



BBP[®]33 SIGN & LABEL PRINTER

User Manual



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Brady Warranty

Our products are sold with the understanding that the buyer will test them in actual use and determine for him or herself their adaptability to his/her intended uses. Brady warrants to the buyer that its products are free from defects in material and workmanship, but limits its obligation under this warranty to replacement of the product shown to Brady's satisfaction to have been defective at the time Brady sold it. This warranty does not extend to any persons obtaining the product from the buyer.

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BBP®33 Agency Compliance and Approvals

United States

FCC Notice-US Only

Warning: This equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with the manufacturer's instructions, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart B of Part 15 of the FCC rules, which are designed to provide reasonable protection against interference when operating in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case required corrective measures will be at the owner's expense. The user is cautioned that any changes or modifications not expressly approved by Brady Worldwide, Inc. could void the user's authority to use the equipment.

Canada

ICES-003 Class A Notice, Classe A

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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.

RoHS Directive 2002/95/EC

This statement clarifies **Brady's** product compliance with the European Union's Directive 2002/95/EC, Restriction of Hazardous Substances.

Safety and Environment

Please read and understand this manual before using the **BBP®33 Sign & Label Printer** for the first time. This manual describes all of the main functions of the printer.

Precautions

Before using the printer, please note the following precautions:

- Read all instructions carefully before operating the printer 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.
- Always use the printer in a well ventilated area. Do not block the slots and opening on the unit, which are provided for ventilation.
- 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.

Technical Support and Registration

Contact Information

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

- **United States:** www.bradyid.com
- **Europe:** www.bradyeurope.com
- **Asia Pacific:** www.bradycorp.com
- **Australia:** www.bradyaust.com.au
- **Canada:** www.bradycanada.ca
- **Latin American:** www.bradylatinamerica.com

Registration Information

To register your printer, go to:

- www.bradycorp.com/register
- www.bradyaust.com.au/register (Australia)

Repair and Return

If for any reason you need to return the **BBP®33** printer for repair, please contact **Brady** Technical Support for repair and replacement information.

Overview

About this Document

The purpose of this guide is to provide information and instructions on using the **BBP®33 Sign & Label Printer**.






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, dialog boxes, button and screens are indicated by *Italics* text.
- See “*Keypad and Menu Functions*” on page 1-3 for a description of the menus and controls.
- Graphic callouts are numbered with the procedure "step number" to which they refer (i.e., if Step 3 refers to a callout in the graphic, the step text will indicate **[3]** and the callout will indicate **3**). Otherwise, callouts are numbered in the order in which they are referenced in the text,

Keypad and Button Actions

Press the following to use the keypad and user interface buttons (for more detail, see “*Keypad and Menu Functions*” on page 1-3):

Icon	Description
	Scroll through menus.
	Select options or go to a submenu.
	Power button.
	Feed media.
	Select from menu options.

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1 Introduction

Thank you for purchasing the **BBP®33 Sign & Label Printer 4"** mono-color peripheral printer. This compact, easy-to-operate thermal transfer printer is a stand-alone that easily connects to your computer for printing labels that you produce using LABELMARK™, labeling software. Media and ribbons from **Brady Corporation** are programmed to work specifically with the printer.

Features and Functions

The following are just some of the features that make this system so easy to use and ready to meet your label-printing requirements:

- Small, lightweight (approximately 11 lbs [4.9 kg]) unit, ready for your desktop.
- A variety of media colors, styles and materials and a wide range of single-color ribbons.
- Smart-cell technology that works intelligently with Brady consumables.
- Easy loading media and ribbon supplies.
- Continuous and die-cut media in a variety of high-performance materials.
- Maximum print speed of 4 ips.
- 300 dpi (11.8 dot/mm) print resolution.
- USB device ports.
- Optional Wireless capability.
- Ability to print from **LABELMARK™ Label Design Software** and **MARKWARE™ Tape and Label Software**.
- Scalable True Type Fonts.
- Built-in autocutter.
- LED display screen to view system status and set printer defaults and options.

Compatible Applications

The **BBP®33** *Sign & Label Printer* is compatible with the following software applications:

- **LABELMARK™** *Label Design Software*
- **MARKWARE™** *Tape and Label Software*

When used with one of these software packages, the printer will automatically recognize all enabled and compatible media.

Note: Only **BBP®33** supplies will work with this printer.

System Specifications






- **Weight:** 11 lbs (4.9 kg)
- **Dimensions** (stored): 8.9 in. x 12.0 in. x 9.5 in. (22.6 cm x 30.5 cm x 24.1 cm)
- **Operating Temperature:** 50 to 104°F (10-40°C)
- **Relative Humidity:** 10% to 80% RH non-condensing
- **Storage:** -4 to 122°F (-20 to 50°C) at 15% to 90% RH non-condensing
- **Voltage:** 90 to 264 VAC, 47 to 63 Hz
- **Print Resolution:** 300 dpi, 11.8 dot/mm
- **Output media size:** up to 4 in. (101.6 mm) wide

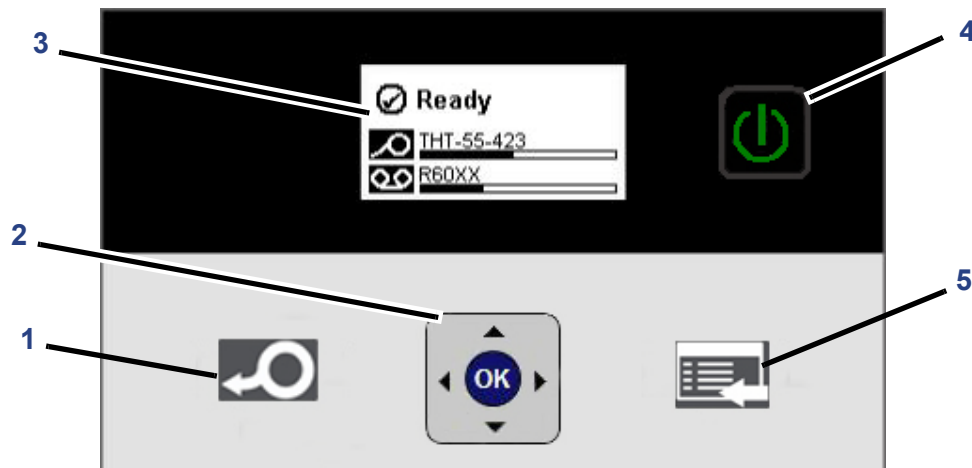
Keypad and Menu Functions

The following describes the keys, buttons and display screen that are used to navigate through and use the **BBP®33 Sign & Label Printer** system.

User Interface

The user interface (UI) contains the keypad and buttons for using the printer. The main functions are as follows:

Item #	Icon	Description
1		Feed: Feeds the labels through the printer to the next notch on the liner. Feeds a full label for die cut; 0.5-inch (12.7 mm) for continuous.
2		Keypad: <ul style="list-style-type: none"> Press ▼ or ▲ to move through primary menu. Press ◀ to exit or move up a menu. Press ▶ for menu support functions. Press  to accept a selection or move through submenus.
3	--	Display Screen: See "Display Screen" on page 1-4 for details.
4		Power Button: Turns the printer on and off.
5		Menu: The display screen.



Keypad and Menu Functions

Display Screen

Display Screen

The display screen has two modes:

- **Ready Mode:** Indicates printer status and displays estimated remaining media and estimated remaining ribbon. Also indicates the media and ribbon installed.
- **Menu Selection Mode:** Lets you configure system defaults, view and set printer information, perform input and output operations and perform diagnostics.

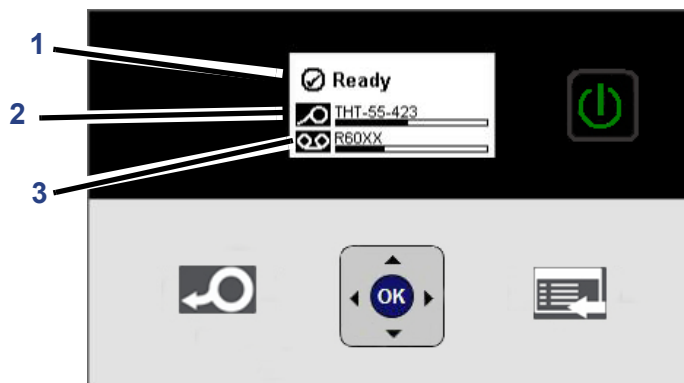
Ready Mode

The printer has three ready modes (see “Connection” on page 3-8 for more detail):

- **Initializing**
- **Ready**
- **Ready - USB Only**

The table describes the display screen when in idle (Ready) mode.

Item #	Condition	Description
1	Printer Status	Displays the online printer status.
2	Media Status	Displays media part number and estimated amount of remaining media.
3	Ribbon Status	Displays ribbon part number and estimated amount of remaining ribbon.



Menu Selection Mode

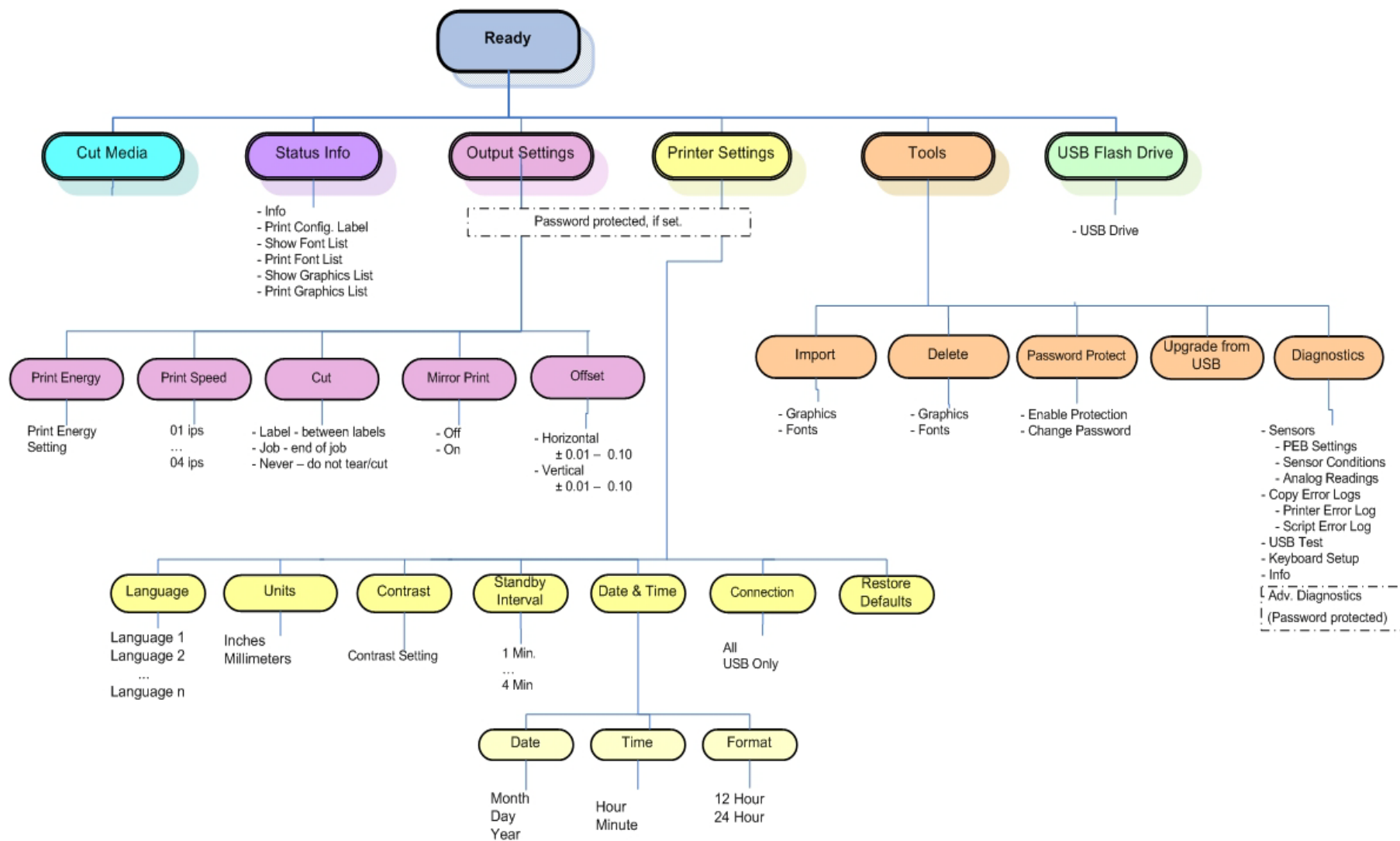
The table describes the main options of the display screen when in menu selection mode. See “*User Interface Menu Structure*” on page 1-6 for a list of all the menu options.

Menu Item	Description
Cut Media	Used to automatically cut the media.
Status Info	Options to display or print status and configuration information, font list and/or graphic list.
Output Settings	Indicates print energy, print speed, cut status and mirror print settings.
Printer Settings	Options to set up printer defaults for language, units, contrast, standby interval, date and time (clock) and restore defaults.
Tools	Options to import or delete graphics and fonts, upgrade from a PC or USB device, perform diagnostics, enable password protection or change a password.
USB Flash Drive	Accesses label script files.

Keypad and Menu Functions

Display Screen

User Interface Menu Structure



2 Printer Set Up

Unpack and Set up Printer

Carefully unpack and inspect the printer surfaces (interior and exterior) and the labeling system for possible damage during shipping.

Note: Be sure to remove any transportation protection from around the printhead and inside the enclosure cover.

What's in the Box

- **BBP®33** Sign & Label Printer
- Power Cord
- USB Type B Cable
- Printed Quick Start Guide
- Product CD including: electronic Quick Start Guide, electronic User's Manual, BPL Programmer's Manual and web links
- Windows Printer Driver CD
- Cleaning Kit (Cat # B31-CCT), not available in all regions - includes foam swabs, adhesive scraping tool, plastic bottle

Note: Please keep the original packaging, including the box, in case the printer must be returned.

Unpack and Set up Printer
System Components

System Components

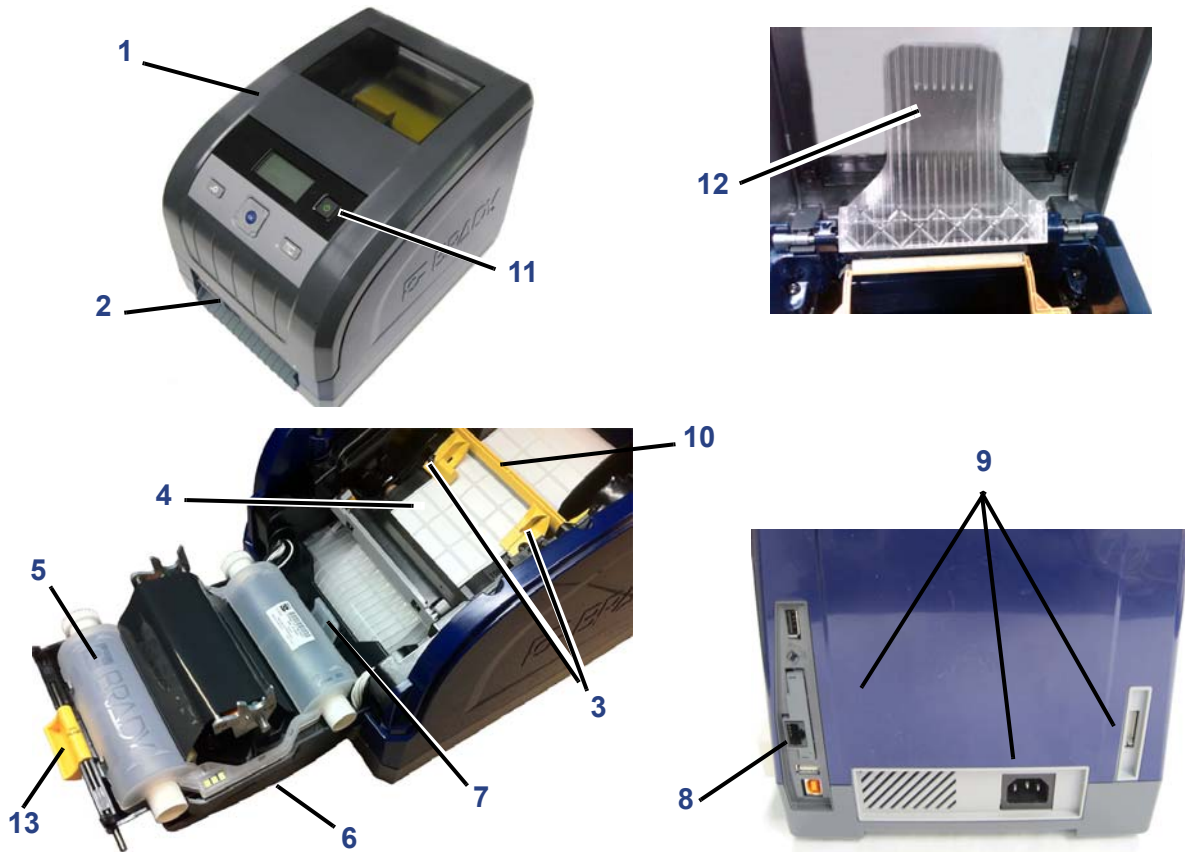


Figure 2-1. Printer Components

- | | | | |
|-----------|-------------------------------|-----------|--------------------------------|
| 1 | Enclosure Cover | 2 | Label Exit/Auto Cutter* |
| 3 | Media Guides | 4 | Media |
| 5 | Ribbon Cartridge | 6 | Ribbon Cover |
| 7 | Ribbon Cartridge Latch | 8 | Brady Network Card |
| 9 | Expansion Ports | 10 | Media Wiper |
| 11 | Power Button | 12 | Media Bridge* |
| 13 | Ribbon Cover Latch | | |

*See User's Manual for component descriptions.

Set up the Printer

Connect Printer Power

To setup the printer:

1. Plug the power cord [1] into the printer at the location shown.
2. Plug the other end of the power cord into an AC power outlet. The printer automatically turns on and displays the printer status and the size and color of the currently installed media.



Install or Change Supplies

The media and ribbon supply cartridges use a “smart cell” to define and track the supply information. The system automatically recognizes the supply information for the installed media and ribbon.

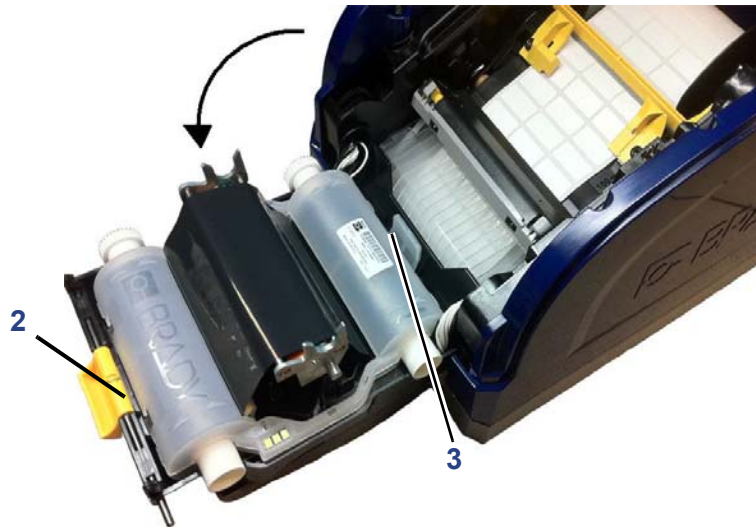
Note: The printer can be either on or off when changing supplies.

To install or change ribbon:

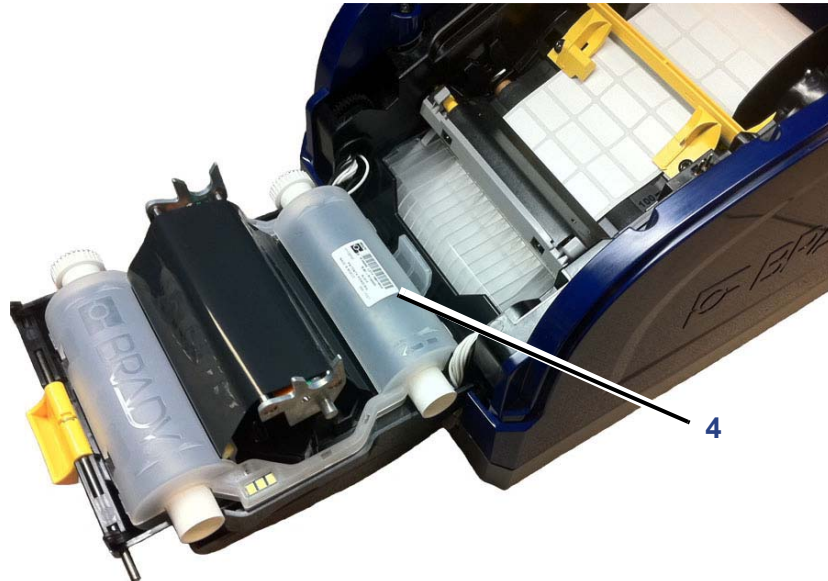
1. To remove ribbon, open the enclosure cover.




2. Release the latch on the ribbon cover [2] and swing open.
3. Release the ribbon cartridge latch [3] and lift the ribbon cartridge up and out.



4. Place ribbon cartridge with ribbon over print head [4] and the product label toward machine, then snap into place.



5. Close and latch the ribbon cover.
6. Close the enclosure cover.
7. If printer was off, press . The system detects the media and ribbon colors and sets the amount of remaining supplies.

Unpack and Set up Printer

Set up the Printer

To install or change media:

1. Open the enclosure cover.



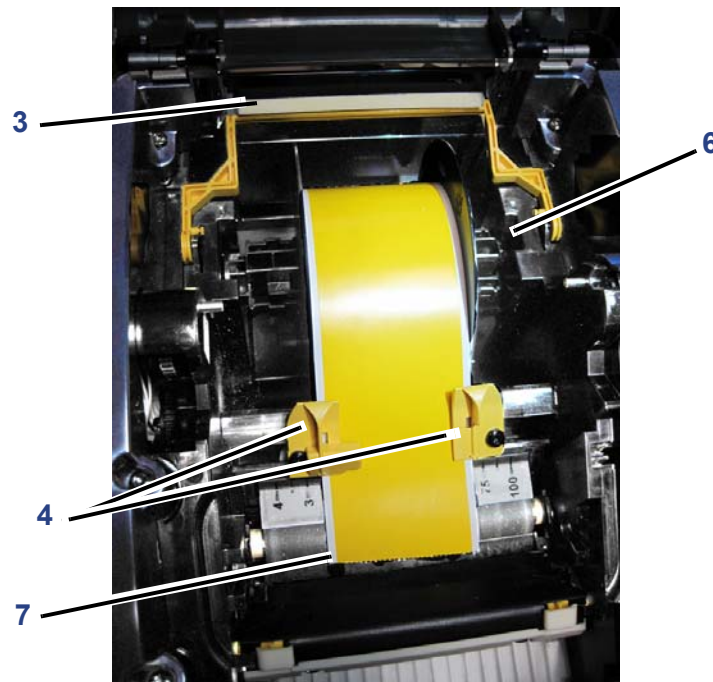
2. Release the latch on the ribbon cover [2] and swing open.




3. If engaged, swing yellow media wiper [3] to the back.
4. Slide yellow media guides [4] to full-open.
5. Remove existing media, if installed, by pulling cartridge from printer.
6. Insert media cartridge until spindle ends rest in slots of media holder [6]. Media unwinds from the top of the roll and the smart cell should be on the left side of the spindle.
7. Feed media from top of roll until it sits just past the black rubber roller.
8. Close media guides until they touch edge of media liner with media under the guides.
9. Move media wiper into position so it rests on media.

Note: Not all media requires the use of the media wiper. Engage the media wiper only if continuous media is installed.

10. Close and latch ribbon cover.



11. Close the enclosure cover.
12. If printer was off, press . The system detects the installed supplies and indicates the amount of remaining supplies on the display screen.

Unpack and Set up Printer




Feeding and Cutting Label Stock

Feeding and Cutting Label Stock

Use this procedure to advance the media to the cut position, and (optionally) cut the media.

Note: For die-cut media, the media is advanced to the cut position which is the next die-cut label. For continuous media, the media advances until you release the Feed button.

To feed and cut the label stock:

1. With printer power on, press and hold **Feed**  until the length of media you want exits the printer.
2. To cut the media:
 - a. Press  to go to the navigation menu.
 - b. Press ▲ or ▼ to scroll to **Cut Media**, then press . The media is cut.

Print Two-sided Sleeve Material

When printing two-sided sleeve material, side one is loaded and printed directly from the roll. To print side two, the material is cut at the end of the job, then loaded from the back of the printer.

A media bridge holds the two-sided material above the the tape roll. The two-sided material lays across the bridge to enter the tape entrance ramp. When done, the bridge is raised and snaps into the enclosure cover.

To setup the media bridge:

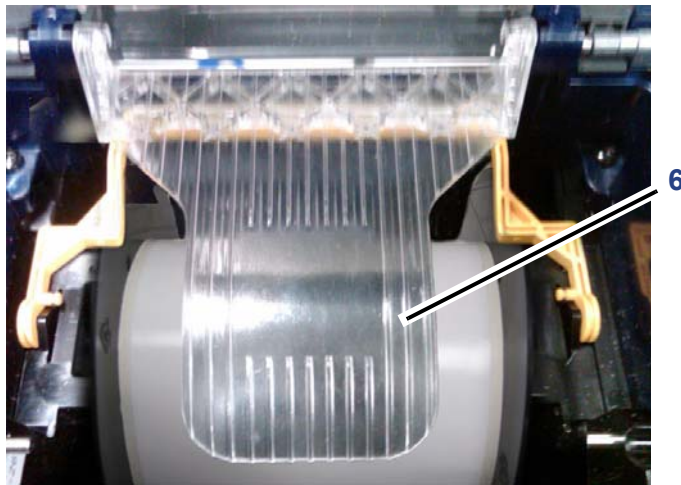
1. Print side one of the two-sided markers.
2. When the job is done, cut the printed markers.

Note: Use scissors or auto-cutter to cut the markers.

3. Open the enclosure cover and ribbon cover.
4. Disengage the yellow wiper arm.
5. Back the media out of the printer but do not remove the media roll.

Note: The media roll must remain in the media slot or the printer will indicate a *tape out* condition.

6. Flip the media bridge down so it lays over the roll of tape [6].

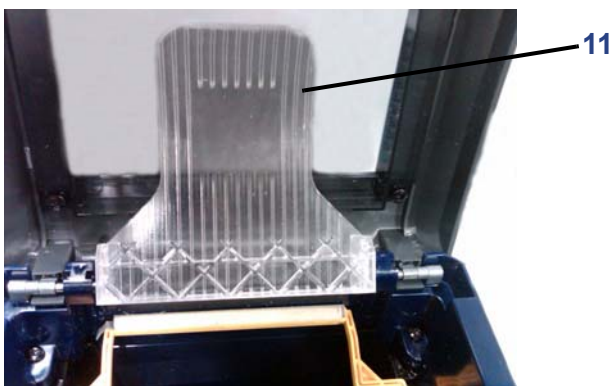


Print Two-sided Sleeve Material

Feeding and Cutting Label Stock

Note: Make sure you place the edge for the **starting (1st)** label into the printer first.

7. From the back of the printer, feed the edge of the marker through the slot between the enclosure cover and the printer as follows:
 - Starting marker (1st printed label) through slot first
 - Printed side down
8. Lay the markers over the media bridge and feed the markers to the top of the black roller ~.25 in. (6.35 mm) from the exit.
9. Close the ribbon and enclosure covers and print side two of the markers.
10. When the job is complete, open the enclosure and ribbon covers.
11. Lift the media bridge [11] up and snap into place on the enclosure cover.
12. Close the enclosure cover.



System Power

These procedures describe how to power-up the printer when starting from a non-powered state (i.e., printer has been unplugged) and how to remove power from the printer.

Note: With power removed (i.e., printer disconnected from power source), the system clock retains its settings for about 30 days.

Starting Printer

- **To start printer from a cold state:** Plug the printer into a power source. The system automatically recognizes the supply information for the installed media and ribbon and the display panel indicates **Ready**.

Note: The backlight for the display panel turns off after a pre-defined period of time.

- **To turn on the backlight:** Press any button.


Powering Off the Printer

When the system is shut down, the display turns off.

To completely remove printer power:

1. Disconnect the power cord from the printer.


To perform a soft power down:

1. Press and release . The screen goes blank and the backlight goes off.

Rebooting the Printer

Use this procedure to reboot the printer (e.g., if the screen freezes).

To reset the printer:

1. Press and hold  for at least 5 seconds. The system performs the initialization process and restarts the printer.
2. When the *Ready* displays, you can continue printing your labels.

Connect Printer to a PC via USB

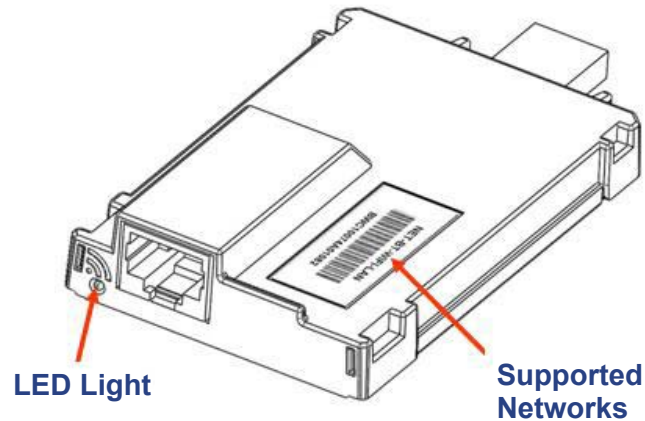
To use your PC with the **BBP®33** *Sign & Label Printer*, you must have the USB device driver installed on your PC.

Note: See “*Compatible Applications*” on page 1-2 for a list of software applications that are compatible with the **BBP®33**. Refer to your labeling software documentation for instructions about installing and using the software.

To install the USB device driver:

1. Go to “*Install USB Driver (only)*” on page 2-29.

Brady Network Cards



LED Light

The changing colors of the LED light on the Brady Network Card signifies the following:

Color	Status
Solid Green	Card is functioning normally, status is OK.
Blinking Orange	The firmware is corrupted and it needs to be upgraded. Use the Brady Network Card Configuration Utility to upgrade the firmware (see "Firmware Upgrade/Factory Reset" on page 2-38 for information on downloading new firmware.)
Blinking Green	Firmware upgrade is in progress.
Solid Red	Card failure. There is no communication between the Brady Network Card and the printer. Contact your system administrator.
Blinking Red	An error is detected in the current operation of the Brady Network Card. Check the current operation.

Supported Networks

The name on the barcode label of your network card indicates which networks the specific card supports.

Name	Networks Supported
NET-BT-WIFI-LAN	Bluetooth, WiFi, and Ethernet
NET-WIFI	WiFi and Bluetooth ONLY
NET-BT	Bluetooth ONLY
NET-LAN	Ethernet ONLY

Installing a Brady Network Card

If your Brady printer is equipped with a Brady Network Card (Ethernet), you can configure the printer to run as a local printer (physically attached to your PC via a USB cable) and as a network (shared) printer through Ethernet.

To establish the printer as a network printer, you must configure the Brady Network Card to recognize and work with your networks. The Brady Printer Drivers CD contains the installation wizards for the Brady printer drivers and also the Brady Network Card configuration. The printer drivers and Brady Network Card drivers can also be downloaded from the Brady website at www.bradyid.com.

The network card installation and configuration wizard identifies the following installation scenarios:

- Ethernet (first time)
- Additional PC's
- USB Driver

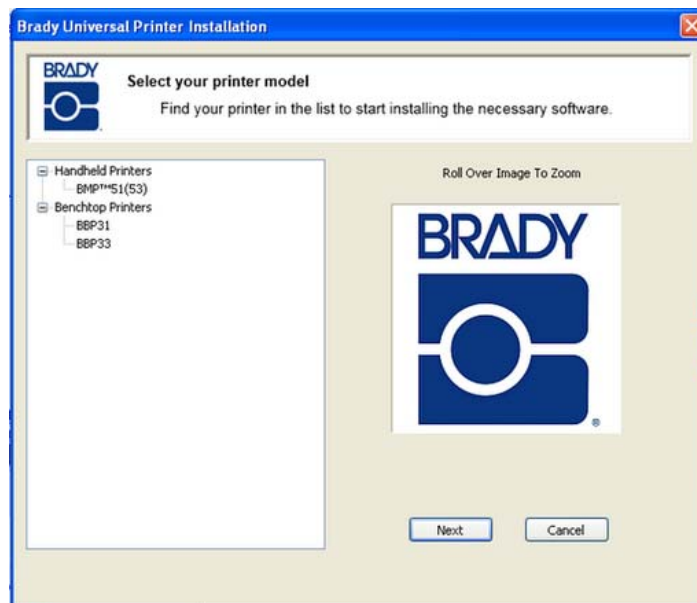
Install Ethernet (first time)

Use this installation process:

- if you have just purchased the printer and are setting it up for the first time.
- if you intend to send print jobs to the printer from a PC using Ethernet or over a LAN network.

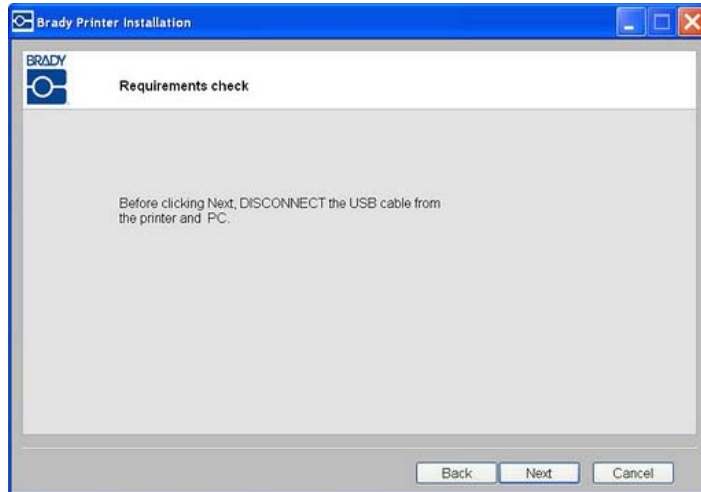
To activate the Ethernet connection:

1. Make sure your printer and your PC are **not** connected with a USB cable.
2. Insert the *Brady Printer Drivers CD* into your computer CD drive. The installation wizard launches automatically.
3. Turn the printer on.
4. Click printer model you are installing, then click **Next**.

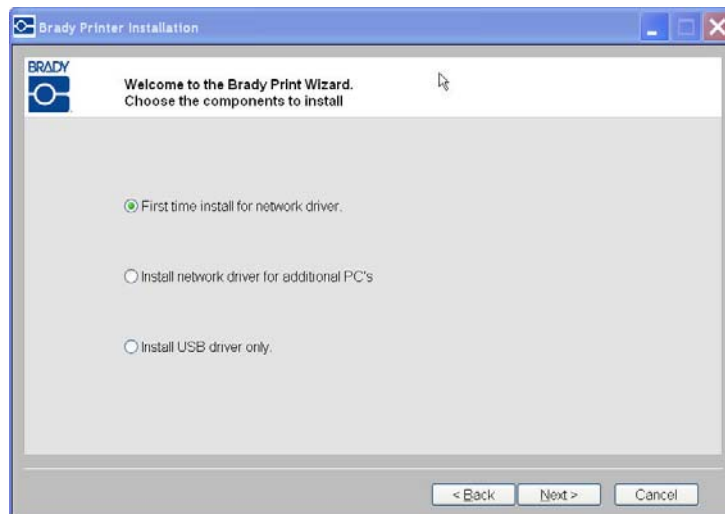


Brady Network Cards
Installing a Brady Network Card

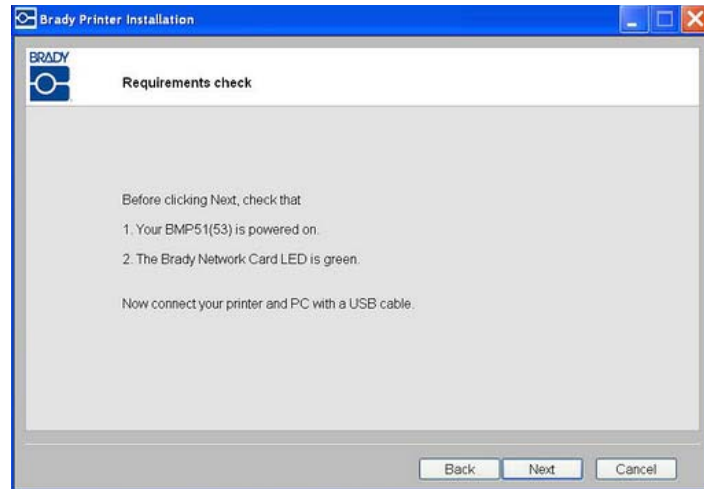
5. If your printer and PC are still connected with a USB cable, **disconnect** it now, then click **Next**.



6. Click **First time install for network driver** (default), then click **Next**.



7. Verify that your printer printer is powered on and the Brady Network Card LED is solid green.
8. Connect the printer to your PC with a USB cable.



9. If the *Found New Hardware Wizard* displays, continue with the next step, otherwise skip to *Step 16*.
10. Click **Yes, now and every time I connect a device** radio button, then click **Next**.



Brady Network Cards
Installing a Brady Network Card

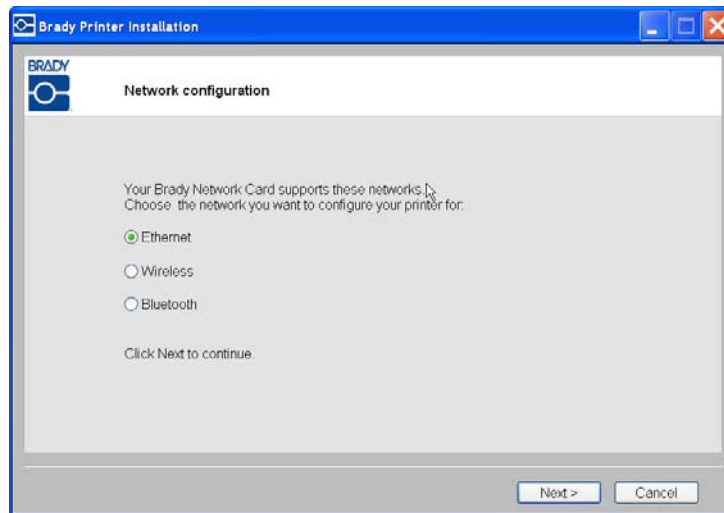
- Click the radio button **Install software automatically (Recommended)**, then click **Next**.



- When the installation is complete, click **Finish** to close the wizard, then click **Next**.



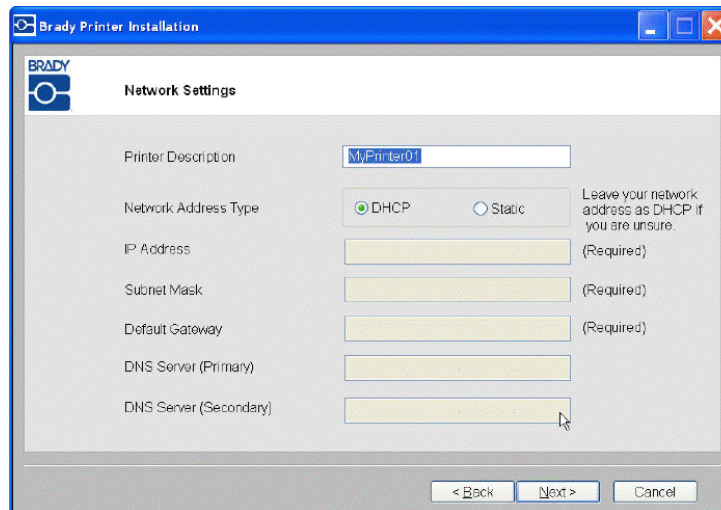
- Click the radio button for **Ethernet**, then click **Next**.



- In the *Printer Description* field, enter an easy-to-identify name/description for this network connection. You can use any alphanumeric characters.
- In the *Network Address Type* field, choose the default **DHCP** protocol.

Note: If you choose Static, you must enter the IP Address, Subnet Mask and Default Gateway fields.

- Click **Next**.



Brady Network Cards
Installing a Brady Network Card

- Verify that your printer and PC are connected to the same network, then click **Next**.

Note: To verify that your printer and PC are on the same network, see the connection guidelines shown below.

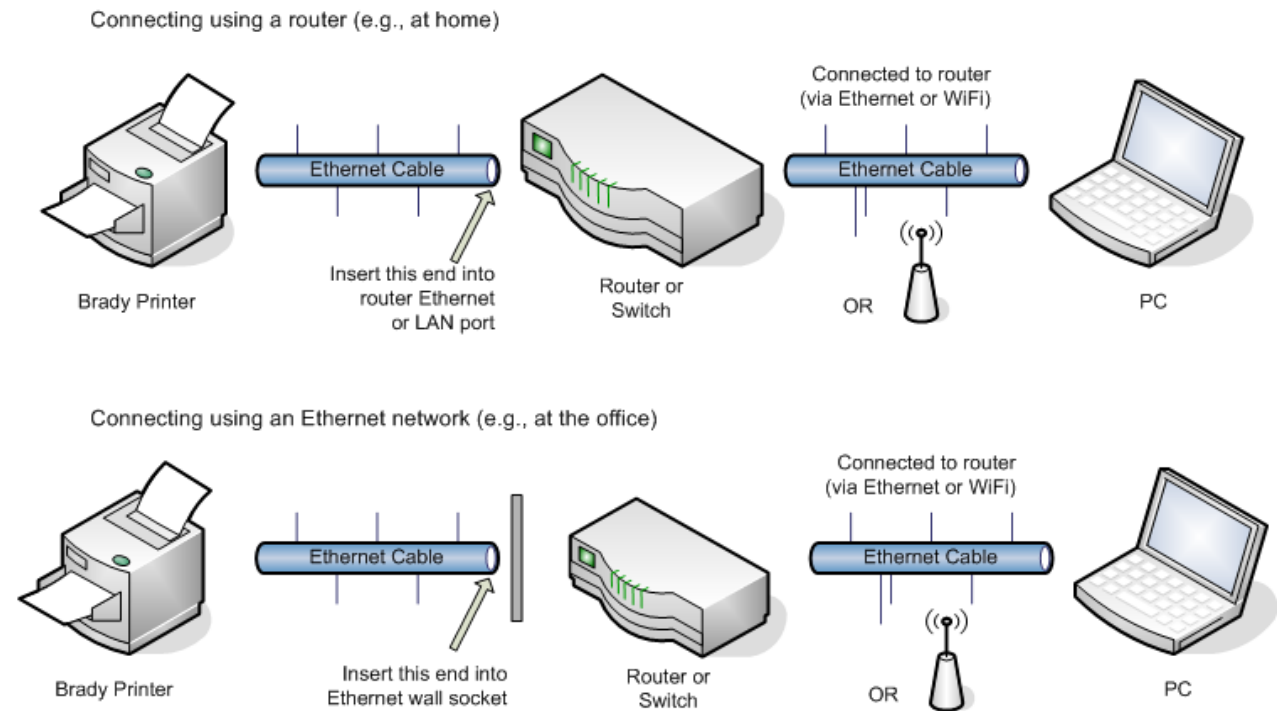


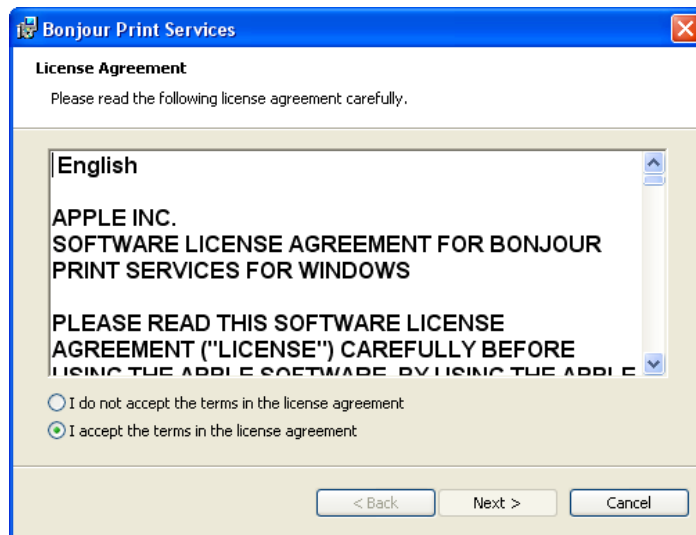
Figure 3. Network Connections

18. When the Ethernet connection is successful, the *Bonjour Printer Wizard* launches automatically. Click **Next**.

Note: The Bonjour program is designed to establish and monitor network printers. The Bonjour Printer Wizard establishes your Brady printer as a network printer.

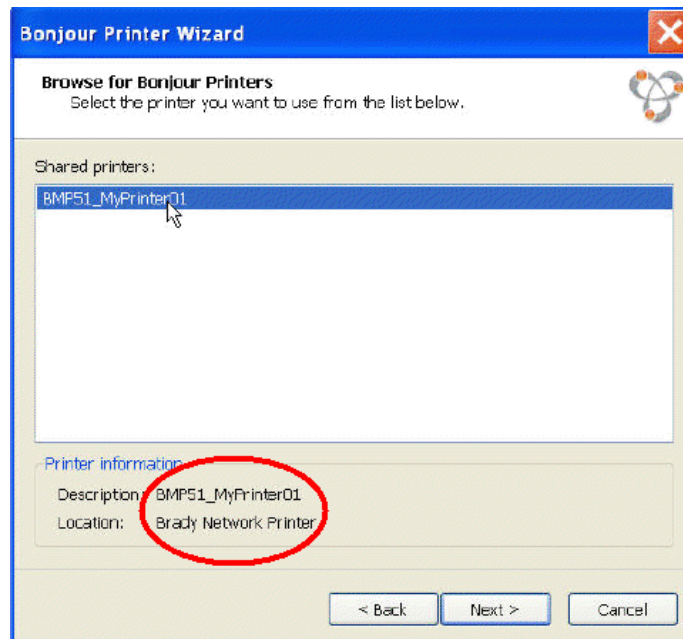


19. Read the *Apple End User License Agreement*, then click **I accept the terms in the license agreement** and click **Next** to continue.

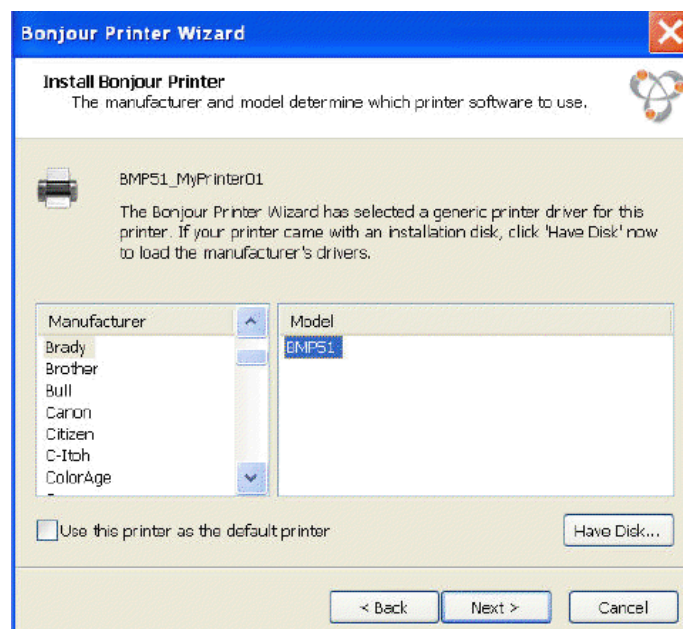


20. Click the assigned network printer name, then click **Next**.

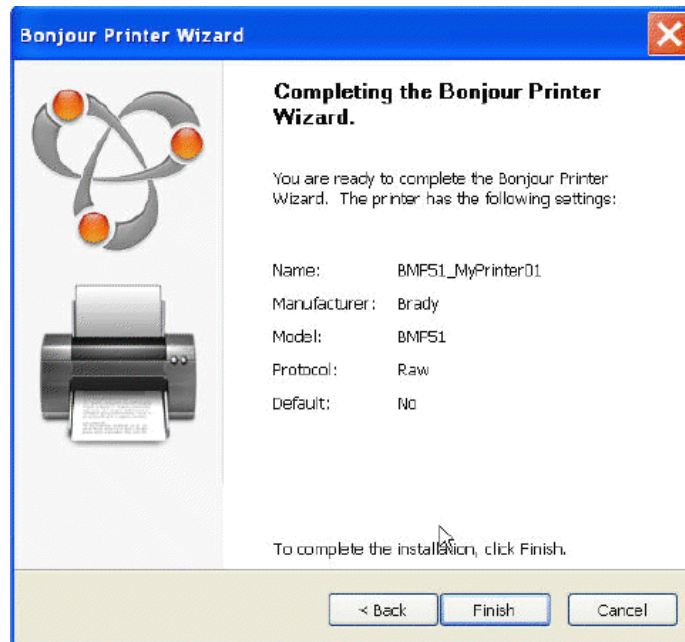
Note: For easier identification, the name or description you assigned in *Step 14*. displays in the lower left corner of the screen.



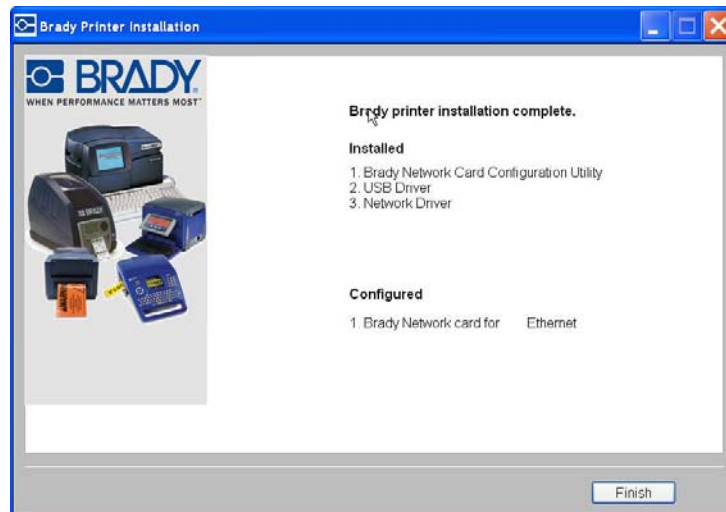
21. In the *Manufacturer* field, click **Brady** (the manufacturers are listed in alphabetical order).
22. In the *Model* field, click the printer to install, then click **Next**.



23. When the *Bonjour Printer* wizard completes, click **Finish**.



24. When the Brady Printer Installation is completed click **Finish** to exit the wizard.



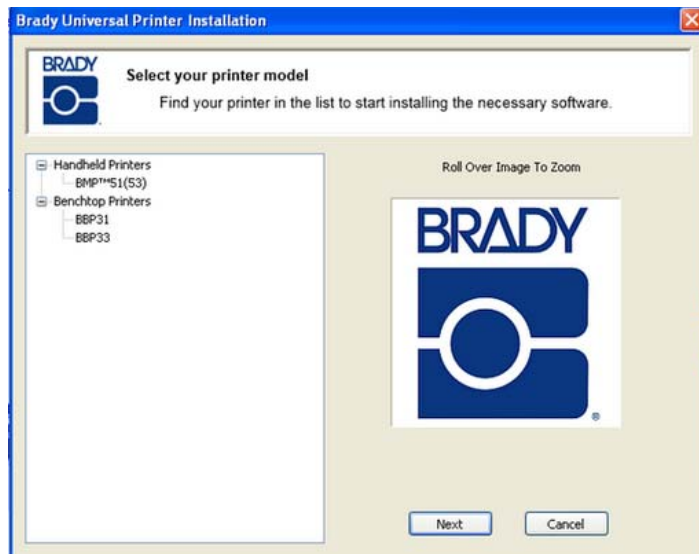
Install Additional PC's using Brady Network Card Utility

Use this installation process if your printer has been configured previously but you now want to use another PC to send print jobs to the printer.

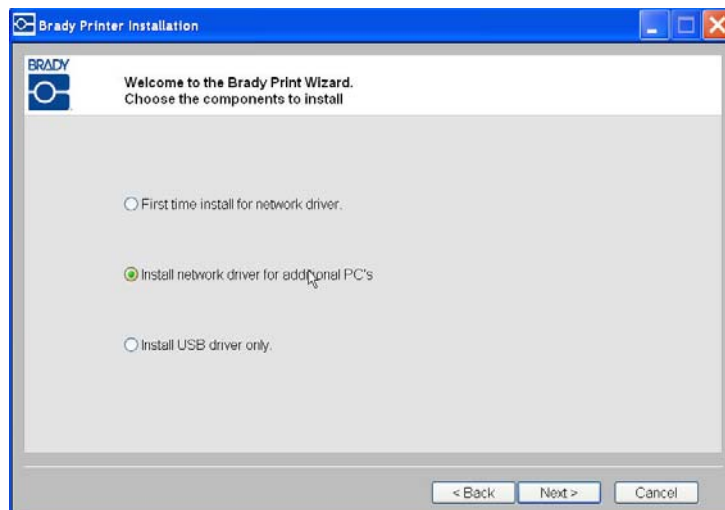
Note: Your additional PC must be on the same network as the printer. If not, it will not be detected during installation.

Once the Brady Network Card has been configured for Ethernet, you can install those network drivers on additional PC's.

1. Insert the *Brady Universal Printer Driver CD* into your computer CD drive. The installation wizard launches automatically.
2. Click the printer model you are installing, then click **Next**.

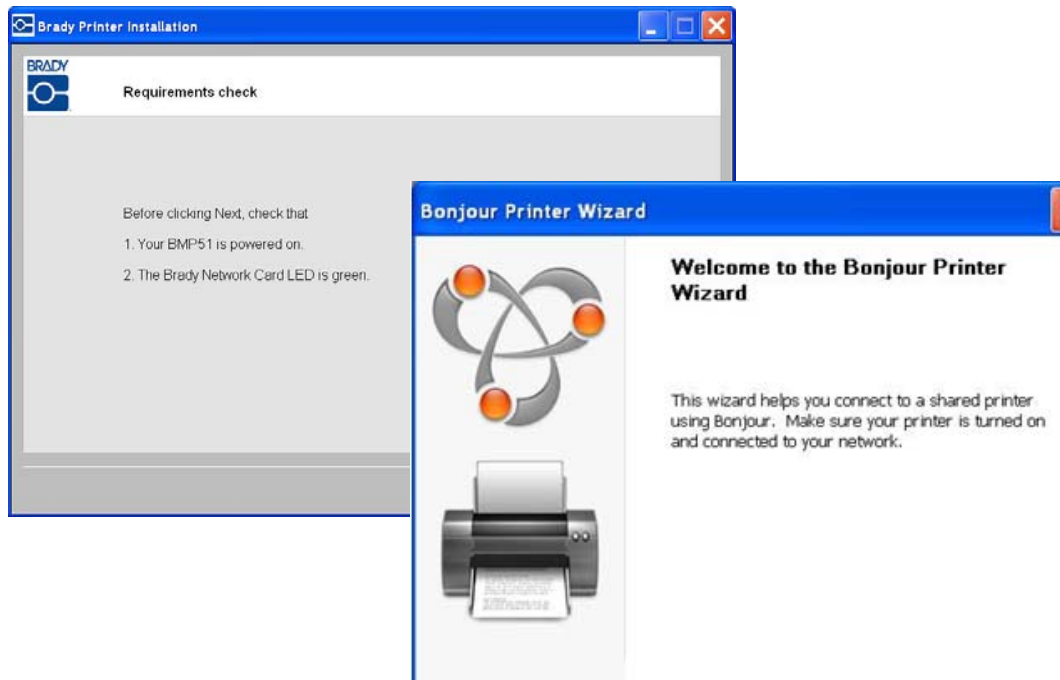


3. Click *Install network driver for additional PC's*, then click **Next**.



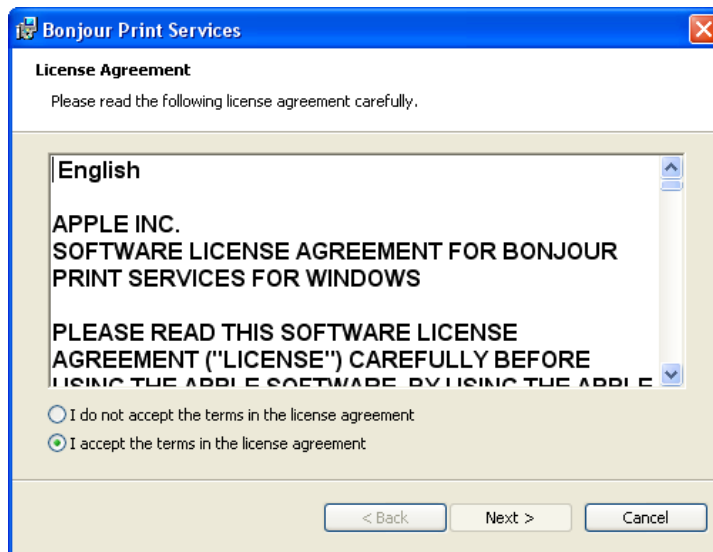
4. Verify that the printer is powered on and the Brady Network Card is functioning properly (green light is on), then click **Next**. The Bonjour wizard launches automatically.

Note: The Bonjour program is designed to establish and monitor network printers. The Bonjour Printer Wizard establishes your Brady printer as a network printer.



5. Click **Next**.

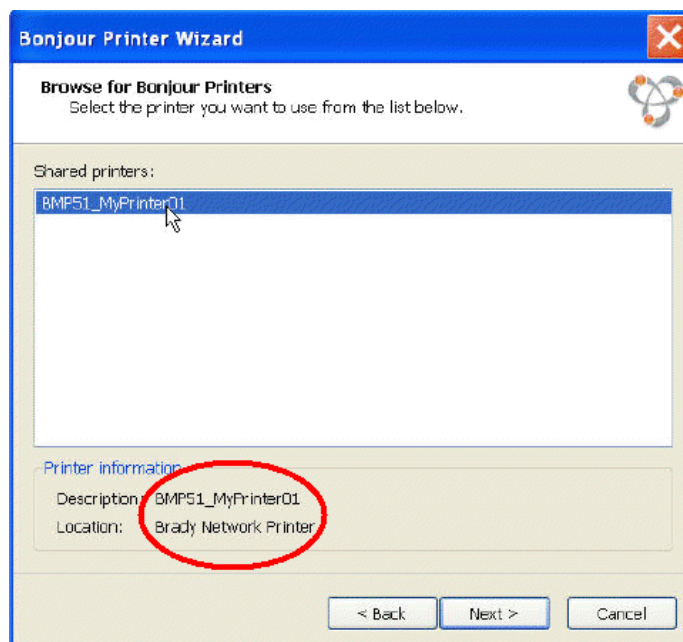
6. Read the Apple End User License Agreement, then click **I accept the terms in the license agreement**.
7. Click **Next** to continue.



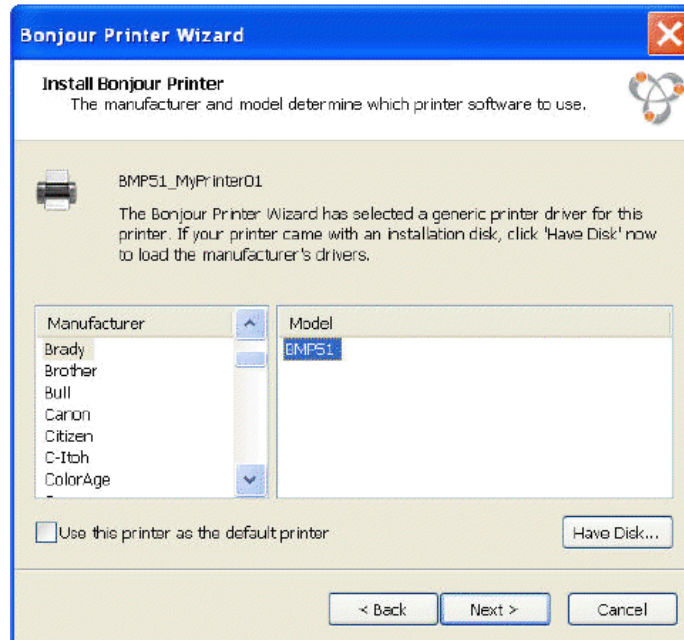
8. Click the assigned network printer name.

Note: For easier identification, the name or description you assigned previously displays in the lower left corner of the screen.

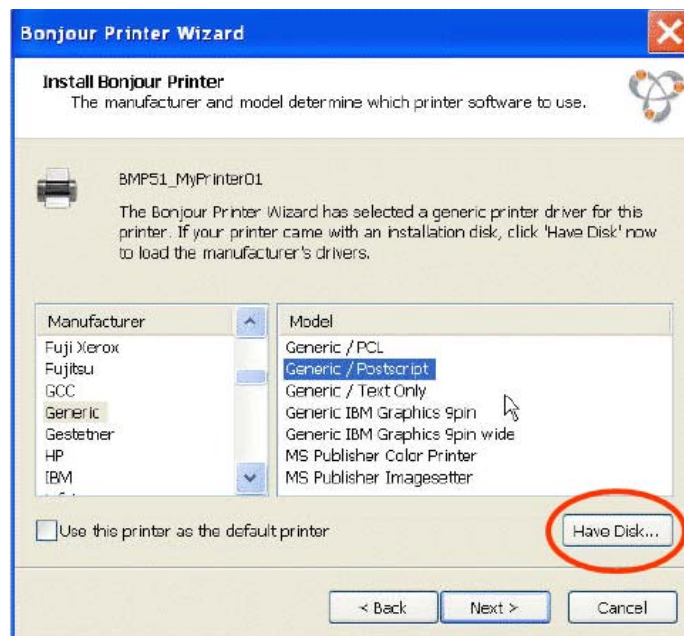
9. Click **Next**.



10. In the *Manufacturer* field, click **Brady** (the manufacturers are listed in alphabetical order).
11. In the *Model* field, click the printer to install, then click **Next**.

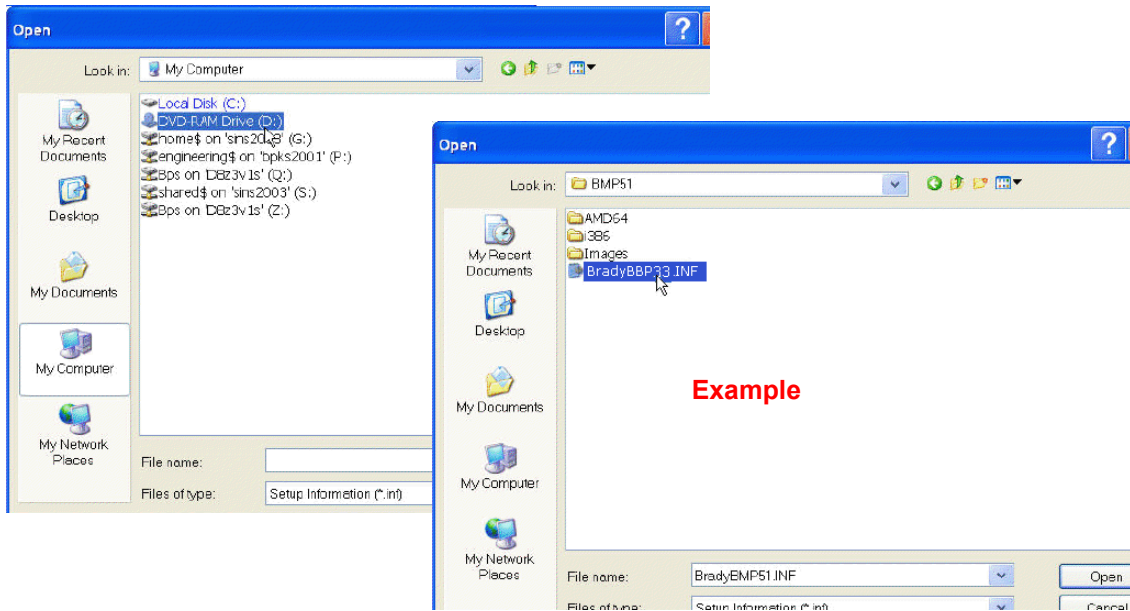


12. If Brady cannot be found in the *Manufacturer* field, click **Have Disk**.

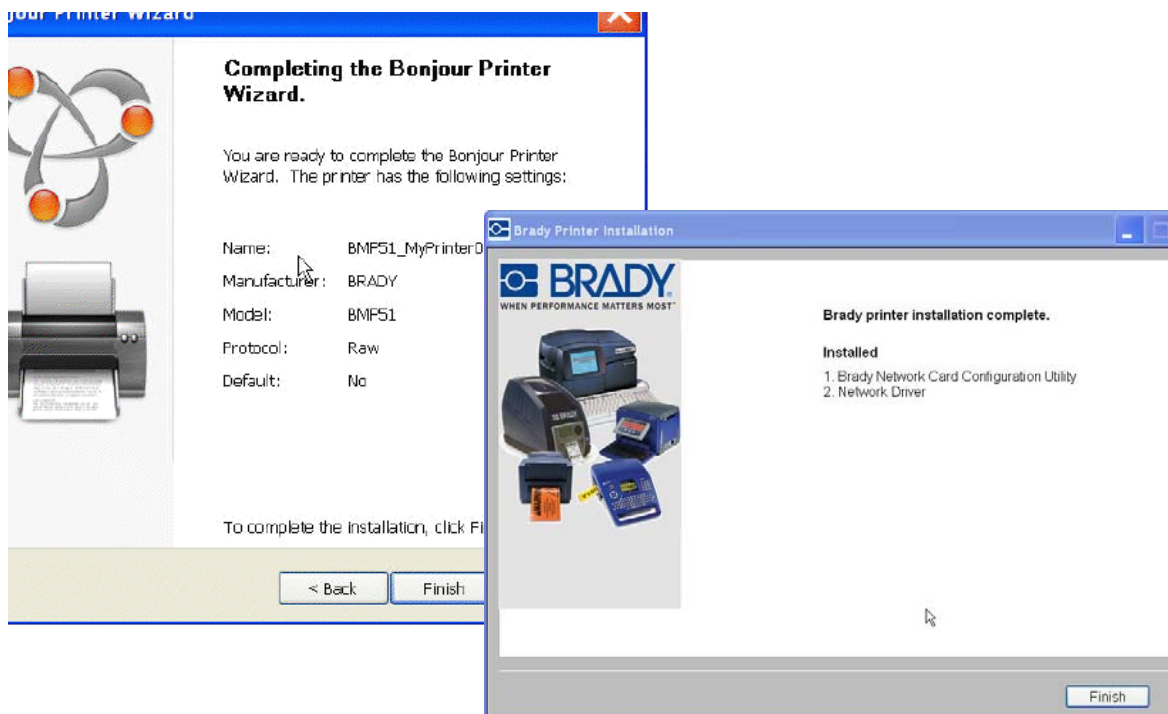


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Installing a Brady Network Card

13. Browse the supplied CD and locate the **.INF** file for your printer model. The example screen shows the **.inf** file for installing a BBP33 printer.



14. When the Bonjour Printer wizard completes, click **Finish**.
15. When the Brady Printer Installation is completed, click **Finish** to exit the wizard.



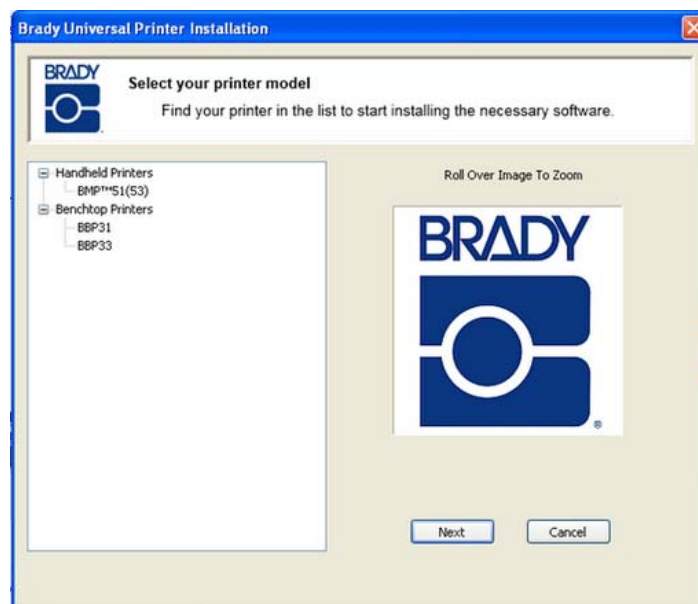
Install USB Driver (only)

Use this installation process if you intend to send print jobs to the printer from a PC using USB cable only.

This procedure installs the printer driver for your Brady printer and installs the Brady Network Card (BNC) configuration utility.

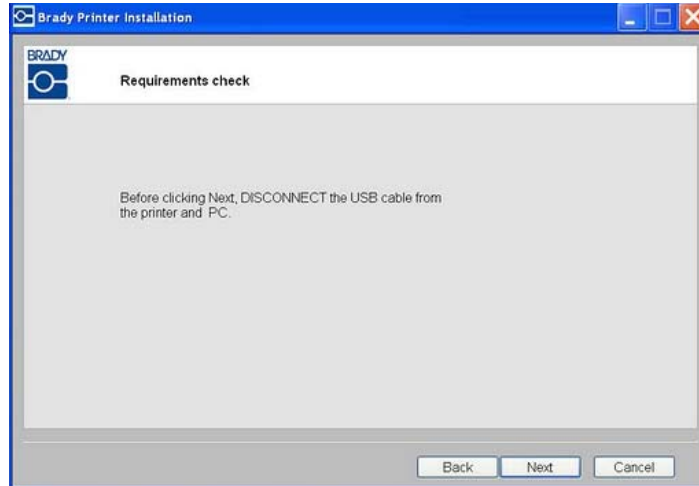
To install the printer driver and the BNC Configuration Utility:

1. Make sure your printer and your PC are **not** connected with a USB cable.
2. Insert the *Brady Printer Drivers CD* into your computer CD drive. The installation wizard launches automatically.
3. Turn the printer on.
4. Click the printer model you are installing, then click **Next**.

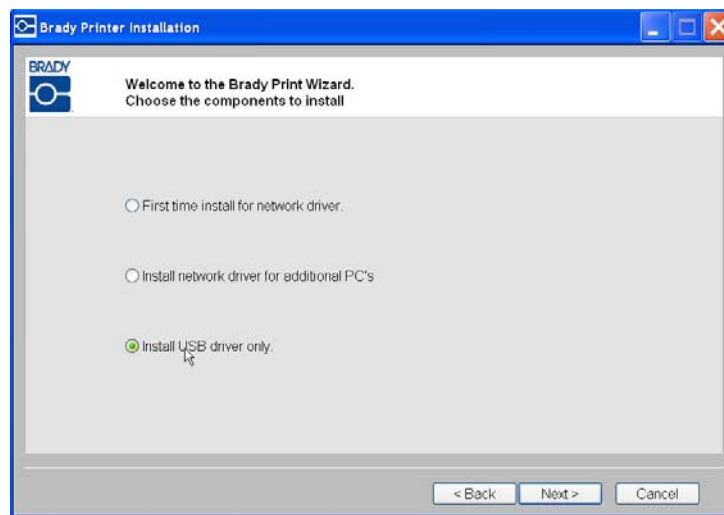


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Installing a Brady Network Card

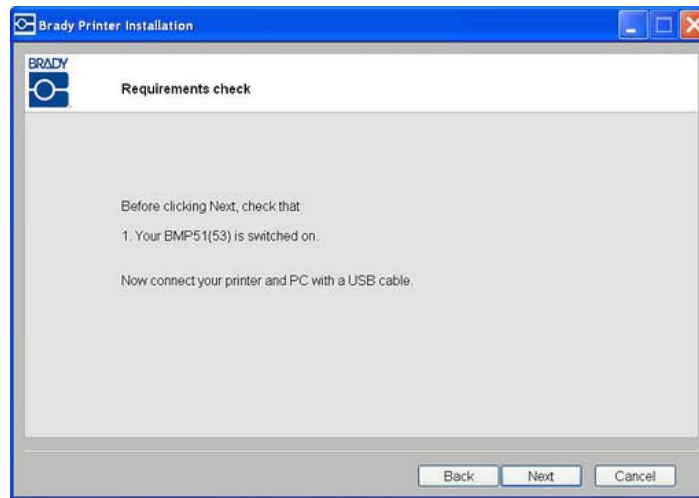
- If your printer and PC are still connected with a USB cable, **disconnect** it now, then click **Next**.



- Click the radio button to **Install USB Driver Only**, then click **Next**.



7. Connect the printer to your PC with a USB cable.



8. If the *Found New Hardware Wizard* displays, continue with the next step, otherwise skip to *Step 10*.
9. Click the radio button **Yes, now and every time I connect a device**, then click **Next**.



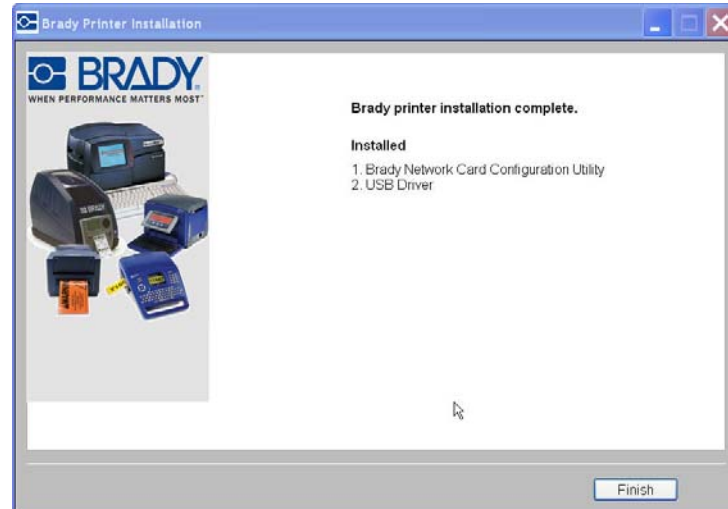
10. Click the radio button **Install software automatically (Recommended)**, then click **Next**.



11. When the install is complete, click **Finish** to close the wizard, then click **Next**.



12. When the *Brady Network Card Configuration Utility* and *USB Driver* are successfully installed, click **Finish**.

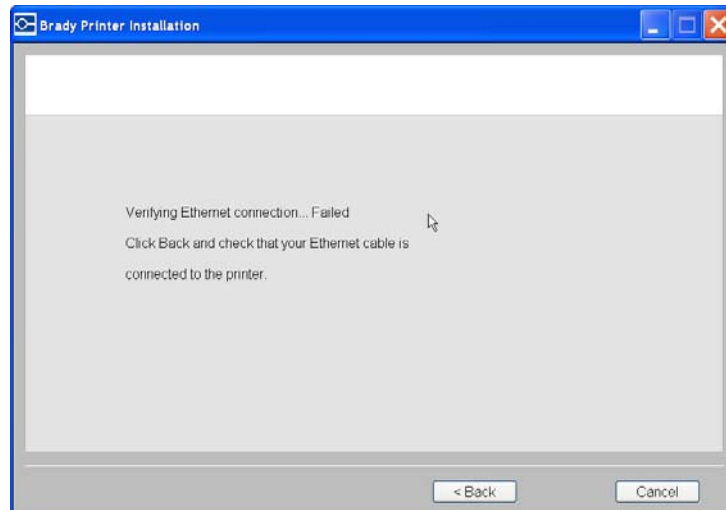


Troubleshooting Brady Network Card

Ethernet Connection Failed

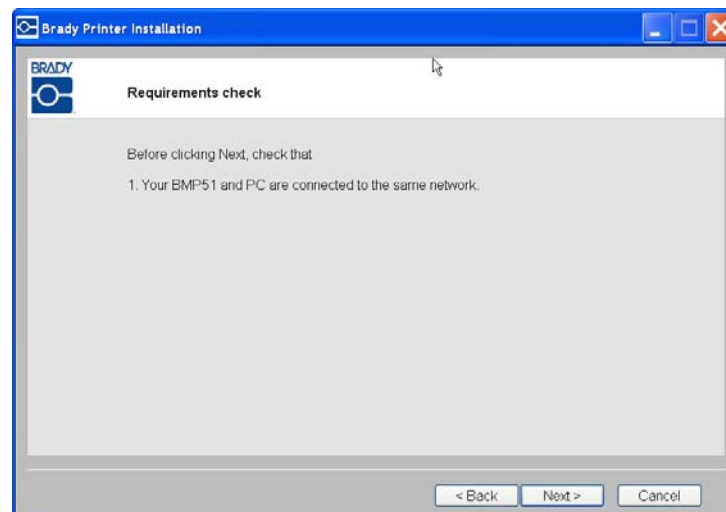
If Ethernet connection fails, an error message displays. The Ethernet connection can fail if the PC and printer are not on the same network.

1. Click **Back**.



2. Verify that your printer and PC are connected to the same network (see the connection diagram in *Figure 3* on page 20).
3. Click **Next** to continue with installation.

Note: If the same network has been selected and the connection still fails, your PC and printer may be on different subnets, or a firewall is blocking the connection. In this case, contact your network administrator.



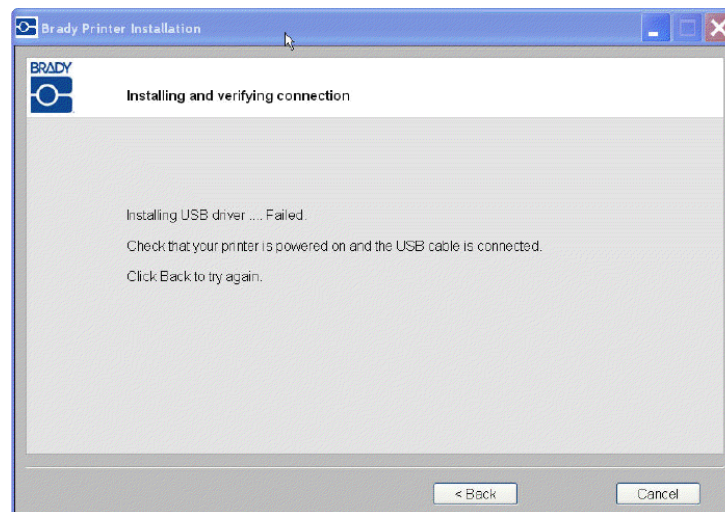
USB Connection Failed

The USB connection could fail for two reasons:

- The printer is powered OFF.
- The USB cable is not connected.

If the connection fails:

1. Click **Back**.
2. Power **ON** the printer and connect the USB cable.
3. Click **Next** to try again.



Using Brady Network Card Configuration Utility

When the network drivers are installed, a configuration utility is also installed and is automatically placed in Programs under the Start button of your Windows program. Use the configuration utility to adjust or change the configuration you initially installed.

To access the utility:

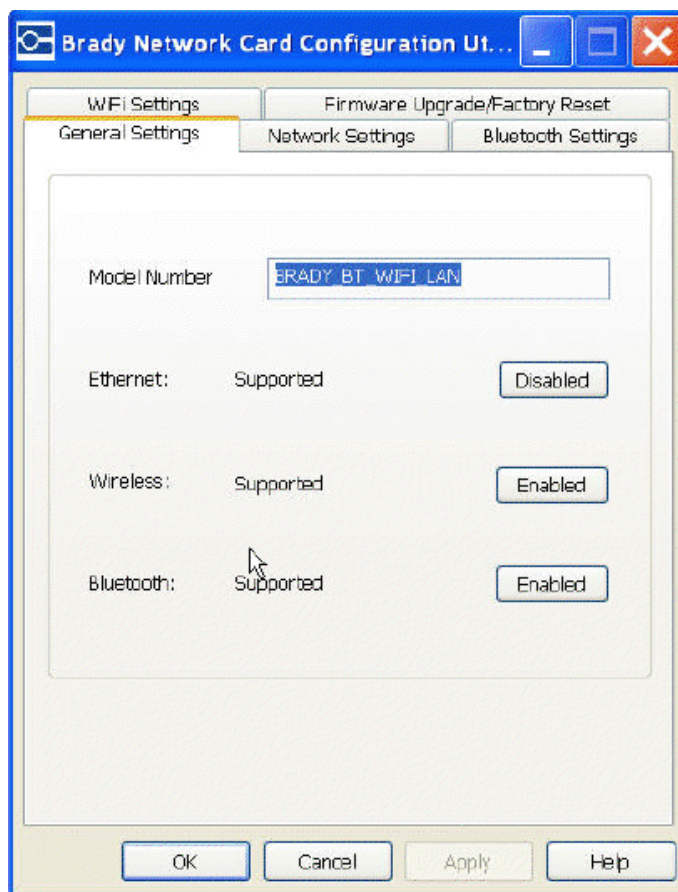
1. Choose **Start>Programs>Brady>Brady Network Card>Brady Network Card Configuration Utility**. One dialog box with multiple tabs is displayed.

General Settings

On the *General Settings* tab, the model number of the Brady Network Card is identified and the previously defined connections listed.

To change the status of each supported configuration:

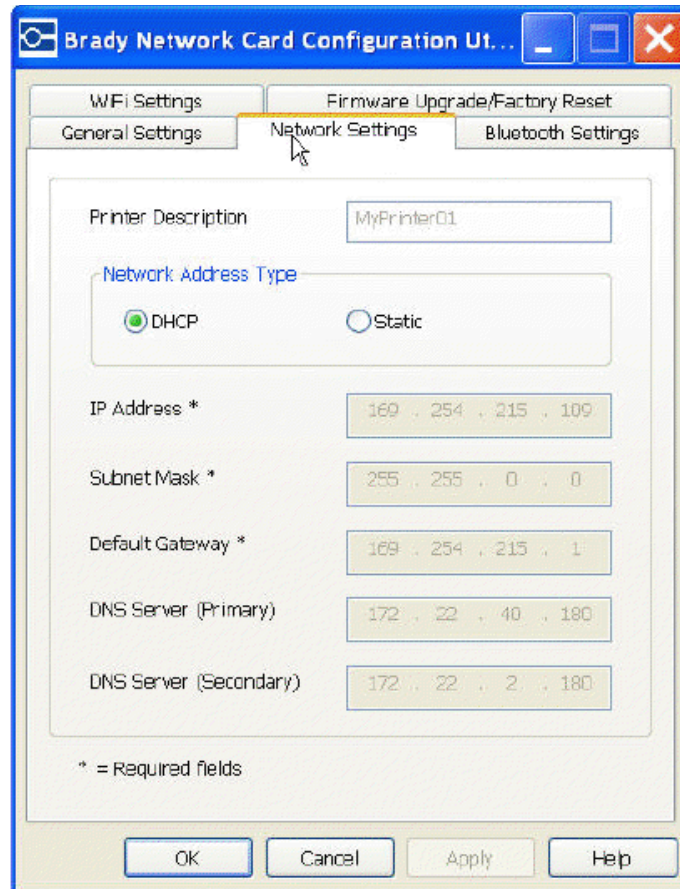
1. Click the **Enabled/Disabled** button to change the current state of the connection.
2. Click **OK** to accept changes and exit the dialog box.



Network Settings

The *Network Settings* tab displays the unique name you gave to the printer and the Address Type used by it. DHCP is the recommended setting.

Note: If Static is selected, you must enter the IP Address, Subnet Mask, and Default Gateway.



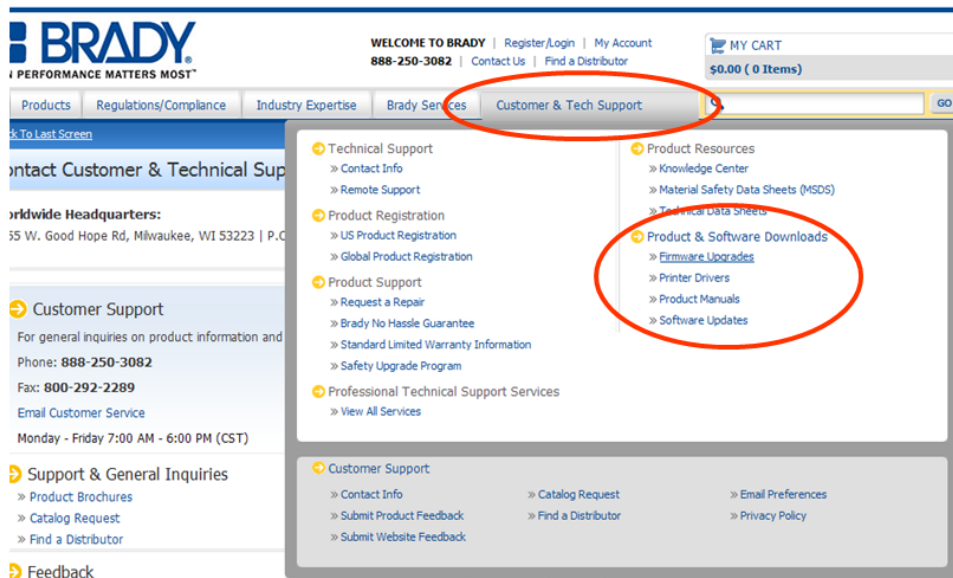
Firmware Upgrade/Factory Reset

You can upgrade your Brady Network Card through the Firmware Upgrade/Factory Reset tab of the Configuration Utility.

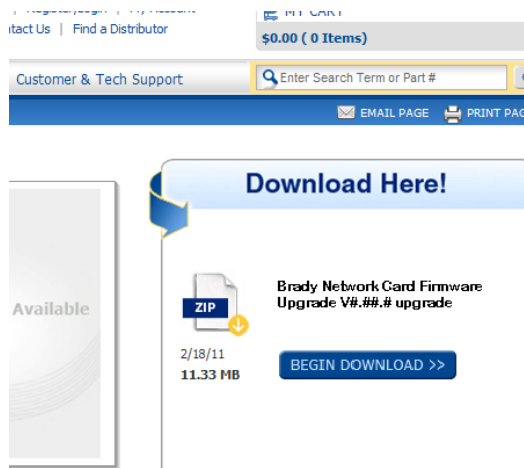
Upgrade Firmware

To upgrade firmware:

1. Access the Brady website at www.bradyid.com.
2. Click **Customer & Tech Support**
3. Under *Product & Software Downloads*, click the the **Brady Network Card** firmware upgrade.



4. In the list presented, select the upgrade you want to download, then click **BEGIN DOWNLOAD**.



5. On the *File Download* screen, click **Save**.



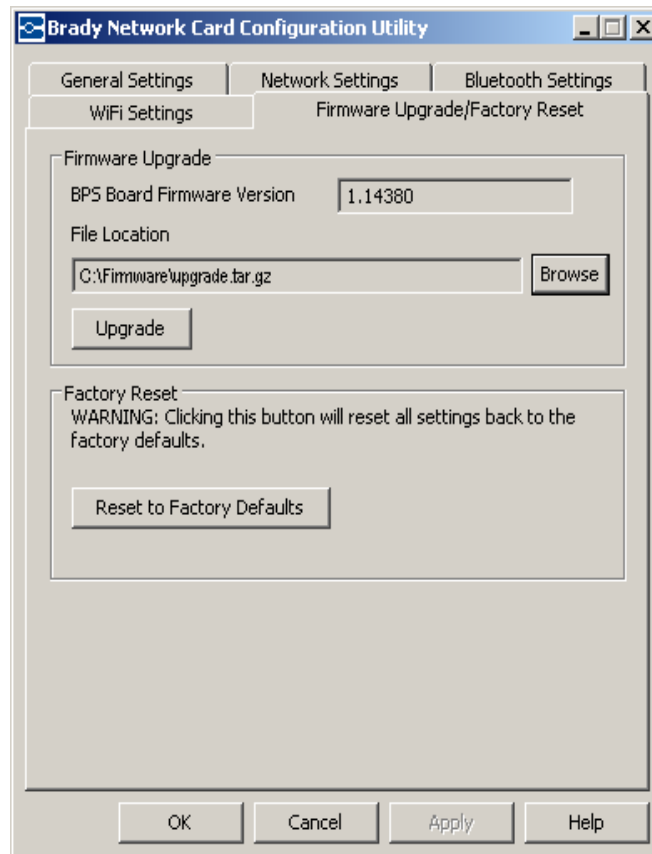
6. Using standard Windows procedures, determine the directory where you want to save the download data.



Brady Network Cards

Using Brady Network Card Configuration Utility

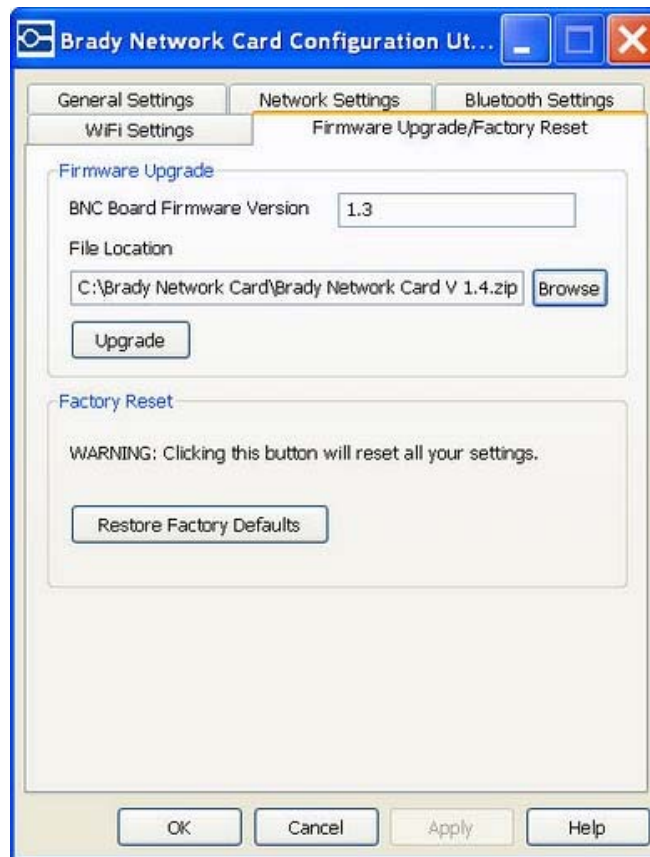
7. On the *Firmware Upgrade* tab of the *Configuration Utility* screen, click **Browse**.
8. Find the directory in which you saved the download ZIP file, then click **Open**.
9. On the *Firmware Upgrade/Factory Reset* tab, click **Upgrade**. The upgrade program information is automatically installed on your system.
10. Click **OK** to accept changes and exit the dialog box.



Factory Reset

To return all settings to the original Factory settings (defaults):

1. On the *Firmware Upgrade/Factory Reset* tab of the *Configuration Utility*, click **Reset to Factory Defaults**. A warning message displays indicating all previous defined settings will be removed.
2. Click **OK** on the warning message.
3. Click **OK** on the dialog box to accept the changes and exit the dialog box. The previous settings are removed.
4. You can now reconfigure the network and card configurations.



3 User Interface Menu

The User Interface (UI) menu provides feedback and also allows you to access and change printer settings, printer status and tools. A 5-way navigation keypad lets you navigate through the menu structure to choose the option(s) you want.



In *Ready* mode, the UI menu indicates printer status and displays estimated remaining material and ribbon. In *Menu Selection* mode, the display changes to a navigation-type menu. Navigation is divided into 6 major functions:

- Cut Media
- Status Info
- Output Settings
- Printer Settings
- Tools
- USB Flash Drive

Cut Media

Selecting **Cut Media** from the menu sends a signal to the printer telling it to cut the media.

To set the cut option:

1. Press  to go to the navigation menu. **Cut Media** is the first option.
2. When you are ready to cut, press . The printer cuts at the current position of the media.

Note: The menu stays on **Cut Media** until you exit the menu.




3. When done, press  to exit to the main menu.

Status Info

Status Info includes information about the printer configuration and fonts. From this menu, you can also print a configuration label, font list or graphics list.

To view system information:

Note: Press ◀ to exit a menu at any time.

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Status Info**, then press .
3. Press ▲ or ▼ and choose from one of the following options, then press .

Note: For print options, use continuous media to get the best results.

- **Info:** Displays the current application and firmware version.
 - **Print Configuration:** Prints current printer configuration.
 - **Show Font List:** Displays list of available fonts. The list is not displayed in individual font styles.
 - **Print Font List:** Prints list of available fonts in their own font style.
 - **Show Graphics List:** Displays list of imported graphics.
 - **Print Graphics List:** Prints list of imported graphics. Does not print a picture of the actual graphic.
4. When done, press ◀ twice to exit to the main menu.

Output Settings

Output Settings let you set the print energy and print speed. You can also set when you want to cut the label, set mirror printing on or off and change the horizontal and vertical offset.

Note: If password protection has been implemented, you will need to enter the password to have access to these functions.

Print Energy










Optional print energy settings are set automatically by the smart cell for the installed media and should only be changed if you are experiencing problems. For example, if your printing is spotty, you may want to increase the print energy to make sure more of the ribbon ink transfers to the label. However, if your ribbon is sticking or tearing during printing, the heat energy may be too high and should be reduced.



CAUTION!

Constantly printing at high energy levels may cause printer jams or other printing errors and may reduce the overall life of your printhead.

To adjust the print energy:





1. Press  to go to the navigation menu.
2. Press  or  to scroll to **Output Settings**.
3. Press  to go to the submenu.
4. Press  to scroll to **Print Energy**, then press .
5. Press  or  to increase or decrease the print energy setting.
6. When done, press  twice to exit to the main menu.

Note: The selected print energy setting will stay in effect for all subsequent print jobs with the currently installed media. When new media is installed, the print energy level is reset to the default setting. The print energy level is also reset by rebooting the system.

Print Speed

Print speed lets you adjust the speed setting from 1 to 4 inches per second (ips). Optimal print speed settings are set automatically by the smart cell for the installed media and should only be changed if you are experiencing problems. For example, you can change print speed if you want to print graphics or other densely populated labels more slowly to ensure complete coverage.




To set the print speed:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Output Settings**, then press .
3. Press ▼ to go to **Print Speed**, then press .
4. Press ▲ or ▼ to select the print speed you want (choose between 1- and 4-ips).
5. Press  to accept the change and return to the submenu.
6. When done, press ◀ twice to exit to the main menu.


Cut Settings

These settings define when the printer expects to cut labels in a print job. Depending on the selected cut settings, the printer advances the label to cut between labels, at the end of the job, or never.

To set the cut option:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Output Settings**, then press .
3. Press ▼ to scroll to **Cut**, then press .
4. Press ▲ or ▼ to select the cut option you want:
 - **Label** = between labels
 - **Job** = end of job
 - **Never** = do not cut

Note: The media advances to the selected position and is automatically cut and ejected.





5. Press  to accept the change and return to the submenu
6. When done, press ◀ twice to exit to the main menu.

Mirror Print Settings

Use this procedure to print labels suitable for reading in a mirror or through the back of the label.

To set the mirror-image option:






Note: Mirror print settings are in effect only during the current print job. When the print job is complete, the printer returns to the default setting.

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Output Settings**, then press .
3. Press ▼ to scroll to **Mirror Print**, then press .
4. Press ▲ or ▼ to select **On** or **Off**.
5. Press  to accept the change.
6. When done, press ◀ twice to exit to the main menu.

Offset

Offset is a value that will move the image from its "nominal" position on the label slightly in one direction or another. Adjusting the offset is typically used to do a fine adjustment of the printed image on a die-cut label, or to move the image slightly closer or further from the edge of a continuous supply.

To set the offset:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Output Settings**, then press .
3. Press ▼ to scroll to **Offset**, then press .
4. Press ▲ or ▼ to select **Horizontal** or **Vertical**, then press .
5. Press ▲ or ▼ to adjust the offset:
 - **Horizontal:** shifts the image (printed portion of the label) to the right or left (values $\pm 0.01 - 0.10$).
 - **Vertical:** shifts the image (printed portion of the label) up or down (values $\pm 0.01 - 0.10$).
6. Press  to accept the change.
7. When done, press ◀ twice to exit to the main menu.

Printer Settings





The Printer Settings menu lets you set the default values for the printer. Defaults are common settings that are pre-assigned to make the system usable as soon as power is applied (e.g., set date and time to your local date and time). By changing the defaults, you can set the printer to your specific requirements.

Any defaults set here will stay in effect even when power is removed from the printer, and also during upgrades.

Note: If password protection has been implemented, you will need to enter a password to have access to these functions.





Language

To change language setting:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Printer Settings**, then press .
3. Press ▼ to scroll to **Language**, then press .
4. Press ▲ or ▼ to scroll to the language you want.
5. Press  to accept the change. It takes a few moments for the settings to take effect.
6. When done, press ◀ twice to exit to the main menu.





Units

To change unit setting:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Printer Settings**, then press .
3. Press ▼ to scroll to **Units**, then press .
4. Press ▲ or ▼ to select **Inches** or **Millimeters**.
5. Press  to accept the change.
6. When done, press ◀ twice to exit to the main menu.

Contrast





To set the contrast:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Printer Settings**, then press .
3. Press ▼ to scroll to **Contrast**, then press .
4. Press ▲ or ▼ to increase or decrease the contrast setting. Contrast values are between 1 and 20.
5. Press  to accept the change.
6. When done, press ◀ twice to exit to the main menu.

Standby Interval

The standby interval time determines when the navigation menu will go into standby mode after a period of inactivity. The standby interval turns off the backlight on the display.







To set the standby interval:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Printer Settings**, then press .
3. Press ▼ to scroll to **Standby Interval**, then press .
4. Press ▲ or ▼ to choose between **1** to **4** minutes.
5. Press  to accept the change.
6. When done, press ◀ twice to exit to the main menu.

Date & Time

The Date & Time menu lets you change the date and time format (i.e., 12-hour or 24-hour clock). Use the same steps to change any of the submenu options.

To change date & time options:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Printer Settings**, then press .
3. Press ▼ to scroll to **Date & Time**, then press .
4. Press ▲ or ▼ to choose the option you want to change (i.e., Date, Time or Format), then press .
5. Use the ▲ or ▼ arrows to select and change the selection, then press .
6. Continue to select options you want to change, using the arrow keys and pressing  to accept the changes.
7. When done, press ◀ repeatedly to exit to the main menu.

Connection




The printer has three ready modes:

- **Initializing:** The printer is ready, but the connection to the Brady Network Card (BNC) module has not yet been established.
- **Ready:** The printer is fully functional, the BNC module has responded and the printer is ready to print.
- **Ready - USB Only:** The printer cannot make a connection to the BNC module. All other functions are ready and the printer can be used. If the BNC module does not respond before the time-out, the following message will display: *Brady Network Card is not responding. USB printing is still available. See User's Manual for details.*

Note: To view the status of the BNC card and possible corrective actions, see “Troubleshooting Brady Network Card” on page 2-34.

Restore Defaults

Restore Defaults resets the printer to its factory settings. Once selected, it may take a few moments to restore the defaults.

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Printer Settings**, then press .
3. Press ▼ to scroll to **Restore Defaults**.
4. Press  to accept.
5. When done, press ◀ twice to exit to the main menu.

Tools

Import

Import lets you add your own graphics or fonts for use on the printer.

Graphics







Use this procedure to add your own graphics for use in labels that you create on the printer.

Imported graphics must be in one of the following supported format(s) and imported from a USB flash drive.

- Bitmap (.bmp)
- Graphics Interchange Format (.gif)
- Joint Photographic Experts Group (.jpg)
- Portable Network Graphics (.png)

Note: This is a monochrome printer. Imported graphics should be black and white. Bitmap files (e.g., *.bmp, .jpg, etc.) are composed of pixels which may appear fuzzy and become distorted when they are resized.

To import a graphic:

1. Copy the desired graphic(s) to the root directory of your USB flash drive (not in a folder).
2. Connect the USB flash drive to any available USB port on the printer.
3. Press  to go to the navigation menu.
4. Press ▲ or ▼ to scroll to **Tools**, then press .
5. Press ▼ to scroll to **Import**, then press .
6. Press ▼ to scroll to **Import Graphics**, then press .
7. Press ▼ to scroll to the desired USB flash drive, then press .
8. Press ▲ or ▼ to scroll through the list of graphics on your USB flash drive, then press  to accept. The graphic will be imported to your printer.

Note: Only one graphic can be imported at a time.

9. When done, press ◀ repeatedly to exit to the main menu.







Fonts

Use this procedure to add your own fonts for use in your labels. Only True-Type fonts can be imported.

The following True-Type fonts are resident on the printer:

- **Arial** (Normal, Bold, Italic)
- **Courier New** (Normal, Bold, Italic)
- **Tahoma** (Normal, Bold)
- **Times New Roman** (Normal, Bold, Italic)
- **Trebuchet MS** (Normal, Bold, Italic)
- **Verdana** (Normal, Bold, Italic)

To import a font:

1. Copy the font(s) you want into the root directory of your USB flash drive.
2. Connect the USB flash drive to any available USB port on the printer.
3. Press  to go to the navigation menu.
4. Press ▲ or ▼ to scroll to **Tools**, then press .
5. Press ▼ to scroll to **Import**, then press .
6. Press ▼ to scroll to **Import Fonts**, then press .
7. Press ▼ to scroll to the desired USB flash drive, then press .
8. Press ▲ or ▼ to scroll through the list of fonts on your USB flash drive, then press  to accept. The font will be imported to your printer.
9. When done, press ◀ repeatedly to exit to the main menu.

Note: If there is not enough space available to store the imported font(s), you will have to clear some space on the system before importing any new fonts. You can clear space by deleting saved graphics or fonts.






Delete

Use these procedures to delete any of your own graphics or fonts that you previously imported.

Note: You cannot delete any of the fonts that come with the printer.






Delete Graphics

To delete a graphic:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Tools**, then press .
3. Press ▼ to scroll to **Delete**, then press .
4. Press ▲ or ▼ to select **Delete Graphics**, then press .
5. Press ▲ or ▼ to scroll through the list of imported graphics.
6. When the graphic you want to delete is highlighted, press .
7. Repeat steps 5 and 7 to delete any additional graphics.
8. When done, press ◀ repeatedly to exit to the main menu.

Delete Fonts

To delete a font:





1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Tools**, then press .
3. Press ▼ to scroll to **Delete**, then press .
4. Press ▲ or ▼ to select **Delete Fonts**, then press .
5. Press ▲ or ▼ to scroll through the list of imported fonts.
6. When the font you want to delete is highlighted, press .
7. Repeat steps 5 and 6 to delete any additional fonts.
8. When done, press ◀ repeatedly to exit to the main menu.

Password Protection



Use this procedure to enable password protection or to change a password. Passwords can be enabled for the **Output Settings** or **Printer Settings** menus.

Enable Protection

To enable password protection:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Tools**, then press .
3. Press ▼ to scroll to **Password**, then press .
4. At the prompt, enter the password by using a combination of arrow keys and buttons, then press .








Note: The default password is DULR (down, up, left right).

5. Press  to accept **Enable Protection**.
6. Press ▲ or ▼ to select either **Off** or **On**, then press .
7. When done, press ◀ repeatedly to exit to the main menu.

Change Password

When changing the password, be sure to write down the new key combination so that you don't forget it.

To change the password:

1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Tools**, then press .
3. Press ▼ to scroll to **Password**, then press .
4. At the prompt, enter the password by using a combination of arrow keys and buttons, then press .
5. Press ▼ to select **Change Password**, then press .
6. At the prompt, enter a new password, then press .
7. At the prompt, confirm the new password, then press .

Note: Once the new password is confirmed, it becomes the password for accessing the *Output Settings* and *Printer Settings* menus if protection is "on." It is also the password required to access the *Password Protect* option.

8. Press ◀ repeatedly to exit to the main menu.

Upgrade from PC

Use this procedure to upgrade your printer to a new software or firmware version from a PC connected to the printer.



CAUTION!

Do not interrupt power on either the printer or PC during the upgrade process.

To upgrade:

1. Before installing, verify the following:
 - Upgrade Utility is available on your PC or via the Brady website (see *Technical Support and Registration* in this manual for more information).
 - USB cable is connected from your **BBP®33** to your PC.
 - Printer is **ON**.

Note: If the printer driver has not been installed on your PC, you will be prompted to install the printer driver before continuing.

2. On the PC, launch the upgrade utility.
3. In the *Welcome* dialog, select **Next**.
4. In the *Select your printer* dialog, select your **BBP®33**.
5. In the *Version Confirmation* dialog, click **Start Upgrade**.

Note: The printer restarts automatically after the upgrade is complete.

6. In the *Upgrade Complete* dialog, click **Finish**.

Tools

Upgrade from USB Flash Drive

Upgrade from USB Flash Drive




Use this procedure to upgrade the firmware or software from a USB flash drive that contains the upgrade. The system will support only one USB device at a time.

To upgrade software from a USB flash drive:



CAUTION!

Do not interrupt power during an upgrade from a USB flash drive.

1. Copy the upgrade files to the root directory of your USB flash drive.
2. Connect the USB flash drive to any available USB port on the printer.
3. Press  to go to the navigation menu.
4. Press ▲ or ▼ to scroll to **Tools**, then press .
5. Press ▼ to scroll to **Upgrade from USB**, then press . The printer automatically downloads and installs the firmware/software from the root directory of the USB flash drive.

Note: During the upgrade, the screen goes blank. It may take a few moments for the upgrade to complete. When done, the printer returns to the *Ready* menu.

Diagnostics





Some diagnostics are not available for users. Advanced diagnostics are password protected and to be used only with Brady Technical Support. The password is assigned by Brady.

Enter Diagnostic Mode

Use this procedure to access any of the diagnostics menus.

To enter diagnostics mode:

Note: A password is required to access the Advanced Diagnostics menus.



1. Press  to go to the navigation menu.
2. Press ▲ or ▼ to scroll to **Tools**, then press  to go to the submenu.
3. Press ▼ to scroll to **Diagnostics**, then press  to go to the diagnostics list.
4. When done, press  to exit the test.

Sensors


Print Engine Base (PEB) Settings

This procedure displays the PEB settings on the printer.

To view the PEB settings:

1. Access **Diagnostic** mode (see “Enter Diagnostic Mode” on page 3-17).
2. Press  to select **Sensors**.
3. Press  to select **PEB Settings**. The PEB settings display results for the following:

CutLine - Lead.	xxxx
Leading - Print	xxxx
Print - Diecut	xxxx
Diecut - Tapeout	xxxx
Rocker Steps	xxxx
Print - Center	xxxx

4. Press ◀ repeatedly to exit to the main menu or  to return to the *PEB Settings* menu.


Sensor Conditions

This diagnostic detects the sensor conditions for ribbon motion, door, cutter, leading (edge), diecut, tapeout, wiper, and center.


Conditions are:

- **BL** (blocked)
- **Clos** (closed) or **Open**
- **Hom** (home position)
- **Eng** (engaged)
- **UnB** (unblocked)

To view the PEB settings:

1. Access **Diagnostic** mode (see “Enter Diagnostic Mode” on page 3-17).
2. Press ▼ to scroll to **Sensor Conditions**, then press  . The sensor settings display results for the following:


RibbonMotion	BL
Door	Clos/Open
Cutter	Hom
Leading	BL
Diecut	BL
TapeOut	BL
Wiper	Eng
Center	BL

3. Press ◀ repeatedly to exit to the main menu or  to return to the *Sensor Conditions* menu.


Analog Readings

This diagnostic detects the analog readings for the diecut analog/digital converter, head voltage and thermistor temperature.

To view the analog readings:




1. Access **Diagnostic** mode (see “Enter Diagnostic Mode” on page 3-17).
2. Press ▼ to scroll to **Analog Readings**, then press  . The readings display for the following:

Diecut A/D	xxxx
Head Voltage	xxxx
Thermistor	xxxx

3. Press ◀ repeatedly to exit to the main menu or  to return to the *Analog Readings* menu.

Copy Error Logs



Printer Error Log

1. Insert a USB drive into any available port on the printer.
2. Access **Diagnostic** mode (see “Enter Diagnostic Mode” on page 3-17).
3. Press ▼ to go to **Copy Error Logs**, then press .
4. Press  to select **Printer Error Log**, then press . The error log is written to the USB drive and the message *Successfully Copied Error Log* displays.

Note: A message will display if no USB device is detected.

5. Press ◀ repeatedly to exit to the main menu.
6. To view the error log:
 - a. Remove the USB drive from the printer and insert into your PC.
 - b. In Windows Explorer, navigate to the USB drive and open the folder **BBP33 Error Logs**.
 - c. Double-click the file **PRINTER_ERROR_LOG.txt** to view the log.

Script Error Log

1. Access **Diagnostic** mode (see “Enter Diagnostic Mode” on page 3-17).
2. Press ▼ to go to **Copy Error Logs**, then press .
3. Press ▼ to go to **Script Error Log**.
4. Press . The error log is written to the USB drive and the message *Successfully Copied BPL Error Log and Successfully Copied SM Error Log* displays.

Note: A message will display if no USB device is detected.




5. Press ◀ repeatedly to exit to the main menu.
6. To view the error log:
 - a. Remove the USB drive from the printer and insert into your PC.
 - b. In Windows Explorer, navigate to the USB drive and open the folder **BBP33 Error Logs**.
 - c. Double-click either of the following files to view the logs:
 - **BPL_ERROR_LOG.txt**
 - **SCRIPT_ERROR_LOG.txt**

USB Test

The USB test verifies that the USB ports are active. The tests can be performed with a flash drive or a type-B cable.



USB Flash Drive Test

To perform a USB test:

1. Access **Diagnostic** mode (see “Enter Diagnostic Mode” on page 3-17).
2. Press ▲ or ▼ to go to **USB Test**, then press  to select the test.
3. Press  to start the test.
4. Insert a USB flash drive into the **Lower USB** port. The display indicates *DSK2: attached*.
5. Remove the USB flash drive. The display indicates *DSK2: removed*.
6. Repeat steps 4 and 5 for the **Upper USB** port.
7. When done, press  to exit the test.

USB Type-B Cable Test



To perform a USB test with a type-B cable:

1. Access **Diagnostic** mode (see “Enter Diagnostic Mode” on page 3-17).
2. Press ▲ or ▼ to go to **USB Test**, then press  to select the test. The USB Test Status screen displays.
3. Insert a USB type-B cable from the **Lower Host** port to the **Function** port. The display indicates *LPT1: attached*.
4. Remove the USB type-B cable. The display indicates *LPT1: removed*.
5. Repeat Steps 3 and 4 for the **Upper Host** port.
6. When done, press  to exit the test.

Keyboard Setup

This procedure configures the printer to use the selected regional USB keyboard.



To configure a keyboard:

1. Access **Diagnostic** mode (see “Enter Diagnostic Mode” on page 3-17).
2. Press ▲ or ▼ to go to **Keyboard Setup**, then press . The list of keyboard options displays.
3. Press ▲ or ▼ to select the regional configuration you want, then press . The printer is configured for use with the selected keyboard.
4. Press ◀ repeatedly to exit to the main menu.

Info

Lists the length of label media printed, number of cuts made and the last errors displayed.

To view printer information:

1. Access **Diagnostic** mode (see “Enter Diagnostic Mode” on page 3-17).
2. Press ▲ or ▼ to go to **Info**, then press .
3. Press ▲ or ▼ to select the information you want displayed:
 - **Printed**: Displays the number of ft (mm) of media printed to date.
 - **Cuts**: Displays the total number of cuts made to date. (**Note**: The number actually reflects the number of times the printer has retracted the material for a new print.)
 - **Last Errors**: Displays the last 15 printer error message numbers.
Press  to display the error messages.

Note: The errors displayed are for *actual* messages received. So, if you get the same error multiple times, the screen will display that error once for each occurrence (up to 15).

4. Press ◀ repeatedly to exit to the main menu.

Advanced Diagnostics





A password is required to enter the advanced diagnostic procedures. Contact your Brady Technical Support contact for help with these diagnostics.

USB Flash Drive

Use this procedure to download and print label scripts from a USB device. Label scripts can be created in any of the following programming languages:

- BPL (xml)
- ZPL
- jScript
- DPL

To download a label script:

1. Insert the USB flash drive into any available USB slot on the printer.
2. Press  to go to the navigation menu.
3. Press ▼ to scroll to **USB Flash Drive**, then press .
4. Press  to select the USB drive shown.
5. Press ▲ or ▼ to scroll through the list of available scripts.
6. Press  to accept. The script will be loaded and printed. The menu returns to the list of available scripts when the label is printed.
7. When done printing, press ◀ repeatedly to exit to the main menu.

4 Maintenance

Printer Maintenance

Removing Power and Media from Printer

Before performing any maintenance procedure that involves opening the enclosure cover, you should remove the power and media from the printer.

To remove printer power and media:

1. Remove the power plug [1] from the printer.



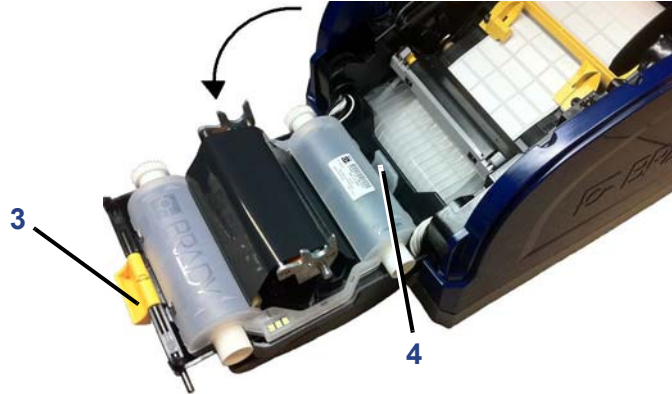
2. Open the enclosure cover.



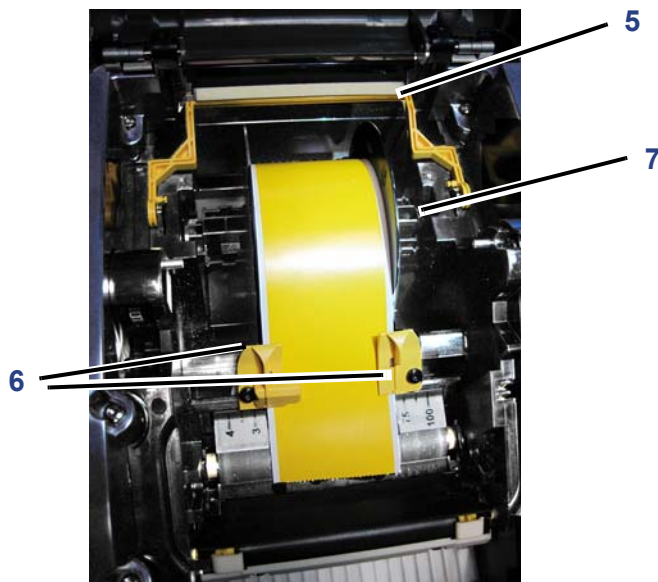
Printer Maintenance

Removing Power and Media from Printer

3. Release the latch on the ribbon cover [3] and swing open.
4. Release the ribbon cartridge latch [4] and lift the ribbon cartridge up and out.



5. Move yellow media wiper [5] to the back.
6. Move yellow media guides [6] to full-open.
7. Remove media cartridge from the slots of media holder [7].



Cleaning the Printer

Remove Dust

Dust generated by media cuts can accumulate in the unit. If a significant amount of dust is built up, clean the unit using this procedure.

Materials Required

- Isopropyl Alcohol
- Compressed Air Bottle, purchased locally (e.g., HOSA AIR-464 Gear Duster)

To clean dust from the printer:



CAUTION!

Always wear safety glasses when using compressed air.

1. Remove power and media from the printer (see “*Removing Power and Media from Printer*” on page 4-1).
2. Using compressed air, spray all visible areas inside the printer to remove accumulated dust.
3. Using a cloth moistened with isopropyl alcohol, wipe any remaining dust from inside the printer.
4. Wipe exterior cover and frame of printer for dirt and residue.

Clean Printer and Keypad Residue

Whenever performing any maintenance on the printer, you should also clean any residue caused by the media.

Materials Required

- Compressed Air Bottle, purchased locally (e.g., HOSA AIR-464 Gear Duster)
- Lint-free Cloth
- Isopropyl Alcohol
- Safety Glasses

To clean residue from the printer:



CAUTION!

Always wear safety glasses when using compressed air.

1. Remove power and media from the printer (see “Removing Power and Media from Printer” on page 4-1).
2. With safety glasses on, spray compressed air on any parts of the printer that have built-up residue.

Note: If compressed air is not available, use a lint-free cloth lightly moistened with isopropyl alcohol and wipe off residue.

3. If necessary, use a moistened, lint-free cloth to clean the keypad.
4. Replace the ribbon and tape.
5. Close all covers and plug in the power cord.

Clean LCD Screen

Materials Required

- Lint-free Cloth, non-abrasive
- Isopropyl Alcohol
- or -
- Pre-moistened Cloth (appropriate for cleaning PC screens)

To clean the LCD screen:

Note: Normal cleaners with ammonia, soaps, or any acids can damage the screen. Use only a lint-free cloth dampened with isopropyl alcohol.

1. Lightly moisten a lint-free cloth with isopropyl alcohol, or use a pre-moistened cloth suitable for cleaning a PC screen.
2. Gently rub the damp cloth across the screen until all of the residue is removed.

Clean Auto-Cutter Blade

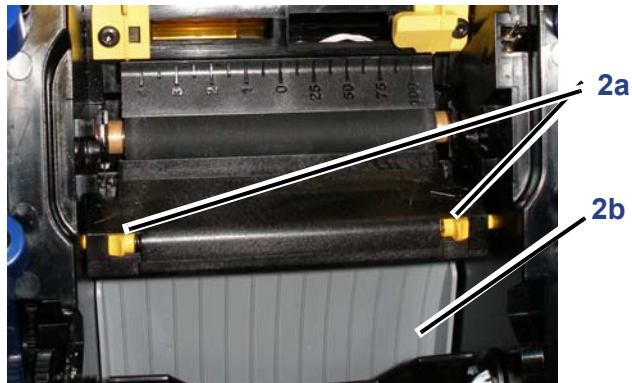
Note: When cleaning the cutter, you should also clean the media and cutter sensors (see “Clean Sensors” on page 4-7).

Materials Required

- Isopropyl Alcohol
- Cleaning Kit (Cat # B31-CCT), includes foam swabs, adhesive scraping tool, plastic bottle (not available in all regions)

To clean the cutter:

1. Remove power and media from the printer.
2. Squeeze the two yellow cutter tabs [2a] to release the cutter. The cutter mechanism and exit chute [2b] will slide down behind the ribbon cover.

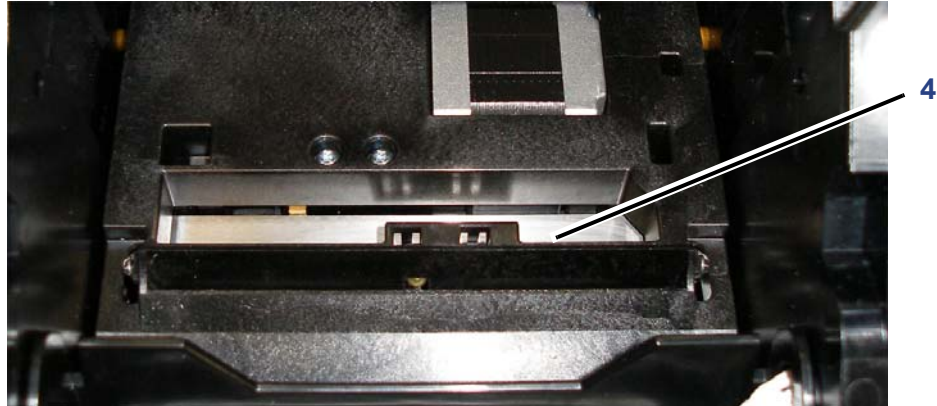


3. Fill the plastic bottle from the cleaning kit with isopropyl alcohol.

Printer Maintenance

Cleaning the Printer

4. Clean metal cutting blade [4]:
 - a. If the cutting blade shows significant residue, use the adhesive scraping tool from the cleaning kit, or other flat-edged tool, to gently scrape the residue off the cutting blade.
 - b. Moisten one of the foam swabs from the cleaning kit with the alcohol. Do not allow the alcohol to drip from the swab.
 - c. Clean cutting blade with moistened swab until all residue is removed.



5. Close the cutting blade by pushing up on the exit chute until the cutter tabs snap into place.

Note: You may need to hold ribbon cover up slightly to access the exit chute.

6. Replace the ribbon and tape.
7. Close all covers and plug in the power cord.

Clean Sensors

The sensors are located inside the printer and may be covered with dust that results from cutting the media. The media sensor is located under the yellow media guide.

Materials Required

- Cleaning Kit (Cat # B31-CCT), includes foam swabs, adhesive scraping tool, plastic bottle (not available in all regions)
- Isopropyl Alcohol

To clean the sensors:

1. If necessary, remove power and media from the printer (see “Removing Power and Media from Printer” on page 4-1).
2. With the ribbon cover open, use a pre-moistened swab and thoroughly clean the surface of the sensors at the locations shown:



CAUTION!

Do not allow the alcohol to drip from the swab.

- a. Center die-cut sensor [2a]
- b. Tape out/die-cut sensors [2b]
(Note: Sensor is located under the yellow media guide.)



Clean Tape Entrance

This procedure cleans the tape entrance, exit area and exit chute. The tape entrance can become sticky because of adhesive buildup

Note: Clean the exit area **after** cleaning the sensors (see “Clean Sensors” on page 4-7). The cleaning swab may be damaged when cleaning the exit area.

Materials Required

- Cleaning Kit (Cat # B31-CCT), includes foam swabs, adhesive scraping tool, plastic bottle (not available in all regions)
- Kimwipes® or other non-abrasive cloth
- Isopropyl Alcohol
- Compressed Air Bottle, purchased locally (e.g., HOSA AIR-464 Gear Duster)

 **CAUTION!**

Always wear safety glasses when using compressed air.

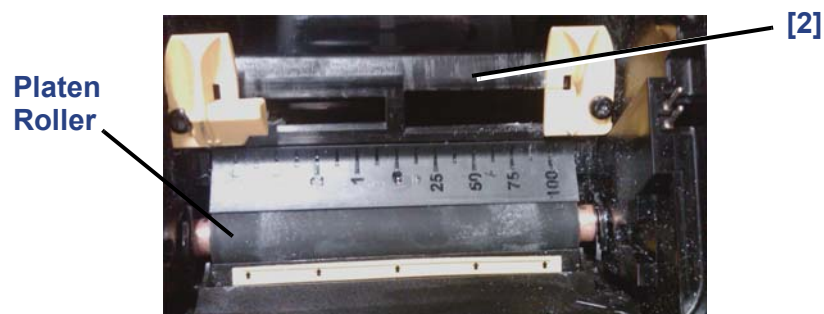
To clean the tape entrance:

1. Lightly moisten a lint-free cloth with isopropyl alcohol.

 **CAUTION!**

Do not use isopropyl alcohol on the print head! *Isopropyl alcohol may permanently damage the print head.*

2. At the top of the tape entrance, rub along entire length of the tape entrance to remove the adhesive residue [2]. If necessary, use the adhesive scraping tool or other flat-edged tool, covered with the Kimwipe, to push against the tape entrance to clean all of the residue from the entrance.
3. Wet a cotton swab with isopropyl alcohol and thoroughly clean along the entire media entrance area.



 **CAUTION!**

When cleaning, don't pinch or gouge the platen roller. Use only compressed air .

4. Use compressed air to clean off dust on the entire printer, including the platen roller.

Clean the Cutter Blade Exit Area

This procedure cleans the cutter blade exit area and the exit chute.

Note: You should clean the exit area after cleaning the cutter blade and sensors. The cleaning swab may be damaged when cleaning the exit area.

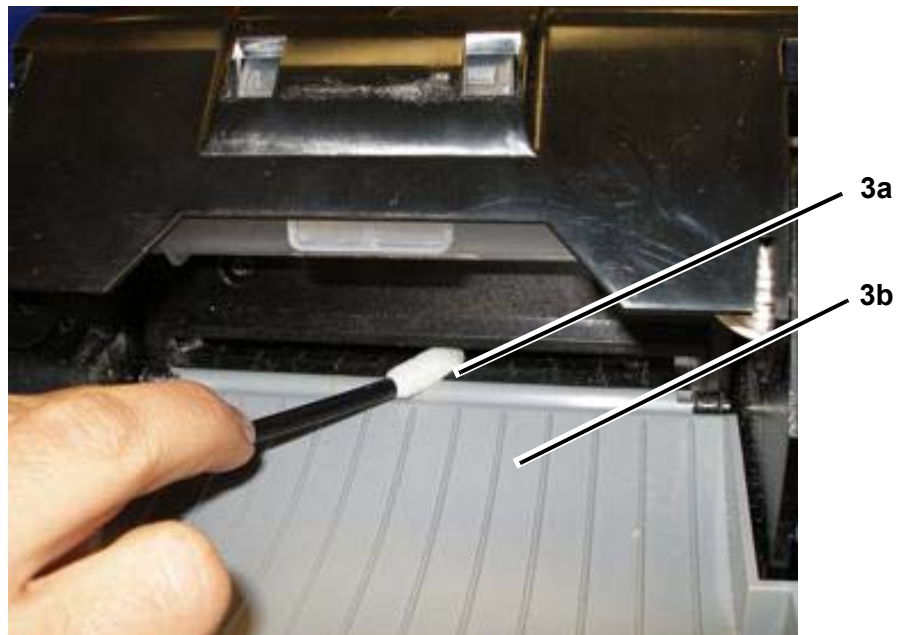
Materials Required

- Cleaning Kit (Cat # B31-CCT), includes foam swabs, adhesive scraping tool, plastic bottle (not available in all regions)
- Isopropyl Alcohol

To clean the exit chute:

1. If necessary, remove power and media from the printer (see “*Removing Power and Media from Printer*” on page 4-1).
2. Close the ribbon cover. It does not need to snap into place.
3. Using a swab pre-moistened with alcohol, clean the exit chute entrance [3a] and exit chute ramp [3b].

Note: To reach all areas of the exit chute, you can close the enclosure cover and tilt the printer up.



4. Replace the ribbon and tape.
5. Close covers and plug in the power cord.

Clean Printhead

Materials Required

- Cleaning Kit (Cat # B31-CCT), includes foam swabs, adhesive scraping tool, plastic bottle (not available in all regions)
- Isopropyl Alcohol

 **CAUTION!**

Use only the materials supplied in the cleaning kit. Using other materials may permanently damage the printhead.

To clean the printhead:

1. Remove power and media from the printer (see “Removing Power and Media from Printer” on page 4-1).
2. Fill the plastic bottle from the cleaning kit with isopropyl alcohol.

 **CAUTION!**

Do not rub the swab over the bronze-colored area of the printhead. This may permanently damage the printhead.

3. Moisten one of the foam swabs from the cleaning kit with the alcohol and gently rub across the **green and black area only** of the printhead [3].



4. Replace the ribbon and tape.
5. Close all covers and plug in the power cord.

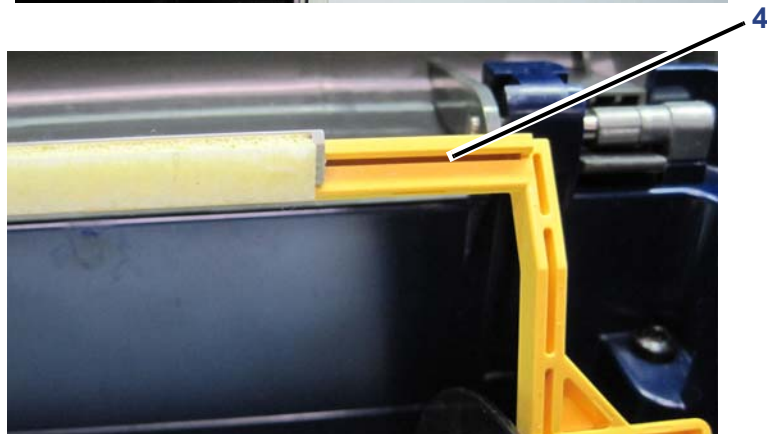
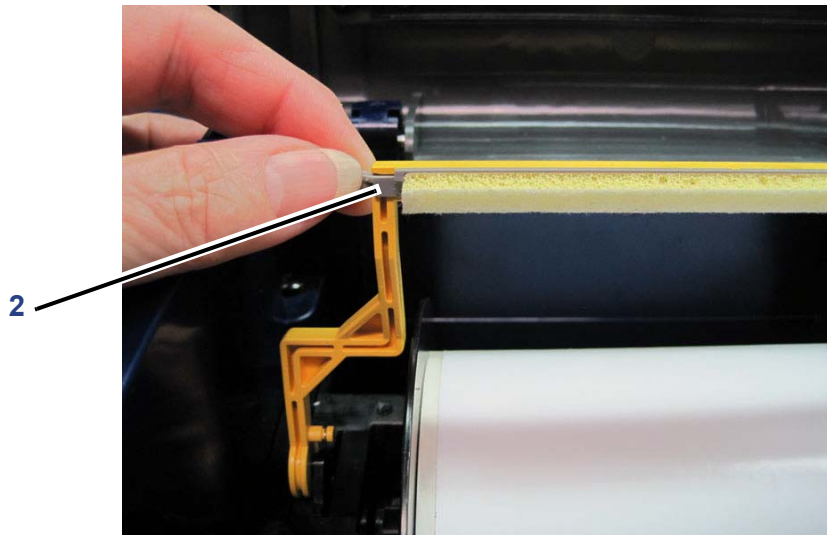
Replacing the Media Wiper

Materials Required

- Media Wiper (5 pack) Kit, Cat #B31-WIPER (sold separately)

To replace the media wiper:

1. Remove power and media from the printer (see “*Removing Power and Media from Printer*” on page 4-1).
2. Lift and hold the wiper arm while grasping the tab of the wiper insert [2].
3. Pull the tab slightly forward and then slide the wiper insert out of the wiper arm.
4. To replace the wiper, insert the lip of the wiper insert into the slot [4] of the wiper arm and slide in until the tab snaps into place.



5. Replace the ribbon and tape.
6. Close all covers and plug in the power cord.

Clearing Jams

To clear jams from the printer:

1. Remove all damaged ribbon and/or media from the printer.
2. Check that there is no damage to the print head, sensors, or any other parts.
3. Check whether any cleaning is needed. If cleaning is required, see *“Cleaning the Printer”* on page 4-3 for details.
4. Reload ribbon and media and clear all error messages.

Replacing/Adjust Media End Caps

In the unlikely even that your tape roll comes apart, contact Tech Support for assistance in replacing or adjusting the end caps. See *“Technical Support and Registration”* on page vii for details.

5 Troubleshooting

Messages

The **BBP®33 Sign & Label Printer** contains error messages that describe what action you should take to resolve any messages or errors.

Messages indicate the problem for the task being performed and also provide a possible corrective action.

Printing Errors

Problem	Cause	Corrective Action
Printer not ready. Error: 15	The ribbon cover is open or the cutter is not in operating position.	Close and latch ribbon cover or move cutter to operational position.
Printer Error. Error: 16	Ribbon cover was opened during printing.	Close ribbon cover.
Printer Error Error: 21	Media wiper is not engaged.	Engage media wiper arm.
Printer Error Error: 22	Media wiper is engaged but should not be used on this media.	Disengage the media wiper arm.
Poor print quality. Error: 1024	Printhead needs cleaning.	Clean printhead with isopropyl alcohol and swab.

Hardware Errors

Problem	Cause	Corrective Action
Printer too warm. Print job canceled. Error: 18	The printhead is too hot.	The printhead has reached maximum operating temperature. Allow printer to cool down approximately 10 minutes, then re-initiate the print job.
Printer too cold. Print job canceled. Error: 20	The printhead has not reached operating temperature.	Normal operating range is between 50-104°F (10-40°C). Allow printer to warm up to operating temperature before printing.
Media jam. Print job canceled. Errors: 45, 80, 85, 87	Media is jammed in the printer [45]; Media is in the media guides, but not detected by the cutter home sensor [80]; Media is in the home position but not detected by the media out notch sensor [85]; Media is in the printer but not detected by the leading edge sensor [87].	Clear media path and reinstall media, then re-initiate the print job. If error persists, contact Technical Support.
Cut quality poor. Error: 1025	Cutter needs cleaning because of adhesive build up on the cutter.	<ul style="list-style-type: none"> • Unlatch cutter and push down away from roller. • Remove residue from blades with flat-edged tool, then clean with isopropyl alcohol. • Close cutter and printer. • From exit chute, swab back of blades with isopropyl alcohol.
Residue on labels. Error: 1027	Media wiper needs to be replaced.	<ul style="list-style-type: none"> • Swing media wiper arm to upright position. • Slide wiper out of wiper arm toward left side of the printer. • Slide replacement wiper into slot on wiper arm.
Poor media detection on the printer, or print registration problems.	Media end cap not centered on spindle.	Adjust the center position of the media roll.
Check Printer.	BNC module is not responding. USB printing is still available.	Check the status of the BNC module or use the printer without a BNC connection.

Media Errors

Problem	Cause	Corrective Action
Error reading media memory cell. Reload or replace media. Errors: 48, 49, 50, 51, 52	Printer cannot read the media memory cell: media validation failed [48]; cannot read media cell [49]; cannot read memory CRC [50]; cell is wrong version [51]; media counter shows no media remaining [52].	Replace media. If problem persists, contact Technical support.
Media out. Error: 53	Media sensor shows end of media. Print job canceled.	Verify media guides are positioned correctly at the edge of the media or replace roll if empty.
Media is jammed. Error: 54	Media is jammed somewhere in the printer. Print job canceled.	Clear the media path and re-initiate the print job.
Media not detected. Error: 55	Media is not loaded correctly.	Reload media: 1. Insert media. 2. Feed media between guides to middle of black roller. 3. Verify guides are positioned to media edge.

Ribbon Errors

Problem	Cause	Corrective Action
Ribbon Out. Error: 58	The ribbon ran out or broke during the print job.	Replace ribbon and close inside printer cover. Re-initiate the print job.
Ribbon too narrow. Error: 62	The installed ribbon is narrower than the installed media.	Replace the ribbon cartridge with wider ribbon. - or - Replace the media with a width that matches the ribbon.
Error reading ribbon memory cell. Errors: 64, 65, 66, 67, 68	The printer cannot read the ribbon memory cell: memory cell code incorrect [64], cannot read cell [65], data in cell is corrupted [66], cell is wrong version [67], ribbon counter shows no ribbon remaining [68].	Replace the ribbon. If problem persists, contact Technical Support.
Media mismatch. Error: 69	The installed ribbon is not recommended for use with the current media.	Replace the ribbon with a type that is compatible with the media. - or - Replace the media with a type that is compatible with the ribbon.

A Supported Scripting Languages

The following tables describe the ZPL, jScript and DPL commands that are supported by the **BBP®33 Sign & Label Printer**.

Note: For Brady Print Language (BPL) commands, see the BPL Programmer's Guide that is included on your Product CD.

ZPL Supported Commands

Job Control

Job Control Descriptions	ZPL®
Command Character 1	^
Command Character 2	~
Comment Line	^FX
Power On Reset	~JR
Label Home	^LH
Label Length	^LL
Set Unit of Measurement	^MU
Mirror Image	^PM
Print Orientation (degrees) [Label Rotation]	^PO
Print Quantity	^PQ
Print Rate	^PR
Print Start	~PS
Print Width	^PW
Serialization Data	^SN
Set Date and Time	^ST
Print Config Label	~WC
Start Job	^XA
End Job	^XZ

Objects

Drawing Objects

Drawing Objects Descriptions	ZPL® Command
Rectangle	^GB
Circle	^GC
Diagonal Line	^GD
Ellipse	^GE
Download graphic file to printer	^GF

Text Commands

Text Description	ZPL® Command
Set Text Font (A-Z, 0-9)	^A
Set Default Font	^CF
Assign Character Identifier to Built-in Font	^CW

Barcodes

Barcode Descriptions	ZPL® Command
ANSI Codabar	^BK
Aztec 1	^B0
Aztec 2	^B0
Codablock	^BB
Code 11	^B1
Code 39	^B3
Code 49	^B4
Code 93	^BA
Code 128	^BC
Data Matrix	^BX
EAN/JAN-8	^B8
EAN/JAN-13	^BE
EAN/UPC Extension	^BS
Field Default	^BY
Industrial 2 of 5	^BI
Interleaved 2 of 5	^B2
Logmars	^BL
Micro-PDF417	^BF
MSI	^BM
PDF417	^B7
Planet Code	^B5
Plessey	^BP
UPC-A	^BU
UPC-E	^B9
UPS MaxiCode	^BD
QR Code	^BQ
RSS	^BR
Standard 2 of 5	^BJ
TLC39	^BT
POSTNET	^BZ

ZPL Supported Commands

Field Data

Field Data

Field Data Descriptions	ZPL® Command
Field Data	^FD
Origin (set upper left corner relative to label home)	^FO
Field Parameter (set vertical/reverse for font field)	^FP
Field Reverse Print (white over black or black over white)	^FR
Field Separator (end of field definition)	^FS
Field Typeset (sets field position, relative to home)	^FT
Set field orientation	^FW

jScript Supported Commands

Job Control

Job Control Descriptions	jScript
Start Job	J
End Job (see Number of Labels)	--
Set Label Size (width and length)	S
Measuring Unit (mm, inches, dots)	m
Printer Orientation (degrees) [Label Rotation]	O
Reverse Print	R
Mirror Image	M
Cut	C
Number of Labels / End Job	A

Objects

Drawing Objects

Drawing Objects Descriptions	jScript
Draw Object	G
Rectangle	R
Line	L
Circle	C
Ellipse	C

Text

Text Description	jScript
Start text object	T
Select internal Font by number	F

jScript Supported Commands

Printer Status

Barcodes

Barcode Descriptions	jScript
Bar Code	B
Aztec	AZTEC
Codabar A / F	CODABAR
Codablock F	CODEABLOCKF
Code 128 A / B / C	CODE128
Code 39	CODE39
Code 93	CODE93
Data Matrix	DATAMATRIX
EAN-8	EAN8
EAN-13	EAN13
EAN-128	EAN128
FIM	FIM
HIBC	HIBC
Interleaved 2 of 5	2OF5INTERLEAVED
JAN 8	JAN8
JAN 13	JAN13
Micro-PDF417	MICRO
MSI Plessey	MSI
PDF417	PDF417
POSTNET	POSTNET
QR Code	QRCODE
UPC-A	UPCA
UPC-E	UPCE
UPS MaxiCode	UPS MAXICODE

Field Data

Setting Field Data Descriptions	jScript
Global Object Offset (move all objects x,y distance)	D
Comments (not sent to printer)	;

Printer Status

Printer Status Descriptions	jScript
Heat/Speed Settings	H
Retrieve and Print Image	I

DPL Supported Commands

Note: These commands conform Revision D, 2001 Datamax Programmer's Manual

Commands

Commands Descriptions	DPL
Set Cut Amount By (Command must be issued and a cut will not occur until job is done.)	:
Set Continuous paper Length	<STX>c
Input Image Data (Only value "B" is supported for "f" parameter.)	<STX>l
Enter Label-Formating Command	<STX>L
Set Printer Metric	<STX>m
Set Printer Inches	<STX>n
Print Time and Date	<STX>T Label Format Mode
Set Format Attribute (Only 2, "Transparent Mode" parameter is supported.)	A
Set Column Offset Amount (The maximum BMP33 offset is .1", if a value larger is entered, it will be set to .1")	C
Set Cut by amount (See ":" command)	c
Terminate Label formatting Mode and Print Label	E
Heat Setting	H
Select Mirror Mode	M
Set Metric Mode	m
Set Inches Mode	n
Set Print Speed (Only values A,C,E,G, 1 - w ips respectively are supported. If an unsupported value is entered, it will default to 2 ips.)	P
Set Quantity of Labels to Print	Q
Set Row Offset Amount (See "C" command)	R

DPL Supported Commands

Barcodes

Barcodes

Barcode Descriptions	DPL
Barcode Command Structure	b [bb] c d eee ffff gggg jj...j where: a = Rotation (1, 2, 3, 4) b [bb] = Barcode c = Wide Bar, (always fixed value of 1)* d = Narrow Bar (1-9)* eee = Symbol Height (001 - 999) ffff = Row (0000 - 9999) gggg = Column jj...j = Data (valid 255-character ASCII string plus termination) * The combination of c and d = 2:1, 3:1, 4:1.
Code 3 of 9	A
UPC-A	B
Interleaved 2 of 5	D
Code 128	E
EAN-13	F
EAN-8	G
HBIC	H
Codabar	I
Interleaved 2 of 5 with Modulo 10 Checksum	J
Plessey	K
Code 93	O
Postnet	P
UCC/EAN Code 128	Q
UPS MaxiCode	U
PDF-417	z
DataMatrix	W1C

Objects

Object Descriptions	DPL
<p>Draw Box <i>(Parameters bbbb and ssss indicate line thickness of box and must be the same.)</i></p>	<p>1X1100000970013b0093004200020002 <i>where:</i> 1 = x = 1 = Fixed Value 1 = Fixed Value eee = Fixed Value ffff = Row gggg = Column b = Box hhhh = Box Horizontal Width vvvv = Box Vertical Height bbbb = Box Bottom & Top Thickness ssss = Box Side Thickness</p>
<p>Draw Box <i>(Parameters bbbb and ssss indicate line thickness of box and must be the same.)</i></p>	<p>1X1100000970013B093042002002 <i>where:</i> 1 = x = 1 = Fixed Value 1 = Fixed Value eee = Fixed Value ffff = Row gggg = Column B = Box hhhh = Box Horizontal Width vvvv = Box Vertical Height bbbb = Box Bottom & Top Thickness ssss = Box Side Thickness</p>
<p>Draw Line</p>	<p>1X1100000970013l00930042 <i>where:</i> 1 = x = 1 = Fixed Value 1 = Fixed Value eee = Fixed Value ffff = Row gggg = Column l = Line Drawing hhhh = Horizontal Width of Line vvvv = Vertical Height of Line</p>

DPL Supported Commands

Objects

Object Descriptions	DPL
<p>Draw Line</p>	<p>1X1100000970013L093042</p> <p>where:</p> <ul style="list-style-type: none"> 1 = x = 1 = Fixed Value 1 = Fixed Value eee = Fixed Value fff = Row gggg = Column L = Line Drawing hhhh = Horizontal Width of Line vvvv = Vertical Height of Line
<p>Text (font)</p> <p><i>Only some True Type fonts are supported. All bitmap and scalable fonts will default to Arial so there will be output on the label (exception is CG Times Family font, which will be mapped to Times New Roman). An entry will be made into the error log.</i></p> <p><i>The CG Times Family font is specified by the sA0-sAz Parameter in the label definition command.</i></p>	
<p>Circle</p> <p><i>A circle is created by defining by its center point and radius.</i></p>	<p>1 X 11 ppp rrrr cccc C ppp bbbb rrrr <CR></p> <p>where:</p> <ul style="list-style-type: none"> 1 = Rotation (must be 1) X = Graphic Field 1 = Multiplier (must be 1) ppp = fill pattern (none, solid) rrrr = Row of Center Point cccc = Column of Center Point C = Circle ID (fixed value) ppp = Fixed Value bbbb = Fixed Value rrrr = Radius of Circle <>CR> = Termination Character

Object Descriptions	DPL
<p>Polygon</p> <p><i>Polygons are created by defining the positions of corners, specifying a number of data points that represent the vertices of the object, which can range from a simple line (two points), or a triangle (three points), to any free-form outline.</i></p>	<p>1 X 11 ppp rrrr cccc P ppp bbbb rrrr cccc rrrr cccc ... <CR></p> <p>where:</p> <ul style="list-style-type: none"> 1 = Rotation (must be 1) 001 = Fixed Value X = Graphic field ID 0001 = Fixed Value 1 = Multiplier (must be 1) rrrr = Row of Point 2 1 = Multiplier (must be 1) cccc = Column of Point 2 ppp = Fill Pattern # rrrr = Row of Point 3 rrrr = Row of Point 1 cccc = Column of Point 3 cccc = Column of Point 1 ... = Additional Points P = Polygon ID (Fixed Value) <CR> = Termination Character

