





V4500
BARCODE SCANNER

User Manual



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Safety and Environment

Please read and understand this manual before using the V4500 Barcode Scanner scanner for the first time. This manual describes all of the main functions of the V4500 Barcode Scanner scanner.

Precautions

Before using the V4500 Barcode Scanner please note the following precautions:

- · Read all instructions carefully before operating the scanner and prior to performing any procedure.
- Do not place the unit on an unstable surface or stand.
- Do not place anything on top of the unit.
- Keep the top clear of obstructions.
- Only use the power source indicated on the rating label.
- Use only the power cord that comes with the unit.
- · Do not place anything on the power cord.
- This equipment is not intended for use by children.



Technical Support and Registration

Contact Information

Visit the Brady Knowledge Base at support.bradyid.com/s/.

For repair or technical assistance, locate your regional Brady Technical Support office by going to:

- United States: bradyid.com/techsupport
- Canada: bradycanada.ca/contact-us
- Mexico: bradyid.com.mx/es-mx/contacto
- Latin America: bradylatinamerica.com/es-mx/soporte-técnico
- Europe: bradyeurope.com/services
- Australia: bradyid.com.au/technical-support
- Asia Pacific: brady.co.uk/landing-pages/global-landing-page

Registration Information

To register your scanner go to:

· bradycorp.com/register

Repair and Return

If for any reason you need to return the product, please contact Brady Technical Support for replacement information.



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1 Introduction

System Specifications

The V4500 Barcode Scanner has the following specifications:

- · Bluetooth capability
- Color LCD display
- · Elastomeric keypad
- Battery status meter
- Removable lithium ion battery, 3300 mAh
- Scan range from 0.4" (10 mm) to 13.1" (333 mm) depending on barcode size and type
- Light weight of only 18 ounces (510 g) (with battery)

Typical Scanning Ranges

	3 mil Code 39	7.5 mil Code 39	10.5 mil GS1 Databar	13 mil UPC	5 mil Data Matrix	6.3 mil Data Matrix	10 mil Data Matrix	20.8 mil Data Matrix
Min	3.5"	0.9"	0.4"	0.7"	1.3"	0.9"	0.4"	0.7"
Distance	90 mm	23 mm	10 mm	18 mm	33 mm	23 mm	10 mm	18 mm
Max	4.4"	6.8"	8.3"	10.6"	4.1"	5.5"	6.7"	13."1
Distance	112 mm	172 mm	210 mm	270 mm	105 mm	140 mm	170 mm	333 mm

Physical and Environmental Characteristics

V4500 Barcode Scanner

The V4500 Barcode Scanner has the following physical and environmental characteristics:

Physical	U.S. Units	Metric Units	
Dimensions	7.8" L x 3.4" W x 6" H	198 x 85.5 x 152 mm	
Weight (with battery pack)	18 oz	510 g	

Environmental	Operation	Storage
Temperature	-4° to 122° F (-20° to 50° C)	-22° to 158° F (-30° to 70° C)
Exposing to direct sunlight is not recommended.		
Relative Humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)





CAUTION! Avoid using the barcode scanner near water, in direct sunlight, or near a heating device.

V1300 Cradle

The V1300 cradle has the following physical and environmental characteristics:

Physical	U.S. Units	Metric Units
Dimensions	10" L x 4.5" W x 2.9" H	254 x 113 x 74 mm
Weight	16 oz	456 g

Environmental	Operation	Storage
Temperature Exposing to direct sunlight is not recommended.	-4° to 122° F (-20° to 50° C)	-22° to 158° F (-30° to 70° C)
Relative Humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)

V1100 Charging Station (optional)

The V1100, optional, charging station has the following physical and environmental characteristics:

Physical	U.S. Units	Metric Units
Dimensions	5.2" L x 3.3" W x 2.6" H	132 x 84 x 66 mm
Weight	6 oz	169 g

Environmental	Operation	Storage
Temperature	32° to 113° F (0°C – 45°C)	-22° to 158° F (-30° to 70° C)
Exposing to direct sunlight is not recommended.		
Relative Humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)



V1200 Battery

The V1200 lithium-ion battery has the following environmental characteristics:

Environmental	Charging	Storage
Temperature	32° to 113° F (0°C – 45°C)	<1 month -4° – 122°F (-20°C – 50°C) <3 months -4° – 104°F (-20°C – 40°C) <1 year -4° – 68°F (-20°C – 20°C)
Relative Humidity	5% to 95% (non-condensing)	0% to 95% (non-condensing)

Proximity Range for Bluetooth

The V4500 Barcode Scanner should be within 196 ft (60 m) of the cradle, without obstruction, to pick up the Bluetooth signal. The scanner will emit an audible alert and the LED will flash red when out of range.



2 Setup

Unpacking the Barcode Scanner

Carefully unpack and inspect the V4500 Barcode Scanner and its components.

What's in the Box

Before setting up the scanner, verify that you have received the following items in the packaging:

- V4500 Barcode Scanner
- V1300 Cradle
- V1200 Li-ion Battery
- Power Cord
- Power Adapter
- USB/Connection Cable
- Quick Start Guide



Save the Packaging

Save the product packaging in case you have to ship it and the accessories back to the supplier.



CAUTION! Never ship the V4500 Barcode Scanner without first removing the rechargeable battery.

If shipping both the barcode scanner and battery, remove the battery and place the items in the original shipping material before transporting. Consult with your transportation carrier for state, federal, municipal, and international shipping regulations regarding the lithium battery pack.

Registration

Register your barcode scanner on-line at www.bradycorp.com/register to receive free product support and updates!



Barcode Scanner Components



1	Selected scanner function	8	Return to the home screen or show app information
2	Config lock enabled	9	Keypad
3	Cradle is connected to host	10	Alternates letters and numbers for keypad input
4	Bluetooth is connected between scanner & cradle	11	Enter
5	Battery charge remaining	12	Settings
6	Shortcut keys	13	Clear previous character(s)
7	Navigation button*		

^{*}Pressing the top or bottom of the navigation button to move up and down or left and right sides to move in those directions on the scanner's screen.



Cradle Components





1	QuickConnect Code for pairing
2	Cable disconnect button
3	Bluetooth indicator
4	LED status lights
5	Pager button
6	Connection port
7	Cable channel guide



Power

Power is supplied to the scanner through a lithium ion battery, which is charged when the scanner is in the V1300 cradle or by using the optional V1100 battery charging station.



CAUTION! The battery in the V4500 Barcode Scanner can only be charged using the V1300 Cradle or V1100 Battery Charging Station.

Battery



WARNING!

- Do not operate or store the battery in temperatures above or below those indicated in the Physical and Environmental Characteristics.
- Do not store the scanner with the battery in temperatures above 122° F (50° C) or below -4° F (-20° C).
- Do not charge the battery in temperatures above 113° F (45° C) or below 32° F (0°C)
- · Do not disassemble or mistreat the battery.
- Do not attempt to open, damage, or replace components in the battery.
- The battery should only be used in the V4500 scanner.
- Charge the battery while it is installed in the scanner using the V1300 cradle or charge the battery separately in the V1100 battery charger.
- Do not allow metal or other conductive materials to touch the battery terminals



WARNING! When storing the battery:

- Do not allow metal or other conductive materials to touch the battery terminals.
- Keep the battery away from sparks, flames, or other heat sources.
- · Keep the battery away from water.
- · Never lay objects on top of the battery.
- Store your battery only in a cool, dry place.
- · Keep the battery out of the reach of children.
- At the end of battery life, replace your old battery only with a battery intended for use with the V4500 Barcode Scanner.
- The battery must be recycled or disposed of properly according to federal, state, and municipal regulations.



WARNING! Risk of Explosion if battery is replaced by incorrect type. Dispose of used batteries according to instructions.



Initial Setup

Cradle

IMPORTANT! Only use the cables provided for the V1300 Cradle.

1. Insert one end of the RJ50 cable into the bottom of the cradle. Push until you hear it click into place.

Note: To remove the cable, firmly push the yellow disconnect button in the front of the cradle and pull the cable out.

2. Press the cable into the channel guide on the bottom of the cradle.





- 3. Insert the barrel end of the adapter into the cable.
- 4. Fit the power cord into the power brick and then plug the other end into an AC wall outlet.





Plug the USB or (optional) serial cable into the host computer.
 This establishes data transfer to the host. For mounting instructions see Mounting the Cradle on page 28.





Scanner

Battery Installation

Press the yellow latch then pull up and back on the silver battery cover and insert battery into the cavity of the scanner. The battery is keyed so it can only be inserted one way. Close the battery compartment latch firmly until it clicks.

Place the scanner into the cradle and press down until it clicks into place.
 The battery indicator will display on the scanner's screen. When the battery is fully charged, remove the scanner from the cradle.

Note: If the screen has turned off, pull the trigger or press any key on the keypad to view the battery indicator.





2. Power on the scanner by pulling the trigger.

When the scanner successfully completes its booting sequence (in about 2 seconds), the LEDs will flash, it will beep, and the scanner will vibrate once.

- 3.Use the navigation keys to scroll through the list and press the Enter button to select the desired language.
- 4. Press F3 to advance to the next screen.
- 5. Follow the instructions on the scanner's display to complete setup.



WARNING! To prevent risk of fire, electrical shock, explosion, or damage:

- Do not operate or store the scanner in temperatures above or below those indicated in the Physical and Environmental Characteristics.
- Do not disassemble, mistreat, or attempt to replace components in the scanner.
- Do not use any AC adapter other than that specifically for use with the V1300 Cradle.
- Do not incinerate the scanner. Keep the scanner, cradle and optional charging station away from heat sources.
- Keep the scanner, cradle and optional charging station away from water.
- Never lay objects on top of the scanner or cradle.
- Store all devices in a cool, dry place.
- The scanner must be recycled or disposed of properly according to federal, state, and municipal regulations.



Battery Removal

To remove the battery, press the yellow latch then pull up and back on the silver battery cover. Tip the scanner until the battery moves out of the cavity and into your cupped hand.



CAUTION! Do not allow the battery to drop onto a hard surface.

Charging the Battery

To charge the battery installed in the scanner, place the scanner in the cradle with the scan window facing down. The scanner will beep once if the scanner is powered off and wakes up, another beep if the scanner has been paired with the cradle and reconnects.

Cradle LED Behavior

LED	Status
• • • •	Charging in progress
	Charged
• • • •	Error

The battery will be fully charged in approximately 4 hours when using the cradle with an external power supply.

Note: It is normal that the area around the scanner becomes warm during charging.

V1100 Charging Station (Optional)

The battery can also be charged using the optional V1100 battery charging station accessory. Connect the charging station to the power supply provided and plug the power supply into an AC power source. Insert battery into the charger. The Power Gauge LEDs will flash once per second during charging. The LEDs will stay on solid when a battery is fully charged in approximately 4 hours.

Note: It is recommended to fully charge the battery before deploying the scanner for the first time, even though a new battery has a residual amount of battery power.



Automatic Shut Down

To conserve energy, the scanner automatically goes into screen saver mode after a period of inactivity. Any data on the screen at the time of auto shutdown is retained and available the next time the trigger is pulled to restart the scanner. When using the cradle, power is constant so there is no drain on the battery. To set the inactive time, see Screen Off Timer on page 12. The scanner will automatically power off when not in use for two hours.



Pairing the Scanner

The scanner operates in Bluetooth Low Energy (BLE) mode. It pairs with the cradle for wireless data communication.

Cradle

The cradle will receive data wirelessly from the paired scanner and send to the host PC via the USB cable (or optional serial cable) on the cradle. It can receive commands, configurations, files, etc. from the host and send wirelessly to the paired scanner.

Pair the scanner with the cradle by using the V4500 scanner to scan the QuickConnect Code located on the cradle. A successful pairing is indicated by two short beeps followed by one normal beep, one vibration and the green LED on the scanner will flash. When the scanner and cradle are paired, the Bluetooth indicator will be a solid blue. When the cradle and host are connected the LED indicators on the cradle will turn solid green.

Computer or Mobile Device

The scanner can be paired with a computer, mobile phone or tablet that supports BLE as a Bluetooth HID keyboard device.

To set up the Bluetooth HID keyboard mode, refer to the Configuration Guide on page 26.

- Open the Bluetooth settings menu on the mobile device, find "Brady V4500" in the available Bluetooth devices.
- Connect the V4500 to the device.
 Successful connection is indicated by a beep and flashing of the Bluetooth LED indicator on the scanner.

Automatic reconnection can be set on the host (mobile device). Connect directly to the host PC using the DirectConnect desktop application, which be can be found at https://www.bradyid.com/v4500support.

App Information

For information about the different apps, press the Home button on the scanner. Available apps include:

- Scan Point and squeeze trigger to capture barcode.
- **Inventory** Append additional information to the barcode such as aisle, bin, location and quantity.
- Image Use on human readable text, such as a label.
- Match Compares two scans and only transmits if they match.
- Info Provides information about available Apps.
- Settings Manages features on the scanner.
- Start Walks the user through the scanner setup.



Settings

Use the settings button above the keypad to configure the language, display brightness, assign the shortcut keys, and more.

Display

Set the brightness on the display or the amount of time after which the display will turn off. To conserve energy, the scanner automatically turns off the display after a period of inactivity.

Screen Brightness

To set the brightness:

- 1. Press the **settings** button.
- 2. *Display* is highlighted, press the **ENTER** button. Screen Brightness is highlighted.
- 3. Press the ENTER button.
- 4. Use the left and right sides of the navigation button to move the slider to adjust the brightness.
- 5. Press the F3 to accept the selection or F1 to cancel.

Dim Level

This feature works in conjunction with the Dim Timer. The screen brightness will dim to a level you set after the Dim Timer expires to conserve power.

To set the dim level:

- 1. Press the **settings** button.
- 2. *Display* is highlighted, press the **ENTER** button.
- 3. Use the navigation button to move to **Dim Level** and press the **ENTER** button.
- 4. Use the left and right sides of the navigation button to move the slider to adjust the dim level.

Screen Off Timer

Set the amount of time for the scanner to be inactive before turning off the screen. Using this feature extends battery life.

To set the display timeout:

- 1. Press the **settings** button.
- 2. Display is highlighted, press the ENTER button.
- 3. Use the navigation button to move to Screen Off Timer and press the ENTER button.
- 4. Use the navigation button to scroll through the options.
- 5. Press the F3 to accept the selection or F1 to cancel.



Dim Timer

Set the amount of time the scanner is inactive before the screen dims to the level set in Dim Level.

To set the dim timer:

- 1. Press the **settings** button.
- 2. *Display* is highlighted, press the **ENTER** button.
- 3. Use the navigation button to move to *Dim Timer* and press the **ENTER** button.
- 4. Use the navigation button to scroll through the options.
- 5. Press the F3 to accept the selection or F1 to cancel.

Screensaver Timer

Set the amount of time the scanner is inactive before the screensaver appears.

To set the screensaver timer:

- 1. Press the **settings** button.
- 2. *Display* is highlighted, press the **ENTER** button.
- 3. Use the navigation button to move to *Screensaver Timer* and press the **ENTER** button.
- 4. Use the navigation button to scroll through the options.
- 5. Press the F3 to accept the selection or F1 to cancel.



Device

UI Languages

Choose the language in which you want all menus, functions, and data displayed.

To set the language:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. UI Languages will be highlighted, press the **ENTER** button.
- 4. Navigate to the desired language and press F3 to save your selection or F1 to cancel.

Keyboard Languages

Set the keyboard language to match that which is being used on the host.

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. Navigate to highlight *Keyboard Languages* and press the **ENTER** button.
- 4. Navigate to the language and press F3 to save your selection or F1 to cancel.

Volume

Raises or lowers the volume of sound for the different types of notifications.

To set the volume:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. Navigate to highlight *Volume* and press the **ENTER** button.
- 4. Navigate to the notification type desired; or turn off the sound for all notification types, by selecting *All Beeps > Disable All Beeps*.
- 5. Press F3 button to save your selection or F1 to cancel.



Vibration

Sets the intensity of the vibration or turns it off for the different types of notifications.

To set the vibration:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. Navigate until *Vibration* is highlighted and press the **ENTER** button.
- 4. Navigate to the desired option and use the left and right sides of the navigation button to move the slider to adjust the intensity.
- 5. Press F3 to save your selection or F1 to cancel.

Trigger

Set the amount of time for holding the trigger before scanning the barcode.

To set the trigger time:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. Navigate until *Trigger* is highlighted and press the **ENTER** button.
- 4. Trigger Mode will be highlighted so press the **ENTER** button.
- 5. Highlight Targeting Preview and press F3.
- 6. Highlight Targeting Preview Time and press the ENTER button.
- 7. Navigate the list to make your selection for how long the trigger needs to be held before the barcode is scanned.
- 8. Press F3 to save your selection or F1 to cancel.

To reset the trigger time to default:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. Navigate until *Trigger* is highlighted and press the **ENTER** button.
- 4. With *Normal Trigger* highlighted, press the **F3** key.

Factory Reset

Erases all custom configurations, pairing information and resets the scanner to default settings.

To initiate a reset:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. Navigate to Factory Reset and press the ENTER button.
- 4. Press F3 to perform a factory reset or F1 to cancel
- 5. Follow the on-screen instructions.



Reset Files

Image files, custom JavaScript files and inventory field history will be removed when using this option.

To reset files:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. Navigate to Reset Files and press the ENTER button.
- 4. Press F3 to reset the files or F1 to cancel.

Reboot

Power the scanner off and back on.

To reboot:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. Navigate to *Reboot* and press the **ENTER** button.
- 4. Press F3 to reboot the scanner or F1 to cancel.

Power Off

Turn the scanner off.

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Device* and press the **ENTER** button.
- 3. Navigate to Power Off and press the **ENTER** button.
- 4. Press F3 to power off the scanner <u>or</u> F1 to cancel. Power up the scanner by pulling the trigger.

Scanner Info

View the following types of information:

- Firmware version
- · Bluetooth firmware version
- Processor chip revision
- Serial number
- · Hardware version
- Keypad revision

To view information:

- 1. Press the **settings** button.
- 2. Use the navigation button to move through the menu until *Scanner Info* is highlighted.
- 3. Press the ENTER button.



Batch Mode

The out of range notification will be disabled when batch mode is enabled. This will store the barcode data in the scanner until it is within range of the cradle which then transfers the information to the host. If the Bluetooth indicator is flashing, scan the QuickConnect Code on the cradle to reconnect.

Enable Batching

To enable or disable batching:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Batch Mode* and press the **ENTER** button.
- 3. Navigate to Enable Batching and press the **ENTER** button.
- 4. Highlight Enable or Disable and press F3 to accept your selection or F1 to cancel.

Batch Erase Mode

When batch mode is enabled, scans will be stored in the scanner until it is in range of the cradle. Choose to have the scanner automatically erase the batch mode data after the data transfer to the host device or delete it manually.

To erase batch data manually or automatically:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Batch Mode* and press the **ENTER** button.
- 3. Navigate to *Batch Erase Mode* and press the **ENTER** button.
- 4. Highlight either Automatic or Manual and press F3 to accept your selection or F1 to cancel

Erase Batch Data

When batch mode is enabled, scans will be stored in the scanner until it is in range of the cradle. If manual erase batch data is set, use this function to erase the data stored in the scanner.

To manually erase batch data:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight Batch Mode and press the ENTER button.
- 3. Navigate to Erase Batch Data and press the ENTER button.
- 4. Press the F3 key to erase the stored data or F1 to return to the Batch Mode screen.

Memory Usage

When batch mode is enabled, scans will be stored in the scanner until it is in range of the cradle. Use this to check the amount of space left for storing data.

To check memory usage:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight Batch Mode and press the ENTER button.
- 3. Navigate to *Memory Usage* and press the **ENTER** button.
- 4. Use either F1 or F3 key to return to the Batch Mode screen.



Function Keys

The three F key buttons are shortcuts to on-device applications. Assign the app wanted for each F key button on the scanner.

Assign Keys

Apps:

Scan - Point and squeeze trigger to capture barcode.

Inventory - Capture barcode and append additional information such as aisle, bin, location and quantity.

Image - Use on human readable text, such as a label.

Match - Compares two scans and only transmits if they match.

To assign a shortcut:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight Function Keys and press the ENTER button.
- 3. Assign Keys is highlighted, press the ENTER button.
- 4. Navigate to the F1, F2 or F3 App and press the **Enter** button.
- 5. Navigate the list of apps and either press the Enter button or F3 to save the selection to the assigned F key button.

To create your own custom apps, please contact Technical Support on page iv.

Preview Options

Use this to set a preview of the F key functions. Setting it to "double press transition" will display the functions on the screen when an F key button is pressed once, then launch to the app when the F key button is pressed a second time.

To enable preview:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Function Keys* and press the **ENTER** button.
- 3. Highlight *Preview Options* and press the **ENTER** button.
- 4. Select single or double press transition and either press the Enter button or F3 to save.



Barcode Settings

Selection Mode

The scanner is capable of reading many different types of barcodes which can be enabled or disabled by scanning the barcode using Selection Mode.

Barcode List

Enable or disable barcode types, as well as other barcode specific features, from the barcode list. Choose a barcode and press the Enter button. Use the navigation button to highlight desired features and press the Enter button.

Disable All Barcodes

To prevent accidental scanning of undesired barcodes, disable all barcodes.

To disable all barcode types:

- 1. Press the **settings** button.
- 2. Use the navigation button to highlight *Barcode Settings* and press the **ENTER** button.
- 3. Navigate to *Disable All Barcodes* and press the **ENTER** button.
- 4. Press the **F3** button to disable all barcodes.
- 5. Navigate to Selection Mode and press the ENTER button.
- 6. Scan the barcode type you want to enable and press the F3 button to enable <u>or</u> F2 to select other settings, when available for that barcode type.
- 7. Press the **Home** button to start scanning.

Config Lock

Setting a four to eight digit pin will allow only people with the pin to change settings on the scanner.

IMPORTANT! Once set, the only way to remove a forgotten pin is to do a factory reset or contact technical support.

To set a config lock:

- 1. Press the **settings button**.
- 2. Use the navigation button to highlight *Config Lock* and press the **ENTER** button.
- 3. Use the keypad to enter a four to eight digit pin.
- 4. Press **F3** to confirm.
- 5. Re-enter the pin.
- 6. Press **F3** to confirm.
- 7. Press F3 to save your selection or F1 to cancel.

A lock icon will appear on the screen when a config lock has been set.



Notifications

Messages displayed by the scanner are saved in memory. Use this feature to view or clear messages.

To access past notifications:

- 1. Press the **settings button**.
- 2. Use the navigation button to highlight *Notifications* and press the **ENTER** button.
- 3. Navigate through the messages and press **Enter** to read the details of the highlighted message.
- 4. Press F3 to clear a single, highlighted message or F2 to delete all messages.
- 5. Press F1 to return to the Settings menu without clearing any messages.

Accessories

The following accessories for the V4500 Barcode Scanner can be purchased separately.

- V1100 Charging Station
- V1200 Li-ion Battery
- · USB cable
- Serial cable
- Power Cord
- Lanyard



3 General Operation

LED Behavior on Scanner

Handheld Scanning

Hold the scanner at a distance of about 4" (10 cm) from the barcode, then pull the trigger. An audible alert will sound to indicate that the barcode has been read, there will be a green blink and the scanner will vibrate.

Note: Depending on the size of the barcode, you may need to vary the distance between the scanner and the barcode. In general, high density codes read better at shorter distances (close up) and large or wide barcodes read better at longer distances (farther away).

LED Behavior on Cradle

Good read — Connected to host Host disconnected File download — Bluetooth connected Device updating Bluetooth disconnected Battery in scanner is charged Battery in scanner is charged

Shortcut F Key Buttons

The three F key buttons are shortcuts for different types of apps, which can be assigned by following the steps under Function Keys on page 18.

Press the appropriate F key for the type of scanning that will be performed. To preview the appropriate to each F key, enable double press transition (see Preview Options on page 18).

Keypad

The keypad provides numbers, letters and punctuation. The clear button, located to the right of the zero, will delete characters to the left of the cursor.

FN Button

The FN button allows you move between using numbers, punctuation, lowercase or uppercase letters, and inserting a space.



When using the Inventory app (see Function Keys on page 18), pressing the FN button the first time will change the keypad entry from numbers to lowercase letters or punctuation (shown on the zero button). Pressing the button a second time will change the letters to uppercase, while still allowing punctuation. A third press will take you back to numbers and now the zero button will display the number and not punctuation.

When in either upper or lowercase letter mode, adding a space using the 1 button is enabled.

A visual indicator at the top of the screen shows when in numeric, upper or lowercase alphabet mode.

Barcodes and Symbology

A variety of barcodes and symbologies are supported. The scanner can store up to one megabyte of barcode data in its internal memory.

IMPORTANT! To maintain battery power, place the scanner back into the cradle between activities. Constant charging will <u>not</u> shorten the life of the battery.

To add a new barcode symbology:

- 1. Press the **settings** button.
- 2. Navigate to highlight *Barcode Settings* and press the **ENTER** button.
- 3. Selection Mode will be highlighted, press the ENTER button.
- 4. Scan the barcode symbology.

 The scanner will display what type of barcode or symbology it is and give you the option to change settings or disable or re-enable reading that type of barcode.

To change settings on barcodes:

- 1. Press the **settings** button.
- 2. Navigate to highlight *Barcode Settings* and press the **ENTER** button.
- 3. Navigate to Barcode List and press the ENTER button.
- 4. Navigate to the desired barcode or symbology type and press the **ENTER** button.
- 5. Make the necessary changes to the available settings and press F1 to cancel <u>or</u> F3 to accept the changes.

To avoid scanning accidental scans of unwanted barcodes, all barcodes can be disabled. Then only the desired barcodes can be enabled.

To disable all barcodes:

- Press the settings button.
- 2. Navigate to highlight *Barcode Settings* and press the **ENTER** button.
- 3. Navigate to *Disable All Barcodes* and press the **ENTER** button.
- 4. Press the F3 key to disable all barcodes.
- 5. On the *Barcode Settings* screen, scroll to either 1D or 2D Barcodes and press the **ENTER** button.
- 6. Highlight **Enable** and press the **ENTER** button.
- 7. Press the F3 key to save or F1 to cancel.
- 8. Press the F1 key to return to Barcode Settings or press the Home button to start scanning.



Alerts

Good Read

When the scanner has successfully read the target, there will be a green blink, a beep and the scanner will vibrate, assuming these features have not been disabled.

Error

The scanner will blink red and beep if the host is not available.

Config

When a configuration barcode is scanned, the scanner will beep.

File Download

During download the red LED will illuminate while saving to memory. A beep will sound when the operation is complete.

Communicating

The scanner will beep when connecting to the host or when reconnecting if the connection was broken.

Scanner Location

To locate a missing scanner, press the paging button on the cradle. The scanner will beep continuously until the trigger is pulled or paging times out after 30 seconds.

Note: This feature only works on a scanner that is paired and in range of the cradle. If the scanner is not paired to the cradle, the light on the cradle will flash three times.

Image

When saving an image, the scanner will beep when the upload begins and again when it is finished.

Power Modes

Operating Mode – The scanner attempts to decode barcodes when the trigger is pulled. In this mode, illumination and targeting are flashing.

Idle Mode – The scanner is on but not attempting to decode barcodes. The screen saver may be active, if it was enabled. In this mode, illumination and targeting are not on. Pull the trigger to put the scanner into operating mode.

Screen Off Mode – The screen is not illuminated, but the trigger can be pulled to immediately put it into operating mode. Even if screen saver is enable, screen off mode will go into effect if enabled.



Power Off Mode – When powered off, the scanner is not drawing any power from the battery. The scanner can be manually powered off or if the scanner is out of its charger and in idle or screen off mode, it will power off after 2 hours by default.

Regardless of mode, the cradle and optional battery charger will show whether the battery is charging, charged, or if there is an error.

Errors are indicated by a one second on/off flashing of a red LED:

- Battery is dead
- Battery is not seated properly. Remove battery and any obstruction and reinsert.

The battery in the scanner can be fully charged in four hours. Keeping the scanner in the cradle when not in use is recommended.

Battery Charging Station (Optional)

To be able to maintain constant power to the barcode scanner, keep up to two spare batteries in the V1100 charging station. The charging station will individually indicate the battery charging status. Simultaneously charging two batteries will take less than four hours. Storing a fully charged battery in the charging station until ready to use is recommended.

Bluetooth Status

The cradle will show Bluetooth status via an LED.

- Slow blue flash scanner is not connected.
- Steady blue LED scanner is connected.

Paging the Scanner

If the scanner is out of its cradle and its whereabouts are unknown, press the paging button on the cradle (see Cradle Components on page 6). As long as it is within the Bluetooth range, the scanner will beep continuously until the trigger is pulled or paging times out after 30 seconds.



4 Maintenance

Firmware Updates

Installing CortexTools3

In order to upgrade the firmware for the first time, a special software tool will need to be downloaded and installed on every host PC for which a cradle and scanner are connected. Alternatively, the software can be installed on a single host and any cradle or scanner can be moved to that host for the purpose of upgrading the firmware.

Minimum System Requirements: Windows 10

Note: CortexTools3 can only be installed on a desktop or laptop computer.

- Go to https://www.bradyid.com/v4500support scroll to find CortexTools3 and download it to the host computer for the barcode scanner and cradle.
- 2. Double-click on the installation file.
- 3. After the install starts, choose the language and click Next.
- 4. Under "Setup Type" select Complete.
- 5. Click the box for "Allow network connections with CortexTools3" and click Next.
- 6. Click Install.
- 7. The box next to "Launch CortexTools3" should be checked by default. If it is not, click the box to add.
- 8. Click Finish.
- 9. Click Yes on the V4500 Keyboard message.



Upgrading the Cradle

- 1. Go to https://www.bradyid.com/v4500support and download the .crbfw firmware upgrade file.
- 2. Remove the battery from the scanner to disconnect the pairing to the cradle.
- 3. Connect the cradle to the host using the USB cable.
- 4. Open CortexTools3 software.
- 5. Click Yes on the message that displays.
- 6. Click the Reader icon in the CortexTools3 interface in the upper left corner.
- 7. On the left side of the CortexTools3 interface, select the cradle to be upgraded.
- 8. Drag and drop or browse for the V1300 upgrade file (as indicated in the file name).
- 9. Click the download button in the CortexTools3 interface.
- 10. Click Yes on the message that displays.
- 11. Close CortexTools3 if you are only updating firmware on the cradle.

Upgrading the Scanner

- 1. Go to https://www.bradyid.com/v4500support and download the .ufw firmware upgrade file.
- 2. Put the battery into the scanner.
- 3. Scan the QuickConnect Code on the cradle.
- 4. Click the Reader icon in the CortexTools3 interface in the upper left corner.
- 5. On the left side of the CortexTools3 interface, select the scanner to be upgraded.
- 6. Drag and drop or browse for the V4500 upgrade file (as indicated in the file name).
- 7. Click the download button in the CortexTools3 interface.
 The LEDs on the scanner will blink yellow during the upgrade.
- 8. When the Download File button displays, you can close CortexTools3 by clicking on the X in the upper right corner of the interface screen.
- 9. Close CortexTools3.

Configuration Guide

This manual has information on the specifics of the scanner configuration. To access that guide, follow the steps below.

- 1. Go to https://www.bradyid.com/v4500support
- 2. Scroll to find the V4500 or enter the model number in the search bar.
- 3. Find the Configuration Guide in the list and click on it.

For additional support, please see Technical Support and Registration on page iv.



Cleaning the Barcode Scanner and Components

Cleaning the scanner, especially the scan window, will help maintain peak performance.



CAUTION! To prevent electric shock, always disconnect the cradle and charger from its power source before cleaning.



CAUTION! Using an abrasive material or any liquid which may leave a residue or streaks on the scan window may impact scan performance.



CAUTION! The use of isopropyl alcohol on the LCD screen can lead to adhesive degradation.

Scan Window and LCD Screen

Use a lint/dust free (or microfiber) cloth dampened with only water to gently wipe the scan window and LCD screen. Allow to air dry before use.

IMPORTANT! Never spray any liquid directly on to the window or screen. Never allow any liquid to pool around the window or screen.

Scanner, Cradle and Charger Case



CAUTION! Do not remove the battery to clean the metal contacts on the battery or inside the battery compartment.

- Lightly moisten a soft (non-scratching) cloth with isopropyl alcohol, or use a pre-moistened swab from the Brady Cleaning Kit PCK-6, to wipe down the outer case on the scanner, cradle and (optional) charger.
- 2. Remove excess isopropyl alcohol with a dry, soft (non-scratching) cloth.
- 3. Allow 15 seconds for the components to dry before using.



Mounting the Cradle

Desktop

Although it is not necessary to secure the cradle on a flat, horizontal surface, multi-use adhesive tape can be used, if desired. Alternatively, it can be more securely fastened using three #10 (M4) size screws (not provided).

Horizontal distance between the two top holes is: 3.05" (77.4 mm).

Vertical distance between the top and bottom holes is: 6.70" (170.35 mm).

Attaching the Lanyard

A lanyard (not provided) can be attached to the scanner using the loop on the handle.







5 Troubleshooting

Use the following table to troubleshoot and diagnose possible performance problems with your scanner. If the corrective action suggested does not work, contact Brady's Technical Support Group. See Technical Support and Registration on page iv.

Notifications

Messages displayed on the scanner are shown in the table below along with the corrective action. To remove the messages from the notification history, see Notifications on page 20.

Message	Corrective Action
Foreign object detected by cradle charger	Check the cradle to remove any foreign object(s) which may be interfering with charging the battery. Also confirm that the scanner is seated properly within the cradle.
Battery charger temperature	See V1200 Battery on page 3 to review storage and operating conditions for the scanner and adjust the environment accordingly.
Battery charger extreme temperature	Replace the scanner in the cradle. See V1200 Battery on page 3 to review storage and operating conditions for the scanner and adjust the environment accordingly. Do not use the scanner until environmental temperatures are within range of the recommended values.
Batch storage is full.	Pair the scanner to the cradle (see Pairing the Scanner on page 11). The batch data will automatically download to the host. The batch data will automatically be deleted, if that option is set, after download. Otherwise it can be deleted manually (see Erase Batch Data on page 17).

Errors

Problem	Cause	Corrective Action
Illumination and/or targeting does	Battery is out of power	Charge the battery or replace it with a freshly charged one.
not appear when the trigger is pulled	Imager failure with the top LED on the scanner blinking red	Call Technical Support. See Technical Support and Registration.



Problem	Cause	Corrective Action
Scanner does not scan the barcode.	Symbology is disabled.	Make sure the symbology you are scanning is enabled. See Barcode Settings on page 19.
Scanner scans the barcode but fails to transmit the data to the host.	Incorrect communication mode.	Set the scanner to the correct communication mode using appropriate configuration code available at https://www.bradyid.com/v4500support (Note: USB Keyboard is the most common mode).
	CortexTools3 is open.	Close CortexTools3.
	Incorrect keyboard language.	Change the Keyboard Languages on page 14.
The host receives incorrect data or misses characters.	Incorrect communication protocol.	Find and scan the configuration code to set raw data or packet data.
	Incorrect setting for intercharacter delay.	Use configuration code to set the intercharacter delay to match your system settings.
	Scanner failed to connect to cradle.	Confirm the cradle is powered and
Scanner beeps three times.	Barcode read but data did not transfer.	scan the QuickDisconnect Code on the base with the scanner.
Scanner will not pair with Bluetooth device.	Bluetooth not supported on device or not paired with scanner.	Confirm that device is Bluetooth connected and paired with scanner.
Scanner beeps and vibrates four times after scanning configuration code.	Scanner successfully decodes but fails to process configuration code.	Make sure to use the correct configuration codes for the scanner.
Scanner is beeping.	Scanner is being paged.	Pull the trigger on the scanner.
Paging button does not work.	Scanner is out of range of the cradle.	Move the scanner into range (196 ft [60 m]) of the cradle.
	Paging button was not pressed long enough.	Press the paging button for one full second.
Wireless LED flashes once per second and data does not transfer.	Cradle is attempting to connect with scanner.	Move the scanner into range of the cradle.



Alerts

Scanner

Follow instructions to enable, disable, or change Volume on page 14 or Vibration on page 15.

Status	Visual	Audio	Vibration
Powers up successfully.	LED on the scanner flashes green one time.	One beep	One vibration
Connects to host successfully.	NA	One beep	NA
Connected to host.	LED on cradle shows steady illumination; double arrow connection icon is displayed on scanner.	NA	NA
Fails to connect to host or goes out of range.	LED blinks red	Three beeps	Three vibrations
Decodes and transfers data to host.	LED on scanner flashes green one time and then illuminated steadily until transfer is complete.	One beep	One vibration
Decodes but fails to transfer data to host.	LED on scanner flashes green one time and then flashes red three times.	Three beeps	One vibration
Successfully decodes and processes configuration code.	LED on the scanner flashes green one time.	Two beeps	Two vibrations
Successfully decodes but fails to process configuration code.	LED on scanner flashes green one time and then flashes red three times.	Four beeps	Four vibrations
Scanner is paged by cradle.	LEDs flash white on cradle and scanner.	Beeps continuously until the trigger is pulled or paging times out.	Scanner continuously vibrates until trigger is pulled or paging times out.
Installing a file.	LED on scanner blinks green.	Beeps upon completion.	NA
Installing a firmware upgrade.	LED on scanner illuminates a steady red and then reboots.	NA	NA



Cradle

Status	Visual
No power	LED is not illuminated
Foreign object or misalignment in charger prevents battery from charging	Red LED flashes on and off every second
Powered but not connected to host	Green LED flashes on and off every second
Scanner in the cradle with battery charging	Green LED flashes on and off every second
Scanner in the cradle with battery fully charged	Green LED shows steady illumination
Attempts to connect to scanner	Bluetooth icon on cradle flashes on and off when not connected
Connected to scanner	Bluetooth icon on cradle shows steady illumination
Page issued to connected scanner	LEDs flash white continuously
Page issued to a scanner that is not connected	LEDs briefly, rapidly flash white while the paging button is being pressed

Charging Station

Status	Visual
If the battery charging temperature range has not been exceeded, contact Technical Support on page iv.	Red LED flashes on and off every second
Battery is charging	Green LED flashes on and off every second
Battery is fully charged	Green LED shows steady illumination



A Regulatory Compliance

Agency Compliance and Approvals

United States

FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada (IC)

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Industrie Canada (IC)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Mexico

IFT notice: La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.



Europe



WARNING! This is a Class B product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.



Waste Electrical and Electronic Equipment Directive

In accordance with the European WEEE Directive, this device needs to be recycled in accordance with local regulations.

RoHS Directive 2011/65/EU, 2015/863/EU

This product is CE marked and complies with the European Union's Directive 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

EU Directive 2015/863 of 31 March 2015 (RoHS 3) amends Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances.

Batteries Directive 2006/66/EC



This product contains a lithium ion rechargeable battery pack. The crossed-out wheeled bin shown to the left is used to indicate 'separate collection' for all batteries and accumulators in accordance with European Directive 2006/66/EC. Users of batteries must not dispose of batteries as unsorted municipal waste. This Directive determines the framework for the return and recycling of used batteries and accumulators that are to be collected separately and recycled at end of life. Please dispose of the battery according to your local regulations.

Notice to Recyclers

- 1. Follow the instructions in this manual to remove the lithium ion battery pack.
- 2. Dispose of in accordance with local regulations.

Turkey

Turkish Ministry of Environment and Forestry

(Directive on the Restriction of the use of certain hazardous substances in electrical and electronic equipment).

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur



Wireless Regulatory Information

Regulatory markings, subject to country certification, are applied to the cradle and scanner signifying Bluetooth (radio) approval has been obtained.



WARNING! Operation of the device without regulatory approval is illegal.

Radio protocol	Bluetooth Classic
RF Operating Frequency	2.402 – 2.480 GHz
RF Output Power	< +20dBm EIRP (100mW)
Antenna Type \ Antenna Gain	PCB trace antenna \ -3.06 dBi
Environmental Operation	-40 to 85° C (-40° to 185° F) Note: Be mindful of the maximum operating temperatures for the equipment.
Environmental Storage	-55 to 125° C (-67° to 257° F) Note: Be mindful of the maximum storage temperatures for the equipment.

United States

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

RF exposure guidelines / Important note: This equipment complies with FCC SAR exemption limits set forth for an uncontrolled environment and properly used as instructed.



Canada

Innovation, Science and Economic Development (ISED)

CAN ICES-3 (A)/NMB-3(A)

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

- 1. This device may not cause interference; and
- 2. This device must accept any interference, including interference that may cause undesired operation of the device.

RF exposure guidelines / Important note: This equipment complies with IC radiation exposure exemption limits set forth for an uncontrolled environment and properly used as instructed.

European Union

This is a Class B product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Radio Equipment Directive (RED) 2014/53/EC

- a. Frequency band(s) in which the radio equipment operates; 2.401GHz to 2.483GHz
- b. Maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates; < +20dBm EIRP (100mW)

Mexico

IFT notice:

"La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada."

International

The BLE radio module used in Brady barcode scanners comply with internationally recognized standards covering human exposure to electromagnetic fields, i.e. EN 62311 "Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)".



B Licensing

THIRD-PARTY LICENSE DECLARATIONS

This document contains license declarations for third-party components integrated within the firmware of this barcode reader. These declarations are provided in accordance with the terms and conditions of the respective third-party licensors, ensuring compliance with their licensing requirements. The rights, permissions, and licenses detailed herein are applicable exclusively to the specified third-party components. They do not apply to any firmware or software elements developed by Brady Corporation or The Code Corporation.

The firmware within this barcode reader uses the GNU Compiler Collection component named **arm-none-eabi-gcc**, version 4.4.0. This component is licensed under the GNU General Public License, version 3 (GPLv3). Other licenses used in **arm-none-eabi-gcc**, version 4.4.0 are available here.

In compliance with the GPLv3, we hereby inform users that the source code of **arm-none-eabi-gcc**, version 4.4.0 is available for access and use under the terms of the GPLv3. A copy of this source code is available here.

The firmware within this barcode reader is based in part on the work of the Independent JPEG Group.

The firmware within this barcode reader uses certain components from **SpiderMonkey**, Mozilla's JavaScript and WebAssembly Engine, which is licensed under the Mozilla Public License (MPL) v1.1. In compliance with the MPL v1.1, we hereby inform users that the source code of these components (i.e., the components in the firmware that are taken from the Mozilla SpiderMonkey JavaScript engine) is available for access and use under the terms of the MPL v1.1. A copy of this source code is available here.

Some of the components from **SpiderMonkey** have been modified slightly for use in the firmware within this barcode reader. The source code of these modified components is also available for access and use under the terms of the MPL v1.1. To obtain a copy of the modified source code corresponding to these components, please contact info@codecorp.com.

The firmware within this barcode reader uses components from the nRF5 SDK provided by Nordic Semiconductor, Inc. The licenses used in the nRF5 SDK are available here.

The firmware within this barcode reader uses a component named **Anchor**, which is a collection of embedded firmware libraries used for a console application. The following statements are provided in accordance with this component's license terms:

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The firmware within this barcode reader uses a component named queue.h, which is a list and queue library. The following statements are provided in accordance with this component's license terms:

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The firmware within this barcode reader uses a component named JSON 3, which is a JavaScript JSON parser and serializer. The following statements are provided in accordance with this component's license terms:

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The firmware within this barcode reader uses a component named CPU Jitter Entropy, which is a CPU jitter random number generator. The following statements are provided in accordance with this component's license terms:

Copyright Stephan Mueller <smueller@chronox.de>, 2013 - 2019



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