BRADY

V2200

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Safety and Environment

Please read and understand this manual before using the V2200 Barcode Scanner for the first time. This manual describes all of the main functions of the scanner.

Precautions

Before using the V2200 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.
- Use only the RJ50 cord that comes with the unit.
- Do not place anything on the 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.

Contents

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1   Introduction

System Specifications

The V2200 Barcode Scanner has the following specifications:

- Scan range from 0.4" (10 mm) to 13.1" (333 mm) depending on barcode size and type
- Light weight of only 15 ounces (415 g)
- Compatible with tool balancer

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 Distance	3.5" 90 mm	0.9" 23 mm	0.4" 10 mm	0.7" 18 mm	1.3" 33 mm	0.9" 23 mm	0.4" 10 mm	0.7" 18 mm
Max Distance	4.4" 112 mm	6.8" 172 mm	8.3" 210 mm	10.6" 270 mm	4.1" 105 mm	5.5" 140 mm	6.7" 170 mm	13.1" 333 mm

Physical and Environmental Characteristics

The V2200 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	15 oz	415 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)

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

2   Setup

Unpacking the Barcode Scanner

Carefully unpack and inspect the V2200 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:

- V2200 Barcode Scanner
- Lanyard clasp for tool balancer
- RJ50 to USB-A/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.

Registration

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

Barcode Scanner Components

Serial Number

The serial number is located on the label affixed to the equipment.

1	Scan window
2	Tool balancer connection
3	Trigger
4	Lanyard loop
5	RJ50 connection port
6	Connector disconnect lever

Initial Setup

1. Insert the RJ50 end of the cable into the bottom of the scanner and push until you hear it click into place.

   To disconnect the cable, pull the yellow lever and pull out the cable.

2. Plug the USB-A end of the cable into the computer.

   This establishes data transfer to the host and powers the scanner.

Cable Disconnect
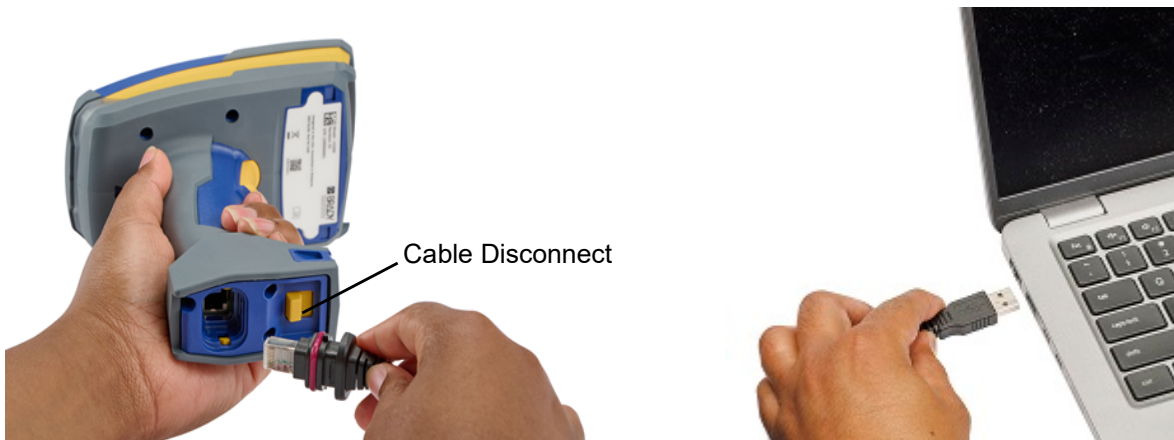
3. Once power is connected, the scanner will be powered on.

   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.

> ⚠️ **WARNING!** To prevent 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 RJ50 cable other than that specifically for use with the V2200.
> - Do not incinerate the scanner.
> - Keep the scanner away from heat sources.
> - Keep the scanner away from water.
> - Never lay objects on top of the scanner.
> - Store in a cool, dry place.
> - The scanner must be recycled or disposed of properly according to federal, state, and municipal regulations.

Settings

To update settings like those shown below, as well as others not listed, follow these steps.

1. Click this link.
2. Scroll to and click on **V2200**.
3. Check the category of interest and click **Next**.
4. Select the desired function and click **Generate**.
5. Choose to print or download the barcode then scan it with your barcode scanner.

Common settings to update include the following:

- **Volume** - Raise or lower the volume of sound for the different types of notifications.
- **Vibration** - Set the intensity of the vibration or turn it off.
- **Trigger** - Set the amount of time for holding the trigger before scanning the barcode.
- **Factory Reset** - Erase all custom configurations, pairing information and resets the scanner to default settings.
- **Reset Files** - Remove image files and custom JavaScript files.
- **Prefix or Suffix** - Configure the barcode scanner to add a prefix or suffix to a barcode when scanning.

For additional support, contact Technical Support (see page iv).

Accessories

Additional accessories for the V2200 Barcode Scanner can be purchased separately.

- Straight and coiled cables in a variety of lengths for connection types:
    - RJ50 to USB-A
    - RJ50 to USB-C
    - RJ50 to RS-232
- Power Supply for RS232 cable

IMPORTANT! A power supply/AC adapter is required for use with an RS-232 cable.

WARNING! Do not use any AC adapter other than that specifically for use with the V2200.

3   General Operation

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 Scanner

•	Good read
• • •	Read error
• • • • •	File upload
———	Device updating

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.

To add new barcode symbology, disable all barcodes, or change settings on barcodes follow these steps:

1. Click this link.
2. Scroll to and click on **V2200**.
3. Check the category of interest and click **Next**.
4. Select the desired function and click **Generate**.
5. Choose to print or download the barcode then scan it with your barcode scanner.

Even when all barcodes are disabled, configuration barcodes can still be scanned.

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 three times if the host is not available.

Config

When a configuration barcode is scanned, the scanner will beep followed by a green blink and a second 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.

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. Pull the trigger to put the scanner into operating mode.

4   Maintenance

Firmware Updates

Installing CortexTools3

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

Contact Technical Support (see page iv) or follow the steps below.

Minimum System Requirements: Windows 10

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

1. Go to https://www.bradyid.com/v2200support 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 V2200 Keyboard message.

> **Note:** If CortexTools3 is allowed network access, the firmware version on the equipment can be automatically ascertained when the equipment is connected and CortexTools3 is open. A message will display if a new firmware version is available.

Upgrading the Scanner

1. Go to https://www.bradyid.com/v2200support and download the .ufw firmware upgrade file.
2. Click the Reader icon in the CortexTools3 interface in the upper left corner.
3. On the left side of the CortexTools3 interface, select the scanner to be upgraded.
4. Drag and drop or browse for the V2200 upgrade file (as indicated in the file name).
5. Click the download button in the CortexTools3 interface.
   The LEDs on the scanner will blink yellow during the upgrade.
6. When the Download File button displays, you can close CortexTools3 by clicking on the X in the upper right corner of the interface screen.
7. Close CortexTools3.

Cleaning the Barcode Scanner

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

> ⚠️ CAUTION! To prevent electric shock, always disconnect the scanner from the computer 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.

Scan Window

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

> **IMPORTANT!** Never spray any liquid directly on to the window. Never allow any liquid to pool around the window.

Scanner Case

1. 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.
2. Remove excess isopropyl alcohol with a dry, soft (non-scratching) cloth.
3. Allow 15 seconds for the components to dry before using.

Attaching a Tool Balancer

Attach a tool balancer to the connection point on the scanner using the lanyard clasp. If the scanner rises after being lowered and released, adjust the spring tension on the tool balancer according to the manufacturer's instructions.
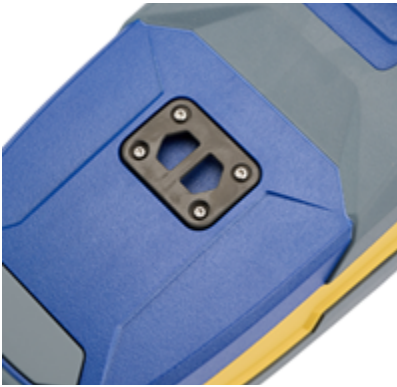
Attaching the Lanyard

A lanyard (available as an accessory) 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.

Errors

Problem	Cause	Corrective Action
Illumination and/or targeting does not appear when the trigger is pulled	The cable connecting the scanner to the computer has come loose.	Check both ends of the cable to make sure they are secure.
	Imager failure with the top LED on the scanner blinking red	Contact Technical Support. See Technical Support and Registration.
Scanner does not scan.	Symbology is disabled.	Make sure the symbology you are scanning is enabled. See Barcodes and Symbology on page 6.
Scanner scans the barcode but fails to transmit the data to the host.	Incorrect communication mode.	Cycle power on the scanner. If the issue persists, set the scanner to the correct communication mode using appropriate configuration code. See Settings on page 5.
	CortexTools3 is open.	Close CortexTools3.
The host receives incorrect data or misses characters.	Incorrect communication protocol.	Find and scan the configuration code to set raw data or packet data. See Settings on page 5.
	Incorrect setting for intercharacter delay.	Use configuration code to set the intercharacter delay to match your system settings. See Settings on page 5.
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.

Alerts

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
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
Installing a file.	LED on scanner blinks green.	Beeps upon completion.	NA
Installing a firmware upgrade.	LED on scanner flashes amber and then reboots.	NA	NA

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.

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

B   Licensing

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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 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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