HP Wireless Barcode Scanner

User Guide

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About This Guide

This guide provides information on setting up and using the HP Wireless Barcode Scanner.

WARNING! Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

NOTE: Text set off in this manner provides important supplemental information.

Table of contents

1 Quick Setup

Use the bar codes in this chapter to perform quick setup procedures for common tasks. Scan the following bar code to set the scanner back to the HP defaults.

Figure 1-1 Set All Defaults

NOTE: Scanning the “Set All Defaults” bar code does not change the interface type.

Scan the following bar code (USB HID Keyboard Emulation) in order to put the HP Wireless Barcode Scanner into the default mode of the scanner.

Figure 1-2 USB HID Keyboard Emulation

When the scanner is changed between HID and USB-COM mode, allow the Windows operating system a little time to reload the drivers for the scanner.

OPOS Driver

The HP Wireless Barcode Scanner by default is shipped in the human interface device (HID) keyboard emulation mode. In order to use the barcode scanner with OLE for Retail POS (OPOS) drivers the scanner must be put into USB COM (OPOS) mode.

For your convenience the bar code to put the HP Wireless Barcode Scanner into USB COM (OPOS) mode or into HID keyboard emulation are located in this document. Refer to the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG) for complete list of barcodes. The document can be found on the HP Point of Sale System Software and Documentation CD that comes with the scanner or the softpaq that is located on the HP support web site.

Scan the following bar code (USB COM OPOS) in order to put the HP Wireless Barcode Scanner into the mode to be used with the OPOS drivers.

Figure 1-3 USB COM (OPOS)

Carriage Return

Scan the following bar code to set the scanner back to the factory defaults.

Figure 1-4 Set All Defaults

NOTE: Scanning the “Set All Defaults” bar code does not change the interface type.

If a carriage return is required after each scanned bar code, scan the following bar codes in order:

Figure 1-5 Enter Programming Mode

Figure 1-6 Set Global Suffix

Figure 1-7 0

Figure 1-8 D

Figure 1-9 Exit Global Suffix Mode

Figure 1-10 Exit Programming Mode

Tab

Scan the following bar code to set the scanner back to the factory defaults.

Figure 1-11 Set All Defaults

NOTE: Scanning the “Set All Defaults” bar code does not change the interface type.

If a tab is required after each scanned bar code, scan the following bar codes in order:

Figure 1-12 Enter Programming Mode

Figure 1-13 Set Global Suffix

Figure 1-14 0

Figure 1-15 9

Figure 1-16 Exit Global Suffix Mode

Figure 1-17 Exit Programming Mode

Volume

Scan the following bar code to set the scanner back to the factory defaults.

Figure 1-18 Set All Defaults

Scan the following barcode to set the volume of the good read beep on the HP Wireless Barcode Scanner:

Figure 1-19 Enter Programming Mode

Scan one of the four barcodes to set the volume to the desired setting:

Figure 1-20 Off

Figure 1-21 Low

Figure 1-22 Medium

Figure 1-23 High

Scan the following barcode to exit the programming mode.

Figure 1-24 Exit Programming Mode

2 Product Features

HP Wireless Barcode Scanner

With rich feature sets and extensive model options, the HP Wireless Barcode Scanner represents the premium level of data collection equipment for general purpose applications. The HP scanner has enhanced optics with improved motion tolerance, allowing codes placed on fast-moving objects to be easily and quickly captured, creating the ideal scanner for tasks requiring high throughput like those found in retail and light industrial environments. The scanner includes the following features:

- **Omni-Directional Operation**: To read a symbol or capture an image, simply aim the scanner and pull the trigger. The HP Wireless Barcode Scanner is a powerful omni-directional scanner, so the orientation of the symbol is not important. The “Green Spot” for good-read feedback helps to improve productivity in noisy environments or in situations where silence is required. When using the product with the cradle at a 45° position, the aiming pattern can work as an aiming system to aid in positioning the bar code for quick and intuitive reading.
- **1D and 2D Symbol Decoding**: Reliably decodes all standard 1D (linear) and 2D bar codes, including:
  - GS1 DataBar™ linear codes
  - Postal Codes (China Post)
  - Stacked Codes (such as GS1 DataBar Expanded Stacked, GS1 DataBar Stacked, GS1 DataBar, Stacked Omnidirectional)

  The data stream — acquired from decoding a symbol — is rapidly sent to the host. The scanner is immediately available to read another symbol.
- **Imaging**: The scanner can also function as a camera by capturing entire images or image portions of labels, signatures, and other items.

3 Safety and Maintenance

Ergonomic Recommendations

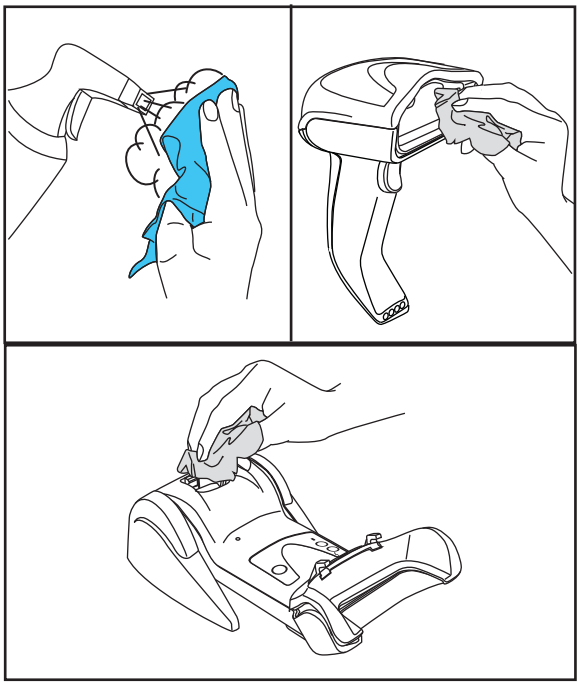
⚠ **WARNING!** In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures

Cleaning

Exterior surfaces and scan windows exposed to spills, smudges or debris require periodic cleaning to ensure best performance during scanning operations. Contacts on the scanner and the base should also be cleaned as needed to ensure a good connection.

Figure 3-1 Cleaning



Use a soft, dry cloth to clean the product. If the product is very soiled, clean it with a soft cloth moistened with a diluted non-aggressive cleaning solution or diluted ethyl alcohol.

⚠ **CAUTION:** Do not use abrasive or aggressive cleansing agents or abrasive pads to clean scan windows, contacts, or plastics.

Do not spray or pour liquids directly onto the unit.

4 Setting Up and Using the Scanner

Follow the steps below to connect and get the scanner up and communicating with its host.

1. Configure the Base Station starting on this page.
2. Charge the Batteries (refer to Charging the Batteries on page 13).
3. Link to the Base Station (refer to Linking the Reader on page 18).
4. Select the Interface Type (refer to Selecting the Interface Type on page 19).
5. Configure the scanner as described in Programming the Scanner on page 21 (optional, depends on settings needed).

Positioning the Base Station

The base station/charger may be set up in desk application to hold the reader in two different positions, either a horizontal or standing position, in order to provide the most comfortable use depending on needs.

Figure 4-1 Positioning the Base Station

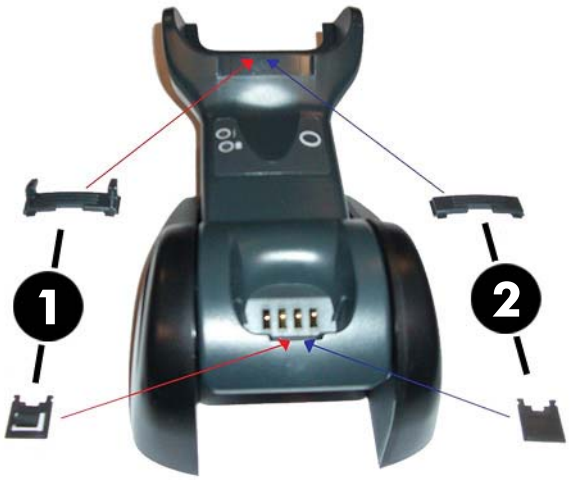
Changing the Base Station Position

The base station is configured by installing one of two sets of mechanical parts that come with the cordless kit. The default mounts provide three options: vertical (wall) mounting, standing (45°), or horizontal mounting with a higher mechanical retention of the scanner. Use the other mounts only for horizontal mounting, with lower retention of the scanner. The different parts may be interchanged to customize retention preferences.

NOTE: A tool such as a rigid pen or a flat screwdriver can be used to change the mounts. Do not allow it to touch the contacts.

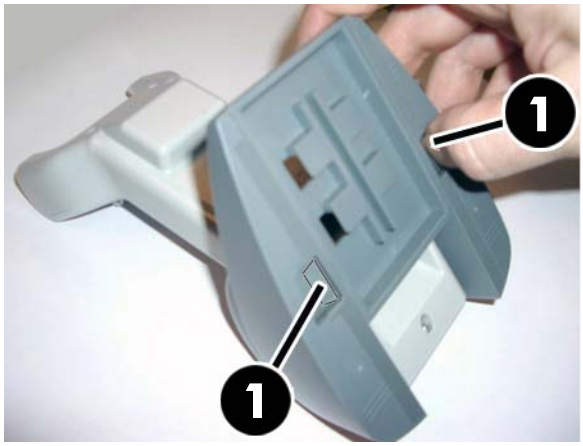
1. Insert the appropriate parts for the desired base station position, as shown below. You can insert parts for a standing, horizontal, or vertical position (1) or you can insert parts for a horizontal only position (2).

Figure 4-2 Inserting Parts for Positioning the Base Station



2. Using your thumbs, push open the plastic tabs (1) on the bottom of the base to free the wing holders.

Figure 4-3 Freeing the Wing Holders



CAUTION: To ensure best contact and performance, do not intermix the parts of the two different mount sets.

3. The stand can now be repositioned in either horizontal (1) or standing (2) position.

Figure 4-4 Repositioning the Stand

Connecting the Base Station

You can connect the Base Station to a terminal, PC, or other host device. Turn off the host before connection and consult the manual for that equipment (if necessary) before proceeding. Connect the interface cable before applying power to the Base Station.

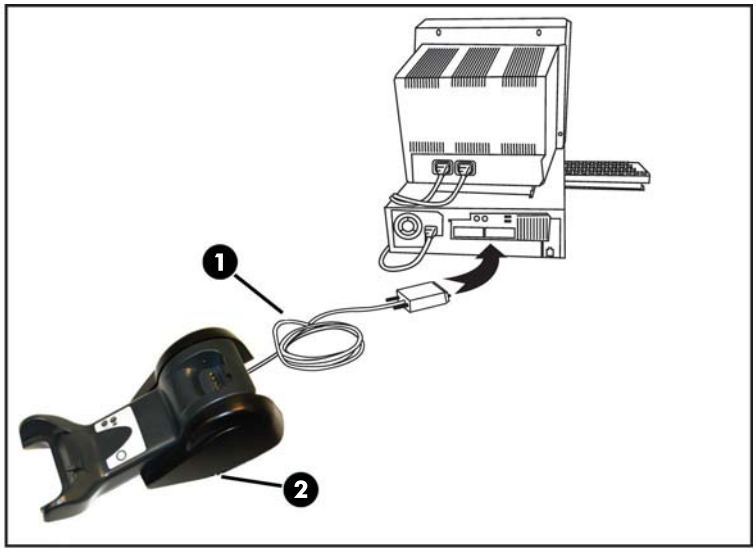
NOTE: The scanner can also be powered by the terminal. When powered by the terminal, the battery charger is automatically set as slow charge.

For some specific interfaces or hosts or lengths of cable, the use of an external power supply may be recommended for full recharging capability (refer to Technical Specifications on page 27 for more details).

Base Station Connection: Fully insert the Interface (I/F) Cable (1) connector into the port on the underside of the Base Station (2).

Host Connection: Connect the Interface (I/F) Cable (1) to a USB port on the host.

Figure 4-5 Connecting the Base Station



NOTE: The scanner can be set up to require a PIN code when connecting to the host. If you are adding new equipment to a system that uses a custom security PIN, please see the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG) for information before proceeding.

Disconnecting the Cable: To detach the cable, insert a paper clip or similar object into the hole on the base (1).

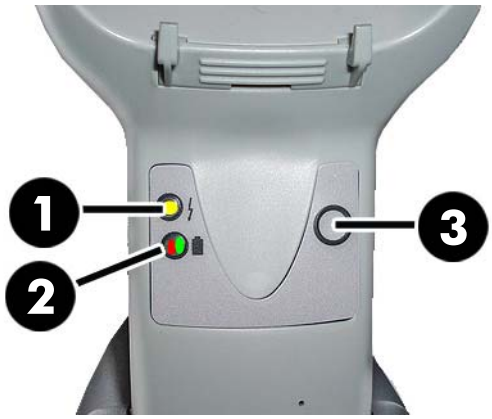
Figure 4-6 Disconnecting the Cable

Using the Base

Base LEDs

LEDs on the Base provide information about the Base as well as battery charging status, as shown below.

Figure 4-7 Base LEDs



No.	Icon	LED	STATUS
1		Power on / Data	Yellow On = Base is powered. Yellow Blinking = Base receives data and commands from the Host or the Reader.
2		Charging	Red On = the Battery is charging.
2		Charge completed	Green On = the Battery is completely charged.
2		Charging + Charge completed	Red and Green Blinking together = the Reader is not correctly placed onto the Base.

The button (3) can be used to force device connection via the HP Scanner Configuration Software tool, to force a Bluetooth disconnect, and for paging the scanner when it is activated. Refer to the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG) for a more detailed explanation.

Charging the Batteries

NOTE: Battery replacement should be done only by a trained technician.

To charge the battery, simply insert the scanner into the base. When the scanner is fully seated in the cradle, it will sound a “chirp” to indicate that the cradle has detected the scanner connection.

The LEDs on the base (as shown in Base LEDs on page 13) will indicate the status of the battery.

NOTE: Before using the Battery, read “Battery Safety” in the following section. HP recommends annual replacement of rechargeable battery packs to ensure maximum performance.

Battery Safety

To install, charge, and/or perform any other action on the battery, follow the instructions in this manual.

⚠ **WARNING!** Do not discharge the battery using any device except for the scanner. When the battery is used in devices other than the designated product, it may damage the battery or reduce its life expectancy. If the device causes an abnormal current to flow, it may cause the battery to become hot, explode, or ignite and cause serious injury.

Lithium-ion battery packs may get hot, explode or ignite and cause serious injury if exposed to abusive conditions. Be sure to follow the safety warnings listed in this guide.

⚠ **WARNING!** Do not place the battery pack in fire or heat.

Do not connect the positive terminal and negative terminal of the battery pack to each other with any metal object (such as wire).

Do not carry or store the battery pack together with metal objects.

Do not pierce the battery pack with nails, strike it with a hammer, step on it or otherwise subject it to strong impacts or shocks.

Do not solder directly onto the battery pack.

Do not expose the battery pack to liquids, or allow the battery to get wet.

Do not apply voltages to the battery pack contacts.

⚠ **WARNING!** In the event the battery pack leaks and the fluid gets into your eye, do not rub the eye. Rinse well with water and immediately seek medical care. If left untreated, the battery fluid could cause damage to the eye.

⚠ **CAUTION:** Always charge the battery at 32° – 104° F (0° – 40° C) temperature range.

Use only the authorized power supplies, battery pack, chargers, and docks supplied by your HP reseller. The use of any other power supplies can damage the device and void your warranty.

Do not disassemble or modify the battery. The battery contains safety and protection devices, which, if damaged, may cause the battery to generate heat, explode, or ignite.

CAUTION: Do not place the battery in or near fire, on stoves or other high temperature locations.

Do not place the battery in direct sunlight, or use or store the battery inside cars in hot weather. Doing so may cause the battery to generate heat, explode, or ignite. Using the battery in this manner may also result in a loss of performance and a shortened life expectancy.

CAUTION: Do not place the battery in microwave ovens, high-pressure containers, or on induction cookware.

Immediately discontinue use of the battery if, while using, charging, or storing the battery, the battery emits an unusual smell, feels hot, changes color or shape, or appears abnormal in any other way.

Do not replace the battery pack when the device is turned on.

Do not remove or damage the battery pack's label.

Do not use the battery pack if it is damaged in any part.

Battery pack usage by children should be supervised.

As with other battery types, Lithium-Ion (LI) batteries will lose capacity over time. Capacity deterioration is noticeable after one year of service whether the battery is in use or not. It is difficult to precisely predict the finite life of a LI battery, but cell manufacturers rate them at 500 charge cycles. In

other words, the batteries should be expected to take 500 full discharge/charge cycles before needing replacement. This number is higher if partial discharging/recharging is adhered to rather than full/deep discharging.

⚠ **CAUTION:** Storage of batteries for a long time at fully charged status or at fully discharged status should be avoided.

CAUTION: Only in case of long storage, to avoid deep discharge of the battery it is recommended to partially recharge the battery every three months to keep the charge status at a medium level.

As a reference, run a fast recharge for 20 minutes every three months on unused products to avoid any performance deterioration of the cell.

The useful life of LI batteries depends on usage and number of charges, etc., after which they should be removed from service, especially in mission critical applications. Do not continue to use a battery showing excessive loss of capacity, it should be properly recycled / disposed of and replaced.

Collect and recycle waste batteries separately from the device to comply with European Directive 2006/66/EC, 2002/ 95/EC, 2002/96/EC and subsequent modifications, US and China regulatory and other laws and regulations about the environment.

Replacing the Batteries

NOTE: Before proceeding, read “Battery Safety” on the preceding pages. HP recommends annual replacement of rechargeable battery packs to ensure maximum performance.

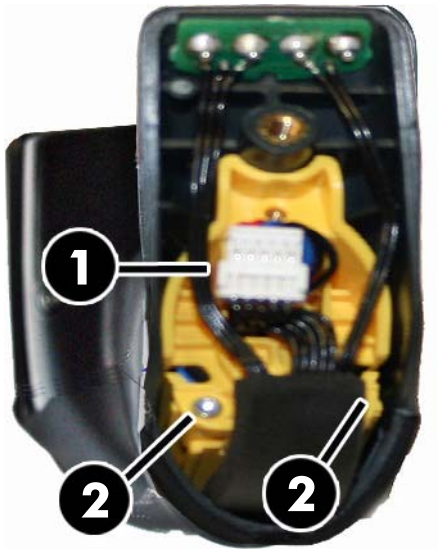
Use the following procedure to change the reader’s battery:

1. Using a screwdriver, unscrew the battery cover screw (1).

Figure 4-8 Removing the Battery Cover

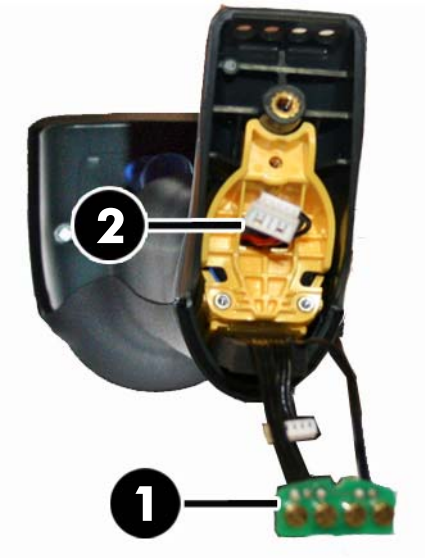
2. Unplug the white connector (1), and remove the two screws (2) securing the battery holder.

Figure 4-9 Unscrewing the Battery Holder



3. Carefully lift out the gold contacts circuit (1), and remove the battery holder cap while letting the white connector pass through the hole (2) in the battery holder (as shown below).

Figure 4-10 Removing the Battery Holder Cap



4. Remove the old battery from its place (if present), and insert the new battery in the same position.
5. Replace the battery holder cap, plug in the connector and return the contacts circuit to its previous location.

NOTE: When inserting the new battery into the handle, take care to position the battery and the connector as described above.

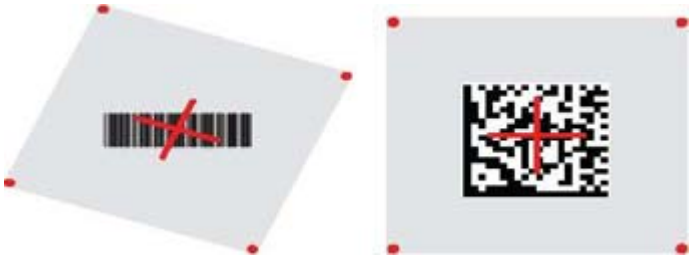
6. Insert the cover in the handle and screw it back into place.

Using the Scanner

The scanner normally functions by capturing and decoding codes. It is equipped with an internal motion-sensing function that activates the aiming system on device motion. The intelligent aiming system indicates the field of view that should be positioned over the bar code:

Figure 4-11 Aiming System

Figure 4-12 Relative Size and Location of Aiming System Pattern



A red beam illuminates the label. The field of view indicated by the aiming system will be smaller when the scanner is closer to the bar code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit.

If the aiming system is centered and the entire bar code is within the aiming field, you will get a good read. Successful reading is signaled by an audible tone plus a good-read green spot LED indicator.

Refer to the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG) for more information about this feature and other programmable settings.

Linking the Reader

Link RF Devices to Base

For RF devices, before configuring the interface it is necessary to link the handheld with the base.

To link the handheld and the base, either press the trigger to wake it, or simply mount into the base to wake up for operation. If the reader was previously linked to another base, you must first scan the **Unlink** bar code before re-linking to the new base.

Figure 4-13 Unlink

Link Scanner to Bluetooth Adapter

1. Install any drivers provided with the Bluetooth adapter.
2. Scan the Enable RF Link to Server label below to make the scanner visible to the host computer.
3. Use the host computer's Bluetooth manager to "Discover new devices" and select "HP Wireless Bluetooth Scanner." If you receive an error message, it may be necessary to disable security on the device.
4. Use an RS-232 terminal program to see incoming data on the port designated by the computer's Bluetooth manager.

Figure 4-14 Enable RF Link to Server

NOTE: The scanner can be set up to require a PIN code when connecting. If you want to set up a PIN, or when adding new equipment to a system that uses a custom security PIN, please see the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG) for information.

Power Off

Scan the bar code below to shut off power to the BT handheld until the next trigger pull.

Figure 4-15 Power Off

Selecting the Interface Type

Upon completing the physical connection between the reader and its host, proceed directly to Interface Selection below for information and programming for the interface type the reader is connected to (for example: RS-232, USB, etc.) and scan the appropriate bar code to select your system's correct interface type.

USB-COM

USB Com to simulate RS-232 standard interface

Figure 4-16 Select USB-COM-STD

NOTE: Install the correct USB Com driver from the CD included with your product.

USB Keyboard Interface

Select options for USB Keyboard Interfaces.

USB Keyboard with alternate key encoding

Figure 4-17 Select USB Alternate Keyboard

USB Keyboard with standard key encoding

Figure 4-18 Select USB Keyboard

Country Mode

This feature specifies the country/language supported by the keyboard. The following languages are supported:

U.S. English	Norwegian	Korean
UK English	Spanish	Russian
Belgian	Swedish	Hebrew
Danish	Traditional Chinese	Arabic
French	Thai	Greek
French Canadian	Portuguese (EU)	Hungarian
German	Brazilian Portuguese	Slovakian
Italian	Japanese	

See the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG) for information and programming bar codes for this feature.

5 Programming the Scanner

The scanner is factory-configured with a set of standard default features. After scanning the interface bar code from the Interfaces section, select other options and customize the scanner through use of the programming bar codes available in the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG). Check the corresponding features section for your interface, and also the Data Editing and Symbologies chapters of the PRG.

Using Programming Bar Codes

This guide contains bar codes that allow you to reconfigure the scanner. Some programming bar code labels, like the "Standard Product Default Settings" in this chapter, require only the scan of that single label to enact the change.

Other bar codes require the scanner to be placed in Programming Mode prior to scanning them. Scan an ENTER/EXIT bar code once to enter Programming Mode; scan the desired parameter settings; scan the ENTER/EXIT bar code again to accept your changes, which exits Programming Mode and returns the scanner to normal operation.

Configure Other Settings

Additional programming bar codes are available in the PRG to allow for customizing programming features. If your installation requires different programming than the standard factory default settings, refer to the PRG.

Resetting Standard Product Defaults

Reference the PRG for a listing of standard factory settings. If you aren't sure what programming options are in the scanner, or you've changed some options and want the factory settings restored, scan the **Standard Product Default Settings** bar code below to copy the factory configuration for the currently active interface to the current configuration.

NOTE: Factory defaults are based on the interface type. Configure the scanner for the correct interface before scanning this label.

Figure 5-1 Standard Product Default Settings

Reading Parameters

Move the scanner toward the target and center the aiming pattern and illumination system to capture and decode the image. See Using the Scanner on page 17 for more information.

The aiming system will briefly switch off after the acquisition time, and if no code is decoded will switch on again before the next acquisition. The illuminator will remain on until the symbol is decoded.

As you read code symbols, adjust the distance at which you are holding the scanner.

Aiming System

A number of options for customizing control of the Aiming System are available. See the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG) for more information and programming bar codes.

Good Read Green Spot Duration

Successful reading can be signaled by a good read green spot.

Use the bar codes that follow to specify the duration of the good read pointer beam after a good read.

Figure 5-2 ENTER/EXIT PROGRAMMING MODE

Figure 5-3 Disabled

Figure 5-4 Short (300 ms)

Figure 5-5 Medium (500 ms)

Figure 5-6 Long (800 ms)

6 Operating Modes

Scan Mode

The imager can be set to operate in one of several scanning modes. See the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG) for more information and settings for any of the options:

Trigger Single (Default): This mode is associated with typical handheld scanner operation. Motion Sense is active and if the scanner detects motion the aiming pattern is turned on. When the trigger is pulled, illumination is turned on and the scanner attempts to read a label. Scanning is activated until one of the following occurs:

- the programmable “maximum scan on time”[1] has elapsed
- a label has been read
- the trigger is released

Trigger Pulse Multiple: Scanning begins when the trigger is pulled and continues after the trigger is released, until the trigger is pulled again or until the programmable “maximum scan on time”[1] has elapsed. Reading a label does not disable scanning. Double Read Timeout[1] prevents undesired multiple reads while in this mode.

Trigger Hold Multiple: When the trigger is pulled, scanning starts and the product scans until the trigger is released or “maximum scan on time”[1] has elapsed. Reading a label does not disable scanning. Double Read Timeout[1] prevents undesired multiple reads while in this mode.

Always On — The illuminator is always ON and the scanner is always ready for code reading. Double Read Timeout[1] prevents undesired multiple reads.

Flashing — The scanner illuminator flashes on and off regardless of the trigger status. Code reading takes place only during the Flash On[2] time. Double Read Timeout[1] prevents undesired multiple reads.

[1] See the PRG for these and other programmable features.

[2] Controlled by Flash On Time and Flash Off Time. Use the PRG to program these options.

Stand Mode: In Stand Mode, the illumination remains on for a configurable amount of time after a good read occurs. The scanner exits stand mode when movement is detected. If the trigger is activated from stand mode, the scanner transitions into one of the triggered modes.

Pick Mode: Specifies a Decoding and Transmission process where bar codes that are not within the configurable distance from the center of the aiming pattern are not acknowledged or transmitted to the host. Pick Mode is active only while the scanner is in Trigger Single mode. If the scanner switches to a different Read Mode, Pick Mode is automatically disabled.

Figure 6-1 ENTER/EXIT PROGRAMMING MODE

Figure 6-2 Scan Mode = Trigger Single

Figure 6-3 Scan Mode = Trigger Pulse Multiple

Figure 6-4 Scan Mode = Trigger Hold Multiple

Figure 6-5 Scan Mode = Flashing

Figure 6-6 Scan Mode = Always On

Figure 6-7 Scan Mode = Stand Mode

Figure 6-8 Pick Mode = Enabled

Multiple Label Reading

The scanner offers a number of options for multiple label reading. See the *HP Wireless Barcode Scanner Programming Reference Guide* (PRG) or software configuration tool for descriptions of these features and programming labels.

Stand Operation

This feature controls how the scanner behaves when it is placed into a cradle or stand.

- Ignore Autorecognition - Disables mode switching when the scanner is placed in a stand.
- Switch to Stand Mode - Automatically switches the scanner to Stand Mode when the scanner is placed in the stand.

- Switch to Flashing - Automatically switches the scanner to Flash Mode when placed in the stand.
- Switch to Always On - Automatically switches the scanner to Always On mode when placed in the stand.

Figure 6-9 ENTER/EXIT PROGRAMMING MODE

Figure 6-10 Ignore Autorecognition

Figure 6-11 Switch to Stand Mode

Figure 6-12 Switch to Flashing

Figure 6-13 Switch to Always On

A Technical Support

Online Technical Support

For the online access to technical support information, self-solve tools, online assistance, community forums or IT experts, broad multivendor knowledge base, monitoring and diagnostic tools, go to http://www.hp.com/support.

Preparing to Call Technical Support

If you can not solve a problem, you may need to call technical support. Have the following information available when you call:

- If the product is connected to an HP POS computer, provide the serial number of the POS computer
- Purchase date on invoice
- The spares part number located on the product
- Condition under which the problem occurred
- Error messages received
- Hardware configuration
- Hardware and software you are using

B Technical Specifications

The following table contains physical and performance characteristics, user environment and regulatory information.

Item	Description
Physical Characteristics	
Color	Black
Dimensions	Height 7.1”/181 mm Length 3.9”/100 mm Width 2.8”/71 mm
Weight (without cable)	Approximately 8.7 ounces / 246 g (reader) Approximately 8.7 ounces / 246 g (base charger)
Electrical Characteristics	
Battery Type	Li-Ion battery pack
Typical charge time for full charge from full discharge	4 hours with 12V external power supply adapter[a] Max 22 hours with Host power (in this case no supply adapter is needed)[a]
Operating Autonomy (continuous reading)	50,000 reads (typical)
Cradle Consumption and DC Input Supply Range	Volt 4.75-14 VDC; Power <8W[b]; Max 500mA when in host/ bus powered mode[b]
Performance Characteristics	
Light Source	LEDs
Roll (Tilt) Angle[c]	Up to ± 180°
Pitch Angle[c]	± 40°
Skew (Yaw) Angle[c]	± 40°
Field of View	Field of View

[a]Charge Times are much lower when battery is within daily typical operating condition.

[b]Typical input current measured under factory default configuration.

[c]Based on ISO 15423 specifications.

Depth of Field (Typical)[1]	
Symbology	**SR:**
Code 39	5mil: 1.6” - 7.5” (4.0 - 19cm); 10mil: 0.4” - 11.8” (1.0 - 30cm); 20mil: up to 17.7” (up to 45cm)
EAN	7.5mil: 0.5” - 10.6” (2.0 - 27cm) 13mil: 0.6” - 15.7” (1.5 - 40cm)
PDF-417	6.6mil: 1.0” - 5.9” (2.5 - 15cm); 10mil: 0.2” - 8.6” (0.5 - 22cm); 15mil: 0.6” - 13.4” (1.5 - 34cm)
DataMatrix	10mil: 0.8” to 6.3” (2.0 - 16cm) 15mil: 0” to 9.3” (0 - 23.6cm)
QR Code	10mil: 1.2” to 4.9” (3 - 12.5cm) 15mil: 0” to 7.5” (1 - 19.0cm)
Minimum Element Width	Standard Range: 1D Min. Resolution = 4 mil PDF-417 Min.Resolution = 5 mil Datamatrix Min. Resolution = 7 mil
Print Contrast Minimum	25% minimum reflectance

[1] 13 mils DOF based on EAN. All other 1D codes are Code 39. All labels grade A, typical environmental light, 20° C, label inclination 10°.

Decode Capability		
1D Bar Codes		
• UPC/EAN/JAN (A, E, 13, 8) • UPC/EAN/JAN (including P2 /P5) • UPC/EAN/JAN (including; ISBN / Bookland & ISSN) • UPC/EAN Coupons • Code 39 (including full ASCII) • Code 39 Trioptic • Code39 CIP (French Pharmaceutical) • LOGMARS (Code 39 w/ standard check digit enabled) • Danish PPT • Code 32 (Italian Pharmacode 39) • Code 128	• Code 128 ISBT • Interleaved 2 of 5 • Standard 2 of 5 • Interleaved 2 of 5 CIP (HR) • Industrial 2 of 5 • Discrete 2 of 5 • Datalogic 2 of 5 (China Post Code/ Chinese 2 of 5) • IATA 2 of 5 Air cargo code • Code 11 • Codabar • Codabar (NW7) • ABC Codabar	• Code 93 • MSI • PZN • Plessey • Anker Plessey • Follet 2 of 5 • GS1 DataBar Omnidirectional • GS1 DataBar Limited • GS1 DataBar Expanded • GS1 DataBar Truncated • DATABAR Expanded Coupon

Decode Capability		
1D Bar Codes		
2D / Stacked Codes		
The scanner is capable of decoding the following symbologies using multiple frames (i.e. Multi-Frame Decoding):		

• PDF-417
• QR Code
• Aztec
• Datamatrix
• Inverse Datamatrix
• Datamatrix is configurable for the following parameters:
  ◦ Normal or Inverted
  ◦ Square or Rectangular Style
  ◦ Data length (1 - 3600 characters)
• Maxicode
• QR Codes (QR, Micro QR and Multiple QR Codes)
	• Aztec
	• Sweden Post
	• Portugal Post
	• LaPoste A/R 39
	• 4-State Canada
	• Postal Codes
	• Australian Post
	• Japanese Post
	• KIX Post
	• Planet Code
	• Postnet
	• Royal Mail Code (RM45CC)
	• Intelligent Mail Barcode (IMB)
		• PDF-417
		• MacroPDF
		• Micro PDF417
		• GS1 Composites (1 - 12)
		• Codablock F
		• French CIP13[a]
		• GS1 DataBar Stacked
		• GS1 DataBar Stacked Omnidirectional
		• GS1 DataBar Expanded Stacked
		• GSI Databar Composites
		• Chinese Sensible Code
		• Inverted 2D codes

[a]It is acceptable to handle this with ULE.		
Interfaces Supported	USB Com Std., USB Keyboard, USB (see Selecting the Interface Type on page 19 for a listing of available interface options)	

User Environment	
Operating Temperature	32° to 122° F (0° to 50° C)
Storage Temperature	-4° to 158° F (-20° to 70° C)
Humidity	Operating: 5% to 90% relative humidity, non-condensing
Drop Specifications	Scanner withstands 18 drops from 1.8 meters (5.9 feet) to concrete
Ambient Light Immunity	Up to 100,000 Lux
Contaminants Spray/rain Dust/particulates	IEC 529-IP52 (scanner only)
ESD Level	16 KV
Regulatory	
Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.	
Radio Features	
Frequency Range	2400 to 2483.5 MHz
Range (in open air)	30 m

LED and Beeper Indications

The scanner's beeper sounds and its LED illuminates to indicate various functions or errors on the scanner. An optional "Green Spot" also performs useful functions. The following tables list these indications. One exception to the behaviors listed in the tables is that the scanner's functions are programmable, and so may or may not be turned on. For example, certain indications such as the power-up beep can be disabled using programming bar code labels.

Indicator	Description	LED	Beeper
Power-up Beep	The scanner is in the process of powering-up.	N/A	Scanner beeps four times at highest frequency and volume upon power-up.
Good Read Beep	A label has been successfully scanned by the scanner.	LED behavior for this indication is configurable via the feature "Good Read: When to Indicate" (see the *HP Wireless Barcode Scanner Programming Reference Guide* for information).	The scanner will beep once at current frequency, volume, mono/bitonal setting and duration upon a successful label scan.
ROM Failure	There is an error in the scanner's software/ programming.	Flashes	Scanner sounds one error beep at highest volume.
Limited Scanning Label Read	Indicates that a host connection is not established.	N/A	Scanner 'chirps' six times at the highest frequency and current volume.
Scanner Active Mode	The scanner is active and ready to scan.	The LED is lit steadily[1]	N/A
Scanner Disabled	The scanner has been disabled by the host.	The LED blinks continuously	N/A
Green Spot[1] flashes momentarily	Upon successful read of a label, the software shall turn the green spot on for the time specified by the configured value.	N/A	N/A
Image Capture	When ready to capture image.	Blue light flashes 2 times when updating	N/A

[1] Except when in sleep mode or when a Good Read LED Duration other than 00 is selected

Programming Mode - The following indications ONLY occur when the scanner is in Programming Mode.

INDICATION	DESCRIPTION	LED	BEEPER
Label Programming Mode Entry	A valid programming label has been scanned.	LED blinks continuously	Scanner sounds four low frequency beeps.
Label Programming Mode Rejection of Label	A label has been rejected.	N/A	Scanner sounds three times at lowest frequency and current volume.

INDICATION	DESCRIPTION	LED	BEEPER
Label Programming Mode Acceptance of Partial Label	In cases where multiple labels must be scanned to program one feature, this indication acknowledges each portion as it is successfully scanned.	N/A	Scanner sounds one short beep at highest frequency and current volume.
Label Programming Mode Acceptance of Programming	Configuration option(s) have been successfully programmed via labels and the scanner has exited Programming Mode.	N/A	Scanner sounds one high frequency beep and 4 low frequency beeps followed by reset beeps.
Label Programming Mode Cancel Item Entry	Cancel label has been scanned.	N/A	Scanner sounds two times at low frequency and current volume.

Error Codes

Upon startup, if the scanner sounds a long tone, this means the scanner has not passed its automatic Selftest and has entered FRU (Field Replaceable Unit) isolation mode. If the scanner is reset, the sequence will be repeated.

The following table describes the LED flashes/beep codes associated with an error found.

Number of LED Flashes/Beeps	Error	Corrective Action
1	Configuration	Contact Help desk for assistance
2	Interface PCB	Contact Help desk for assistance
6	Digital PCB	Contact Help desk for assistance
12	Imager	Contact Help desk for assistance
15	Accelerometer	Contact Help desk for assistance

C Agency Regulatory Notices

In some environments, the use of wireless devices may be restricted. Such restrictions may apply on-board airplanes, in hospitals, near explosives, in hazardous locations, and so on. If you are uncertain of the policy that applies to the use of this product, ask for authorization to use it before you turn it on.

Federal Communications Commission Notice

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

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

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hewlett Packard Company may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Declaration of Conformity for Products Marked with the FCC Logo (United States Only)

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

For questions regarding the product, contact:

Hewlett Packard Company

P. O. Box 692000, Mail Stop 530113

Houston, Texas 77269-2000

Or, call 1-800-HP-INVENT (1-800 474-6836)

For questions regarding this FCC declaration, contact:

Hewlett Packard Company

P. O. Box 692000, Mail Stop 510101

Houston, Texas 77269-2000

Or, call (281) 514-3333

To identify this product, refer to the Part, Series, or Model number found on the product.

Canadian Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. CAN ICES-3(B)/NMB-3(B).

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

Avis Canadien

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada. CAN ICES-3(B)/NMB-3(B).

European Union Regulatory Notice

Products bearing the CE marking comply with one or more of the following EU Directives as may be applicable:

Low Voltage Directive 2006/95/EC; EMC Directive 2004/108/EC; Ecodesign Directive 2009/125/EC; R&TTE Directive 1999/5/EC; RoHS Directive 2011/65/EU

Compliance with these directives is assessed using applicable European Harmonised Standards.

The full Declaration of Conformity can be found at the following web site: http://www.hp.eu/certificates

(Search with the product model name or its Regulatory Model Number (RMN), which may be found on the regulatory label.)

The point of contact for regulatory matters is: Hewlett-Packard GmbH, Dept./MS: HQ-TRE, Herrenberger Strasse 140, 71034 Boeblingen, GERMANY.

Mexico Notice

Declaración para México

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

Radio Model: DLBTMCX

Frequency: 2400 to 2483.5 MHz

Laser Compliance

This device is classified as a Class 2 Laser Product in accordance with US FDA regulations and the IEC 60825-1.

Each laser product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007; and with IEC 60825-1:2007

⚠ **CAUTION:** CLASS 2 LASER RADIATION DO NOT STARE INTO THE BEAM

Output Radiation 1mW Avg. Emitted Wave Length 650nm

⚠ **WARNING!** Use of controls or adjustments or performance of procedures other than those specified herein or in the laser product's installation guide may result in hazardous radiation exposure. To reduce the risk of exposure to hazardous radiation:

• Do not try to open the module enclosure. There are no user-serviceable components inside.

• Do not operate controls, make adjustments, or perform procedures to the laser device other than those specified herein.

• Allow only HP Authorized Service technicians to repair the unit.

Product Environmental Notices

Materials Disposal

Some HP LCD monitors contain mercury in the fluorescent lamps that might require special handling at end-of-life.

Disposal of this material can be regulated because of environmental considerations. For disposal or recycling information, contact the local authorities or the Electronic Industries Alliance (EIA) http://www.eiae.org.

Disposal of Waste Equipment by Users in Private Household in the European Union

This symbol on the product or on its packaging indicates that this product must not be disposed of with your household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling or waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact the local city office, the household waste disposal service or the shop where you purchased the product.

HP Recycling Program

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, go to http://www.hp.com/recycle.

Chemical Substances

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and Council). A chemical information report for this product can be found at http://www.hp.com/go/reach.