



Brady Script Emulator for ZPL[®]

User Manual

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Revision A

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Brady Warranty

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Safety and Environment

Please read and understand this manual before using the Brady Script Emulator for ZPL® for the first time. This manual describes all of the main functions of the Brady Script Emulator for ZPL.

Precautions

Before using the Brady Script Emulator for ZPL, please note the following precautions:

- Read all instructions carefully before operating the device 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 product go to:

- bradycorp.com/register

Repair and Return

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

Document Conventions

When using this document, it is important that you understand the conventions used throughout the manual.

- All user actions are indicated by **Bold** text.
- References to menus, windows, buttons and screens are indicated by *Italicized* text.

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1 Introduction

The Brady Script Emulator for ZPL converts ZPL® data to a print job compatible with supported Brady printers. The emulator connects to the printer's USB-B or -C port.

Supported printers: See <https://qr.bradyid.com/zpladapter>.

System Specifications

The Brady Script Emulator for ZPL has the following specifications:

- Weight: 6.2 oz
- Military grade shock resistance
- Withstands a drop of up to 4 feet

Physical and Environmental Characteristics

The Brady Script Emulator for ZPL has the following physical and environmental characteristics.

- Dimensions (length x width x height): 5.22 x 4.04 x 1.06 inches (132.6 x 102.6 x 26.92 mm)
- Electrical Rating: 100-240V AC, 50-60 Hz

Environmental	Operation	Storage
Temperature Exposing the adapter to direct sunlight is not recommended.	39°F to 104°F (4°C to 40°C)	14°F to 140°F (-10°C to 60°C)
Temperature (AC adapter)	32°F to 104°F (0°C to 40°C) (North America and international adapters)	North America: -13°F to 185°F (-25°C to 85°C) International: -4°F to 140°F (-20°C to 60°C)
Relative Humidity (AC adapter)	North America: 10% to 90% (non-condensing) International: 10% to 85% (non-condensing)	North America: 10% to 100% (non-condensing) International: 10% to 95% (non-condensing)

Store in a temperature and humidity controlled, dust-free environment.



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

System Requirements

Smartphone must be an NFC-enabled device. If your phone uses Apple Pay® or Google Pay™ payment service, it is NFC-enabled.

No printer driver is needed to work with the Brady Script Emulator for ZPL®. The emulator does not accept files from Brady Workstation software or Express Labels Mobile app.

2 Setup

Unpacking the Brady Script Emulator for ZPL®

What's in the Box

- Brady Script Emulator for ZPL
- AC Adapter (North American or international version)
- Power USB C-C Cord
- Quick Start Guide



Note: You also need a data cable with one USB-A end and one USB-B or USB-C end depending on your printer. An appropriate cable would have been included with your Brady printer.

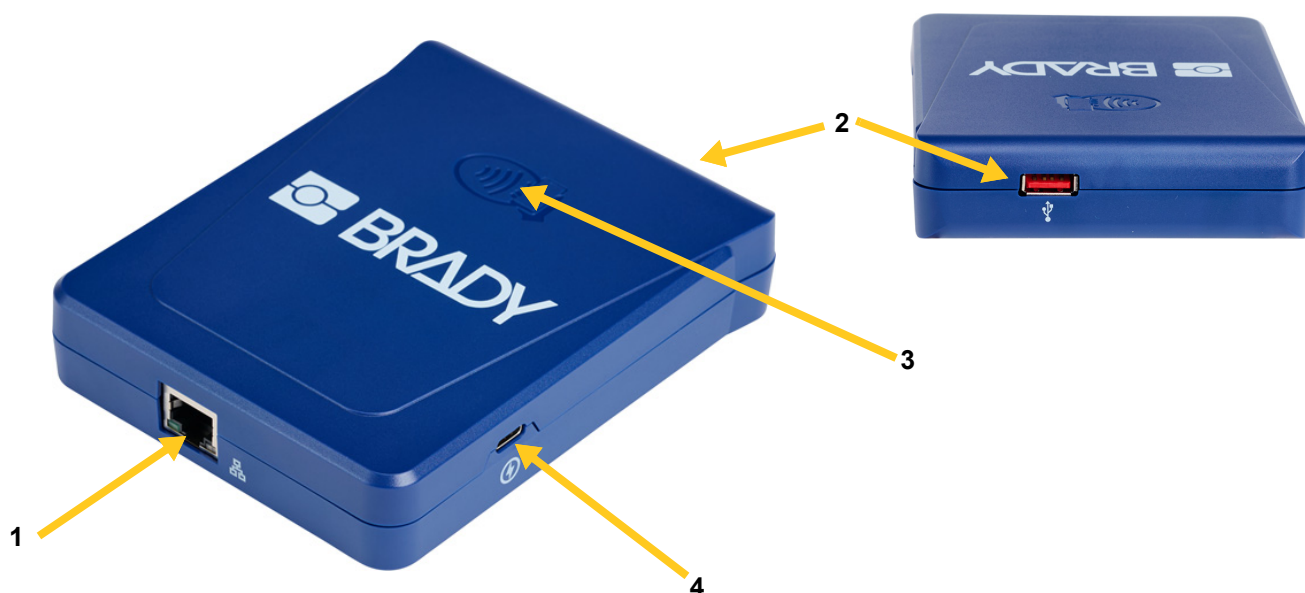
Save the Packaging

Save the packaging surrounding your Brady Script Emulator for ZPL in case you have to ship the device and accessories back to the supplier.

Registration

To receive free product support and updates, register your product online at www.bradycorp.com/register.

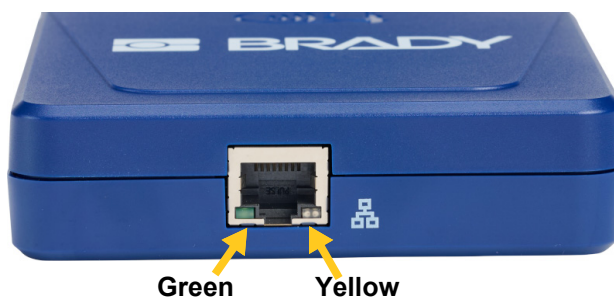
Components



- 1 Ethernet port
- 2 USB-A port
- 3 Tap-to-connect
- 4 Power port (USB-C)

Ethernet status lights:

- Green: activity
 - Blinking: receiving or sending
 - Off: no activity.
- Yellow: link status (on or off)



Power

Use the provided AC adapter and USB-C to C cord for power. The device must be plugged in to function.

Setting Up

Use the embedded web server to configure settings for the Brady Script Emulator for ZPL®. To do so you need the ZPL emulator's IP address. The easiest method uses a smartphone to obtain the ZPL emulator's IP address, but you can also use a USB drive and a computer.

Setting up Using a Phone

To set up the Brady Script Emulator for ZPL:

1. Plug in all the cords.
 - a. Insert one end of the USB-C power cable into the power port on the device, and the other end into the appropriate AC adapter for your region, and then plug in to a power outlet.



- b. Plug the USB-A end of the data cable in to the Brady Script Emulator for ZPL and the other end in to the printer's data port (USB-B or USB-C depending on your printer).



- c. Plug one end of the Ethernet cable in to the Brady Script Emulator for ZPL®, and the other end into an Ethernet port for your network. The network must also offer a Wi-Fi connection so that your phone or tablet will be able to connect to the same network.



2. Wait 1 minute and 30 seconds.
3. **IMPORTANT:** Make sure your phone and the Brady Script Emulator for ZPL are on the same network.
4. Unlock the phone and then tap the phone to the tap-to-connect symbol on the ZPL emulator. This obtains the emulator's IP address so the browser can connect to the embedded web server running on the emulator.
5. Make a note of the IP address shown in the notification on your phone.
6. Open the emulator's embedded web server.
 - Tap the notification on your phone to open the embedded web server. You will need to scroll to see all the controls.
 - If you prefer to view the embedded web server on a larger screen, open it on a computer. See ["Opening the Embedded Web Server" on page 10](#).
7. Configure settings as needed. See ["Settings" on page 9](#).

Setting up Using a Computer

To set up the Brady Script Emulator for ZPL®:

1. Plug in the power and Ethernet cables.
 - a. Insert one end of the USB-C power cable into the power port on the device, and the other end into the appropriate AC adapter for your region, and plug in to a power outlet.



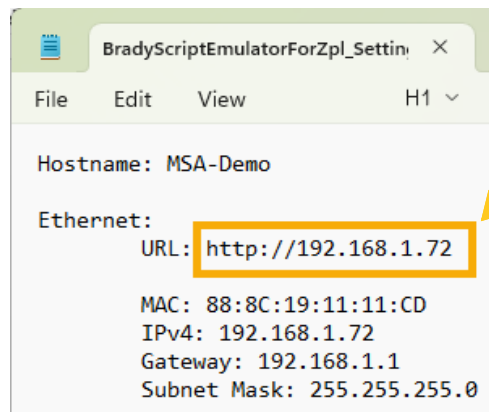
- b. Plug one end of the Ethernet cable in to the Brady Script Emulator for ZPL, and the other end into an Ethernet port for your network.



2. Insert a USB drive into the USB-A port on the Brady Script Emulator for ZPL®.



3. Wait 12 seconds. The emulator writes a text file to the USB drive.
4. Remove the USB drive from the emulator and insert it into a USB-A port on the computer.
IMPORTANT: The computer must be on the same network as the emulator.
5. Navigate to the USB drive and open the **BradyScriptEmulatorForZpl_Settings.txt** file. The text file contains a web address (URL) that consists of the IP address of the Brady Script Emulator for ZPL.



Web address for the emulator's embedded web server.

Note: This is an example. The URL will be different for your emulator.

6. Copy the web address in the .txt file and paste it into the address field in a browser. The emulator's embedded web server opens.
7. Configure settings in the embedded web server. Most are optional, but you may especially want to set **ZPL Settings**. Click the **Settings** tab and configure settings as needed. For more on settings, see ["Settings" on page 9](#).

Settings

Use the emulator's embedded web server to configure settings. The web page should be open after completing the steps in [“Setting up Using a Phone” on page 5](#) or [“Setting up Using a Computer” on page 7](#).

Most settings are self-explanatory.

Notes for Configuring Settings

- **Connection > Wired (Ethernet) > IP Settings:** With *IP Settings* set to DHCP, as most networks are, the device's IP address will change periodically. Choosing *Static* instead, if allowed on your network, will provide a consistent IP address for sending scripts and opening the embedded web server.
- **Connection > Other settings > Raw Port:** This is the port to send ZPL® scripts to.
- **Password Settings:** Enable and create a device password if you want to require a password to log in to the embedded web server for this Brady Script Emulator for ZPL.
- **Date and Time:** Be sure to set this if your labels include the current date and time. The date and time of the emulator is used rather than that of the attached printer.
- **ZPL Settings > For ZPL documents:** The DPI is automatically set to the DPI of the connected printer. If your ZPL scripts are written for a different DPI, change the setting to match the DPI of your scripts. The Brady Script Emulator for ZPL adjusts for the different DPI so that content is printed on the label in the correct position.

Note that if the two DPI values are not cleanly divisible by whole numbers the adjustment may not be exact. For example, conversion from 200 to 600 DPI has no issues because 200 goes into 600 three times (a whole number). Conversion from 200 to 300 DPI may not be exact because 300 divided by 200 is a fraction, 1.5.

Validate the Printer Connection

To verify that the Brady Script Emulator for ZPL is connected to the printer, you can print a diagnostics label from the emulator's embedded web server. The diagnostics label contains the device's IP address which you can use to connect to the device from another computer. The information on the diagnostics label may also be useful if you need help from your IT department.

To print a diagnostics label:

1. Open the embedded web server for your emulator. See [“Opening the Embedded Web Server” on page 10](#).
 2. Click the **DIAGNOSTICS** tab if it is not already selected.
 3. Click **Diagnostic Label**.
 4. Make sure labels are loaded in the connected printer and that the printer is on.
- Note:** We recommend 1" continuous labels or larger.
5. Click **PRINT**.

3 General Operation

In addition to sending scripts to the printer, this chapter covers basics like how to manage files (images and fonts for use on labels) on the Brady Script Emulator for ZPL® and how to open the emulator's embedded web server.

Send a ZPL Script to the Printer

Send your ZPL scripts to the Brady Script Emulator for ZPL, so the attached printer can print the label.

Supported commands:

- For information on which ZPL commands are supported, see the document *Supported ZPL II Scripting Commands*. You can download this document from <https://qr.bradyid.com/zpladapter>.
- If your script contains unsupported commands, results may not be as expected.

Prerequisites:

- The device sending the script (computer, PLC, or mainframe host) must be on same network as the Brady Script Emulator for ZPL.
- You must know the IP address of the Brady Script Emulator for ZPL. (If you don't know the IP address of the emulator, either refer to the Diagnostics Label if you printed one during setup or follow the steps in “[Setting up Using a Phone](#)” on page 5 or “[Setting up Using a Computer](#)” on page 7.)

To send a ZPL script to the printer:

Send ZPL data to the IP address of the emulator at the port specified with the *Raw Port* setting. The default raw port is 9100. To set the raw port see “[Settings](#)” on page 9.

Opening the Embedded Web Server

Use the emulator's embedded web server for the following tasks:

- See device and diagnostics information
- Change settings
- Upgrade firmware
- Manage files
- Restart the Brady Script Emulator for ZPL

To open the embedded web server for a Brady Script Emulator for ZPL®:

1. Make sure the computer or phone is on the same network as the emulator and can access the internet.
2. Open a web browser on the phone or computer.
 - **Phone:** Unlock the phone and then tap the phone to the tap-to-connect symbol on the ZPL emulator. Tap the notification on your phone to open the embedded web server. You will need to scroll to see all the controls.
 - **Computer:** Type the ZPL emulator's IP address in the address bar of the browser. If you have printed a diagnostics label, refer to that for the IP address. If the device's IP is set to DHCP, the IP address may have changed since the label was printed.

If you don't have the IP address or the embedded web server does not open, follow the setup steps to obtain the IP address and connect with the web page. See [“Setting up Using a Phone” on page 5](#) or [“Setting up Using a Computer” on page 7](#).

Managing Files

If your scripts require graphics, fonts, or templates (ZPL formats), be sure to store them on the Brady Script Emulator for ZPL.

Note: Regardless of the drive specified in your script, files will always be retrieved from the emulator.

To store files on the Brady Script Emulator for ZPL:

1. From the computer (or phone) with the files, open the embedded web server for the emulator. See [“Opening the Embedded Web Server” on page 10](#).
2. Click the **FILE MANAGER** tab.
3. Click the upload button. 
4. Find and select the file, and click **Open**. The file uploads to the emulator.

On the *FILE MANAGER* screen you can also see how much space is available and delete files.

Restarting

Restart the device after changing the device name.

To restart the Brady Script Emulator for ZPL:

1. Open the embedded web server for the emulator. See [“Opening the Embedded Web Server” on page 10](#).
2. Click the **DEVICE ACTIONS** tab.
3. Click **RESTART NOW**.

The ~JR ZPL command also works to restart the emulator.

4 Maintenance

Upgrading Firmware

Use the emulator's embedded web server to get firmware upgrades. You can do this using a smartphone or a computer and a USB drive.

IMPORTANT! Do not remove power from the Brady Script Emulator for ZPL® during the upgrade.

Upgrading Over the Internet

To upgrade firmware over the internet:

1. Confirm the following requirements are in place.
 - Make sure the computer or phone and Brady Script Emulator for ZPL are on the same network.
 - Make sure the computer or phone can access the internet. If not, see [“Upgrading With a Downloaded File” on page 12](#).
2. Open the embedded web server. See [“Opening the Embedded Web Server” on page 10](#).
3. Click the **FIRMWARE** tab.

A yellow arrow on the tab indicates that an update is available, but it may take a short time for this indicator to appear. Clicking the tab forces the check for updates.
4. Click **UPDATE NOW**.
5. Click **OK** on the firmware update message.
6. After the upgrade completes, refresh the web page.

Upgrading With a Downloaded File

If your computer does not have internet access, you can download the upgrade file from a computer with internet access and transfer the file via a USB drive to the Brady Script Emulator for ZPL.

To upgrade firmware with a downloaded file:

1. On a computer with internet access, go to the technical support website for your region. See [“Technical Support and Registration” on page iv](#).
2. Find firmware updates.
3. Find the most recent Brady Script Emulator for ZPL firmware upgrade.
4. Download the firmware.
5. Save the downloaded file to a USB drive.
6. Complete the upgrade either directly on the emulator (simplest method) or via a network computer.

On emulator:

- a. Plug the USB drive into the USB-A port on the emulator.
- b. Wait 5 minutes. **DO NOT REMOVE POWER!** The emulator reboots during the upgrade process.
- c. Remove the USB drive.

Via computer:

- a. Connect the USB drive to the USB port on a computer on the same network as the Brady Script Emulator for ZPL®.
- b. Open the embedded web server for the Brady Script Emulator for ZPL. See [“Opening the Embedded Web Server” on page 10](#).
- c. Click the FIRMWARE tab.
- d. Click **BROWSE AND UPDATE**.
- e. Navigate to the USB drive, select the firmware file, and click **Open**.

Cleaning

Wipe surface with a dry cloth.

Use compressed air to remove dust and debris from ports.

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 A 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 may cause harmful interference in which case the user will be required to correct the interference at his own expense.

In instances where interference is experienced, the following measures are recommended to assist in mitigation:

- Reorient or reposition the equipment relative to the interference.
- Increase the separation distance between the equipment and the interference.
- Connect equipment to a separate power circuit than the interference if applicable.

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.

Estados Unidos

Aviso de la FCC

Este equipo se puso a prueba y se confirmó que cumple con los límites para un dispositivo digital de Clase A, conforme a la Parte 15 de las Regulaciones de la Comisión Federal de Comunicaciones (Federal Communications Commission, FCC). Estos límites se han diseñado para proporcionar protección razonable contra interferencias perjudiciales cuando el equipo se utilice en un entorno comercial. Este equipo genera, utiliza y puede emitir energía de radiofrecuencia y, si no se instala y se utiliza según el manual de instrucciones, puede ocasionar interferencias perjudiciales en las radiocomunicaciones.

El uso de este equipo en un área residencial puede causar interferencias perjudiciales, en cuyo caso el usuario tendrá que corregir dichas interferencias por su cuenta.

En los casos donde se producen interferencias, se recomiendan las siguientes medidas para ayudar a mitigarlas:

- Volver a orientar o reposicionar el equipo para evitar la interferencia.
- Aumente la distancia de separación entre el equipo y la interferencia.
- Si es posible, conecte el equipo a un circuito eléctrico distinto al de las interferencias.

Los cambios o las modificaciones que no hayan sido aprobados expresamente por la parte responsable del cumplimiento pueden invalidar la autorización que se le otorga al usuario para utilizar el equipo.

Este dispositivo cumple con la Parte 15 de las Regulaciones de la FCC. El uso está sujeto a las siguientes dos condiciones: (1) es posible que este dispositivo no provoque interferencias perjudiciales y (2) este dispositivo debe aceptar cualquier interferencia recibida, incluso aquella que pueda generar un uso no deseado.

Canada

Innovation, Science and Economic Development (ISED)

Canada ICES-003: Information Technology Equipment (including Digital Apparatus)

Canada NMB-003: Équipement de technologie de l'information (incluant les appareils numériques)

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

Europe



WARNING! This is a Class A 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 coin cell battery. 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

To remove the lithium coin cell battery:

1. Disassemble device and locate the lithium coin cell battery located on the main circuit board.
2. Using a small screwdriver, pry the battery from its holder and remove the battery from the board. Dispose of in accordance with local regulations.

China 中国

China RoHS Hazardous Substance Table related to this product is available at
<https://www.bradyid.com/forms/customer-service/certificate-request>.

警告

此为 A 级产品。在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对于干扰采取切实可行的措施。

仅适用于非热带气候条件下安全使用

仅适用于海拔2000m 以下地区安全使用。

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