Wired IP Protocol	WLAN IP Protocol	RFID Read Power	ZPL Mode	Ports Menu	WML Version	Min Security Mode
Print Mode	Load Defaults	Wired MAC Address	WLAN MAC Address	RFID Write Power	Sensors Menu			Settings Menu
Label Top	Manual Calibration	Wired Port	WLAN Port	RFID Valid Count			Settings Menu	
Left Position	Diagnostic Mode		ESSID	RFID Void Count			Bluetooth Menu	
Reprint Mode	ZBI Enabled?		Channel	Language Menu				
Label Length Max	Yes / No	WLAN Installed	Signal					
Language	Run ZBI Program		IP Port					
Tools Menu	Stop ZBI Program	No WLAN	IP Alternate Port					
	Network Menu	Print Information						
		Reset Network						
		Load Defaults						
		RFID Menu						

Attaching Power

> **Important •** Set up your printer so that you can handle the power cord easily if needed. To make certain the printer cannot carry electrical current, you must separate the power cord from the power supply receptacle or AC electrical outlet.

> **Caution •** Never operate the printer and power supply in an area where they can get wet. Serious personal injury could result!

1. Make sure the printer's power switch is in the off position (down).

2. Insert the AC power cord into the power supply.

3. Plug the other end of the cord into an appropriate AC electrical outlet. Note: The active power light will go on if power is on at the AC outlet.

4. Insert the power supply's power connector into the printer's power receptacle.
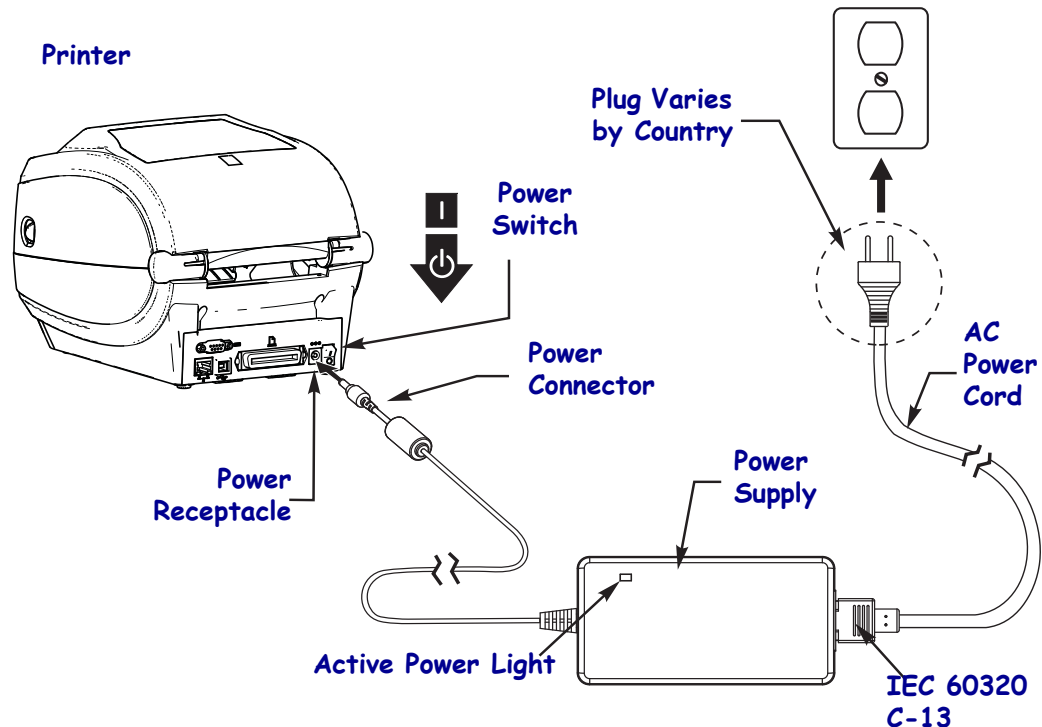
> Note • Ensure the appropriate power cord with a three (3) prong plug and an IEC 60320-C13 connector are used at all times. These power cords must bear the relevant certification mark of the country in which the product is being used.

Load Media and Transfer Ribbon

Caution • When you are loading media or ribbon, remove all jewelry that could come into contact with the printhead or other printer parts.

Caution • Before touching the printhead assembly, discharge any built-up static electricity by touching the metal printer frame or by using an anti-static wriststrap and mat.

Loading Ribbon Ribbon is used only with thermal transfer labels. For direct thermal labels, do not load ribbon in the printer (omit steps 2 through 6 in the following procedure).

Important • Use ribbon that is wider than the media to protect the printhead from wear. Ribbon must be coated on the **outside** (refer to the *User Guide* for more information).

Loading Media Use the instructions in this section to load ribbon and to load roll media in Tear-Off mode. For instructions for loading fanfold media or for loading in different print modes, refer to the *User Guide*.

Preparing Media

Whether your roll media is inside or outside wound, you load it into the printer the same way.

- Remove the outside length of media. During shipment, handling, or storage, the roll may become dirty or dusty. Removing the outside length of media avoids dragging adhesive or dirty media between the printhead and platen.
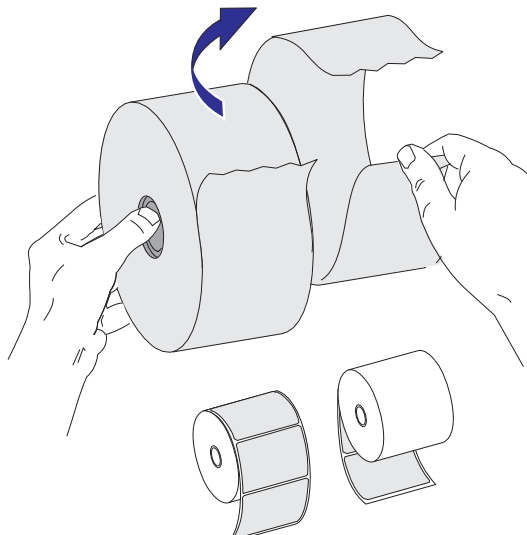
Placing the Roll in the Media Compartment

1. Open the printer. Pull the release latch levers toward the front of the printer.

2. Open the media roll holders. Pull the media guides open with your free hand and place the media roll on the roll holders and release the guides. Orient the media roll so that its printing surface will face up as it passes over the platen (drive) roller.
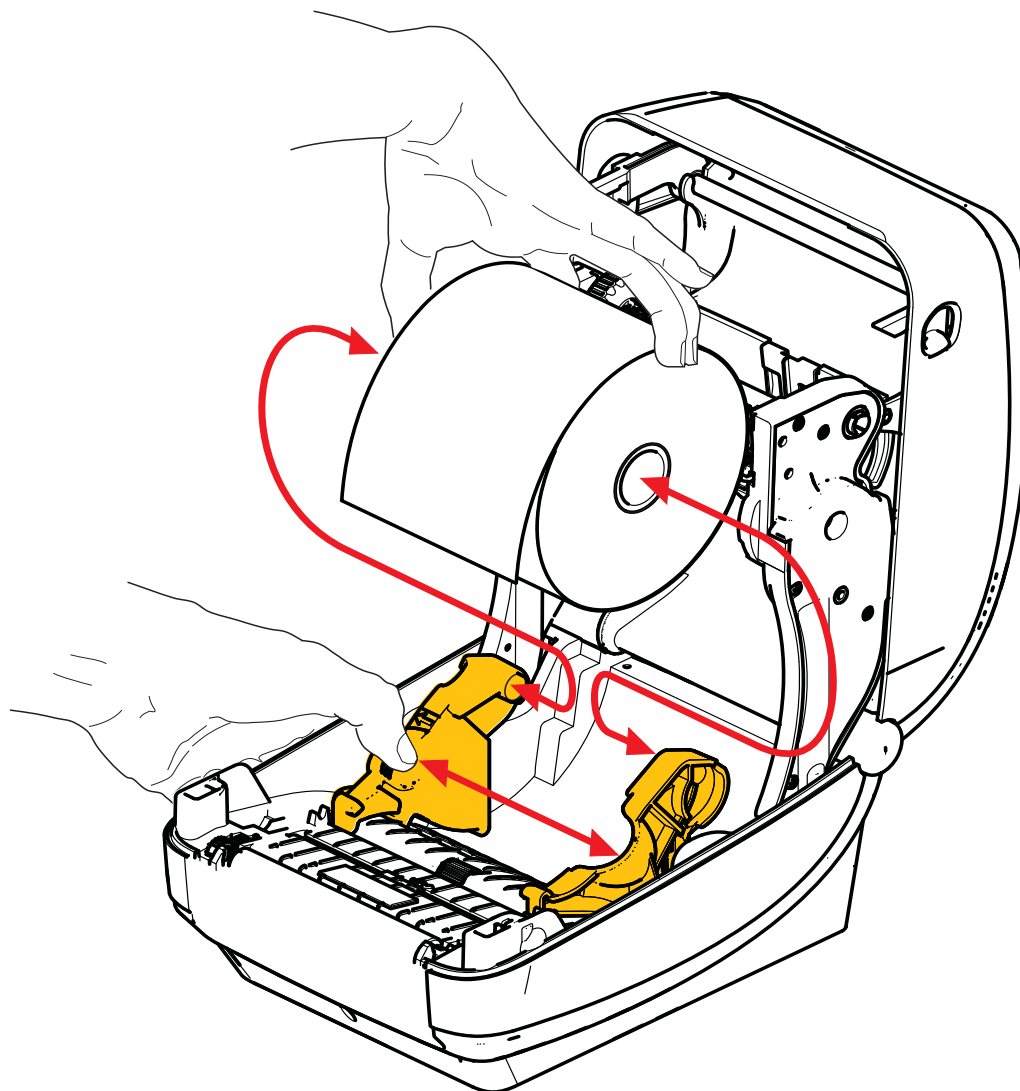
3. Verify that the moveable blackline sensor is aligned in the center default position. This is the standard operating position for media sensing. When the sensor is moved from the default label web (gap) sensing area, the printer will only detect blackline, black mark and die-cut notched media. See User's Guide for more details on adjusting this sensor use variation.

**Printer Optional:
Moveable
Blackline Sensor**
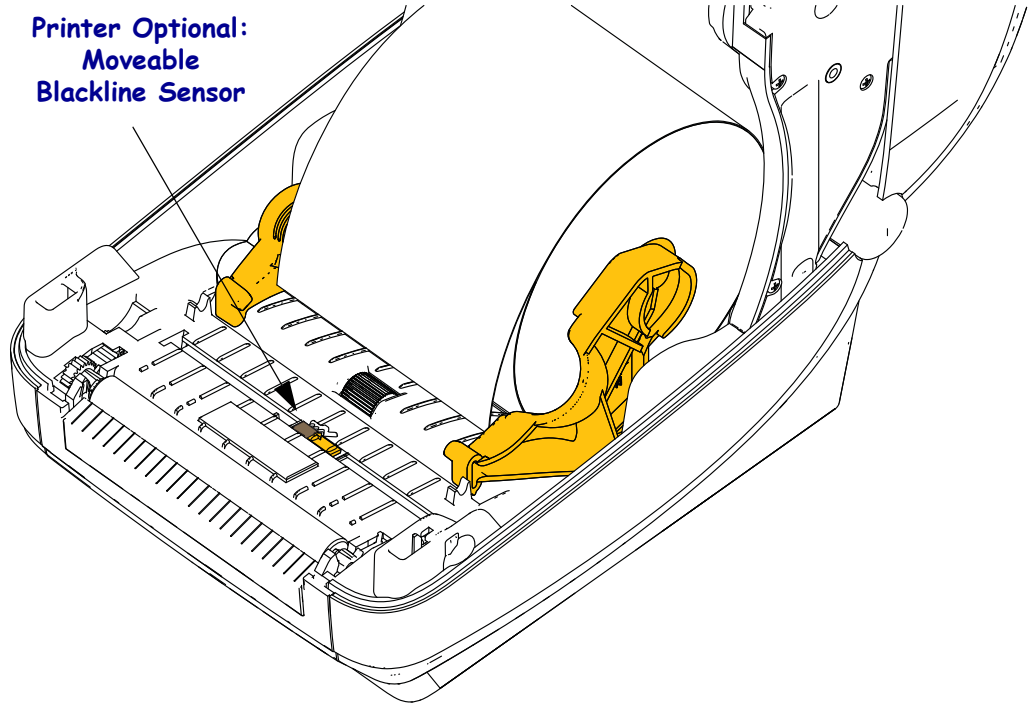
**Off Center
Blackline Sensing Only**
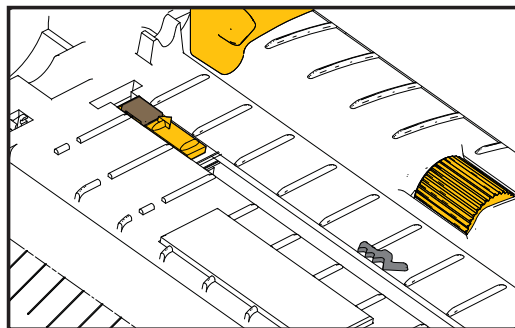
**Default - Web (Gap) Sensing
Standard Operating Position**
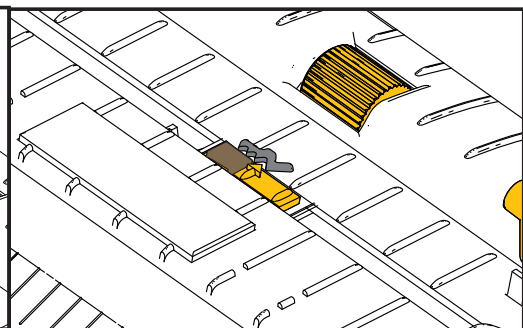
4. Pull the media so that it extends out of the front of the printer. Verify the roll turns freely. The roll must not sit in the bottom of the media compartment. Verify that the media's printing surface is facing up.
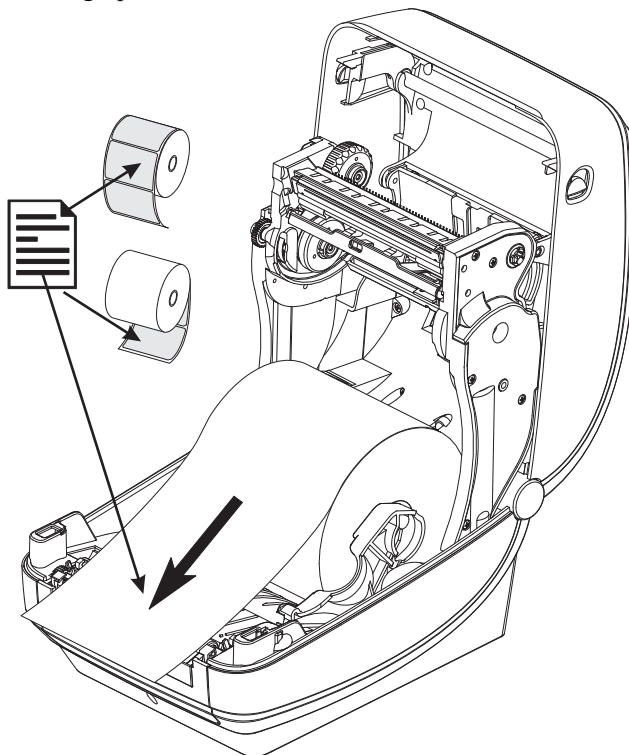
5. Push the media under both of the media guides.

Under Media Guides
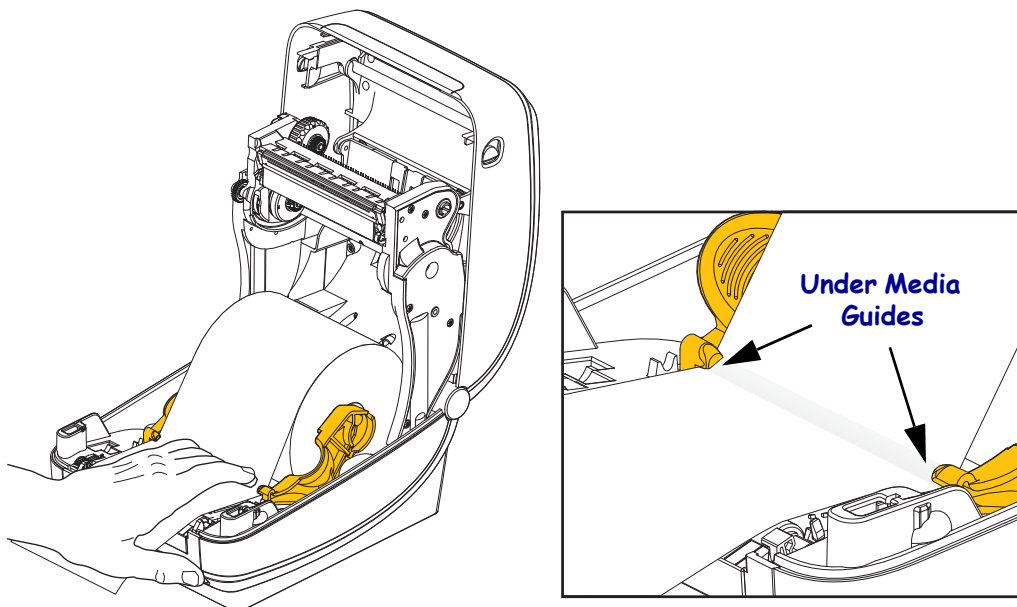
6. Close the printer. Press down until the cover snaps closed.

Loading Transfer Ribbon

Transfer ribbons come in several varieties and in some cases colors to match your application needs. Genuine Zebra® transfer ribbons are specifically designed for your printer and Zebra brand media. Using non-Zebra media or ribbons not approved for use in your Zebra® printer may damage your printer or printhead.

- The media and ribbon types should be matched to provide you with optimal print results.
- Always use ribbon that is wider than the media to protect the printhead from wear.
- For direct thermal printing, do not load ribbon in the printer.

Before following these steps, prepare the ribbon by removing its wrapping and pulling its adhesive strip free.
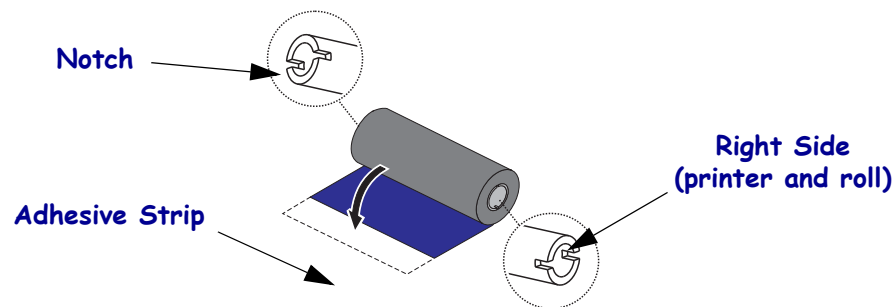
See the User's Guide for more information on ribbon use.

Important • DO NOT USE early model desktop printer ribbon cores! The older ribbon cores can be identified by notches on only one side of the ribbon core. These older cores are too large and will cause take-up spool to bind.

Note • DO NOT USE ribbon cores with damaged notches - rounded, frayed, smashed, etc. The core notches should be square to lock the core on the spindle or the core may slip causing ribbon wrinkle, poor end of ribbon sensing or other intermittent failures.

1. With the printer open, place a new ribbon roll on printer's lower ribbon supply spindles.
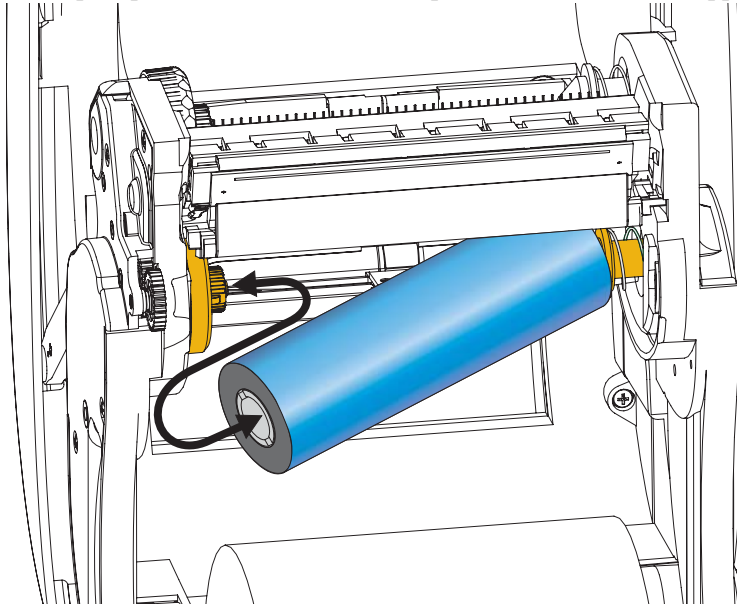
Rotate the roll until the notches align and lock into the left side of the supply hub.

2. Place an empty ribbon core on printer's take-up spindles. Rotate the ribbon core until the notches align and lock into the left side of the take-up hub.
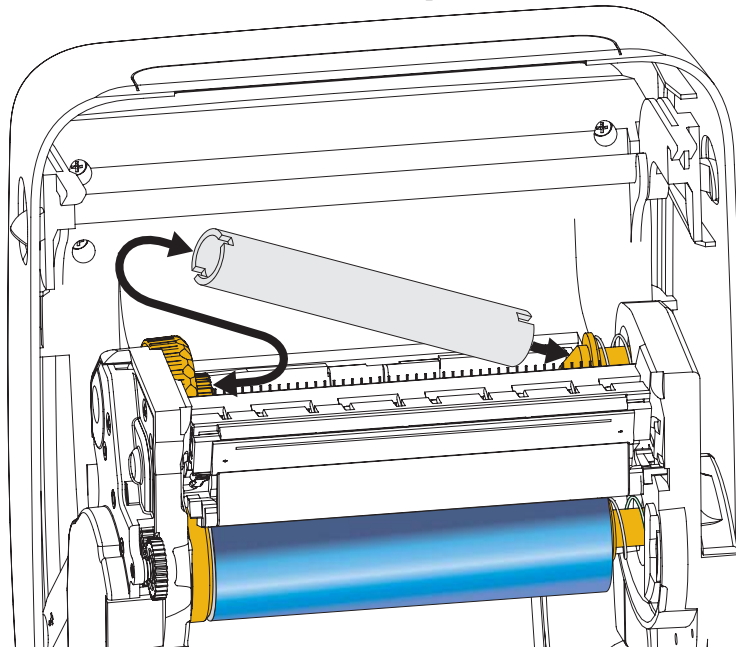
You can find your first ribbon take-up core in the packing box. Subsequently, use the empty supply core to take up the next roll of ribbon.

3. Pull the transfer ribbon's leader off the roll and attach it with the adhesive strip on the leader to the empty ribbon core on the supply spindle. Center the ribbon on the ribbon core.
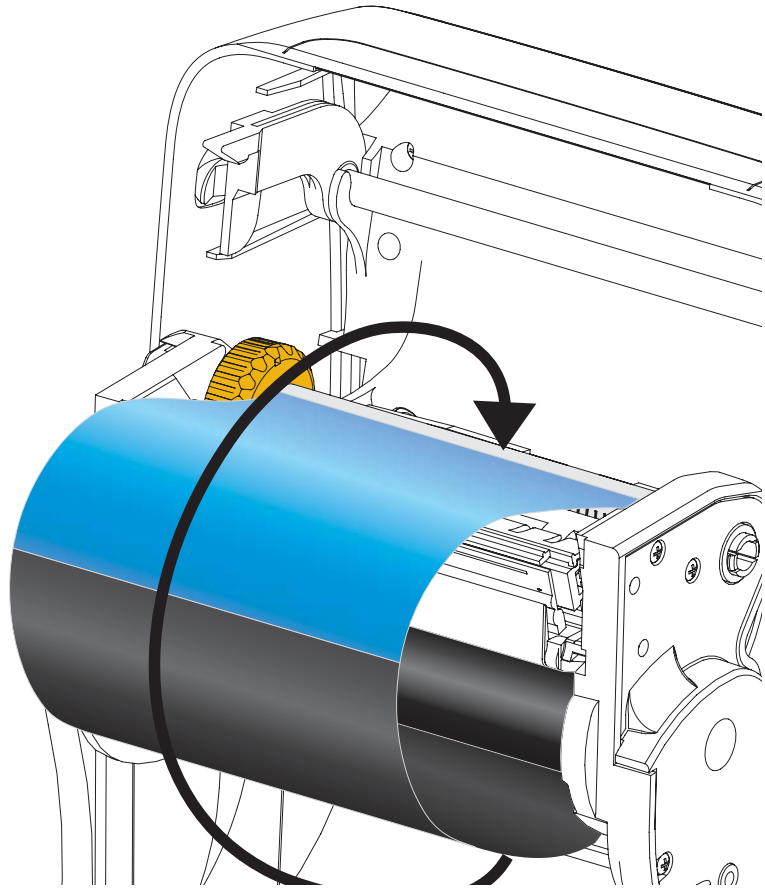
4. Rotate the thumb wheel on the left side of the supply spindle towards the rear of the printer until the ribbon is pulled tight across the printhead.
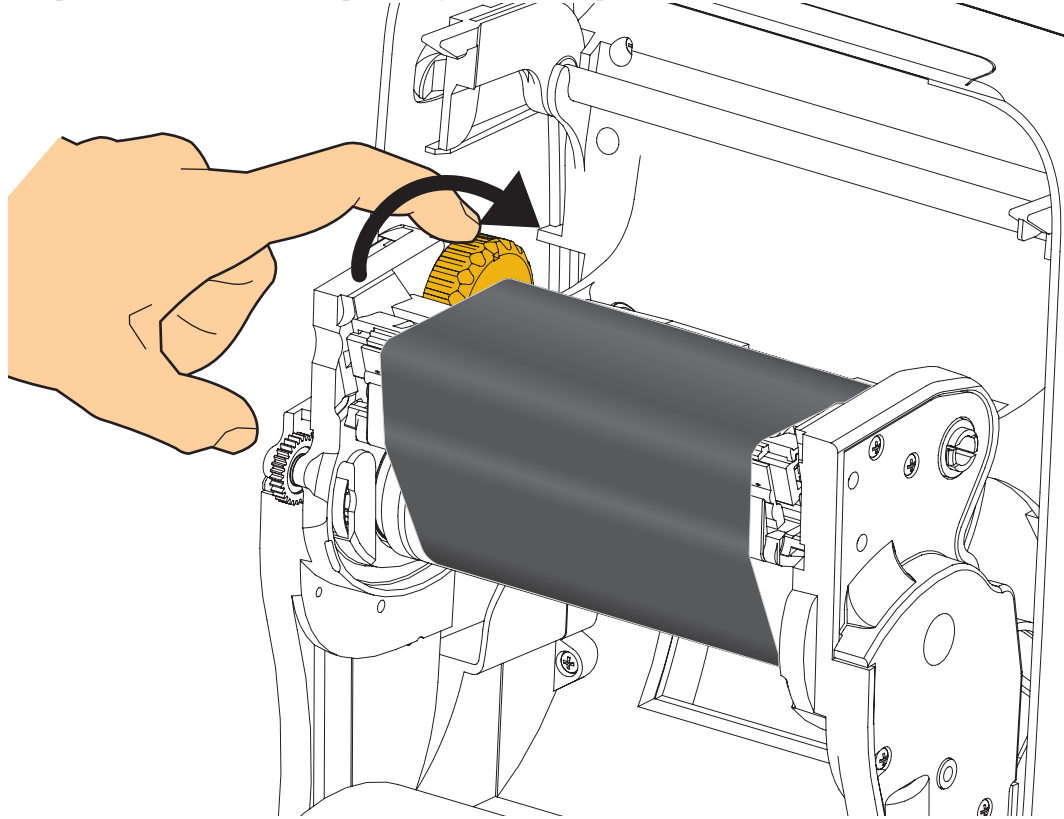
5. Verify that the media is loaded and ready to print and then close the printer cover.

6. Press the Feed button to have the printer feed a minimum of 10 cm (4 inches) of media to remove slack and ribbon wrinkle, and to align the ribbon on the spindles.

7. Change the print mode setting from direct thermal printing to thermal transfer to set the printer's temperature profiles for thermal transfer media. This can be done with the printer driver, application software, or printer programming commands.

- When controlling printer operations with ZPL programming, refer to the Media Type (`^MT`) ZPL II command (follow the instructions in the ZPL Programming Guide).

8. To verify the mode change from direct thermal printing to thermal transfer printing, use the *Test Printing with Configuration Report Printouts* on page 20 to print a configuration label. The 'PRINT METHOD' should read 'THERMAL-TRANS' on the printer configuration status label.

Your printer is now ready to print.

Test Printing with Configuration Report Printouts

Before you connect the printer to your computer, make sure that the printer is in proper working order. You can do this by printing a configuration status report.

1. Make sure the media is properly loaded and the top cover of the printer is closed.

2. Press and hold **CANCEL** button while turning the printer on (**I**).

3. Hold **CANCEL** button down until the printer status light turns green for the first time and release.

4. The Printer and Network Configuration Reports will be printed a couple of seconds after the printer's display reports 'PRINTER READY'.

If you cannot get these reports to print and you have checked your printer installation with this document, then see the Troubleshooting section of the User's Guide or the Zebra Website for guidance.

Connecting your Printer to a Computer

The Zebra® ZD500™ printers support a variety of interface options and configurations. These include: Universal Serial Bus (USB) interface, RS232 Serial, Parallel (IEEE 1284.4), 10/100 Wired Ethernet, Wireless Ethernet (WiFi) and Bluetooth.

Pre-install Windows® Printer Drivers

Install the Zebra Setup Utilities <u>before</u> applying power to the printer connected to the PC (running a Zebra driver supported Windows operating system). The Zebra Setup Utility will prompt you to apply the printer power. Continue to follow the instructions to complete your printer installation.

The Zebra Setup Utility is designed to assist you with installing these interfaces. The cabling and unique parameters for each of these physical printer communication interfaces is discussed in the following pages to assist you with making configuration setup choices prior to and immediately following applying power. The Zebra Setup Utilities configuration wizards will instruct you to turn the printer's power on at the appropriate time to complete the installation of your printer.

For Connecting to Wireless Communication Interfaces:

- Refer to the *ZebraNet™ Wired and Wireless Print Server Guide.*

Caution • Keep the power switch in the OFF position when attaching the interface cable. The power cord must be inserted into the power supply and the power receptacle on the back of the printer before connecting or disconnecting the communications cables.

Interface Cable Requirements

Data cables must be of fully shielded construction and fitted with metal or metallized connector shells. Shielded cables and connectors are required to prevent radiation and reception of electrical noise.

To minimize electrical noise pickup in the cable:

- Keep data cables as short as possible (6 foot [1.83 m] recommended).
- Do not tightly bundle the data cables with power cords.
- Do not tie the data cables to power wire conduits.

Important • This printer complies with FCC "Rules and Regulations," Part 15, for Class B Equipment, using fully shielded data cables. Use of un-shielded cables may increase radiated emissions above the Class B limits.

USB Interface

USB Cable

CERTIFIED **USB**

Serial Interface

Serial Cable

Tighten
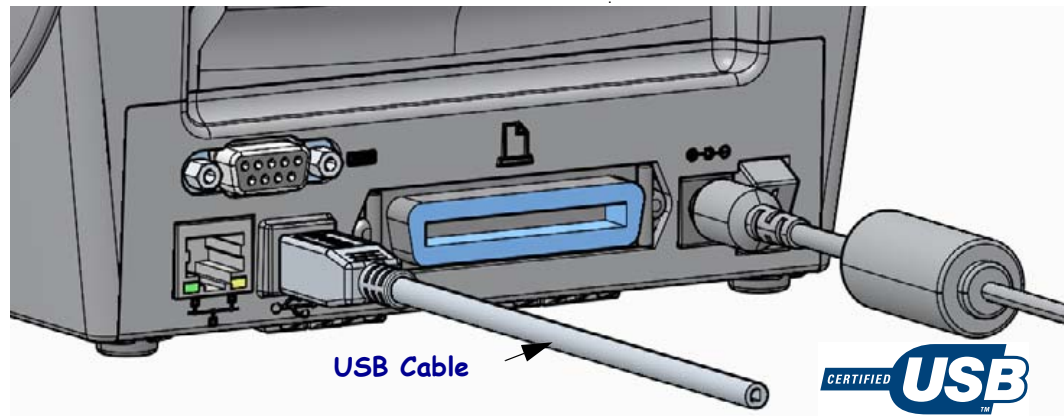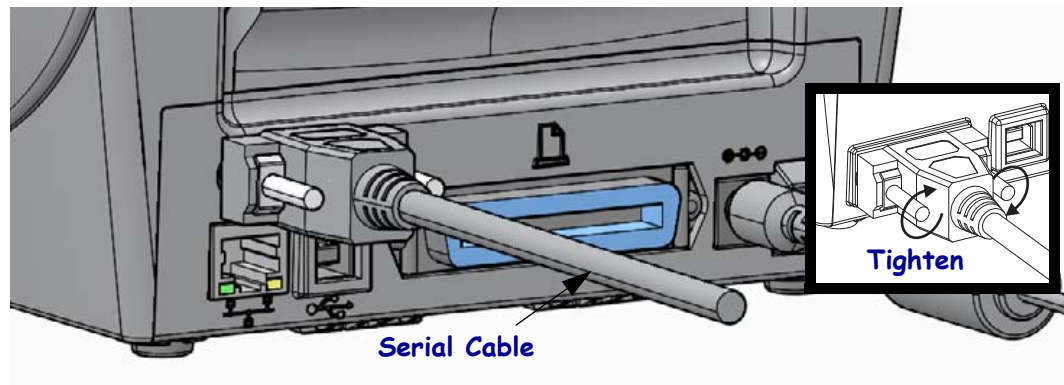
Parallel Interface

Parallel Cable
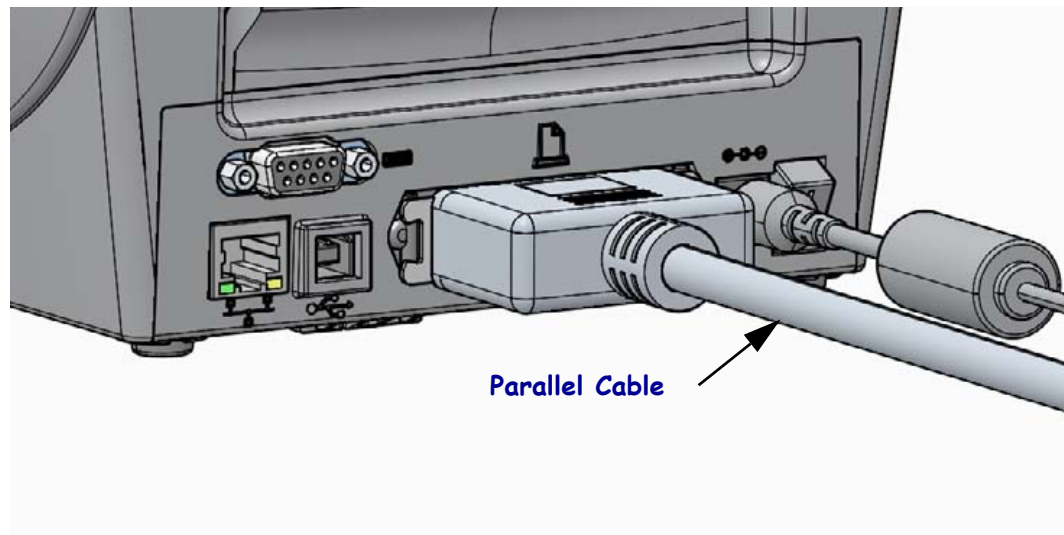
Wired Ethernet Interface

**Ethernet Cable
(RJ45 Connector)**
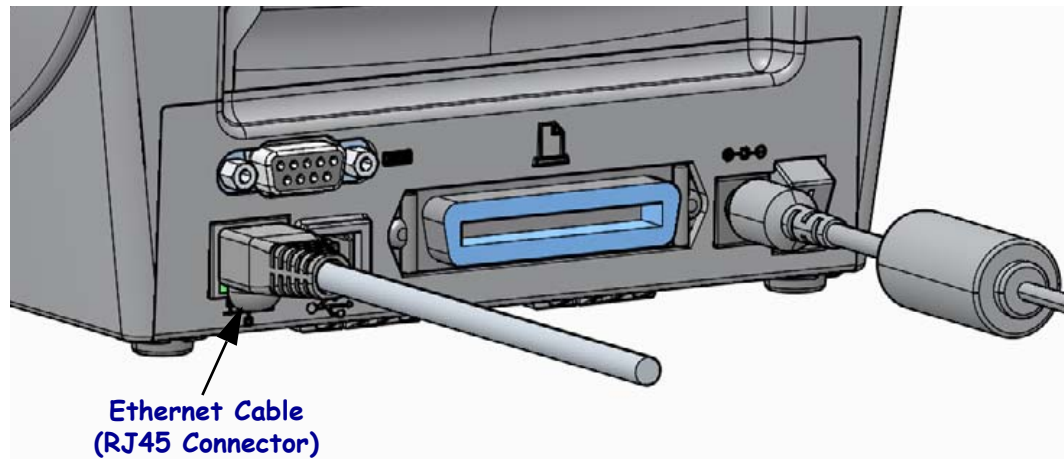
Ethernet Status/Activity Indicators

LED Status	Description
Both OFF	No Ethernet link detected
Green	100 Mbps link detected
Green with the Amber flickering on and off	100 Mbps link and Ethernet activity detected
Amber	10 Mbps link detected
Amber with the Green flickering on and off	10 Mbps link and Ethernet activity detected

Green LED   **Amber LED**
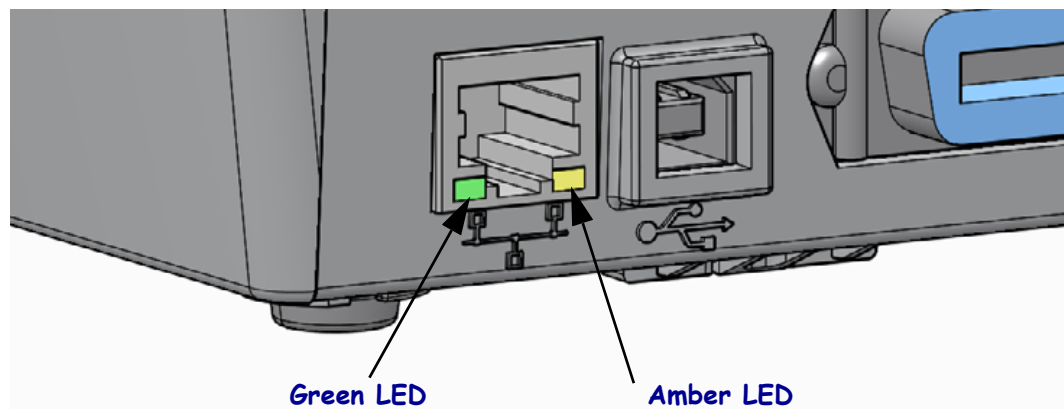
Manual Calibration - Media

The printer may need to have the sensors and the label length adjusted for a new media. Small variations in media from manufacture to manufacture and even from batch to batch of media may necessitate recalibrating the printer for the media being used.

Use the Manual Calibration procedure when you change media unless to it media from the same batch you have been using.

The primary method used to set the printer for media in use is the control panels SENSORS menu to access the MANUAL CALIBRATION procedure. Use the following procedure to set your printer's language when the printer is turned on and in the 'Ready' state.
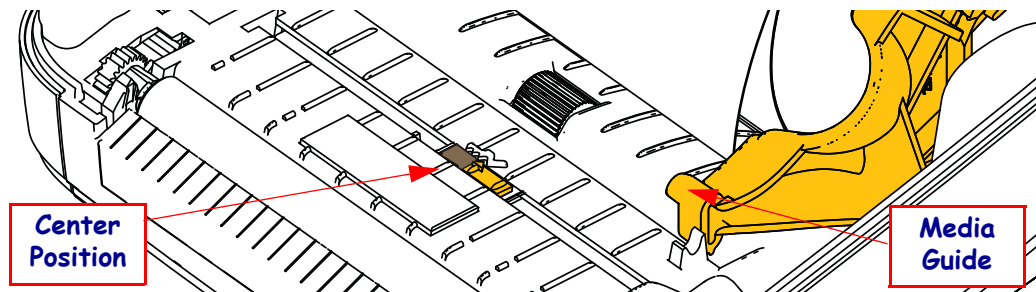
Procedure for calibration of label media with liner and inter-label 'GAP' between labels.

1. Load the printer with your chosen label media. Verify the media sensor is in the center position for label gap (transmissive) sensing, see below.

2. Remove the first 3 inches or 80 mm of labels from the liner. Place the label-less liner over the platen (driver roller) and the leading edge of the first label under the media guides.

3. Close the printer. Turn the printer power ON. Press the menus 'Home' (🏠) button.

4. Navigate to the 'SENSORS' (▤) menu button and press the 'Select' (✓) button.

5. Use the 'Left' (◀) and 'Right' (▶) navigation arrows to browse to the 'MANUAL CALIBRATION' procedure.

6. Press the select button (—) below the **START** on the lower right hand of the display.

7. The display will have a message:
   LOAD BACKING
   PRINTER PAUSED

8. Press the Pause button once to start the calibration procedure.

9. When it has finished the first part of the calibration, the display will read:
   RELOAD ALL
   CONTINUE.

10. Press the Pause button once again to continue the calibration procedure. The printer will begin feeding several labels and then it will stop with the display message reading:
    READY

    Remove excess media. Media calibration has finished and you are ready to print.

RFID Calibration (ZD500R only)

RFID calibration sets communication parameters for your tag type. This procedure should be done after the printer has been calibrated for the media (length and gap settings), typically a Manual Media Calibration. During the RFID calibration process, the printer moves the media, calibrates the RFID tag position, and determines the optimal settings for the RFID media being used.

These settings include the programming position, the read/write power level to use, and reads the tag's TID to determine the chip type (or choose F0 from the front panel RFID menu).

To restore the printer's default programming position at any time, use the "restore" option in the rfid.tag.calibrate SGD command.

Do not remove any labels or tag from the liner (label backing or 'web'). This allows the printer to determine RFID settings which do not encode adjacent tags. Allow a portion of media to extend out the front of the printer to allow for backfeed during the tag calibration procedure.

Always do a Manual Media Calibration and RFID Calibration when you change media type. It should not be necessary when simply replacing an empty roll of the same media.

Before beginning, load RFID media into the printer and perform the manual media calibration.

1. Press the Feed button once to feed (advance) one label.

2. Press the menus 'Home' (🏠) button. Navigate to the 'RFID' (▦) menu button and press the 'Select' (✓) button.

3. Use the 'Left' (◀) and 'Right' (▶) navigation arrows to browse to the 'RFID CALIBRATE' procedure. Press the select button (—) below the **START** on the lower right hand of the display.

4. The printer will slowly feed a label while adjusting the location and RFID read/write communication settings for your chosen RFID tag/label.

   The printer will feed an additional label in some cases when calibration has completed successfully with the display message reading: READY

5. Remove excess media. Media calibration has finished and you are ready to print.

ALTAREX jest wiodącym dostawcą całej gamy urządzeń do systemów informatycznych wykorzystujących automatyczną identyfikację produktów, w oparciu o technikę kodów kreskowych, jak również z zastosowaniem nowych technologii, na przykład RFID.

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