



Quick Check® 890

*Bar Code Verifier*

Quick Check® ImageData



User's Guide

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*Note: Software screens included in this document are in English only and are included for reference only. They may be different from the screen that displays on your terminal.*

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## *Introduction*

The Quick Check® 890 Verifier System (QC890) is a professional quality control system for verifying the readability and standards compliance of printed linear bar code symbols. This verification system implements an integrated approach that consists of the QC890 Verifier unit and the Quick Check® ImageData (QCID) software.

The QC890 system offers ease of use, stability and repeatability, flexibility, increased user features and control, and quality testing of the most common industry applications and symbologies.

## *Unpacking the QC890 Verifier*

After you open the shipping carton containing the product, take the following steps:

- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.
- Make sure the items in the carton match your order.
- Save the shipping container for later storage or shipping.

The standard accessories that should be included in your kit are:

- Quick Start Guide
- CD with QCID software and this User's Guide
- DC power supply with cord (includes adapters for different countries)
- Interface cables (USB and RS-232)
- Plastic gauge
- Metal ruler
- Reference test symbols
- Calibration bar code page

## *QC890 Verifier Features*

The QC890 Verifier is a full-featured bar code verification system compatible with all major linear bar code symbologies. It is both a quick and easy-to-use pass/fail analyzer of bar code symbols and a powerful measuring tool for detailed testing of bar code symbols.

The QC890 Verifier provides all of the information you need to interpret overall symbol quality.

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The verifier tests the following symbologies:

Codabar	Interleaved 2 of 5
Code 11	MSI
Code 16K	PDF417
Code 39	Reduced Space Symbology (RSS-14, RSS Limited, RSS Expanded)
Code 49	Regular 2 of 5
Code 93	Telepen
Code 128	UPC/EAN
IATA 2 of 5	

## *Using the QC890 Verifier*

The QC890 Verifier offers a choice of Automatic, 5, 6, and 10 mil aperture settings. External devices (i.e., mouse wands, pen wands, and linear imagers) are available with apertures designed to match the most common X dimensions. Wands are available with apertures of 3 (Mouse Wand only), 5, 6, 10, and 20 (Mouse Wand only) mil. These aperture sizes correspond to those specified in ISO/IEC 15416 Bar Code Print Quality Test Specification - Linear Symbols. The proper aperture should be selected based on the X dimension range shown in the table in the [Pen/Mouse Wand Aperture Selection](#) (page A-1) section.

Choosing an inappropriate scanning aperture results in inaccurate quality measures. Too small an aperture may detect reflectance non-uniformities (spots and voids) that would not affect scanning with a "normal" aperture size. Too large an aperture will not be able to resolve individual elements of the symbol.

## *Scan Button*

The scan button on top of the unit wakes the unit from power down. A first press of the button turns on illumination and a second press activates reading capabilities.

## *Scan Button LEDs*

- Red LED - error conditions
- Green LED - good symbols and configuration changes

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## *User LED Indications*

<b>LED Indication</b>	<b>Cause</b>
Green Solid	Charging
Green Flash	Good read
Red Solid	Error condition
Red Flashing	Low battery

## *Audio Sound*

An audio signal (default ON) provides a quick indication if a scan passes or fails the current test. You can change the pitch/volume of these beeps (see [Illumination Timer](#) on page B-1). After a scan, one short, high pitch beep indicates that the symbol passes an appropriate group of tests, while one long, low pitch beep indicates that it fails.

## *Special Features*

The QC890 Verifier supports the Reflectometer mode. In the Reflectometer mode, the unit operates as a free-running reflectometer. See "[Reflectometer Mode](#)" on page 3-7 for additional information.

## *Physical Connections*

A DC power barrel on the back of the unit connects to a power supply for external power and battery charging.

The DB9 port on the unit connects to the pen wand, mouse wand, or customized imager. Refer to "[Scanning Properly Using the QC3800V Linear Imager](#):" on page 3-5. If you are using any of these devices, refer to "[Scanning Properly Using a Pen/Mouse Wand](#)" on page 3-3 for additional information.

The RJ45 ten pin connector provides the USB or RS-232 serial interface to the host. Refer to "[USB Communication Interface](#)" on page 2-1 and "[RS-232 Serial Communication Interface](#)" on page 2-3 for details on connecting your unit.

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## Specifications

Item	Specification
Dimensions	7" (18cm)W x 6"(15.cm)H x 5.4" (14cm)D
Weight	1 lb 8 oz (680 grams)
Temperature	Storage: -20° to 70°C Operational: 0° to 50°C
Humidity	20% to 95% RH non condensing
Battery	Built-in factory - Lithium Ion rechargeable

## Internal Battery

*Note: Batteries are factory replaceable only. You must return your unit to Hand Held Products for replacement (see [Product Service and Repair](#) on page 5-1).*

## Charging the Battery

*Note: The battery may be in an unknown charge state at delivery. We recommend that you charge the battery for at least 6 hours prior to use. You may use the while charging it.*

### To charge the batteries:

1. Plug the power supply into the port on the back of the unit.
2. Plug in the power supply to the AC main source.

The QC890 Verifier uses a rechargeable battery. The QC890 Verifier can be operated from the battery or power supply. With a set of properly charged batteries, the unit operates for a minimum of 20 hours. When not in use, you can leave the unit connected to the charger.

## Powering On the QC890 Verifier

- If the power supply is attached and plugged into a wall outlet, the QC890 Verifier is on.
- If the QC890 Verifier is attached to the USB host with power on, the verifier is on.
- If the QC890 Verifier is operating using the battery, it shuts itself off after 15 minutes of inactivity to conserve battery power. Pressing the scan button on top of the unit one time powers up the unit from the power down mode.



### *Quick Check ImageData*

The Quick Check ImageData (QCID) program was designed for use in conjunction with the QC890 Verifier. Use of any other hardware devices with this program is not supported. Installation of the QCID software for your appropriate operating system is included on the CD-ROM that accompanied your verifier.

The QCID is the graphical interface to the Quick Check 890 Verifier. The verification results can be saved for later reference.

### *Installation of Quick Check ImageData*

To install the Quick Check ImageData, insert the CD and follow the instructions that display.

### *Communication Interfaces*

The QC890 Verifier system supports the following interfaces: USB, RS-232, and Bluetooth®.

### *USB Communication Interface*

For the USB interface, the Hand Held Products CDC-ACM driver must be installed prior to using the QC890 Verifier. This driver is copied to the following directory during install:

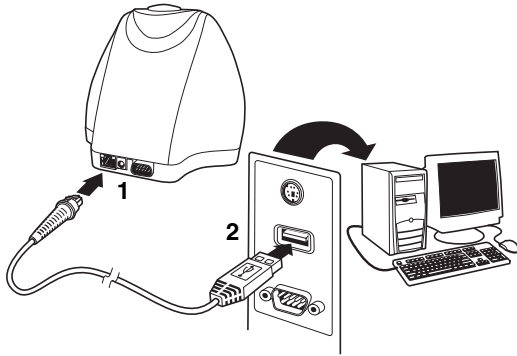
<install location>\Drivers\USBCOMPortEmulation\hhpcdc.inf

The default <install location> is C:\Program Files\Hand Held Products\Quick Check ImageData\drivers\USBCOMPortEmulation.

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*Note: Please review the file, readme.htm, in the install location prior to running the QCID.*

Connect the QC890 Verifier to the host as shown in the illustration below.



### ***USB COM Port Emulation***

Scan the following bar code to program the QC890 Verifier to emulate an RS-232-based COM Port. After connecting the QC890 Verifier and upon successful installation of the USB driver, the driver will use the next available COM Port. All QC890 Verifiers that have been configured for USB COM Port emulation use this host assigned port number. USB COM Port Emulation is the default interface for the QC890 Verifier.



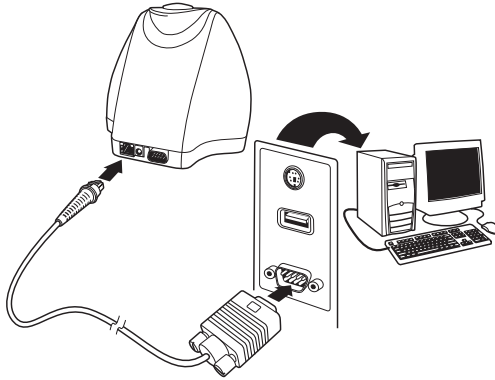
\* USB COM Port Emulation

*Note: No additional configuration (e.g., baud rate) is necessary.*

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## ***RS-232 Serial Communication Interface***

An RS-232 interface requires no additional drivers. Connect the QC890 Verifier to the host as shown in the illustration below.



## ***RS-232 Selections***

Scan the following bar code to select RS-232 communications.



RS-232 Communication

The RS-232 settings supported are:

Baud Rate:	115,200
Parity:	None
Data Bits:	8
Stop Bits:	1
Flow Control:	None

## ***Bluetooth***

The Bluetooth implementation uses the SPP (Serial Port Profile) profile to connect the QC890 Verifier to the host system. The QC890 SPP profile is a standard Bluetooth profile implementation. This allows the QC890 system to be compatible with most Bluetooth hardware. The QC890 unit can be used with existing Bluetooth radios built into laptops, PCs, or PDAs.

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## Using the QC890 Verifier with Bluetooth Devices

*Note: If you chose to use the USB or RS-232 interfaces, the Bluetooth communication interface automatically turns off.*

The QC890 Verifier may be used with Bluetooth devices (e.g., laptop, PC, PDA, etc.). Scanning the Bluetooth bar code below turns the Bluetooth option on in the QC890 Verifier. *Default = Off.*



Bluetooth On

*Note: If you turn the Bluetooth option on, scan the appropriate bar code that follows to connect to a PC/Laptop or PDA/Mobility Systems device.*

To establish a Bluetooth connection to a PC/Laptop, scan the bar code below, follow the instructions supplied with your Bluetooth device to locate the QC890 Verifier, and connect to it. If you go out of range with your QC890 Verifier, the QC890 Verifier automatically reconnects to the Bluetooth device once you come back in range. *When Bluetooth communication is enabled, the default is PC/Laptop.*



\* Bluetooth Connection - PC/Laptop

To establish a Bluetooth connection to a PDA or Hand Held Products Mobility Systems device, scan the bar code below, follow the instructions supplied with your Bluetooth device to locate the QC890 Verifier, and connect to it. If you go out of range with your QC890 Verifier, the QC890 Verifier will not re-connect. It will be up to the host device to re-connect to the QC890 Verifier.



Bluetooth Connection - PDA/Mobility Systems Device

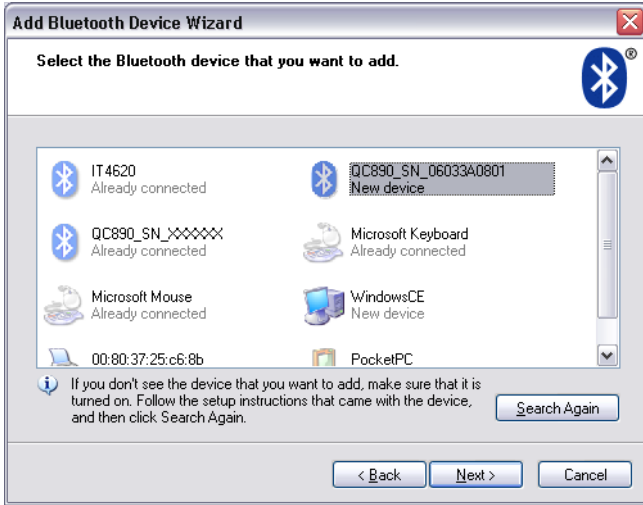
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## *Enabling Your Device for Bluetooth*

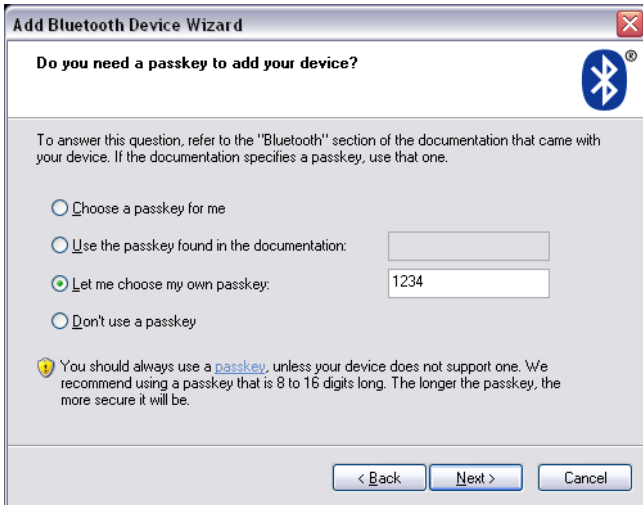
After scanning the appropriate Bluetooth connection bar code, you need to run the Quick Check ImageData application to enable the Bluetooth radio in your device (PC, PDA, or Mobility Systems device) in order to look for the QC890 Verifier.



Once the QC890 Verifier is recognized, it appears in the list of available devices. Select the QC890 Verifier to which you want to bond and select **Next**.



You will be asked if you need a passkey to add your device. The default passkey for all Hand Held Products QC890 verifiers is "1234."



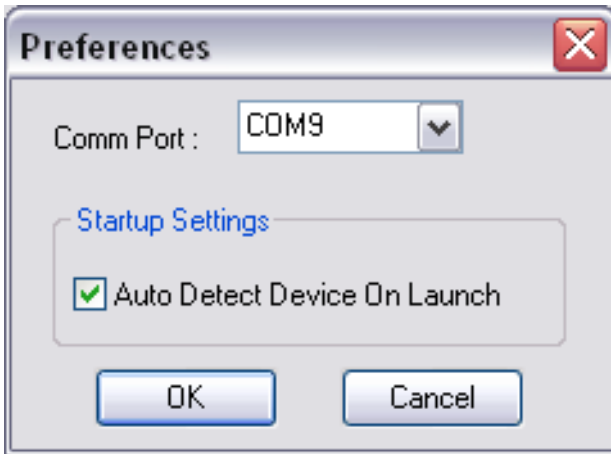
The Wizard loads the QC890 Verifier information into your device. You may be given a choice of selecting a check box if you want your QC890 Verifier to be set as the default device to which Quick Check ImageData connects.

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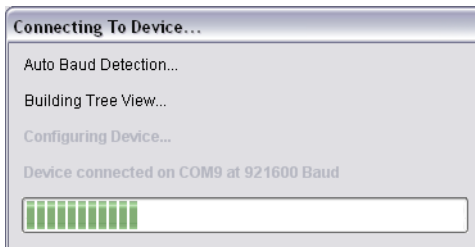
Once you select **Finish**, your device is ready to communicate with the QC890 Verifier via the assigned ports. Make a note of the assigned port number. You will need to know this port number in the following installation steps.

### *Enabling QCID for Bluetooth*

1. Once you open the QCID application, click on **File -> Preferences**.
2. Choose the assigned incoming port number reported in the Add Bluetooth Device wizard.
3. Click **OK**.



4. Your QC890 Verifier then connects to the QCID application.



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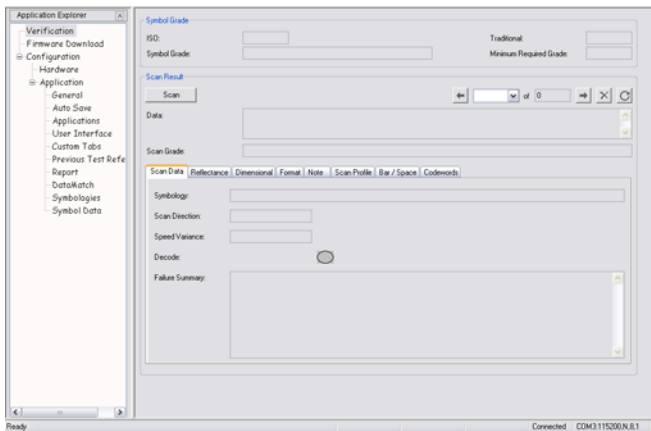
## Using Quick Check ImageData

For the PC version of Quick Check ImageData, start Quick Check ImageData by clicking on **Start->Programs->Hand Held Products->Quick Check ImageData** or double click the Quick Check ImageData icon on your desktop (set up during installation).

For the Windows Mobile for Pocket PC version, start Quick Check ImageData by clicking on **Start ->Programs**. Select the Quick Check ImageData icon.

The first time you use QCID, the application asks you to select the COM Port to which the QCID is attached. After you make the selection, QCID attempts to connect to the attached QC890 Verifier. When a connection is established, the main screen of the application, as shown below, displays.

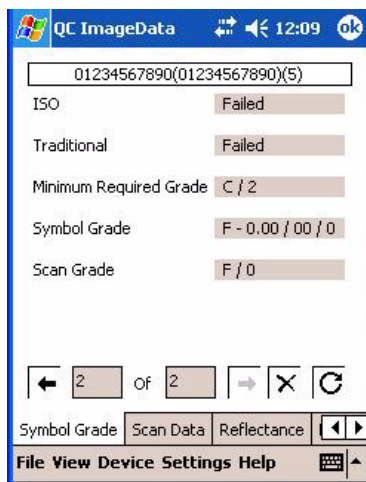
### PC Main Screen





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## Windows Mobile for Pocket PC Main Screen



## *Help System*

The Quick Check ImageData program has an extensive help system to aid in the verification of your bar codes. Please refer to the help files for questions regarding the verification process and for specific questions regarding the QCID program.



## Using the Quick Check 890 Verifier System

### Scanning a Bar Code Symbol Using the QC890 Verifier

*Note: Calibration is a requirement of the ISO/IEC standards. Without proper initial calibration, the values displayed may not be accurate. Please be sure to calibrate the QC890 Verifier prior to scanning bar codes and when you change apertures and/or external scanning devices.*

1. Place the QC890 Verifier on top of the symbol.
2. Press the scan button on top of the unit to turn on illumination. Look through the unit's window to align the unit with the bar code.

*Note: The best verification data is gathered by aligning the center of the symbol to the center arrows.*

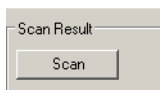


3. Press the scan button on top of the unit again while the illumination is on to scan and verify the bar code.

### Scanning a Bar Code Symbol Using Quick Check ImageData

A scan can be initiated with Quick Check ImageData.

1. Place the QC890 Verifier on top of the symbol.
2. If necessary, press the scan button on top of the unit to turn on illumination to aid in alignment of the symbol.
3. For the PC version, click the **Scan** button on the Main Display window.



- 
4. For the Windows Mobile for Pocket PC version, select **Device** and then **Scan** from the Scan Data tab.



## *Calibrating the QC890 Verifier*

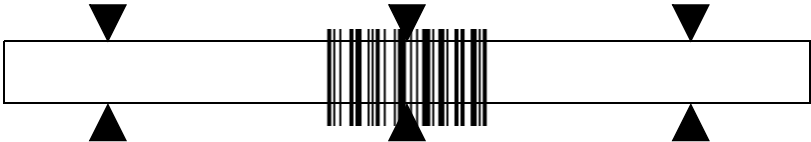
*Note: Calibration is a requirement of the ISO/IEC standards and must be performed with each aperture change.*

When calibrating the QC890 Verifier system, the QC890 Verifier must be connected to QCID. While preparing to calibrate the QC890 Verifier system, it is important to align the center of the reflectance page symbol to the center arrows and to keep the QC890 Verifier flat and level to the surface of the reflectance page.

The reflectance page is a precision standard that is made of photographic materials. To ensure proper calibration, you must replace the reflectance page if it becomes dirty or physically damaged. Make sure to use only the original calibration tools that were supplied with your QC890 Verifier kit or certified replacements obtained from Hand Held Products.

1. Place the verifier on top of the symbol.
2. Press the scan button on top of the unit to turn on illumination.
3. Look through the unit's window to align the unit with the bar code.

*Note: The best verification data is gathered by aligning the center of the symbol to the center arrows.*



4. Press the scan button on top of the unit a second time while the illumination is on to scan the calibration bar code. You will hear a series of beeps and

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the illumination will turn off. If the calibration process is successful, the following screen displays.



5. Enter the prompted data (Name and Location) and press **OK**. The following screen displays.



6. If the unit does not calibrate, contact Hand Held Products Technical Support (see [Technical Assistance](#) on page 2).

## ***Scanning Properly Using a Pen/Mouse Wand***

1. Turn on the verifier and confirm that it is operational (i.e., does not need to be charged or calibrated).
2. Hold the pen wand as you would a pen or pencil, placing your fingers on each side of the foot near the tip.

**or**

Hold the mouse wand as you would a computer mouse.

3. Lightly touch the wand against either quiet zone (clear area) on either side of the bar code. For the pen wand, you will have the proper scanning angle when the tip and the reflectance guide (black plastic clamp) are flat on the scanning surface.
4. At about the same speed with which you would quickly underline a sentence in this manual, and without interruption, gently move the wand across the center of the bar code. You do not need to press hard on the wand while scanning the bar code. Gentle pressure on the wand will not scratch the contacted surface, but pressing down hard may damage the code and yield poor results.
5. Listen for audible tones.

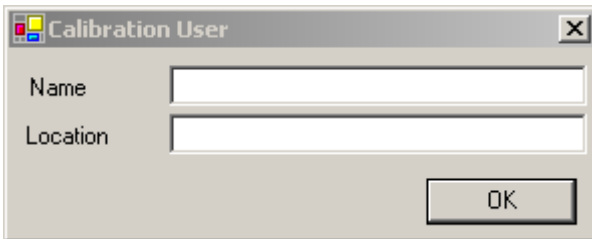
- If you hear a single beep tone followed by another single beep of the same tone, it signifies a good read.
- If you hear a single beep and then a beep of a different tone, the unit detected an error in the scanned symbol.

## *Calibrating an External Pen/Mouse Wand*

1. Using the proper scan technique described in step 4 above, scan the reflectance page. You will hear a single beep after the first good scan and the following display appears:



2. Continue to scan the reflectance page for a total of ten good scans. After each good scan, a single beep sounds and the display indicates the number of good scans you need to obtain. After the tenth good scan, the following window displays:



- 
3. After you type in your name and location, click **OK**. The following message appears:



*Note: When using the external QC3800V linear imager, it does not report ISO/IEC reflectance parameters; therefore no calibration is necessary or possible.*

### ***Scanning Properly Using the QC3800V Linear Imager:***

1. The best reading position for the QC3800V linear imager is 6 inches (150mm) from the surface of the bar code to the face of the scanner, with an angle of incidence of 15 degrees from perpendicular. At this orientation, the system performance approximates an average circular aperture size of .006 to .008 inches (.152 to .203 mm). Extreme variations from this orientation may negatively affect the accuracy of some parameter results.
2. Scanning is initiated by depressing the trigger on the linear imager.
3. Listen for an audible tone. When the unit scans and decodes a bar code, it emits a single beep.
  - If the unit cannot decode a bar code after a trigger pull, nothing happens.
  - After a successful decode, with a result that passes the minimum acceptable grade, the unit emits another beep of the same tone.
  - A decode that fails to receive a grade above the minimum requirement causes the unit to emit a beep of a different tone.

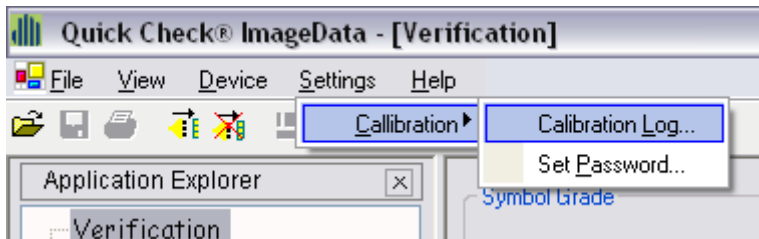
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*Note: The QC3800V reading width (includes quiet zones) is 6 inches.*

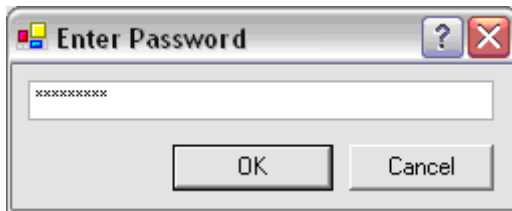
*Note: The QC3800V is the only device that can be used as a non-contact input device with a QC890 Verifier unit. The QC3800V should not be used with any decoders, terminals, or other brand of verifiers.*

## **Calibration Log**

The Calibration Log records the instances when calibration was performed. It records the Date/Time set on your PC, serial number of the QC890 Verifier being calibrated, and the name and location of the operator. To access the Calibration Log, click on **Settings -> Calibration -> Calibration Log**.

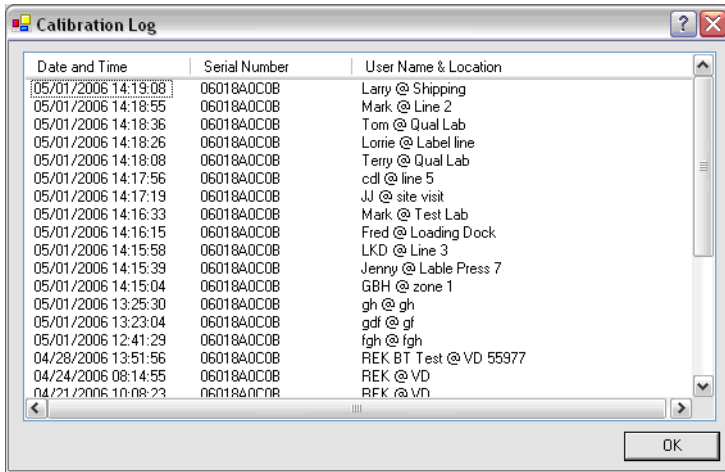


You will be prompted to enter a password. The password can be either the Master Password (Visions07) or a password you previously set.





The Calibration Log looks like this:




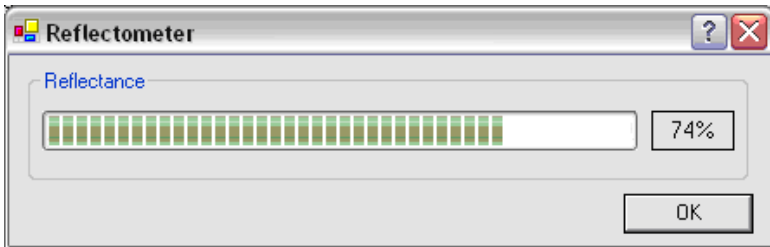
Date and Time	Serial Number	User Name & Location
05/01/2006 14:19:08	06018A0COB	Larry @ Shipping
05/01/2006 14:18:55	06018A0COB	Mark @ Line 2
05/01/2006 14:18:36	06018A0COB	Tom @ Qual Lab
05/01/2006 14:18:26	06018A0COB	Lorrie @ Label line
05/01/2006 14:18:08	06018A0COB	Terry @ Qual Lab
05/01/2006 14:17:56	06018A0COB	cdl @ line 5
05/01/2006 14:17:19	06018A0COB	JJ @ site visit
05/01/2006 14:16:33	06018A0COB	Mark @ Test Lab
05/01/2006 14:16:15	06018A0COB	Fred @ Loading Dock
05/01/2006 14:15:58	06018A0COB	LKD @ Line 3
05/01/2006 14:15:39	06018A0COB	Jenny @ Lable Press 7
05/01/2006 14:15:04	06018A0COB	GBH @ zone 1
05/01/2006 13:25:30	06018A0COB	gh @ gh
05/01/2006 13:23:04	06018A0COB	gdf @ gf
05/01/2006 12:41:29	06018A0COB	fgh @ fgh
04/28/2006 13:51:56	06018A0COB	REK BT Test @ VD 55977
04/24/2006 08:14:55	06018A0COB	REK @ VD
04/21/2006 10:08:23	06018A0COB	REK @ VD

## Reflectometer Mode

*Note: The Reflectometer Mode is only available for use with the mouse/pen wands.*

Reflectometer Mode measures the spot reflectance of the area at which the imager is “looking.”

1. To activate the Reflectometer, click on the Reflectometer icon (  ) on the tool bar below the menu options. The Reflectometer window opens.



2. Place the scanning device on any surface to see the spot reflectance of that surface. The green status bars shows the reflectance signal strength. The field to the right of the status bar shows the percentage of reflectance.
3. Select **OK** to exit the Reflectometer mode.



### *Cleaning the External Devices*

Occasionally the scanner tip or window may become partially obstructed by ink, paper fibers, or other particulate deposits (such as wax or varnish). To ensure reliable scanning, you should periodically check and, if necessary, clean the tip with a soft cloth.

*Note: Damaged tips for the pen wand should be replaced. Consult your dealer or Hand Held Products Product Service and Repair Department for details (see [Product Service and Repair](#) on page 5-1).*

### *QC890 Verifier*

Occasionally the view window or alignment window may become dusty or dirty. Use a soft cloth to clean both of the windows. Since the open slot of the alignment window is where the code is “seen,” dirt on the window does not affect the readability of the QC890 Verifier.

*Note: It is not necessary, nor is it advisable, to insert anything into the open slot on the bottom of the QC890 Verifier.*

### *Recertification*

Sending the QC890 Verifier back to Hand Held Products periodically for a factory calibration and re-certification is recommended; however the frequency is based on your company’s ISO procedures regarding test and measurement equipment.

When you are ready to re-certify your QC890 Verifier, please contact Product Service and Repair for pricing and a Return Material Authorization (RMA) number (see [Product Service and Repair](#) on page 5-1).



### *Product Service and Repair*

Hand Held Products provides service for all its products through service centers throughout the world. To obtain warranty or non-warranty service, return the unit to Hand Held Products (postage paid) with a copy of the dated purchase record attached. Contact the appropriate location below to obtain a Return Material Authorization number (RMA #) before returning the product.

#### **North America**

Hand Held Products Corporate Offices  
Telephone: (800) 782-4263, option 3  
Fax: (704) 566-6015  
*E-mail: [naservice@handheld.com](mailto:naservice@handheld.com)*

#### **América Latina**

Hand Held Products América Latina  
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## **Japan**

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Fax: +81-3-5770-6313  
E-mail: [apservice@handheld.com](mailto:apservice@handheld.com)

## ***Online Product Service and Repair Assistance***

You can also access product service and repair assistance online at [www.handheld.com](http://www.handheld.com).

## ***Technical Assistance***

If you need assistance installing or troubleshooting, please call your Distributor or the nearest Hand Held Products technical support office:

### **North America/Canada:**

Telephone: (800) 782-4263, option 4 (8 a.m. to 6 p.m. EST)  
Fax number: (315) 685-4960  
E-mail: [natechsupport@handheld.com](mailto:natechsupport@handheld.com)

### **América Latina:**

Teléfono: (800) 782-4263, opción 8, opción 3  
Teléfono: (704) 998-3998, opción 8, opción 3  
E-mail: [latechsupport@handheld.com](mailto:latechsupport@handheld.com)

### **Brasil**

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## **México**

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## **Europe, Middle East, and Africa:**

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U.K. Ofc: Int+44 1925 240055  
E-mail: [eutechsupport@handheld.com](mailto:eutechsupport@handheld.com)

## **Asia Pacific:**

Telephone: Int+852-3188-3485 or 2511-3050  
E-mail: [aptechsupport@handheld.com](mailto:aptechsupport@handheld.com)

## ***Online Technical Assistance***

You can also access technical assistance online at [www.handheld.com](http://www.handheld.com).

## ***Limited Warranty***

Hand Held Products, Inc. ("Hand Held Products") warrants its products to be free from defects in materials and workmanship and to conform to Hand Held Products' published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any Hand Held Products product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of (A) modification or alteration by the purchaser or other party, (B) excessive voltage or current supplied to or drawn from the interface connections, (C) static electricity or electro-static discharge, (D) operation under conditions beyond the specified operating parameters, or (E) repair or service of the product by anyone other than Hand Held Products or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by Hand Held Products for the product at the time of purchase ("Warranty Period"). Any defective product must be returned (at purchaser's expense) during the Warranty Period to Hand Held Products' factory or authorized service center for inspection. No product will be accepted by Hand Held Products without a Return Materials Authorization, which may be obtained by contacting Hand Held Products. In the event that the product is returned to Hand Held Products or its authorized service center within the Warranty Period and Hand Held Products determines to its satisfaction that the product is defective due to defects in materials or workmanship, Hand Held Products, at its sole option, will either repair or replace the product without charge, except for return shipping to Hand Held Products.

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EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not manufactured/sold by Hand Held Products voids the warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. Hand Held Products, Inc. extends these warranties only to the first end-users of the products. These warranties are nontransferable.

The limited duration of the warranty for the Quick Check 890 Verifier is for two (2) years.



## Pen/Mouse Wand Aperture Selection

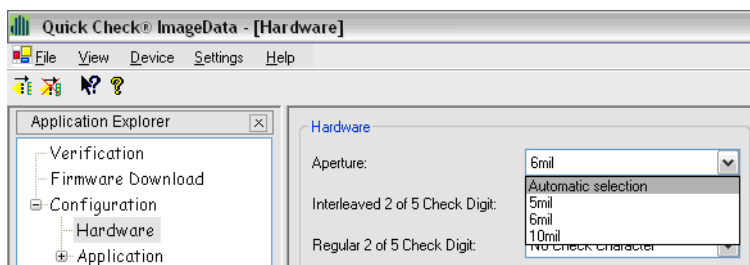
The table below is a handy reference to help you choose the proper aperture size required for the size/type bar code you wish to verify. This data is based on the standard ISO/IEC 15416 Bar code Print Quality Test Specification - Linear Symbols.

Aperture Diameter (in .001")/Aperture Ref. No.	Aperture Diameter	"X" Dimension Range (in inches)	"X" Dimension Range (in mm)
03	0.075	0.004" to 0.007"	0.100 to 0.180
05	0.125	0.0071" to .013"	.0180 to 0.330
10	0.250	0.0131" to 0.025"	0.330 to 0.635
20	0.500	0.0251" and larger	0.635 and larger

*Note: 6 mil aperture specified for UPC/EAN only.*

*Note: 3 mil and 20 mil aperture available in mouse wand style only.*

Check your application standard's requirements for specified aperture requirements. If no aperture is specified, use the aperture that is as close to, but not larger than, 80% of the narrow element width.



The QC890 Verifier has an Automatic selection feature available ONLY for the internal optics. When using the Automatic selection feature, the verifier automatically selects from a 5, 6, or 10mil aperture. This selection is determined by the symbology (e.g., EAN/UPC selects 6mil aperture) or as determined by the internal optics' ability to calculate the width of the narrow element and select the aperture as determined by the table above.



## Menu Setting Bar Codes

The QC890 bar code verifiers are programmed in the factory for the most common settings. If you need to change these settings, programming is accomplished by scanning the bar codes included in this chapter.

An asterisk (\*) next to an option indicates the default setting.

### *Resetting the Standard Product Defaults*

If you aren't sure what programming options are in your device, or you've changed some options and want the factory settings restored, scan the **Standard Product Default Settings** bar code below.



Standard Product Default Settings

### *Illumination Timer*

Scan the appropriate bar code to set the duration (in seconds) of the illumination.  
*Default = 5 seconds.*



3 seconds



\*5 seconds



15 seconds

### *Power Down Timer*

*Note: This option applies to battery operation only.*

When there is no activity within a specified time period, the QC890 Verifier enters low power mode. Scan the appropriate Power Time-Out bar code to change the time-out duration (in seconds).

*Note: Scanning zero (0) is the equivalent of setting no time-out.*

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If there are no scans during the “scanner power time-out timer” interval, the QC890 Verifier goes into power down mode. Whenever a scan occurs, the “scanner power time-out timer” is reset. *Default = 15 minutes*



No Power Down Timeout



5 minutes



\*15 minutes



60 minutes



120 minutes

## Symbology Defaults - Operation

The default QC890 symbologies and operation are listed below:

- Codabar\*
- Code 11\*\*
- Code 16K\*\*\*
- Code 39\*
- Code 49\*\*\*
- Code 93\*
- Code 128\*
- IATA 2 of 5 \*\*\*
- Interleaved 2 of 5\*
- MSI\*\*\*
- PDF417\*\*\*
- Reduced Space Symbology (RSS-14, RSS Limited, RSS Expanded)\*\*\*
- Regular 2 of 5\*\*\*
- Telepen\*\*
- UPC/EAN\*
- Unrecognized\*\*\*

\* Enabled by default. Can be scanned when disabled.

\*\* Disabled by default. Can be scanned when disabled.

\*\*\* Disabled by default. Cannot be scanned when disabled.





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