

Cordless Hand Scanner Series 7 with *Bluetooth*[®] Wireless Technology

Featuring a Bluetooth enabled bar code scanner and SocketScan software for wirelessly adding bar code scanning to Bluetooth enabled mobile computers running:

- *Windows Mobile 2003, 2003SE or 5.0*
- *Palm OS 5.2 or later*
- *Windows XP or XP Tablet Edition*

User's Guide



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Other than the above, Socket Communications can assume no responsibility for anything resulting from the application of information contained in this manual.

Please refrain from any applications of the Socket Cordless Hand Scanner that are not described in this manual. Please refrain from disassembling the Cordless Hand Scanner. Disassembly of this device will void the product warranty.

You can track new product releases, software updates and technical bulletins by visiting Socket's web page at: www.socketcom.com.

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1 | Introduction

If you need to collect bar coded data but don't want to be tied to your mobile or desktop computer, Socket's Cordless Hand Scanner (CHS) Series 7 with *Bluetooth* wireless technology is just what you're looking for. This innovative device combines the power of laser bar code scanning with the convenience of *Bluetooth* wireless technology in a single compact, lightweight device that is ergonomically designed to fit comfortably in the palm of your hand.



Bar code scanning is the most efficient way to collect data from a mobile computer. If the data to be entered is bar coded, using a laser scanner is 50 times faster and 10,000 times more accurate than manual data entry.

Bluetooth wireless technology transforms how devices connect with each other, offering you new possibilities for using your mobile computer with other devices. With Socket's Cordless Hand Scanner (CHS), you can scan bar codes while connected to the PDA in your pocket or to your laptop, tablet or desktop computer located up to 300 feet away — all without the hassle of cables or the awkwardness of a protruding antenna.

Scanner Versions

The CHS Series 7 includes three versions of the scanner. The entry-level CHS 7E uses linear CMOS imaging technology. The mid-level CHS 7M has a Class 1 laser scanner. The performance level CHS 7P features a Class 2 laser scanner and a ruggedized construction.

About the Software

SocketScan™ enters scanned data directly into any open Windows or Palm OS program as if the data were manually typed, so you can use the CHS with your favorite application. Included is a utility that enables you to configure Prefix/Suffixes, sounds, and other special settings for the CHS.



Connect!Agent™ for Windows Mobile and XP simplifies *Bluetooth* by automatically setting up and managing the wireless connection. Connect!Agent runs in the background, requiring no user interaction.

About Combining Scanning with *Bluetooth*

The Cordless Hand Scanner represents an optimal combination of proven laser bar code scanning and state-of-the-art *Bluetooth* connectivity. Because of the problems inherent in the intermittent storage of scanned data in on-board memory if the *Bluetooth* connection is lost, the CHS is designed to operate only when connected to the host, with the powerful Class 1 radio providing the maximum possible connection range.

The user is advised of the connection status with a single beep when the CHS connects to the host and a double beep when the connection is closed or lost. As with any wireless device, connectivity range can be affected by a variety of environmental variables.



The most likely source of errors in any cordless scanning system is not in the scanning and decoding process, but in the transmission of the data to the host. For this reason, the Cordless Hand Scanner features Socket's exclusive *Error Proof Protocol* (patent pending), which ensures that scanned data is correctly received by the host computer and allows for real-time validation of data and notifies the user in case of errors.

The beeper and green LED signals provided by the CHS confirm not only a successful scan but also the successful transmission of the scanned data to the host. Users familiar with bar code scanning may notice a slight delay between the successful scan and shut off of the laser, and the beep and green LED from the CHS confirming completed transmission of the data. In most instances, this delay is less than 300 ms (milliseconds), but may be slightly longer as the connectivity range limit is approached.

Because of the two-way transmission verification process, it is possible to cause communication problems by scanning bar codes as fast as possible. When this occurs, all transmissions will stop for several seconds before scanning can be resumed. To prevent this from happening, the user should wait until the confirming beep is received before scanning the next bar code.

System Requirements

Your mobile computer should meet these minimum requirements:

- Any of the following operating systems:
 - Windows Mobile 2003, 2003SE or 5.0
 - Palm OS 5.2 or later
 - Windows XP or XP Tablet Edition
- Any of the following *Bluetooth* stacks: *
 - Socket Drakar v1.4 (from Socket SDIO and CF Connection Kits)
 - IVT BlueSoleil v1.4.7 or later (from Socket CF Connection Kit with Adapter or Socket Class 1 USB Adapter)
 - Broadcom (Widcomm) v1.4
 - Microsoft *Bluetooth* stack for Pocket PCs
 - Microsoft Windows XP Service Pack 2
 - Toshiba *Bluetooth* stack 3.03.06 or greater (with Windows XP)

If you are using a Pocket PC or Palm device, during installation you will need a desktop or laptop computer that meets these minimum requirements:

- Windows 98SE, Me, 2000 or XP
- Either Microsoft ActiveSync 4.0 or greater or Palm Desktop Software

For information about using the CHS with Symbian Series 60 devices, please visit: www.socketcom.com/product/cordless.asp?Type=Scanner

**Support for other Bluetooth stacks is planned for future releases. For Windows XP, only the IVT and Microsoft stacks are compatible with the optional Socket Connect!Agent software.*

For software updates, please visit: www.socketcom.com/support/support_bar.asp

Package Contents

The Socket Cordless Hand Scanner package includes these items:

- Socket Cordless Hand Scanner with *Bluetooth* Wireless Technology
- AC charging adapter with international plugs
- 2 NiMH rechargeable AAA batteries
- Lanyard with retractable tether
- Software Installation CD
- Booklets with copyright, warranty, and regulatory compliance information

Product Registration

Socket highly recommends that all customers register their Socket products. Registered users receive the following benefits:

- Priority for technical support
- Special offers for future products and upgrades
- The latest new product information.

Register online at: www.socketcom.com/prodreg

Hardware Features

Rechargeable Batteries and AC Adapter

Charge the internal batteries by using the included AC adapter. The adapter rating is 5V, 2A, positive pole center. A fully charged battery should provide roughly 8 hours of normal operation.

WARNING: Charge ONLY NiMH batteries in the CHS. Damage may result if other battery types are charged. Do not store the CHS for more than 30 days with the batteries installed.

The red Battery Status LED will not function properly if standard AAA non-rechargeable batteries are being used.

Besides the included AC adapter, you can also recharge the CHS by using any of the following:

- Socket's Mobile Power Pack. For more information, please visit: www.socketcom.com/product/AC4009-541.asp
- AC and DC adapters of most recent Pocket PCs from Casio, Compaq, Dell, Fujitsu, and Toshiba are also compatible.

Touch Screen Stylus

The CHS features a stylus tip in the tail of the CHS that you can use Pocket PC and other device touch screens. The stylus can be removed with small pliers if desired. Visit the Socket website to purchase replacement styli.

WARNING: Do not use the stylus if damaged. A damaged stylus may scratch the display screen of your computer.



The stylus does not work with XP Tablet computers using Active Matrix displays.

Status Indicator LED

LED	LED Activity	Meaning
Bluetooth Status (Blue)	1 blink per second	Bluetooth radio is on, but not connected.
	1 blink per 5 seconds	Bluetooth radio is on, connection established.
Good Read (Green)	Green	Data successfully scanned and transmitted to host device.
Battery Status (Red)	1 blink per second	Less than 20% of battery life remaining.
	Solid red	Batteries are charging.
	Off when connected to charger	Batteries are fully charged.

Status Indicator Beeps

The scanner beeps to signal the *Bluetooth* connection status. You can also have the scanner beep to indicate scanned data reaching the host device.

LED	Beep Pattern	Meaning
Bluetooth Status (Blue)	1 beep	Connection to host device has begun.
	2 beeps	Connection to host device has ended.
Good Read (Green)	1 beep	Data was successfully scanned and transmitted to host device.

2 | Hardware Preparation

Installing Batteries and Attaching the Tether

1. Use a coin or screwdriver to unlock and remove the battery cover. Turn the lock underneath the scanner to a horizontal position. Remove the casing.



2. Install the batteries in opposite directions, as indicated by the positive symbols.



WARNING: Do not install the batteries incorrectly. Damage may result.

3. If desired, attach the tether. Wrap the string loop around the inside part of the lock.
4. Replace the battery cover and lock it into place.
5. If desired, attach the tether to a lanyard or belt.



Charging the Scanner

Use the included AC adapter to charge the Cordless Hand Scanner. The scanner's NiMH batteries must be charged for at least 4 hours before the first use. The Battery Status LED will emit a solid red light while charging, and turn off when the batteries are fully charged.



WARNING: Do not attempt to charge alkaline batteries — this may cause alkaline batteries to leak and damage the CHS.



The red Battery Status LED will not function properly if standard AAA alkaline batteries are being used.

3 | Setup for Windows Mobile

This chapter explains how to install and use the Cordless Hand Scanner (CHS) with a *Bluetooth* enabled Pocket PC or other mobile computing device running Windows Mobile 2003, 2003SE or 5.0.

Before you begin the instructions in this chapter, make sure you have installed the batteries (and tether, if desired), and charged the scanner, as described in Chapter 2, “Hardware Preparation.”



Setup Summary

STEP 1: Install the software.

STEP 2: Configure scanner settings.

STEP 3: Connect scanner to host device with *Bluetooth*.

STEP 4: Scan data into your application.

OPTIONAL:

- Select symbologies.
- Configure prefix/suffixes.
- Run Scan Demo.

STEP 1: Install the Software

You must install SocketScan, but installing Connect!Agent is optional.



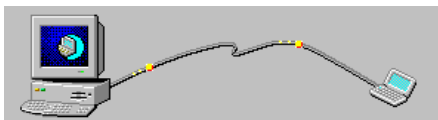
Should I install Connect!Agent?

Connect!Agent simplifies Bluetooth by automatically setting up and managing the Bluetooth connection. It runs in the background and requires no interaction from the user. If you choose not to install Connect!Agent, you will need to use your Bluetooth software to manually configure and manage the Bluetooth connection.

Software Installation

ADVANCED USERS: Refer to the README file for CAB installation instructions.

1. Delete any bar code scanning software already installed in your device, including software from other companies. Make sure the software is closed. Tap Start | Settings | System tab | Remove Programs. Use the utility to delete the software.
2. Use ActiveSync and a serial/USB cable or cradle to make an active connection between the mobile computer and a host PC. ActiveSync should say Connected, and the ActiveSync icon should turn green.



IMPORTANT! ActiveSync 4.0 or greater is required. Download it free from www.socketcom.com/activesync.

3. Insert the installation CD into your host PC.
4. Use My Computer or Windows Explorer to access your CD drive.



5. In the CD, open the SocketScanCE folder and click on Setup.exe.

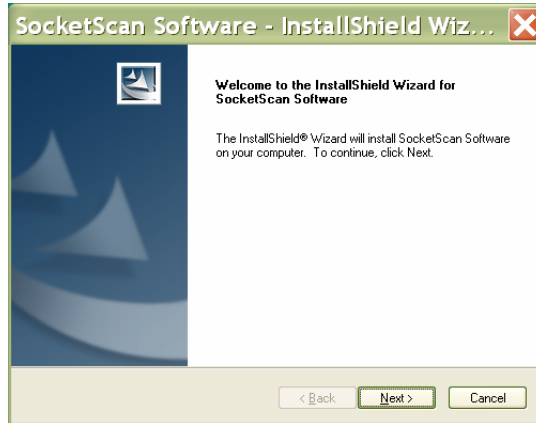


SocketScanCE

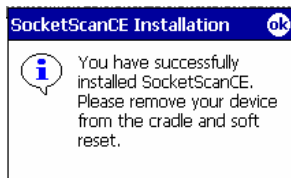


setup
Setup.exe
InstallShield Software Corpora...

- The installation wizard will automatically begin. Follow the wizard to install the software.



- After installing the software, a dialog on your Pocket PC will direct you to soft reset. Tap ok.



- Remove your device from the cable/cradle and perform a soft reset by pressing the reset button. If you skip this step, some icons may not appear correctly.
- If desired, install Connect!Agent by opening the Connect!Agent folder in the CD and clicking on Connect!AgentSetup.exe. Follow the wizard to install the software.



Connect!Agent




Connect!AgentSetup
Setup.exe
InstallShield Software

STEP 2: Configure Scanner Settings

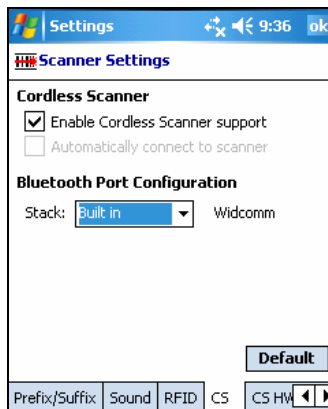
1. Tap Start | Programs | SocketScan.



2. Go to the Today screen by tapping Start | Today.
3. Tap the SocketScan icon  at the bottom of the screen. In the pop-up menu, tap Settings.



4. The Scanner Settings utility will appear. Tap on the CS tab at the bottom of the screen.
5. Enter the following settings:

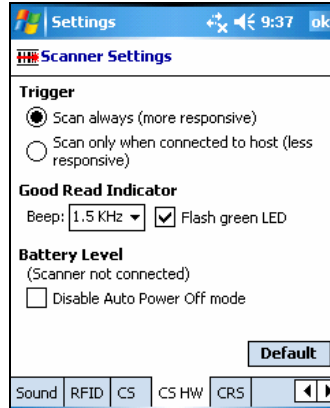


Enable Cordless Scanner support: Check this box. IMPORTANT!!!

Stack:

- **Connect!Agent:** Select if you installed Connect!Agent and would like to use it.
- **Built in:** Select if your device has a built-in *Bluetooth* radio, and you don't want to use Connect!Agent. Your *Bluetooth* stack will be reported (e.g., Widcomm).
- **Socket:** Select if using the Socket SD/CF *Bluetooth* card.

6. Tap on the CS HW tab. Enter the following settings:



- **Trigger:** Select whether you would like the CHS to scan only when a *Bluetooth* connection to the device is detected. If you require the CHS to detect a *Bluetooth* connection before each scan, scanning will be a few milliseconds slower.
- **Good Read Indicator:** Select how you would like the CHS to indicate that it has successfully read data.
- **Battery Level:** No progress bar should appear since you are not connected to the CHS.
- **Disable Auto Power Off mode:** The CHS automatically shuts off if there is no *Bluetooth* connection for 20 minutes. Check to disable.

7. After entering settings, tap **ok** to save the changes.

STEP 3: Connect CHS to Host Device with *Bluetooth*

1. Turn on the Cordless Hand Scanner. **Press the small power button for five seconds**, until you see the LED turn blue. The LED should blink blue once every second to show that the *Bluetooth* radio is on but not connected. If the LED begins blinking red, the battery needs to be recharged.



2. Prepare the *Bluetooth* hardware for your Pocket PC. **Make sure the *Bluetooth* radio is turned on. If needed, make sure a COM port is enabled for outbound *Bluetooth* Serial communications, and note the COM port number.** Refer to the documentation for your *Bluetooth* hardware for instructions.




3. If you did not install Connect!Agent, make sure a COM port is enabled for outbound *Bluetooth* serial communication. Refer to the device manual.

4. Tap Start | Programs | SocketScan.

Disregard the icons for Socket Trigger RFID, Socket Trigger Scan, and Socket Trigger Select.



5. Tap on the SocketScan icon  at the bottom of the screen. In the menu, tap Connect CS.



6. Your device will begin searching for the CHS.

- If you installed Connect!Agent, your mobile device will automatically search for and connect to the CHS. A beep will indicate the connection.



- If you did not install Connect!Agent, your device's *Bluetooth* software will search for devices. In the list of found *Bluetooth* devices, select **Socket CHS**. The device will connect to the CHS, indicated by a beep.



If using the Broadcom (Widcomm) stack, you will be prompted to configure automatic connections.

If a passkey is requested, enter 1234.

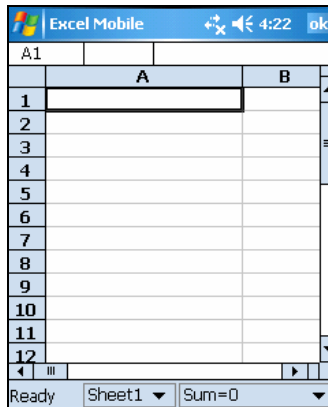
7. After your mobile device connects to the CHS, the scanner will beep once. The SocketScan icon at the bottom of the Today screen will change into a scanner icon to indicate the connection.



Connect!Agent will save information about the CHS to automate future connections to your specific unit.

STEP 4: Scan Data into Your Application

1. Start the Windows application that you want to receive the data (e.g., Excel, Notepad, etc.). Make sure a document or spreadsheet is open.



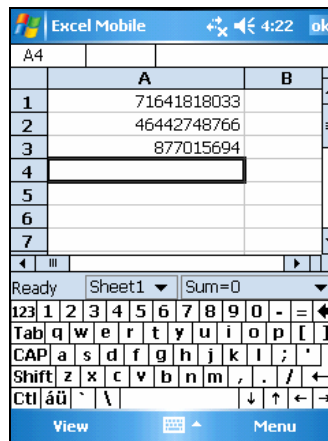
2. Place the cursor where you want data from the next scan to go.
3. Press the trigger button and scan the code.



When data is read and sent to the mobile computing device, the laser will turn off. Depending on your scanner settings, the scanner may beep and/or the Hand scanner's LED may flash green to indicate a good read.

If no data is read in a few seconds, the laser will turn off, and you must try again.

- After a successful scan, data should appear in your document. For example, after you scan a bar code into a Pocket Excel spreadsheet, data should appear in the first cell. The default “CR” (carriage return) suffix will advance the cursor to the next cell, ready for the next scan.



Wait for the “Good Scan” indication before you scan another bar code. If you try to scan too fast, the device can lock up until you stop scanning.

If your mobile device suspends or the CHS moves out of range, the connection will end. After the mobile device turns on again or returns in range, SocketScan will try to re-connect 3 times. If, after the 3 attempts, they have not re-connected, you will need to manually re-connect the devices.

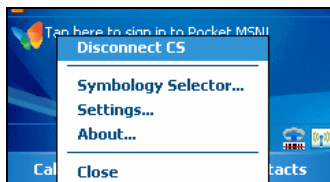
To turn off the CHS, press the power button for at least 2 seconds, until the LED stops blinking.

For information about third-party applications compatible with the CHS for asset tracking, health care, and other vertical markets, visit:
www.socketcom.com/solutions/default.asp?Type=Vertical

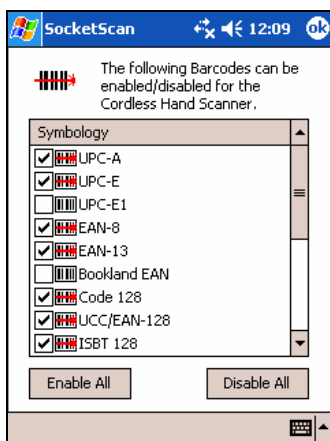
OPTIONAL: Select Symbologies

The applet makes it quick and convenient to modify which symbologies you want the scanner to recognize. By default, the scanner is set to recognize nine of the most common symbologies.

1. Tap on the SocketScan icon. In the pop-up menu, tap Symbology Selector...



2. In the screen that appears, check the symbologies you wish to enable. Uncheck those you wish to disable. Tap ok.



Symbologies not supported by the CHS will be grayed out. Enabling all possible symbologies will make the decode process slightly longer.

OPTIONAL: Configure Prefix/Suffixes

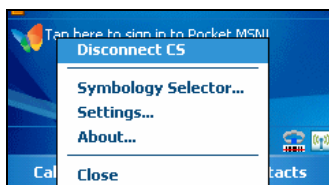
The SocketScan applet lets you specify prefix and/or suffix characters to be added automatically to the data you scan. This helps to further eliminate manual data entry.

1. Tap on the SocketScan icon. In the pop-up menu, tap Settings.

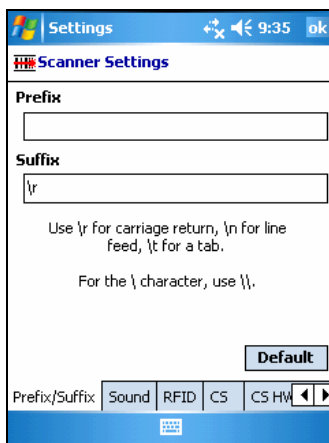


You can configure prefix/suffixes whether or not the CHS is connected to your Pocket PC.

2. In the pop-up menu, select Prefix/Suffix...



3. In the screen that appears, enter the characters you want to be appended to each scan (128 character maximum). Tap **OK**.



By default, SocketScan enters a carriage return after every data scan.

- Use `\r` for Carriage Return, `\n` for Linefeed, `\t` for Tab., `\\` for a single `\` character.
- Other characters can be typed or entered using the format `\nnn`, where `nnn` = ASCII character 001 through 255.

OPTIONAL: Run Scan Demo

Scan Demo makes it easy to determine the symbology, number of characters, and decoded data (in either ASCII or Hex) of any bar code supported by the scanner. This is especially useful if you encounter a bar code that the scanner will not decode by default.

1. Tap Start | Programs | Scan Demo.



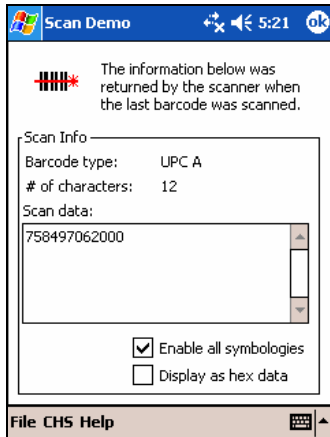
Accessing Scan Demo disconnects the Bluetooth link. If you have not configured the CHS to automatically connect, select the CHS tab at the bottom of the page to re-establish this link.

2. The Scan Demo screen will appear. If desired, use the check boxes at the bottom of the screen to modify the test.

Enable all symbologies: By default, this option is checked. Different symbologies can sometimes interpret the same bar code differently, so you may want to uncheck this option.

Display as hex data: Check this box to view scanned data in hexadecimal format. Otherwise, data will appear as ASCII.

3. Scan the bar code. Scan Demo will report the properties of the bar code.



4 | Setup for Palm

This chapter explains how to install and use the Cordless Hand Scanner (CHS) with a *Bluetooth* enabled device running Palm OS 5.2 or later.

Before you begin the instructions in this chapter, make sure you have installed the batteries (and tether, if desired), and charged the scanner, as described in Chapter 2, “Hardware Setup.”



Setup Summary

STEP 1: Install the software.


STEP 2: Connect scanner to PDA with *Bluetooth*.

STEP 3: Scan data into your application.

OPTIONAL:

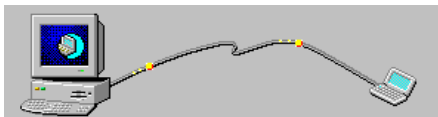
- Configure scan settings.
- Select symbologies.
- Test bar codes.



For help using SocketScan, tap on the  button on the top of any screen.

STEP 1: Install the Software

1. Delete any bar code scanning software already installed in your device, including from other companies. Make sure the software is closed. Tap **Home**, then tap **Menu**. In the App menu, tap **Delete**. Use the utility to delete the software.
2. Use HotSync and a serial/USB cable or cradle to connect your device to a host PC.



3. Insert the installation CD into your host PC.
4. Use My Computer or Windows Explorer to access your CD drive.



5. In the CD, open the SocketScanPalm folder and click on Setup.



6. The SocketScan Installation program will begin. Follow the instructions on your screen to install the software.



7. When software installation is complete, disconnect the device from the host PC. Soft reset the device by pressing the reset button.

STEP 2: Connect CHS to PDA with *Bluetooth*

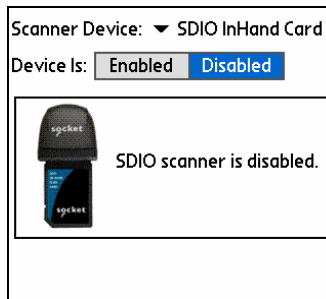
1. Turn on the Cordless Hand Scanner. **Press the small power button for five seconds**, until you see the LED turn blue. The LED should blink blue once every second to show that the *Bluetooth* radio is on but not connected. If the LED begins blinking red, the battery needs to be recharged.



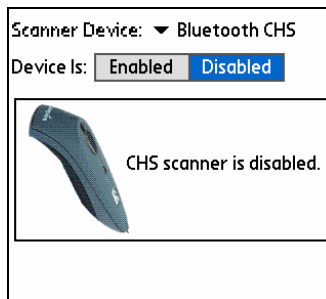
2. Start SocketScan. Tap Home. In the upper right corner, make sure All is selected. Scroll down and tap on the SocketScan icon.



3. The main screen of SocketScan will appear, showing a picture of the Socket SDIO In-Hand Scan Card. In the Scanner Device drop-down menu, select **Bluetooth CHS**.



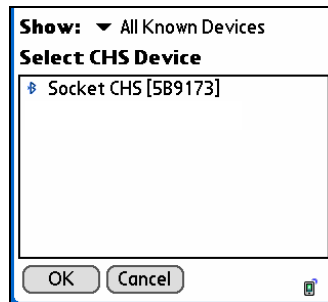
4. The screen will display a picture of the Cordless Hand Scanner. In the Device is field, tap **Enabled**.



5. If you have not yet enabled your *Bluetooth* hardware, a message will ask if you wish to do so. Tap OK.



6. Your device will begin searching for *Bluetooth* enabled devices in range. After it finishes searching, select the Socket CHS from the list of discovered devices and tap OK.

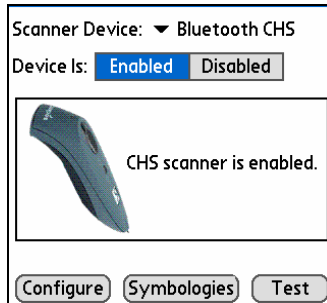


The Cordless Hand Scanner will appear as Socket CHS [xxxxxx], where the characters in brackets are the last 6 characters of the scanner's *Bluetooth* MAC address.

7. Your device will connect to the CHS. If a passkey is requested, enter **1234**.



8. When the scanner connects to your device, the CHS will beep once. The main screen of SocketScan will also indicate that the scanner is enabled, and the **Configure**, **Symbologies**, and **Test** buttons will appear at the bottom of the screen.



If the PDA suspends, the CHS will automatically re-connect once you turn on the PDA again.



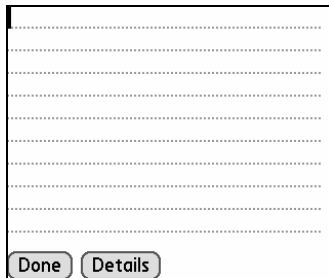
If the CHS is taken out of range, or if the Bluetooth connection is otherwise lost, to resume operation you must enable it again in SocketScan.



For more information about the meanings of LEDs and beeps, please see page 9.

STEP 6: Scan Data into Your Application

1. Start the Palm application that you want to receive the data (e.g., Memo). Make sure a document or spreadsheet is open.



Note: You cannot scan data into Palm Note Pad, because it is a graphics-based program.

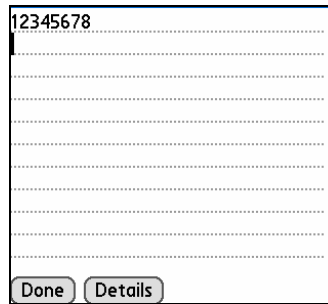
2. Press the trigger button and scan the code.



When data is read and transmitted to the host, the laser will turn off. Depending on the settings chosen in the SocketScan Configure screen, the scanner may beep and/or the LED may flash green.

If the Scanner fails to read data within a few seconds, the laser will turn off, and you must try again.

3. After a successful scan, data should appear in your document. For example, after you scan a bar code into a Memo, data should appear in the first line. The default “CR” (carriage return) suffix will advance the cursor to the next line, ready for the next scan.

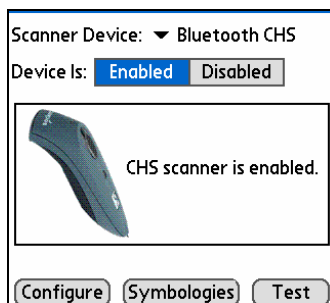


Wait for the “Good Scan” indication before you scan another bar code. If you try to scan too fast, the device can lock up until you stop scanning.

For information about bar code scanning applications for asset tracking, health care and other vertical markets, please visit: www.socketcom.com/solutions

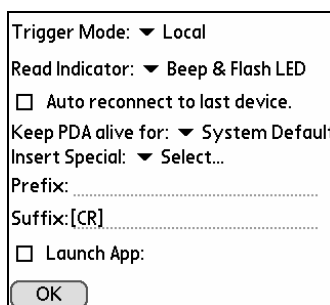
OPTIONAL: Configure Scan Settings

1. Make sure the main screen of SocketScan reports that the CHS is enabled. Tap Configure.



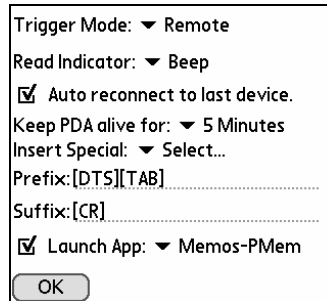
You can configure prefix/suffixes whether or not the CHS is connected to your device.

2. The Configure screen will appear. Enter any settings, as desired:



- **Trigger Mode:** Select **Local** to directly trigger the scanner whenever you press the trigger button. Select **Remote** to have the scanner verify a connection to your PDA before it activates the laser.
- **Read Indicator:** Select how you would like the CHS to indicate that data was successfully decoded and transmitted to the PDA.
- **Auto reconnect to last device:** Check to have your PDA automatically connect to the last CHS unit it connected to whenever you tap **Enabled** in the main screen of SocketScan.
- **Keep PDA alive for:** Select how long you would like the PDA to stay alive after the last scan. This feature allows you to scan data for several hours without touching the PDA, as long as you scan at least once before the time limit passes. Select **System Default** to keep your PDA alive for the amount of time set as default in the PDA's system settings.

- **Insert Special:** First tap in the **Prefix** or **Suffix** field to indicate where you would like to enter special data, such as a date stamp, time stamp, tab, etc. Then tap on the **Insert Special** drop-down menu and select the type of special data to enter.



- **Prefix:** Tap to enter characters you would like appended before scanned data (128 character maximum). Besides special data items, only printable ASCII characters can be used.
- **Suffix:** Tap to enter characters you would like appended after scanned data (128 character maximum). Besides special data items, only printable ASCII characters can be used. The default suffix is a carriage return [CR].
- **Launch App:** Check the box, then use the drop-down menu that appears to select an application that you would like SocketScan to automatically enter data into whenever you press the trigger button. The application will launch only when you are outside of SocketScan (i.e., SocketScan is running in the background).



If you configured SocketScan to launch an application, whenever you scan data into a document, the data will only be entered after any existing data, no matter where you place the cursor. You will not be able to scan data into the middle of existing data.

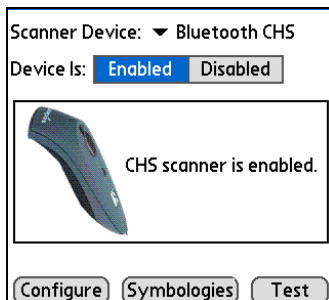
For example, if you already scanned three lines of data into Memo, the next data you scan will appear on the fourth line, even if you place the cursor on a previous line before scanning.

3. After entering any settings, tap **OK** to make the changes take effect.

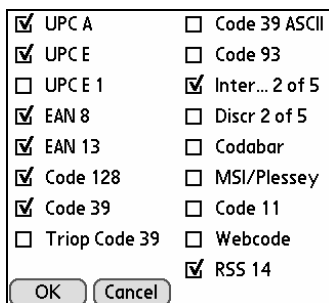
OPTIONAL: Select Symbologies

The feature makes it easy to modify which symbologies you want the scanner to recognize. By default, the scanner is set to recognize eight of the most common symbologies.

1. In the main screen of SocketScan, tap **Symbologies**.



2. In the screen that appears, check the symbologies you wish to enable. Uncheck those you wish to disable. Tap **OK**.

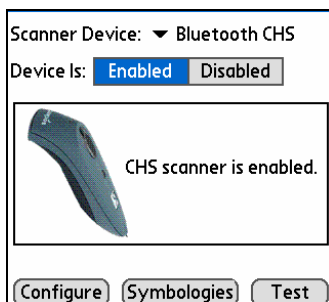


Enabling all possible symbologies will make the decode process slightly longer.

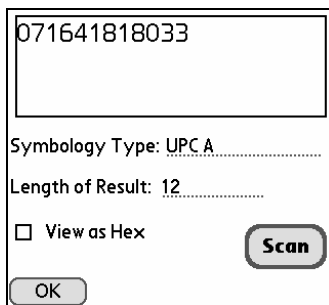
OPTIONAL: Test Bar Codes

SocketScan includes a Test feature that makes it easy to determine the symbology, number of characters, and decoded data (in either ASCII or Hex) of any bar code supported by the scanner. This is especially useful if you encounter a bar code that the scanner will not decode by default.

1. In the main screen of SocketScan, tap Test.



2. The Test Scan screen will appear. If desired, check the View as Hex box to view scanned data in hexadecimal format. Otherwise, data will appear as ASCII.
3. Scan the bar code. You can either press the trigger button on the CHS, or press the Scan button on the screen. SocketScan will report the properties of the bar code.



4. After you complete your testing, tap OK.

5 | Setup for Windows XP

This chapter explains how to install and use the Cordless Hand Scanner (CHS) with a *Bluetooth* enabled computer running Windows XP or Windows XP Tablet Edition.

Before you begin the instructions in this chapter, make sure you have installed the batteries (and tether, if desired), and charged the scanner, as described in Chapter 2, “Hardware Setup.”



Setup Summary

STEP 1: Install the software.

STEP 2: Connect scanner to computer with *Bluetooth*.

STEP 3: Configure scanner settings.

STEP 4: Scan data into your application.

OPTIONAL:

- Assign sound and prefix/suffixes.
- Assign a trigger button.
- Select symbologies.

STEP 1: Install the Software

You must install SocketScan, but installing Connect!Agent is optional. Connect!Agent is only compatible with the IVT BlueSoleil and Microsoft XP SP2 *Bluetooth* stacks.



Should I install Connect!Agent?

Connect!Agent simplifies the Bluetooth setup and connection process. Once the CHS is turned on and SocketScan is running, Connect!Agent will automatically set up and manage the Bluetooth connection. It runs in the background and requires no interaction from the user.

Software installation instructions

ADVANCED USERS: Refer to the README file for CAB installation instructions.

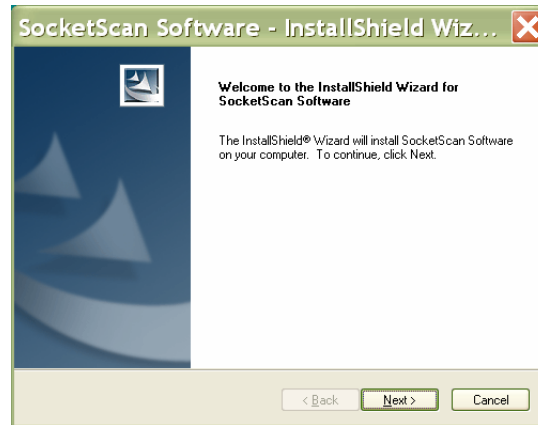
1. Delete any bar code scanning software already installed in your computer, including software from other companies. Make sure the software is closed. Click Start | Control Panel | Add or Remove Programs. Use the utility to delete the software.
2. Insert the SocketScan installation CD into the CD drive of your computer.
3. Use My Computer or Windows Explorer to access your CD drive.



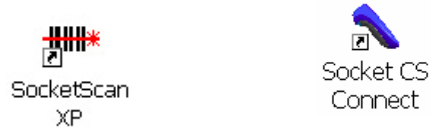
4. In the CD contents, open the SocketScanXP folder and click on the Setup.exe file.



5. The installation wizard will launch. Follow the wizard to install the software.



6. After software installation, icons for SocketScanXP and Socket CS Connect will appear on your desktop.



7. If desired, install Connect!Agent by opening the Connect!Agent folder in the CD and launching the Connect!AgentXPSetup_S.exe file. Follow the wizard to install the software.



STEP 2: Configure *Bluetooth* Settings

Skip this step if you installed and want to use **Connect!Agent**, which automatically configures the *Bluetooth* settings. **Connect!Agent** works only with the **Socket (IVT)** and **Microsoft** stacks.

If you will not be using **Connect!Agent**, follow the appropriate instructions for your *Bluetooth* stack. Configuration is only needed the first time you connect the **CHS** to your computer.

Socket Connection Kit with IVT BlueSoleil software (CF or USB):

1. Turn on the Cordless Hand Scanner. **Press the small power button for five seconds, until you see the LED turn blue.** The LED should blink blue once per second to show that the *Bluetooth* radio is on but not connected.
2. Insert the **Socket** card into your computer, using a **CF-to-PC Card** adapter, or insert the **Class 1 USB Adapter** into the **USB** port.



3. Start **BlueSoleil**. Click on the **BlueSoleil** icon on your desktop, or click **Start | All Programs | IVT BlueSoleil | BlueSoleil**.
4. Click **My Bluetooth | Security**. Check the box **Set Default Passkey** and enter the default PIN **1234** in the field below.



- Double-click on the red ball to search for the Cordless Hand Scanner, which will appear as Socket CHS [xxxxxx].

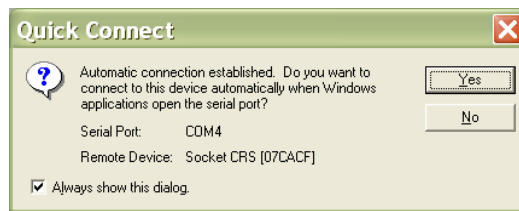


The characters in brackets are the last 6 characters of the scanner's Bluetooth MAC address.

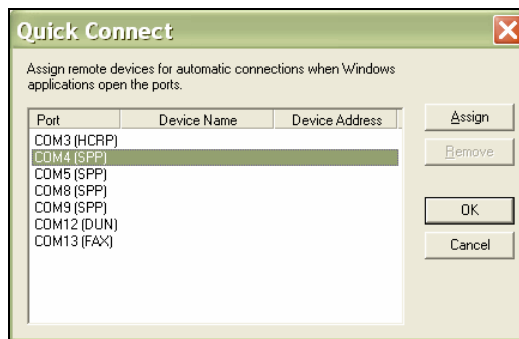
- Double-click on the Socket CHS icon to begin the service discovery. After the Serial Port Service icon is highlighted at the top of the screen, right-click on the Serial Port Service icon and click Connect.



- BlueSoleil will ask whether you want to connect to the CHS automatically when Windows applications open the serial port. Click Yes.



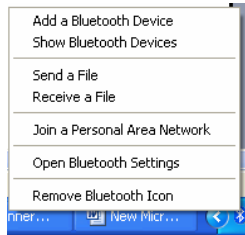
- When the devices connect, the CHS will beep once, and the Bluetooth logo in the task tray will turn green.
- Click Tools | Configurations | Quick Connect. Choose a COM port assigned to SPP (Serial Port Profile) and click Assign. In the next screen, select the CHS and click OK. **Remember which COM number you assigned to the CHS** and click OK.



Microsoft Windows XP Service Pack 2:

Refer to the documentation for your *Bluetooth* hardware/software for instructions on discovering and connecting to the CHS.

1. Turn on the Cordless Hand Scanner. **Press the small power button for five seconds, until you see the LED turn blue.** The LED should blink blue once per second to show that the *Bluetooth* radio is on but not connected.
2. Turn on the *Bluetooth* radio of your computer.
3. Use the Add Bluetooth Device Wizard to discover and connect to the Cordless Hand Scanner. Click on the *Bluetooth* icon in the task tray. In the pop-up menu, click **Add a Bluetooth Device**.



4. During the device discovery, the Cordless Hand Scanner will appear as **Socket CHS [xxxxxx]**



The characters in brackets are the last 6 characters of the scanner's Bluetooth MAC address.

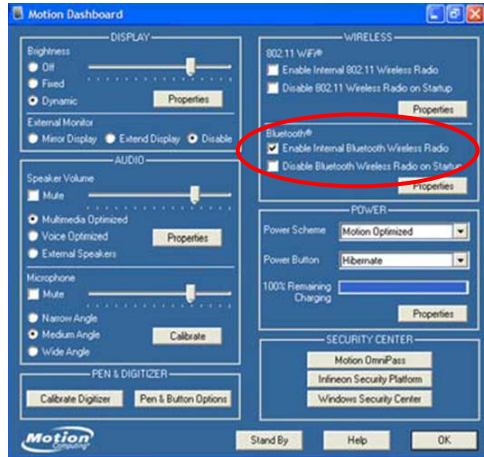
5. In the passkey options screen, select the option **Let me choose my own passkey** and enter a passkey of your choice.
6. To indicate the connection, the CHS will beep once.
7. In the last screen of the Add Bluetooth Device Wizard, note the COM number of the **Outgoing COM port**.



Toshiba Bluetooth Stack:

These instructions are based on a Motion Computing tablet. Refer to the manual for your *Bluetooth* hardware/software for specific *Bluetooth* usage instructions.

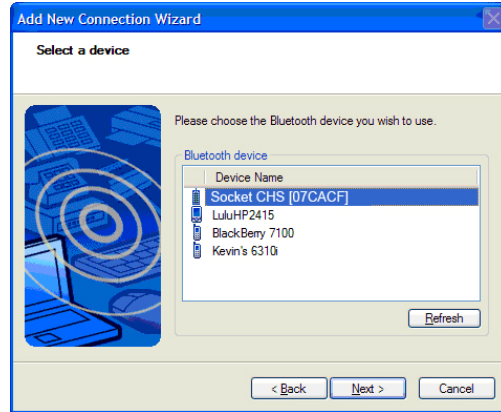
1. Turn on the *Bluetooth* radio of your computer. Tap on the Dashboard icon on the desktop. In the dashboard, check **Enable Internal Bluetooth Wireless Radio**. Tap OK.



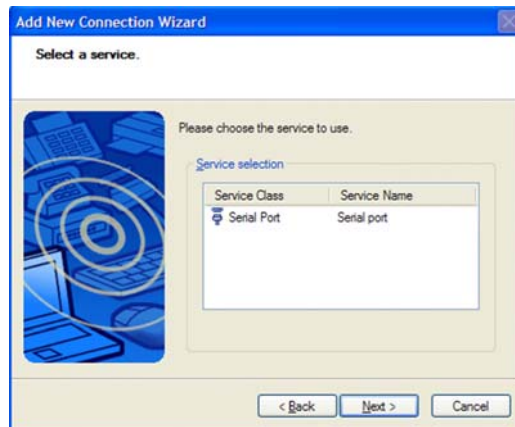
2. Turn on the Cordless Hand Scanner. **Press the small power button for five seconds, until you see the LED turn blue.** The LED should blink blue once per second to show that the *Bluetooth* radio is on but not connected.
3. Double-tap on the *Bluetooth* icon at the bottom of your screen.
4. In *Bluetooth* Settings, tap **New Connection** at the bottom of the screen.
5. The Add New Connection Wizard will launch. Select **Custom Mode** and tap **Next**. The tablet will begin searching for *Bluetooth* devices in range.



6. In the list of found devices, select **Socket CHS [xxxxxx]**. Tap **Next**.



7. If a passkey is requested, enter the default PIN **1234**. Tap **OK**. To indicate the connection, the CHS will beep once.
8. In the list of device services, select **Serial Port**. Tap **Next**.

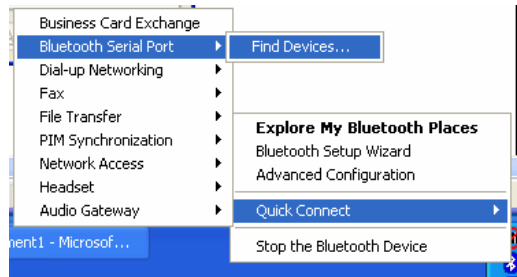


9. Note which COM port is assigned to the CHS.

Broadcom (Widcomm) Bluetooth Stack:

Refer to the manual for your *Bluetooth* hardware/software for specific instructions. Many *Bluetooth* USB adapters use this stack.

1. Turn on the *Bluetooth* radio of your computer.
2. Turn on the Cordless Hand Scanner. **Press the small power button for five seconds, until you see the LED turn blue.** The LED should blink blue once per second to show that the *Bluetooth* radio is on but not connected.
3. Perform a Quick Connect to a *Bluetooth* Serial Port. Click the *Bluetooth* icon in the task tray. Click Quick Connect | Bluetooth Serial Port | Find Devices.



It is essential to connect to the CHS via Quick Connect because this sets the CHS as your default Bluetooth serial device.


4. During the device search, the CHS will appear as Socket CHS [xxxxxx]

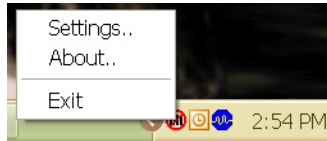
The characters in brackets are the last 6 characters of the scanner's Bluetooth MAC address.

5. If a passkey is requested, enter **1234**. To indicate the connection, the CHS will beep once.

By default, the Bluetooth software will ask you for the passkey each time you connect. To stop the automatic prompts, under Advanced Configuration, disable the Secure Connection requirement for both the Local Service and Client Application, then unpair the devices. Refer to the documentation for your Bluetooth hardware/software for complete instructions.

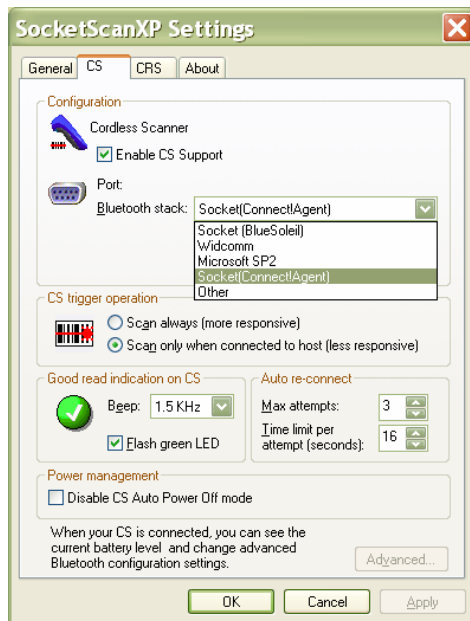
STEP 3: Configure Scanner Settings

1. Click the SocketScan icon  at the bottom of the screen. In the pop-up menu, click Settings.



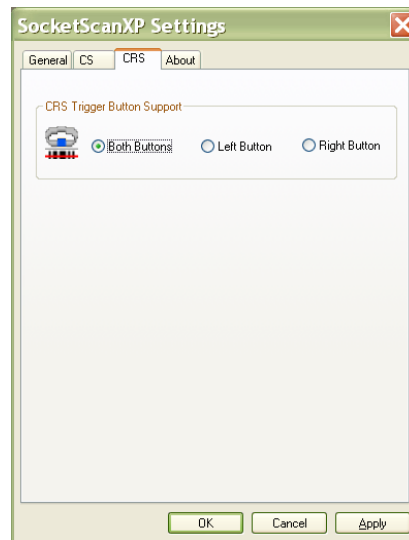
Alternatively, click Start | Control Panel | SocketScanXP Settings.

2. Tap on the CS tab. Enter the following settings:



- **Enable CS support:** Check this box. **IMPORTANT!!!**
- **Bluetooth stack:** Select **Socket (Connect!Agent)** if you want to use it. Otherwise, select your computer's *Bluetooth* stack. The Connect!Agent option will only appear if you installed the Connect!Agent software.
- **COM Port:** Select the COM port number assigned to the CHS. This field will only appear for some *Bluetooth* stacks.
- **CS trigger operation:** Select whether you want the CHS to scan only when a *Bluetooth* connection to the device is detected. If you select

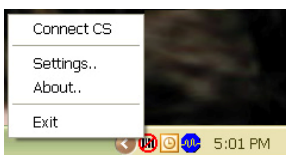
- Scan only when connected to host, scanning will be a few milliseconds slower.
 - Good read indication on CS: Select how you would like the CHS to indicate that it has successfully read data.
 - Auto re-connect: Select the maximum number of attempts and time limit per attempt for the CHS to try to reconnect to your computer in case they are moved out of range from each other.
 - Battery Level: No progress bar should appear since you are not connected to the CHS.
 - Power management: The CHS automatically shuts off if there is no *Bluetooth* connection for 20 minutes. Check to disable.
 - Advanced: When the computer is connected to the CHS, you can modify the *Bluetooth* friendly name and security settings of the CHS.
3. Click on the CHS tab. Select which button on the CHS you would like to use to trigger the scanner.



4. After entering settings, click OK to save the changes.
5. If SocketScan is open, you will be prompted to exit and restart SocketScan. Click OK. Click on the SocketScan icon at the bottom of your screen and in the pop-up menu, click Exit.

STEP 4: Start SocketScan and Connect to CHS

1. If you did not install Connect!Agent start your computer's *Bluetooth* software and make sure the *Bluetooth* radio is turned on.
2. Start SocketScan XP. Click on the icon on the desktop.
3. Right-click the SocketScan icon at the bottom of the screen and click **Connect CS**.



*If you installed Connect!Agent, it will automatically open the Bluetooth software and turn on the Bluetooth radio when you click **Connect CS**.*

*After you configure the correct Bluetooth hardware settings in SocketScan, the **Connect CS** menu option allows you to connect to the CHS directly from SocketScan, instead of manually connecting via your Bluetooth software.*

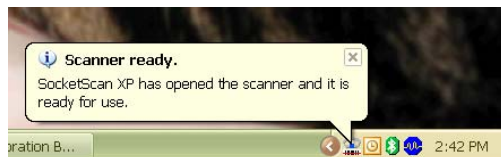
*The **Connect CS** option will not appear unless you checked the box **Enable CS Support** in the SocketScanXP settings.*

SocketScan will not be able to connect to the CHS if you have another device assigned as your favorite or default Bluetooth serial device.

4. If you are using Connect!Agent, and this is your first time connecting, Connect!Agent will automatically begin searching for the CHS. After it finds the CHS, it will automatically configure the connection.



5. SocketScan will connect the computer to the CHS, indicated by a beep and a status bubble.

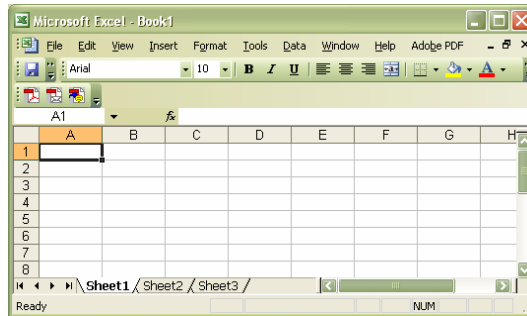


- The task tray icon at the bottom of your screen will change to an image of a scanner to indicate that SocketScan is connected to the CHS.



STEP 5: Scan Data into Your Application

- Start the Windows application that you want to enter scanned data into (e.g., Excel, Notepad, etc.). Make sure a document or spreadsheet is open.



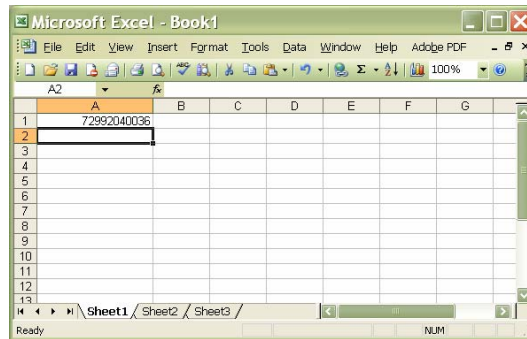
- Place the cursor where you want data from the next scan to be entered.
- Press the trigger button and aim your finger at the bar code. The red laser beam should cover the entire width of the bar code. See Chapter 1 for scanning tips.



When data is read and sent to the mobile computing device, the laser will turn off. Depending on your scanner settings, the scanner may beep and/or the Hand scanner's LED may flash green to indicate a good read.

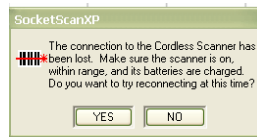
If no data is read in a few seconds, the laser will turn off, and you must try again.

4. After a successful scan, data should appear in your document. By default, the cursor automatically advances to the next cell or line, ready for the next scan.



Wait for the “Good Scan” indication before you scan another bar code. If you try to scan too fast, the device can lock up until you stop scanning.

If your computer suspends or the CHS is moved out of range, the connection will be lost. After the computer turns on again or returns in range, SocketScan will try to re-connect according to the “auto re-connect” settings you chose in SocketScan.



After the time limit for re-connection attempts has passed, you can click on the Socket CS Connect icon on the desktop to manually initiate re-connection.



To end the connection, click on the SocketScan icon and click **Disconnect CS**. The CHS will beep twice to indicate the connection has ended.

To turn off the CHS, press the power button on the wrist unit for at least 2 seconds, until the LED stops blinking.

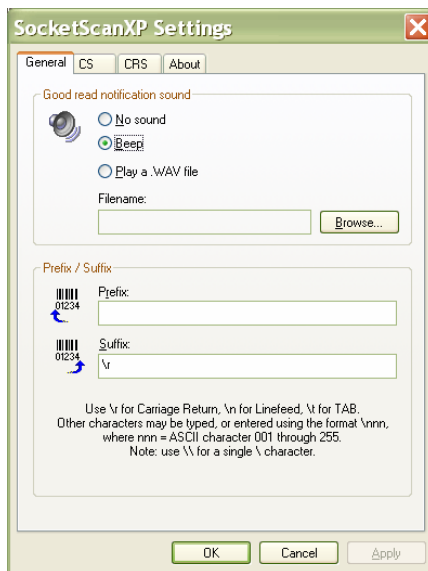
For information about third-party applications compatible with the CHS for asset tracking, warehouse mobility, and other vertical markets, visit: www.socketcom.com/solutions/default.asp?Type=Vertical

OPTIONAL: Assign Sound and Prefix/Suffix Settings



You can configure these settings whether or not the CHS is connected to your computer.

1. In SocketScanXP Settings, click on the General tab.



2. Adjust any settings as desired:

Good read notification sound:

Select which sound you would like your computer to use to indicate good readings of data. By default, your computer will beep.

- If you would like your computer to play a .WAV file, select **Play a .WAV file** and click **Browse** to indicate the file location.

Prefix/Suffix:

Enter any prefix and/or suffixes you would like SocketScan to automatically append to scanned data (128 character max., printable ASCII characters only). By default, SocketScan will enter a carriage return after every data scan.

- Use `\r` for Carriage Return, `\n` for Linefeed, `\t` for Tab., `\\` for a single `\` character.
- Other characters can be typed or entered using the format `\nnn`, where `nnn` = ASCII character 001 through 255.

3. After adjusting any settings, click **OK**. As prompted, exit and restart SocketScanXP to have your changes take effect.

OPTIONAL: Configure Advanced *Bluetooth* Settings

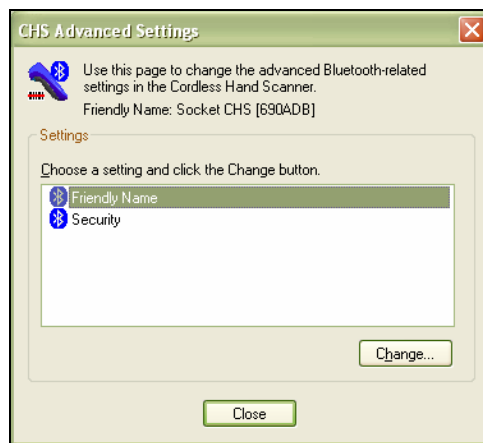
The SocketScanXP utility enables you configure advanced *Bluetooth* settings of the CHS, including the *Bluetooth* friendly name and security settings.

1. In SocketScanXP Settings, click on the CS tab.



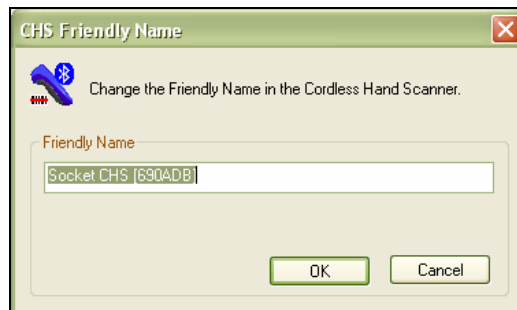
The Trigger and Barcodes tabs will only appear if you are connected to the CHS.

2. At the bottom of the CHS screen, the CHS battery level will be indicated by a status bar. Click **Advanced**.
3. The CHS Advanced Settings screen will appear, reporting the current *Bluetooth* friendly name assigned to the CHS.
4. If desired, select **Friendly Name** or **Security** and click **Change**.



5. In the screen that appears, enter any changes and click **OK**.

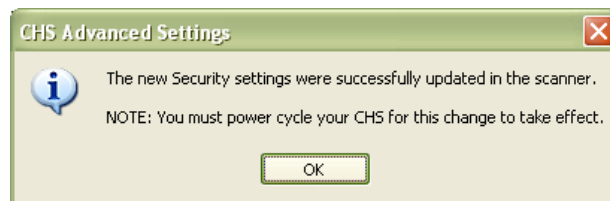
CHS Friendly Name: Enter a new friendly name and click **OK**.



CHS Security Settings: Enter a PIN code and/or any authentication or encryption settings. If desired, click **Delete Bonding** to delete any bonding/pairing information in the CHS. After making any changes, click **OK**.



6. If you modified any security settings, you will be prompted to turn your CHS off and back on to make the changes take effect. Read the message and click **OK**. Turn the CHS off and back on again.



7. When you return to the CHS Advanced Settings screen, click **Close**.
8. In the SocketScanXP Settings screen, click **OK**.
9. Exit and restart SocketScanXP to have your changes take effect.

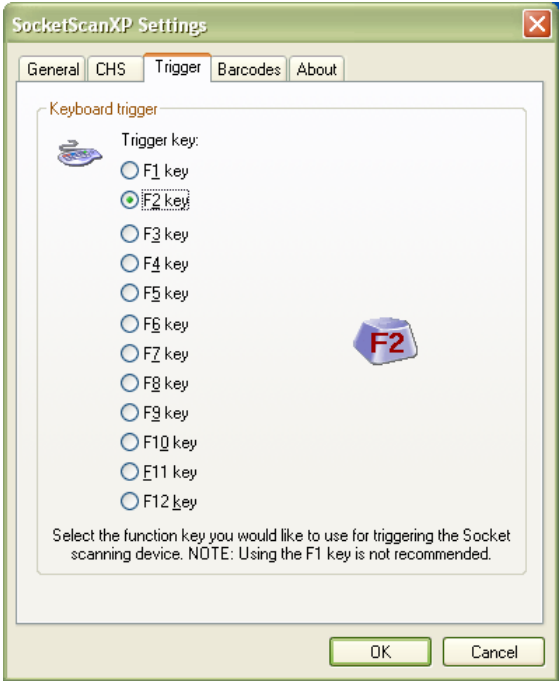
OPTIONAL: Assign a Trigger Button

The SocketScanXP utility enables you to assign one of your computer's function keys to trigger the CHS.

- 1. In SocketScanXP Settings, click on the Trigger tab.



The Trigger and Barcodes tabs will only appear if you are connected to the CHS.



- 2. Select the function key you would like to use as a trigger key. Click OK.
- 3. As prompted, exit and restart SocketScanXP to have your changes take effect.

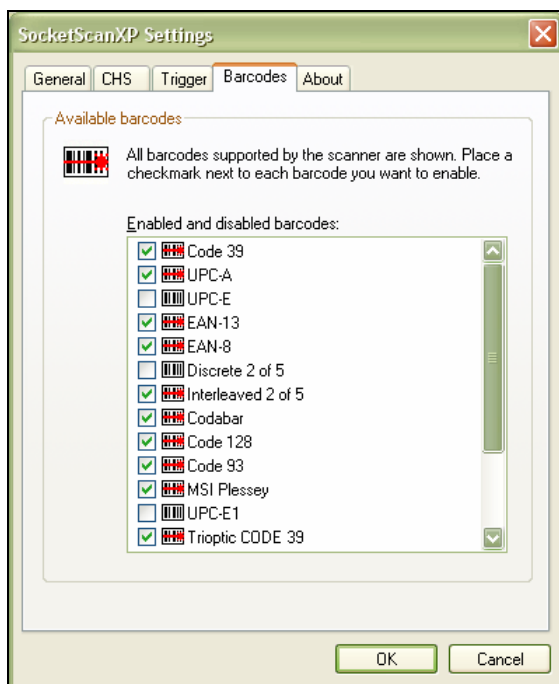
OPTIONAL: Select Symbolologies

The SocketScanXP utility makes it easy to modify which symbolologies you want the scanner to recognize and decode.

1. In SocketScanXP Settings, click on the **Barcodes** tab.



*The **Trigger** and **Barcodes** tabs will only appear if you are connected to the CHS.*



2. Check the symbolologies you wish to enable. Uncheck those you wish to disable. Click **OK**.



Enabling all possible symbolologies will make the decode process slightly longer.

3. As prompted, exit and restart SocketScanXP to have your changes take effect.

OPTIONAL: View Version Information

1. In SocketScanXP Settings, click on the About tab.



The Trigger and Barcodes tabs will only appear if you are connected to the CHS.



2. View the control panel applet (CPL) and CHS firmware version information. Click OK.



To view the SocketScan software version, click on the SocketScan icon and in the menu, click About.

Appendix A

Specifications

Physical Characteristics

Size: 125l x 31h x 35w (mm) 4.9l x 1.2h x 1.4w (in.)

Total Mass: approx. 90 g (0.2 lb)

Power Source: Two AAA NiMH rechargeable batteries

Expected Battery Life with Normal Operation (connected via Bluetooth and minimum 2,000 bar code scans): 8 hours

Operating Temp: 32 to 120°F (0 to 50°C)

Operating System Support:

- Windows Mobile 2003, 2003SE, 5.0
- Windows XP, XP Tablet Edition
- Palm OS v5.2 and later

For information about using the CHS with Symbian OS, please visit:

www.socketcom.com/product/cordless.asp?Type=Scanner

2005 Sunrise Date Compliant

Scanning Characteristics

Bar Code Symbolologies Decoded: Code 39, UPC/EAN/JAN, MSI, Code 128, Code 93, Codabar, I 2 of 5, D 2 of 5, RSS-14

Laser: Class 1 (CHS 7M) with Fuzzy Logic (Optional Class 2 (CHS 7P) with Fuzzy Logic)

Scan Angle: 46.5°

Laser Scanner Performance:

Scan Repetition Rate: 50 (± 3) scans/sec (bi-directional)

Decode Distances: 2.2 to 40+ inches depends on symbol size, symbology, label media, W-N Ratio, scan angle

Bluetooth Characteristics

Protocol: Bluetooth 2.45 GHz ISM band frequency hopping

Antenna: Integrated

Radio Range: Up to 330 ft (100 m), depending on environment

Connection: Point-to-point *Security:* Encrypted link

RF Power: Class 1 radio; Typical Output: 14 dbm

Bluetooth Stack Support

- Socket Drakar v1.4 (from Socket SD/CF Connection Kit)
- IVT BlueSoleil v1.4.7 or greater (from Socket CF + Adapter/USB Connection Kits)
- Broadcom (Widcomm) v1.4
- Microsoft *Bluetooth* stack for Windows Mobile
- Microsoft Windows XP SP 2
- Palm *Bluetooth* Stack
- Toshiba *Bluetooth* stack 3.03.06 or greater

Certification/Compliance

FCC: Part 15, Class B CE: EN55024:1998
C-TICK: s.182 *Bluetooth* 1.1 TELEC
ETS 300 328 ETS 300 826

About Bluetooth Range

The Cordless Hand Scanner features a powerful Class 1 *Bluetooth* radio to provide the maximum possible range. As with all wireless technologies, the connection range can vary widely depending on many factors such as the brand and placement of the host device, the type and size of physical obstacles and the presence and activity level of competing radio transmissions.

In range testing of the CHS while connected to a variety of typical host devices with Class 2 radios, functional connection distances from 18 to over 100 feet have been experienced depending on the environment. The following conditions appear to reduce the *Bluetooth* connection range:

- The presence of soft, absorbent materials such as paper, fiberglass insulation, foam material in office cubical walls, carpeting and, to a lesser extent, even sheetrock and wood construction materials. Hard materials such as concrete increase the range.
- Human bodies or containers of liquid positioned between the host and the CHS.
- The presence and activity level of competing *Bluetooth* or 802.11 (Wi-Fi) systems using the same 2.4 GHz frequency.
- Metal in a grid pattern, such as chain link fencing or chicken wire. This type of material may block the *Bluetooth* (or Wi-Fi) signal completely.

Appendix B

Safety and Usage Tips

About *Bluetooth* and Health

Bluetooth wireless technology allows you to use short-range radio signals to connect a variety of devices, such as bar code scanners, mobile phones, Pocket PCs, notebook computers, printers, LAN access points, and many other devices at home or work. These radio signals replace the cables that have traditionally connected these devices.

Bluetooth products have small radio transmitters and receivers. Output power is normally very low, only 1 mW (1/1000 of a watt). This gives a working range of approximately 10 meters.

The maximum exposure levels from *Bluetooth* products are far below recommended safety guidelines. At most, typical *Bluetooth* devices (1mW) reach only one percent of the prescribed safety levels.

Product Care

- Do not expose your product to liquid, moisture or extreme humidity.
- Do not expose your product to extreme high or low temperatures.
- Do not expose your product to lit candles, cigarettes, or cigars, or to open flames, etc.
- Do not drop, throw or try to bend the product, as rough treatment could damage it.
- Do not paint your product, as the paint could obstruct parts and prevent normal use.
- Do not attempt to disassemble your product: a broken warranty seal will void the warranty. The product does not contain consumer serviceable components. Should your Cordless Hand Scanner need service, please contact Socket technical support at: support@socketcom.com.
- Treat your product with care. Keep in a clean and dust-free place.
- Changes or modifications of this product, not expressly approved by Socket, may void the user's authority to operate the equipment.

Antenna Care

Do not place a metallic shield around the Cordless Hand Scanner since it will reduce the radio transmission efficiency.

Efficient Use

For optimum performance, please make sure that there is no metal surrounding your Cordless Hand Scanner.

Driving

RF energy may affect some electronic systems in motor vehicles, such as car stereo, safety equipment, etc. Check with your vehicle manufacturer to be sure that the Cordless Hand Scanner will not affect the vehicle's electronics.

Aircraft

- Turn off your Cordless Hand Scanner before boarding any aircraft.
- To prevent interference with communications systems, you must not use your Cordless Hand Scanner while the plane is in the air.
- Do not use it on the ground without permission from the crew.

Radio Frequency Exposure

Your Cordless Hand Scanner contains a radio transmitter and receiver. When in operation, it communicates with a *Bluetooth* enabled mobile computer by receiving and transmitting radio frequency (RF) magnetic fields in the frequency range 2400 to 2500 MHz. The output power of the radio transmitter is 0.001 Watt. The Cordless Hand Scanner is designed to be in compliance with the RF exposure limits set by national authorities and international health agencies¹ when installed or used separately from other antennas or radio transmitters.

¹ Examples of RF exposure standards and guidelines:

ICNIRP, "Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)", International Commission on Non-Ionizing Radiation Protection (ICNIRP), Health Physics, vol. 74, pp 494-533, April 1998.

99/519/EC, EU Council Recommendation on the limitation of exposure to the general public to electromagnetic fields 0 Hz – 300 GHz, Official Journal of the European Communities, July 12, 1999.

ANSI/IEEE C95.1-1992, "Safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz", The Institute of Electrical and Electronics Engineers, Inc., New York, 1991.

FCC Report and Order, ET Docket 93-62, FCC 96-326, Federal Communications Commission (FCC), August 1996.

Radiocommunications (Electromagnetic Radiation Human Exposure) Standard 1999, Australian Communications Authority (ACA), May 1999.

Appendix C

Bar Code Label Specifications

All bar code symbols/labels should satisfy the appropriate AIM Uniform Symbology Specification.

Background Substrate:

The bar code symbol should be printed on material (media) that is reflective and has a matte (not glossy) finish. A background diffuse reflectance of at least 70% to 80% is desirable for optimum contrast. Retro-reflective media should be used to obtain decode distances greater than 36 inches.

Ink Color and Type:

The inked bars should not exceed 25% reflectance at the wavelength that is being used for reading, whether printed with black ink or colored ink. The reflectance value should not vary more than 5% within the same character.

Voids and Specks:

The code should be printed clearly, free of voids, specks, blemishes and lines that could “fool” the scanner. Specks or blemishes in the white spaces, or false or missing bar sections could be interpreted by the reading equipment as part of the code. Generally, the width of such flaws is more serious than the height. Code symbols/ labels should be rejected if these defects are present.

Definition:

The bars in the bar code symbol should be well defined. Their edges should not be rough or fuzzy, so that the bars and spaces have the proper widths intended for the bar code symbology used.

Contrast:

Background reflectance (that of the substrate on which the codes are printed) should always provide a good contrast relative to the ink reflectance (that of the code bars). The difference between the two should be at least 37.5% at the wavelength used for reading.

Tolerance:

The ratio of the widths of bars and spaces in a bar code symbol must conform to the appropriate AIM bar code specifications and can cause problems if not correct throughout the bar code. Problems can occur when bar edges are smeared or rough, or when they exhibit voids.

Appendix D

Enabling or Disabling Symbologies

The Cordless Hand Scanner is pre-set to automatically detect and decode (auto-discriminate) the most common bar code symbologies. To enable or disable symbologies, simply use SocketScan's Symbology Selector.

Notes:

- *The length of some symbologies will change after Symbology Selector is used. See Table 1.*
- *With more symbologies enabled, the scanner must work harder to search through all the possible combinations. This may make the decoding process slightly longer.*
- *The advanced symbology parameters listed in Table 2 can only be modified by using the SocketScan Advanced Programming Guide or the SocketScan SDK. Check Socket's website for updates.*

Table 1. Default Symbologies

Symbology	Scanner Default	Default Length	Length after Symbology Selector
UPC/EAN/JAN			
UPC-A	Enabled	N/A	N/A
UPC-E	Enabled	N/A	N/A
UPC-E1	Disabled	N/A	N/A
EAN-8	Enabled	N/A	N/A
EAN-13	Enabled	N/A	N/A
Code 128 (USS-128 & UCC/EAN 128)	Enabled	Any	Any
Code 39*			
Code 39	Enabled	2 to 23	2 to 55
Trioptic Code 39	Enabled	2 to 23	2 to 55
Code 39 Full ASCII	Disabled	2 to 23	2 to 55
Code 93	Disabled	2 to 38	2 to 55
Interleaved 2 of 5*	Enabled	14 Only	2 to 55
Discrete 2 of 5*	Disabled	12 Only	2 to 55
Codabar	Disabled	5 to 55	2 to 55
MSI Plessey*	Disabled	1 to 30	2 to 55
RSS-14 (Standard, Limited, Expanded)**	Disabled	N/A	N/A

**Warning: Setting the length to "Any" may lead to inaccurate decodes of these symbologies.*

***This symbology will be added in the next release.*

Table 2. Other Symbology Parameters

Symbology Parameters	Scanner Default
UPC/EAN/JAN	
Supplementals	Disabled
Transmit Check Digit	Enabled
Bookland EAN	Disabled
Decode UPC/EAN Supplementals	Ignore
UPC/EAN Supplemental Redundancy	Seven
Transmit UPC-A Check Digit	Enabled
Transmit UPC-E Check Digit	Enabled
Transmit UPC-E1 Check Digit	Enabled
Convert UPC-E to A	Disabled
Convert UPC-E1 to A	Disabled
EAN-8 Zero Extend	Disabled
UPC/EAN Security Level	0
UPC/EAN Coupon Code	Disabled
Code 39	
Convert Code 39 to Code 32	Disabled
Code 32 Prefix	Disabled
Check Digit Verification	Disabled
Transmit Check Digit	Disabled
Code 39 Full ASCII	Disabled
Interleaved 2 of 5	
Check Digit Verification	Disabled
Transmit Check Digit	Disabled
Convert I 2 of 5 to EAN-13	Disabled
RSS-14	Disabled
RSS-14 Limited	Disabled
RSS-14 Expanded	Disabled

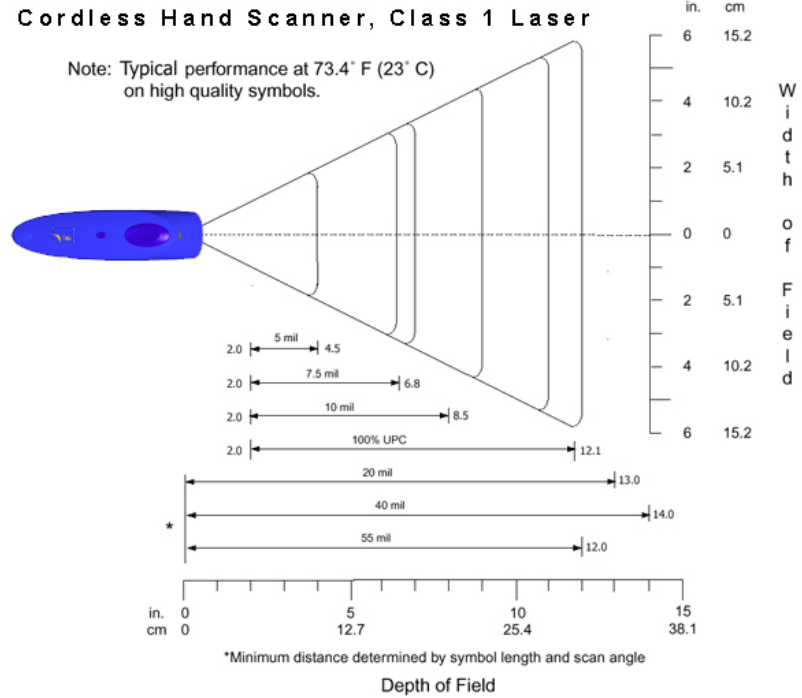
For more information on bar codes, symbologies, labels or other bar code related topics, visit any of the following web sites:

- a. www.aimglobal.org/technologies/barcode/
- b. www.aimglobal.org/aimstore/stackedsymbologies.htm
- c. www.adams1.com
- d. www.bizfonts.com
- e. www.barcode-us.com/info_center/upc.htm (UPC Codes)
- f. www.barcode-us.com/info_center/bookinfo.htm (Bookland EAN)
- g. www.dataid.com/bcsymbology.htm
- h. www.aaabarcodes.com
- i. www.snx.com/mechanics.html
- j. www.pscnet.com/html/aabcsymbologies.htm#Checksums
- k. www.idautomation.com/barcoding4beginners.html

Appendix E


Decode Zone


The decode zones for the Cordless Hand Scanner is shown below. The minimum element width (“X Dimension” or bar code “size”) is the width in thousandths of an inch (mils) of the narrowest element (bar or space) in the symbol. The figures shown are the typical scanning distances (depths of field) for selected bar code sizes. The maximum usable length of a bar code symbol (Width of Field) at any given range is also shown.



Appendix F

Troubleshooting

For help on SocketScan, tap Start | Help on a Pocket PC, or tap on the  icon on a Palm device.

SYMPTOM: I get the “No Scanner Detected”  icon in the task tray of my Windows-based mobile computer and can't trigger the laser or scan any bar codes.

POSSIBLE REASON	SOLUTION
Your mobile computer is not connected to the Cordless Hand Scanner.	Make sure the Cordless Hand Scanner is on and in range and has enough battery power. Try to reconnect.

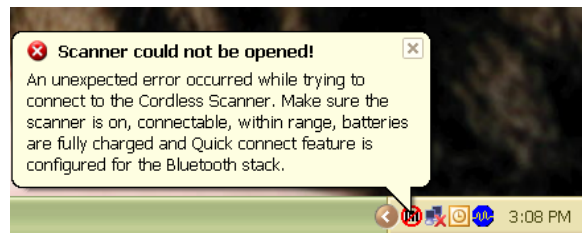
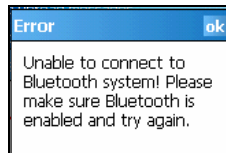
SYMPTOM: When I try to scan, the laser activates, but no data appears on my screen, and the laser eventually turns off.

POSSIBLE REASON	SOLUTION
The scanner is too close or too far from the bar code.	Practice so you get accustomed the most effective distance and scanning angle.
The bar code is incorrectly formatted or poorly printed.	Try scanning a bar code that is correctly formatted or printed well, such as on a retail package.
The bar code symbology may be disabled or not supported by the Cordless Hand Scanner.	Use Scan Demo for Windows Mobile or the Test screen for Palm OS to identify the symbology. If needed, enable the symbology by using Symbology Selector for Windows Mobile or the Symbology screen for Palm OS.
You don't have an application open to scan data into.	Open an application, such as Excel, and place the cursor where you want scanned data to go. Try scanning again.

SYMPTOM: When I scan a lot of bar codes very fast, the scanner locks up and won't work for a few seconds.

POSSIBLE REASONS	SOLUTION
You are scanning too fast for the Error Proof Protocol to confirm that the mobile computer has successfully received each scan of data.	Wait for the confirmation beep after each scan before you scan a new bar code. You may need to re-scan data that was not correctly received by the mobile computer.

SYMPTOM: My mobile computer cannot find the Cordless Hand Scanner, and/or I get an error message saying that there are connection problems.



POSSIBLE REASONS	SOLUTION
You are too far from the Cordless Hand Scanner.	Move the devices closer together, within a range of 10-15 meters.
The Cordless Hand Scanner is not turned on.	Turn on the Cordless Hand Scanner.
You have assigned another device as your favorite or default <i>Bluetooth</i> serial device.	Remove any settings that assign another device as your favorite <i>Bluetooth</i> serial device.
You are using an XP system without Connect!Agent, and you did not start the <i>Bluetooth</i> software.	Start the <i>Bluetooth</i> software.
The <i>Bluetooth</i> radio of your mobile computer is not turned on.	Turn on the <i>Bluetooth</i> radio of your mobile computer.

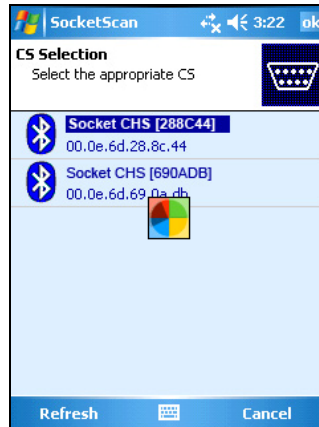
SYMPTOM: While scanning with the CHS, I turned off the Pocket PC, or my Pocket PC entered suspend mode. Now my Pocket PC won't turn on again.

POSSIBLE REASONS	SOLUTION
This is a known problem with the Widcomm stack (built into HP h221X iPAQ Pocket PCs with ROM version 1.00).	Soft reset the Pocket PC by pressing the reset button.

SYMPTOM: My Pocket PC shows an error message saying that there are insufficient device resources.

POSSIBLE REASONS	SOLUTION
Some HP iPAQ Pocket PCs are not compatible with the Socket Cordless Hand Scanner.	The CHS will not work with your Pocket PC at this time.

SYMPTOM: Connect!Agent has found multiple CHS devices, and I don't know which one to choose.



POSSIBLE REASONS	SOLUTION
This is your first time using Connect!Agent to connect to a CHS, and Connect!Agent has found multiple CHS devices using the default name.	Turn off the CHS device(s) you do not want to connect to. Tap Refresh. Connect!Agent will connect to and save information about your CHS to exclusively connect to it in the future. If you are using SocketScan XP, you can use the SocketScan settings utility to change the <i>Bluetooth</i> friendly name of your CHS.

SYMPTOM: *While scanning with the CHS, I turned off the Pocket PC, or my Pocket PC entered suspend mode. Now the CHS won't reconnect to my Pocket PC.*

POSSIBLE REASONS	SOLUTION
There is a problem with the Widcomm stack on some Pocket PCs where the CHS can be discovered but fails to communicate. Affected units include the HP iPAQ models h221X with ROM version 1.10 and h1945.	Soft reset the Pocket PC by pressing the reset button.

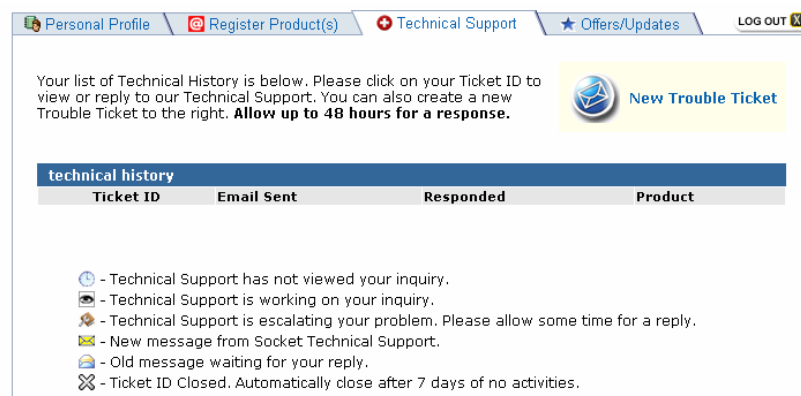
Appendix G

Technical Support

If you have trouble installing or using the Cordless Hand Scanner with *Bluetooth* Wireless Technology, contact Socket's technical support department for assistance.

IMPORTANT! To obtain technical support, you must first register your product online at www.socketcom.com/prodreg.

After you register your product and log in, click on the **Technical Support** tab, then click **New Trouble Ticket** to submit an online request for technical support. Afterwards, you can log on anytime to monitor the status of your request. If we are unable to resolve your support inquiry online, we can arrange for a technical support representative to call you at a specific time.



The screenshot shows a web interface with navigation tabs: Personal Profile, Register Product(s), Technical Support, Offers/Updates, and LOG OUT. Below the tabs, there is a message: "Your list of Technical History is below. Please click on your Ticket ID to view or reply to our Technical Support. You can also create a new Trouble Ticket to the right. Allow up to 48 hours for a response." To the right of this message is a "New Trouble Ticket" button with an envelope icon. Below the message is a table titled "technical history" with columns: Ticket ID, Email Sent, Responded, and Product. Below the table is a legend with icons and descriptions:

- Technical Support has not viewed your inquiry.
- Technical Support is working on your inquiry.
- Technical Support is escalating your problem. Please allow some time for a reply.
- New message from Socket Technical Support.
- Old message waiting for your reply.
- Ticket ID Closed. Automatically close after 7 days of no activities.

Please refrain from disassembling the Cordless Hand Scanner. Disassembly of this device will void the product warranty.

Limited Warranty

Socket Communications Incorporated (Socket) warrants this product against defects in material and workmanship, under normal use and service, for the following period from the date of purchase:

Cordless Hand Scanner: Two years

Incompatibility is not a defect covered by Socket's warranty. During the warranty period, Socket will, at its option, repair or replace the defective product at no charge when furnished with proof of retail purchase, provided that you deliver the product to Socket or to an authorized Socket Service Center.

The returned product must be accompanied by a return material authorization (RMA) number issued by Socket or by Socket's Authorized Service Center. If you ship the product, you must use the original container or equivalent and you must pay the shipping charges to Socket. Socket will pay shipping charges back to any location in the contiguous United States. This warranty applies only to the original retail purchaser and is not transferable.

Socket may, at its option, replace or repair the product with new or reconditioned parts and the returned product becomes Socket's property. Socket warrants the repaired or replaced products to be free from defects in material or workmanship for ninety (90) days after the return shipping date, or for the duration of the original warranty period, whichever is greater.

This warranty does not cover the replacement of products damaged by abuse, accident, misuse or misapplication, nor as a result of service or modification other than by Socket.

SOCKET IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING DAMAGE TO PROPERTY AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow limitation of implied warranties, or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

This product may contain fully tested, recycled parts, warranted as if new.

For warranty information, phone (510) 744-2700.

Limited Software Warranty

LIMITED WARRANTY. SOCKET warrants that the original disk or CD ROM is free from defects for 90 days from the date of delivery of the SOFTWARE.

CUSTOMER REMEDIES. SOCKET'S entire liability and your exclusive remedy shall be, at SOCKET'S option, either (a) return of the price paid or (b) replacement of the SOFTWARE which does not meet SOCKET'S Limited Warranty and which is returned to SOCKET with a copy of your receipt. Any replacement SOFTWARE will be warranted for the remainder of the original warranty period or 30 days, whichever is longer. **THESE REMEDIES ARE NOT AVAILABLE OUTSIDE OF THE UNITED STATES OF AMERICA.**

NO OTHER WARRANTIES. SOCKET disclaims all other warranties, either express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the SOFTWARE and the accompanying written materials. This limited warranty gives you specific legal rights. You may have others which vary from state to state.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES. In no event shall SOCKET or its suppliers be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or inability to use the SOFTWARE, even if SOCKET has been advised of the possibility of such damages. Because some states do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

EXPORT LAW ASSURANCES. You may not use or otherwise export or reexport the SOFTWARE except as authorized by United States law and laws of the jurisdiction in which the SOFTWARE was obtained. In particular, but without limitation, none of the SOFTWARE may be used or otherwise exported or reexported (a) into (or to a national or resident of) a United States embargoed country or (b) to anyone on the U.S. Treasury Department's list of Specially Designated Nationals or the U.S. Department of Commerce's Table of Denial Orders. By using the SOFTWARE, you represent and warrant that you are not located in, under control of, or a national or resident of any such country or on any such list.

GOVERNMENT END USERS. If the SOFTWARE is supplied to the U. S. Government, the SOFTWARE is classified as "restricted computer software" as defined in clause 52.227-19 of the FAR. The U. S. Government's rights to the SOFTWARE are as provided in clause 52.227-19 of the FAR.

CONTROLLING LAW AND SEVERABILITY. This License shall be governed by the laws of the United States and the State of California. If for any reason a court of competent jurisdiction finds any provision, or portion thereof, to be unenforceable, the remainder of this License shall continue in full force and effect.

Regulatory Compliance

The Socket Cordless Hand Scanner is designed to be compliant with the rules and regulations in locations where they are sold and will be labeled as required. This product is type approved — users are not required to obtain license or authorization before using.

This product has been certified as conforming to technological standards. Therefore, the following actions are punishable by law:

- Disassembly or modification of this product
- Removal of identification labels on the back of the product

The frequency used by this product is also used by industrial, scientific and medical devices, such as microwave ovens, as well as wireless detectors for motion detectors, such as those requiring licenses used on manufacturing lines or similar radio transmitters (all of these wireless devices will be called “other wireless transmitters” below). Most modern electronic equipment (e.g., in hospitals and cars), is shielded from RF energy. However, certain electronic equipment is not.

1. Please ensure that all medical devices used in proximity to this device meet appropriate susceptibility specifications for this type of RF energy.
2. In the unlikely event that there is electronic interference between this system and other wireless transmitters, quickly change the location of operation or stop operating the unit (cease signal transmission).
3. If other electrical interference or related problems occur, contact Socket technical support at support@socketcom.com

Radio Frequency Interference Requirements

This device complies with part 15 of the FCC rules and Industry Canada. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment is also ETS EN300 328-2, ETS EN301 489-1 and ETS EN301 489-17 compliant. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his or her own expense.

This equipment generates and radiates radio-frequency energy. To comply with FCC RF exposure compliance requirements, the following antenna installation and device operating configurations must be satisfied: (1) Users are not permitted to make changes or modify the system in any way, and (2) connecting external antennas to the Cordless Hand Scanner is prohibited. This device and its antenna must not be co-located or operated with any other antenna or transmitter.

To comply with Industry Canada RF exposure compliance requirements, the following antenna installation and device operating configurations must be satisfied: “The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, available at Health Canada’s website www.hc-sc.gc.ca/ehp/ehd/catalogue/rpb.htm”

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 may try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the radio or television.
- Increase the distance separating the equipment and the receiver.
- Connect the equipment to an outlet on a different branch circuit than that of the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet helpful: *How to Identify and Resolve Radio-TV Interference Problems*. This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402.

Canada Certification

The marking of “IC:xxxxxx-yyyyyy” on the device means: “xxxxxx-yyyyyy” is the certification number, and the term “IC” before the equipment certification number only signifies that Industry Canada technical specifications were met.

Radio Frequency Interference Requirements – Canada

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le Matériel Brouilleur du Canada.

CE Marking & European Union Compliance

Products intended for sale within the European Union are marked with a CE Mark which indicates compliance to applicable Directives and

European Normes (EN), as follows. Amendments to these Directives or ENs are included: Normes (EN), as follows:

Applicable Directives:

- Radio and Telecommunications Terminal Equipment Directive 1999/5/EC
- Low Voltage Directive 73/23/EEC

Applicable Standards:

- EN 55 022 – Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment.
- EN 50 082-1 – Electromagnetic Compatibility – General Immunity Standard, Part 1: Residential, Commercial, Light Industry.
- IEC 801.2 – Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 2: Electrostatic Discharge Requirements.
- IEC 801.3 – Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 3: Radiated Electromagnetic Field Requirements.
- IEC 801.4 - Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 4: Electrical Fast Transients Requirements
- EN 60 950 + Amd 1 + Amd 2 – Safety of Information Technology Equipment Including Business Equipment.

LASER DEVICE:

Class 1 laser devices are not considered to be hazardous when used for their intended purpose. The following statement is required to comply with U.S. and international regulations:

CAUTION: Use of controls, adjustments or performance of procedure other than those specified herein may result in hazardous laser light exposures.

Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

Battery Warning:

- Your device contains a rechargeable NiMH battery. Never throw the battery into a fire, as that could cause the battery to explode.
- Never short-circuit the battery by bringing the terminals in contact with another metal object. This could cause personal injury or a fire, and could also damage the battery.
- Never dispose of used battery with other ordinary solid wastes. Batteries contain toxic substances.
- Dispose of used battery in accordance with the prevailing community regulations that apply to the disposal of batteries. Cover the metal terminals with insulating tape. (This is to prevent accidental short-circuiting).
- Never expose the battery to any liquid.
- Always keep the battery out of reach of infants or small children.
- Never shock the battery by dropping it or throwing it.
- Dispose of a spent or damaged battery promptly.

Product Disposal

Your device should not be placed in municipal waste. Please check local regulations for disposal of electronic products.



