

# 7530 Hand-Held Computer

## User Manual

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*ISO 9001 Certified  
Quality Management System*





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150 Greenleaf Avenue, Unit F

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# APPROVALS AND SAFETY SUMMARY

## Declaration Of Conformity

Product:	<b>7530 Hand Held Micro-computer with Portable Docking Module</b>
Application of Council Directive(s):	R&TTE Directive: 1999/5/EEC EMC Directive: 89/336/EEC Low Voltage Directive: 73/23/EEC
Conformity Declared to Standards:	Article 3.1a (Health): EN 60950: 2000 Article 3.1b (EMC): EN 301 489-17: v1.1.1; 09-2000 Article 3.2 (RF Spectrum): EN 300 328-2: v 1.1.1; 07 2000 EN 55022: 1998 + Am 1, Class B; EN 61000-3-2; EN 61000-3-3 EN 55024:1998; EN 61000-4-2; $\pm 4\text{kV}$ CD; $\pm 8\text{kV}$ AD EN 61000-4-3; 3V/m, 80-1000 MHz EN 61000-4-4; $\pm 1\text{kV}$ Power lines EN 61000-4-5; $\pm 1\text{kV}$ Differential mode EN 61000-4-6; 3VRMS, 150kHz-80MHz EN 61000-4-11; AC Mains Ports
Manufacturer:	PSION TEKLOGIX INC. 2100 Meadowvale Boulevard Mississauga, Ontario, Canada L5N 7J9
Year of Manufacture:	2003
Manufacturer's Address in the European Community:	PSION TEKLOGIX S.A. La Duranne; 135 Rue Rene Descartes; BP 421000 13591 Aix-En-Provence Cedex 3; France
Type of Equipment:	Information Technology Equipment
Equipment Class:	Commercial and Light Industrial
	<i>I the undersigned hereby declare that the equipment specified above conforms to the above directives and standards.</i>
Manufacturer:	Rob Williams Vice President of Engineering Psion Teklogix Inc. Ontario
Legal Representative	Dominique Binckly Vice President International Sales Psion Teklogix S.A. France

## FCC DECLARATION OF CONFORMITY (DoC)

Applicant's Name & Address: PSION TEKLOGIX  
2100 Meadowvale Blvd.  
Mississauga, Ontario  
Canada L5N 7J9  
Contact Person: Iain Roy  
Telephone No.: (905) 813-9900

US Representative's Name & Address: 1810 Airport Exchange Blvd., Suite 500  
Erlanger, KY, 41018, USA  
Contact Person: Joe Musgrave  
Telephone No.: (859) 372-4106

Equipment Type/Environment: Computing Devices

Trade Name / Model No.: 7530 Hand Held Micro-computer with  
Portable Docking Module

Year of Manufacture: 2004

### Standard(s) to which Conformity is Declared:

The 7530 Hand Held Micro-computer with Portable Docking Module, supplied by Psion Teklogix, has been tested and found to comply with **FCC PART 15, SUBPART B - UNINTENTIONAL RADIATORS, CLASS B COMPUTING DEVICES FOR HOME & OFFICE USE.**

*I, the undersigned, hereby declare that the equipment as tested is representative within manufacturing tolerance to units.*

### Applicant

Signature

Rob Williams

Full Name

Vice President of Engineering

Position

Mississauga, Ontario, Canada

Place

July 4, 2003

Date

### Legal Representative in U.S.

Signature

Joe Musgrave

Full Name

V.P. Global Solutions, Americas

Position

Erlanger, KY 41018, USA

Place

July 4, 2003

Date

## Approvals And Safety Summary

This equipment complies with Class B Part 15 of the FCC rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Psion Teklogix, the party responsible for compliance, may void the user's authority to operate the equipment.

### 1. FCC Information to Users

For Class B Unintentional Radiators:

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

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

### 2. Warning to Users



**Warning:** Changes or modifications not expressly approved by Psion Teklogix Inc. could void the user's authority to operate the equipment.

## Approvals And Safety Summary



### LASER WARNINGS

For your own safety, it is critical that you comply with the following warnings:



### CAUTION

Do not look into the laser beam or point the beam at people or animals.



### CAUTION

Using controls or adjustments, or performing procedures other than those specified herein may result in hazardous radiation exposure.



### CAUTION

The use of optical instruments with this product will increase eye hazard.

This product contains a laser scanner that emits less than 1.2 mW maximum radiant power at a wavelength of 650nm or 680nm. This product complies with 21 CFR 1040.10, 1040.11 and DIN EN 60825-1: 2001, and is classified as a Class 2 laser product.

The SE1200 ALR has an maximum radiated power less than 1.4 mW; according to EN 60825-1: 2001 it is classified as a Class 3B laser product.



### DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE

Operating Psion Teklogix equipment where explosive gas is present may result in an explosion.



### DO NOT REMOVE COVERS OR OPEN ENCLOSURES

To avoid injury, the equipment covers and enclosures should only be removed by qualified service personnel. Do not operate the equipment without the covers and enclosures properly installed.

**WARNING:** This portable RF transmitting device has been tested and found to comply with FCC and IC RF exposure requirements with the maximum SAR of 0.5 Watts/Kg with body tissue. The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.

## *Approvals And Safety Summary*



### **CAUTION!**

Danger of explosion if a 7530 battery is incorrectly handled, charged, disposed of or replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the instructions described in “Lithium-Ion Battery Safety Precautions” on page 252. Carefully review all battery safety issues.



### **VORSICHT!**

Explosionsgefahr bei unsachgemäßem Austausch der Batterie Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleichwertigen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.



# INTRODUCTION

# 1

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## 1.1 About This Manual

This manual describes how to configure, operate and maintain the Psion Teklogix 7530 hand-held computer.

### ***Chapter 1: Introduction***

provides a basic overview of the 7530 hand-held.

### ***Chapter 2: Basic Checkout***

describes the steps required to get the 7530 ready for operation.

### ***Chapter 3: Getting To Know Your 7530***

describes the 7530 features and outlines how to charge and maintain the battery. This chapter also provides a description of the keyboard, how to navigate in Microsoft® Windows® CE, how to use the internal scanner, and so on.

### ***Chapter 4: Working With Windows CE***

describes the Microsoft® Windows® CE desktop and how to use it. This chapter also outlines the basics of moving around a Windows CE window, selecting and opening icons, files, folders and working with a Windows dialogue box.

### ***Chapter 5: Configuration***

provides a description of the Windows CE Control Panel and how to use it to configure the 7530, along with the scanners attached to the hand-held, and so on.

### ***Chapter 6: Tekterm Application***

describes TESS and ANSI operations. This chapter also provides descriptions of the Tekterm parameters.

### ***Chapter 7: Peripheral Devices & Accessories***

describes the peripherals and accessories available for your 7530 hand-held.

### ***Chapter 8: Specifications***

details radio, hand-held computer and battery specifications.

### ***Appendix A: Support Services And Worldwide Offices***

provides the helpdesk phone number at the Mississauga, Ontario, Canada office and details the support services available. This appendix also lists the worldwide office addresses and phone numbers.

### ***Appendix B: Port Pinouts***

includes 7530 pinouts.

## 1.2 Text Conventions



**Note:** *Notes highlight additional helpful information.*



**Important:** *These statements provide particularly important instructions or additional information that is critical to the operation of the equipment.*



**Warning:** *These statements provide critical information that may prevent physical injury, equipment damage or data loss.*

## 1.3 About The 7530 Hand-Held Computer

The 7530 is a ruggedized hand-held personal computer, running the Microsoft® Windows® CE.net operating system. It is intended for use in commercial and light industrial applications with a focus on real time wireless data transactions. All possible bar code input methodologies are supported by one of the variety of scanners available. Optimization for specific operational environments is supported with a wide range of peripheral options and carrying accessories.

### 1.3.1 Features

- Rugged design:
  - sealed from water and dust to IP54 (light rain) rating.
  - withstands multiple drops of up to 6.5 feet onto concrete.
- Large 240 x 320 portrait mode display that is available in colour or black and white with or without a touchscreen
- Automatic backlighting for both the display and the keypad.
  - automatic backlight and contrast control.
  - daylight readable screen.
- Processor and memory:
  - Intel PXA255 400Mhz CPU with 32 MB FLASH and 64 MB RAM standard.
- Microsoft® Windows® CE.net operating system
- Application software:
  - Internet Explorer for CE.
  - Tekterm terminal emulation.
- Ergonomic keyboard designed to accommodate left- and right-handed use.
- Two keyboard formats available:
  - 58-key with 6 function keys (standard).
  - 36-key large button with 10 function keys.
  - keypads feature EL backlight for visibility in low-light conditions.
- Wireless communication:
  - Compact FLASH slot normally equipped with an IEEE 802.11b 11 Mbps 2.4GHz Wi-Fi radio.

**Features**

- standard antenna integrated onto radio card.
- optional high performance internal antenna available.
- Bluetooth SD I/O radio.
- Expansion slot:
  - SD I/O slot that supports extra FLASH memory (up to 512 MB)
- Programming environment:
  - HTML
  - .net Compact framework
  - Java, Visual C++
- Bar code applications:
  - internal 1D and 2D scan engines.
  - internal CMOS image capture scan engine.
  - supports decoded and undecoded tethered scanners.

### 1.3.2 The 7530 Hand-Held Computer



Figure 1.1 7530 With 63-Key Keyboard

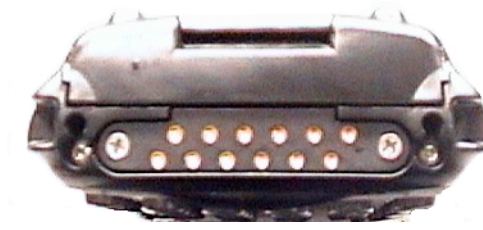


Figure 1.2 7530 Docking Port

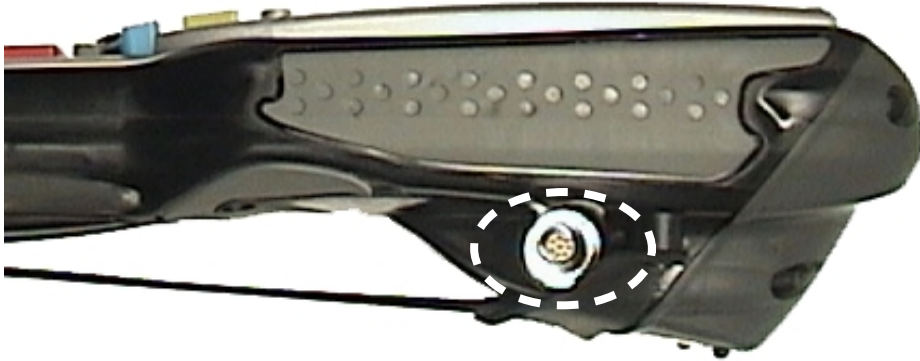


Figure 1.3 Tether Port

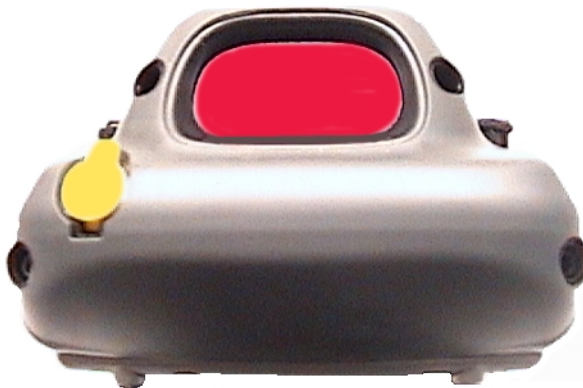


Figure 1.4 Scanner Window

### 1.3.3 Regulatory Labels



Figure 1.5 Laser Warning Labels





Figure 1.7 Manufacturer's Label



**Warning:** *Using controls or adjustments or performing procedures other than those specified herein may result in hazardous radiation exposure.*



# BASIC CHECKOUT

# 2

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## 2.1 Preparing The 7530 For Operation

Typically, 7530 hand-helds are configured at the factory and arrive ready for use. Although the 7530 is equipped with an internal Compact Flash and SD I/O slot, these slots are not intended for user modification. If a device needs to be changed or added in these slots, contact qualified Psion Teklogix personnel. Refer to *Appendix A: Support Services And Worldwide Offices* for the service number closest to you.

### 2.1.1 Equipment You Need To Get Started

You'll need:

- A 7530 compatible battery charger, docking station or portable docking module (PDM) with power supply.
- An operating wireless network (if you are not operating the equipment in batch mode).
- A medium Phillips head screwdriver.

### 2.1.2 Charging The Battery



**Important:** *The 7530 uses a high capacity Lithium-Ion battery. It is critical that you review the battery safety guidelines in “Lithium-Ion Battery Safety Precautions” on page 252 before charging the battery.*

Batteries shipped from the factory are not charged. They must be fully charged prior to use. Full capacity may not be reached until at least 5 full charge/discharge cycles have been performed.

7530 batteries can be charged using a gang charger or the 7530 internal charger. When using the internal charger, a suitable power source is required. All chargers and docking stations are described in *Chapter 7: Peripheral Devices & Accessories* beginning on page 254.

### 2.1.3 Attaching Carrying Accessories

Psion Teklogix recommends that a carrying accessory – a hand strap, pistol grip or shoulder strap – be installed on the 7530 before use.

If your hand-held is not fitted with a hand strap or pistol grip, you can install either using the carrying accessory kit supplied. You'll need:

- A Phillips head screwdriver.



**Important:** *Do not use adhesives such as Loctite to secure the screws on the carrying accessories. These chemicals may damage the plastic casing.*

### 2.1.3.1 Attaching The Hand Strap



**Note:** *A Phillips head screwdriver is required.*

Two Phillips head screws are provided with the hand strap.

- Attach the strap to the two threaded inserts located at the back of the 7530 near the top of the unit.

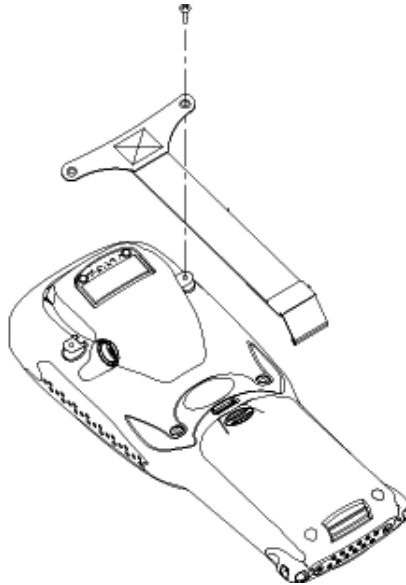


Figure 2.1 Attaching The Hand Strap

- Stretch the handstrap toward the base of the 7530, and hook the bottom of the handstrap into the slot near the base of the battery pack.

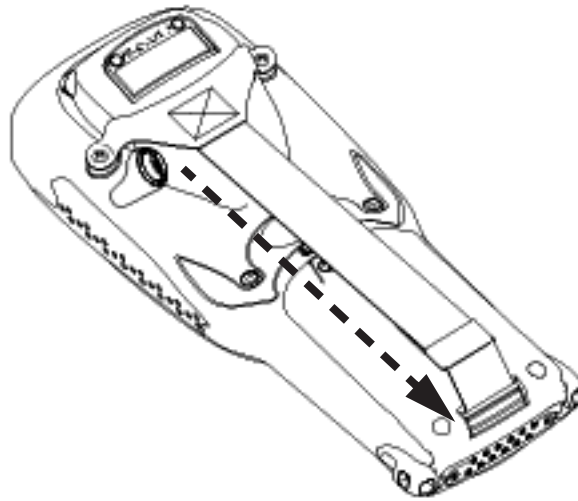


Figure 2.2 Hooking The Hand Strap To The 7530

### 2.1.3.2 Attaching The Pistol Grip



**Note:** *A Phillips head screwdriver is required.*

The pistol grip is attached to the back of the 7530 using the four threaded inserts in the upper part of the 7530 casing. Four black #4-40 Phillips head screws are provided with this accessory.



**Note:** *Prior to installation, make sure the trigger mechanism is securely snapped into the pistol grip body and that the trigger operates properly.*

## Powering Up The 7530 And Configuring The Radio

- Position the pistol grip so that it fits snugly over the back of the unit and the inserts on the back of the 7530 align with the holes in the pistol grip.

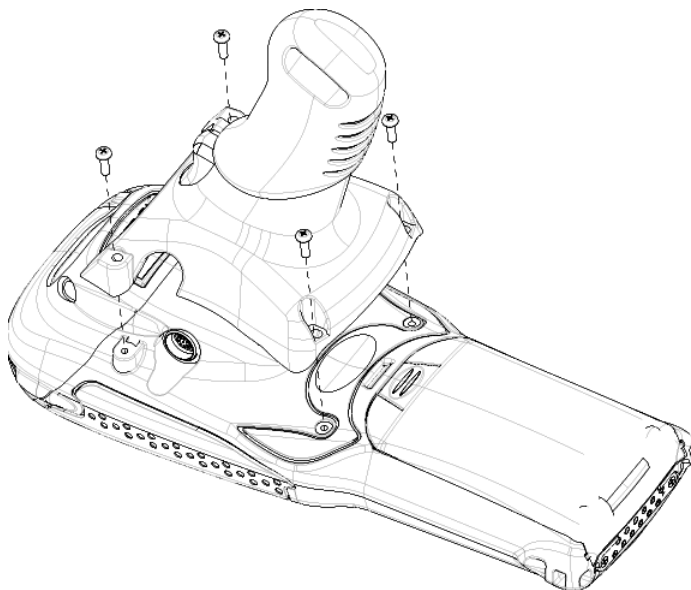


Figure 2.3 Attaching The Pistol Grip

- Using a Phillips screwdriver, securely fasten the pistol grip to the back of the 7530.

## 2.2 Powering Up The 7530 And Configuring The Radio



**Note:** *Psion Teklogix offers a Portable Docking Module (PDM) along with its power supply to help speed the checkout and confirmation process for your 7530. The PDM can power your hand-held with or without a battery installed in the 7530. Refer to Chapter 7: Peripheral Devices & Accessories beginning on page 249 for more information about this accessory.*

## 2.2.1 Installing The Battery And Switching The 7530 On

If you are not using a docking station or PDM:

- Slide the **charged** battery with the contoured plastic facing you into the 7530. Click the battery into place.

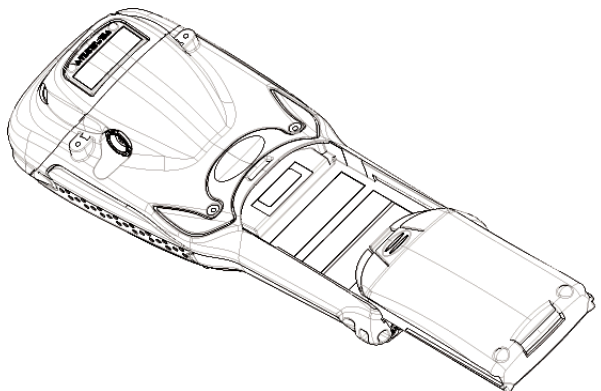


Figure 2.4 Installing The Battery



**Note:** *If you are using a docking station, you can insert an uncharged battery, dock the unit and switch it on.*

*If you are using a PDM, you can configure your unit without a battery, with a **charged** battery **or** with an **uncharged** battery.*

If you are using a hand strap:

- Hook the bottom of the hand strap into the slot at the base of the battery.

To switch the 7530 on:

- Press and hold down the <ENTER/ON> key for at least one second.
- When all four LEDs flash orange, release the <ENTER/ON> button.

A splash screen displaying the *Psion Teklogix* logo and the *Microsoft® Windows® CE. net* logo appears. When Windows® CE has successfully loaded, the startup desktop is displayed.



**Note:** *The screen may go blank for a few seconds after the splash screen loading bar reaches the end. This is part of the normal Windows CE cold boot process. The desktop is displayed after a few moments.*

## 2.2.2 Configuring An IEEE 802.11 Radio Installed In The 7530

The most common 802.11b settings are configured as defaults. However, there are some fields that must be completed, including the SSID of your access point and the security methods implemented in the network (including access keys).



**Important:** *If the 7530 is equipped with a radio that has never been configured, the radio settings dialogue box opens automatically when the unit is powered on. In this case, skip to Step 4 on page 20.*

To configure the 802.11b radio:

1. Press <BLUE> 0 to display the Start Menu. Use the <DOWN> arrow key to highlight Settings. Press the <RIGHT> arrow key to display the sub-menu. Highlight Network... and press <ENTER>.

*If you have a touchscreen, tap on the Windows® Start Menu button in the taskbar, and tap on Settings>Network and Dial-up Connections.*

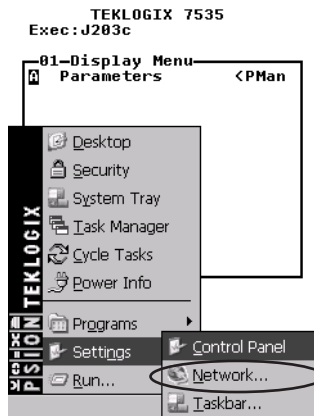


Figure 2.5 Network And Dial-Up Connections



**Note:** *You can also press <CTRL> <ESC> to display the Start Menu.*



- Choose the radio icon to open the 802.11b Wireless LAN Settings window – in the sample screen this is labelled \$NETWLAN1.

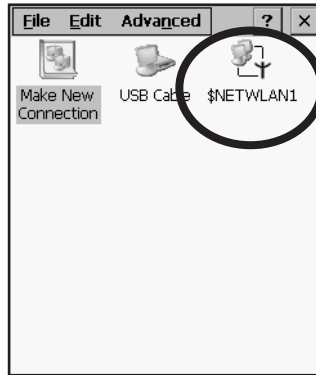


Figure 2.6 802.11b Wireless LAN Settings Window

- Wireless Statistics Tab  
When you choose the Wireless LAN icon, an 802.11b Wireless LAN Settings window (\$NETWLAN1 in the sample below) is displayed.

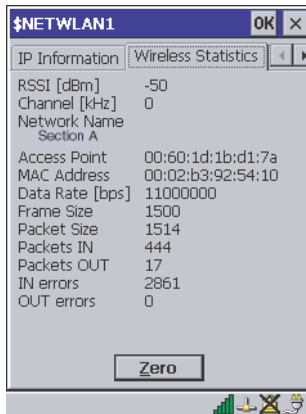


Figure 2.7 Wireless Statistics

This tab lists your radio statistics. Choosing the Zero button resets the statistics of the last four items – Packets IN, Packets OUT, IN errors and OUT errors.

- Press the <TAB> key followed by the <RIGHT> arrow key to display the next tab in this window – Wireless Information.

## 4. Wireless Information Tab

The options under this tab display existing networks to which you can connect, and it allows you to add a new network or modify the settings for an existing network.



**Note:** *Configure button* – To change the settings in an **existing network**, highlight the network you want to modify, and choose the *Configure* button to display the Wireless Properties dialogue box.

*Connect button* – To force connection to a specific, **existing network**, highlight the network to which you want your 7530 to connect, and choose the *Connect* button.

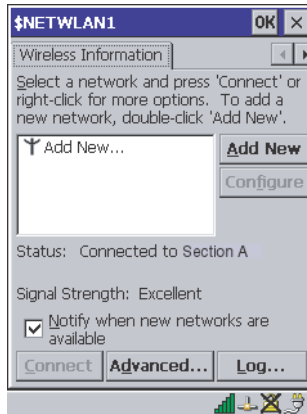


Figure 2.8 Wireless Information Tab

This tab lists *available* networks – any access points that are broadcasting an SSID, and it lists *preferred* networks – networks that you have configured. Since access points are generally secure, they will most likely not be listed here. By default, 7530 attempts to connect to preferred networks. This behaviour can be changed by enabling (✓) 'Automatically connect to non-preferred networks' in the Advanced dialogue box (page 26).

- To **add** a new configuration, press the <TAB> key to highlight the *Add New* button, and press <ENTER>. A blank Wireless Properties dialogue box is displayed.

## 5. Wireless Properties

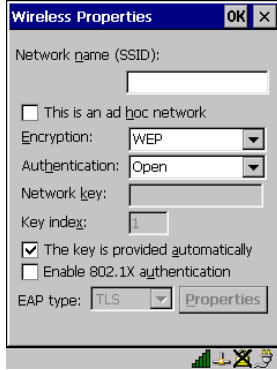


Figure 2.9 Wireless Properties Dialogue Box

Network name (SSID):

- Type the appropriate SSID (Service Set Identifier) in the ‘Network name (SSID):’ text entry field at the top of this dialogue box.

The Network name field can contain a maximum of 32 characters. The name assigned here is listed as a *preferred* network.



**Important:** *Keep in mind that the 7530 will only communicate with access points that are configured with the same SSID.*

### Ad Hoc And Infrastructure

If you are using an “Infrastructure” network – one in which 7530s must pass data through an access point – leave the checkbox next to ‘This is an ad hoc network’ **blank**.

If you are using an “Ad Hoc” network – a network in which 7530s pass data **directly** to other 7530s without an access point – press the <TAB> key to highlight ‘This is an ad hoc network’, and press the <SPACE> key to enable (√) Ad Hoc.

### Encryption

WEP (Wired-Equivalent Privacy) encryption prevents others from accidentally accessing your network. If you are **not** using encryption, you can choose ‘Disabled’ from the dropdown encryption menu. Otherwise, leave this field as is.

**Configuring An IEEE 802.11 Radio Installed In The 7530****Authentication**

802.11 supports two subtypes of network authentication services: Open and Shared. Under Open authentication, any wireless station can request authentication. The station that needs to authenticate with another wireless station sends an authentication management frame that contains the identity of the sending station. The receiving station then sends back a frame that indicates whether it recognizes the identity of the sending station.

Under Shared authentication, each wireless station is assumed to have received a secret shared key over a secure channel that is independent from the 802.11 wireless network communications channel.

**Network Key:**

This text box is used to specify a 5 or 13 ASCII character sequence or an equivalent 10 or 26 Hexadecimal digit sequence that matches the active WEP key on the access point.

- To assign a Network key, press <TAB> to highlight 'The key is provided automatically', and press the <SPACE> key to *disable* this option.

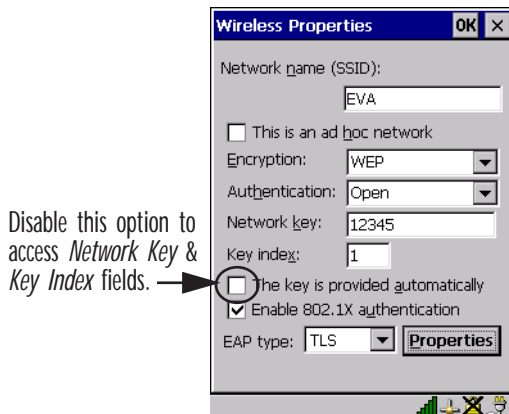


Figure 2.10 Accessing Network Key And Key Index

**Key Index:**

This field is used to identify the WEP key.

- Enter a value from 1 to 4.

#### Enable 802.1x authentication

“802.1X” is the IEEE standard that offers additional security for local area networks. It provides authentication for user devices attached to an Ethernet network, whether wired or wireless. A security protocol packet such as TLS or MD5 encapsulated in an “EAP” is used in conjunction with the “802.1x” standard to authenticate users at the MAC layer. Available EAPs are listed in the dropdown menu next to the ‘EAP’ option.

- To activate “802.1X”, press <TAB> to highlight ‘Enable 802.1x authentication’, and press the <SPACE> key to enable (√) it.

#### EAP Type (Extensible Authentication Protocol):

This dropdown menu lists the EAP types available on your system. The items in this dropdown menu will vary depending on your network setup. Keep in mind also that some authentication protocols require that you select a ‘Certificate’. By selecting the Properties button, you will be able to select a Certificate. “Certificate Assignment” on page 105 provides a website that outlines how to create certificates for your network.

#### 6. Saving and exiting the radio setup.

Once you have completed your configuration, press <ENTER> or tap on OK.

The connection you created will be listed in the Wireless Information tab as a preferred network. The radio will search for the SSID and will compare the WEP and authentication information you specified. If there is a match between your 7530 settings and the access point settings, the 7530 will communicate on the network through the access point.

## 2.2.3 Assigning An IP Address

If your network is *not* using a DHCP server, you will need to assign an IP address.

- In the \$NETWLAN1 Settings window, press the <TAB> key followed by the <LEFT> arrow key to display the IP Information tab.

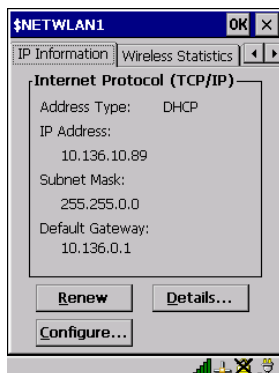


Figure 2.11 IP Information



**Note:** Choosing the Renew button forces the 7530 to renew or find a new IP address. This is useful if, for example, you are out of communication range for a longer period of time and your 7530 is dropped from the network.

To define a static IP address:

- Highlight the Configure... button, and press <ENTER>.

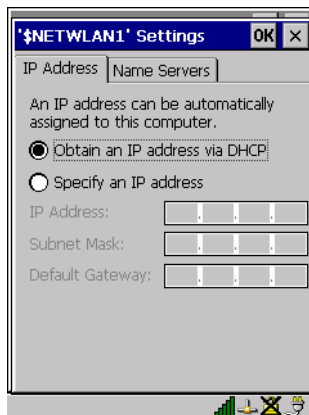


Figure 2.12 Defining An IP Address

- Press the <DOWN> arrow key to highlight Specify an IP address.
- Press the <TAB> key to move from field to field, and type an IP, Subnet Mask and Default Gateway address. Press <ENTER> to save your information.

## 2.2.4 Name Servers Tab



**Note:** *If DHCP is enabled, name server addresses are assigned automatically.*

- In the \$NETWLAN1 Settings window, press the <TAB> key followed by the <LEFT> arrow key to display the IP Information tab.
- In the IP Information tab, highlight the Configure... button, and press <ENTER>.
- Press the <TAB> key followed by the <RIGHT> arrow key to display the Name Servers tab.

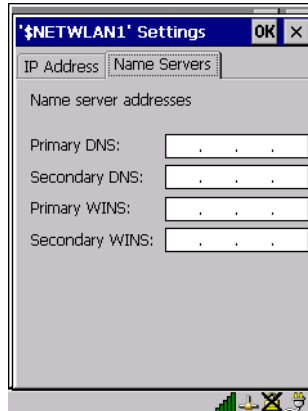


Figure 2.13 Name Servers Tab

The DNS and WINS fields in the Name Servers tab allow you to specify additional WINS and DNS resolvers. The format for these fields is ###.###.###.###.

## 2.2.5 Advanced Features

To display the Advanced Wireless Settings dialogue box:

- Highlight the **Advanced...** button in the Wireless Information tab and press <ENTER>.

This window lists the available preferred networks.

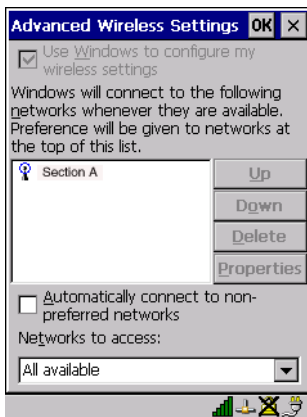


Figure 2.14 Advanced Settings

### 2.2.5.1 Rearranging Preferred Networks

The 7530 attempts to connect with the networks listed in this dialogue box *in sequence, beginning at the top of the list*. If you need to rearrange this list of networks – move networks up and down in the list:

- Press the <TAB> key to move the cursor into the networks list.
- Use the <UP> or <DOWN> arrow keys to highlight the network that you want to move up or down in the list.
- To move the highlighted item in the list upward or downward, press <TAB> to highlight the Up or Down button, and press <ENTER>.



## 2.2.5.2 Deleting A Preferred Network

To delete a network from this list:

- Press the <TAB> key to highlight the networks list.
- Use the <UP> or <DOWN> arrow keys to highlight the network that you want to remove.
- Highlight the Ddelete button, and press <ENTER>.

## 2.2.5.3 Changing Network Properties

To change the properties of an existing preferred network:

- Highlight the network that you want to modify.
- Press <TAB> to highlight the Properties button, and press <ENTER>.
- Make any necessary changes in the Wireless Properties dialogue box, and press <ENTER> to save the changes.

## 2.3 Checking The Scanner

If your 7530 is equipped with an internal scanner, it will successfully decode most 1D bar codes as delivered. Press the SCAN button and check for a valid decode on any UPC bar code. If desired, set the “Dot Time” parameter to zero in the ‘Teklogix Scanners’ applet in the Control Panel to turn off the default aiming dot.

Performance is improved if you disable all unneeded bar codes under the ‘Bar Codes’ dialogue screen. Review “Scanner Properties Setup” on page 118 for details about bar codes.

## 2.4 Using Microsoft<sup>®</sup> ActiveSync<sup>®</sup> To Work With Files

ActiveSync<sup>®</sup> – Microsoft PC connectivity software – can be used to connect the 7530 to PCs running this software. By connecting the 7530 to a PC with a cable and running ActiveSync on the PC, you can:

- View 7530 files from Windows Explorer.
- Drag and drop files between the 7530 and the PC in the same way that you would between PC drives.
- Back up 7530 files to the PC, then restore them from the PC to the hand-held again, if needed, and so on.



**Note:** *You'll need the USB setup utility to configure the .ini file. For information about this USB application, refer to Appendix C: USB Setup Application.*

To install ActiveSync, follow the step-by-step instructions provided with the program's setup wizard. Refer to the following website for details:  
<http://www.microsoft.com/windowsmobile/resources/downloads/pocketpc/activesync35.msp>

## 2.5 Calibrating The Touchscreen

If your 7530 is equipped with a touchscreen, it will need to be calibrated. Refer to “Calibrating The Touchscreen” on page 41 for details.

## 2.6 Resetting The 7530 Hand-Held



**Important:** *Because Psion Teklogix cannot guarantee what has been saved (registry) after a reset, this should be considered as a last resort.*

To reset the 7530:

- Press and hold down the <BLUE> key and the <ENTER/ON> key simultaneously for a minimum of six seconds.

A reset results in a complete reboot of the unit. All RAM memory contents are lost. The contents of the flash memory and memory card may be preserved, but Psion Teklogix cannot guarantee. However, you should keep in mind that When the 7530 is reset, the screen displays the Psion Teklogix and Microsoft® Windows® CE.net splash screen before displaying the startup desktop.



**Note:** *You do not need to reset your 7530 after configuring the radio.*

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## 3.1 Features Of The 7530

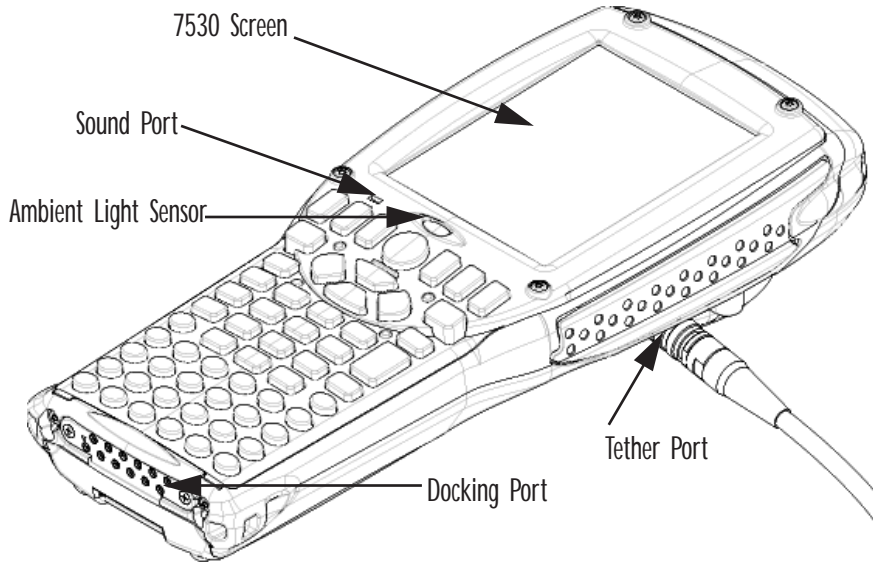


Figure 3.1 Front Of 7530

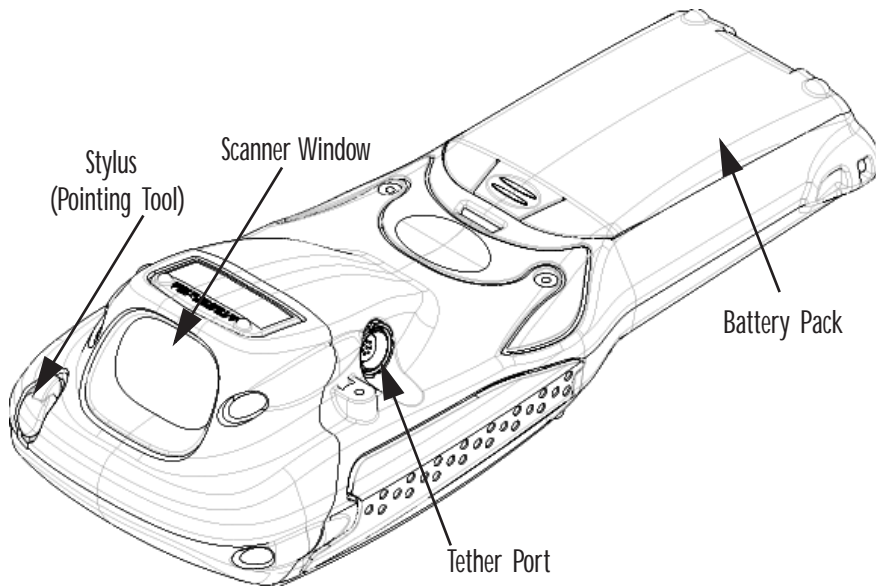


Figure 3.2 Back Of 7530

## 3.2 The Battery

The 7530 hand-held operates with a Lithium-Ion battery pack. Preparing the hand-held unit for operation requires that a battery pack be charged and installed in the unit.

### 3.2.1 Battery Safety



**Important:** *Before attempting to install, use or charge the battery pack, it is critical that you review and follow the important safety guidelines in the section entitled “Lithium-Ion Battery Safety Precautions” beginning on page 252.*

### 3.2.2 Removing And Installing The Battery Pack



**Note:** *TURN OFF THE 7530 HAND-HELD BEFORE REMOVING THE BATTERY PACK. If you do not turn the hand-held off before removing the battery, it may be necessary to reboot the unit. Any active sessions will be lost.*

#### Removing The Battery Pack

- If your 7530 is equipped with a hand strap, unhook it from the base of the battery.
- Press down the release tab at the top of the battery, and slide the battery out.

## Installing The Battery Pack

To install the battery pack:

- Slide the battery pack with the contoured plastic facing you into the 7530. Click the battery into place.

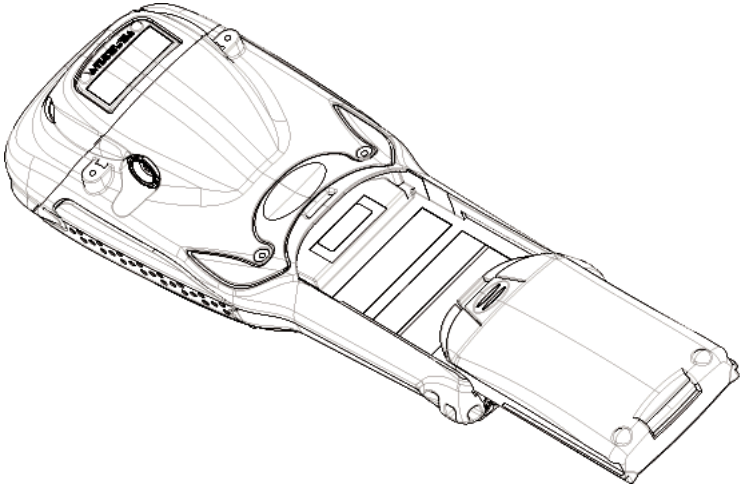


Figure 3.3 Installing The Battery Pack

- If your computer is equipped with a hand strap, insert the hook at the end of the hand strap into the slot at the base of the battery.

### 3.2.3 Charging The Battery



**Important:** *FOR DETAILED INFORMATION about 7530 chargers and docking stations, refer to Chapter 7: Peripheral Devices & Accessories beginning on page 249. For battery safety, refer to “Lithium-Ion Battery Safety Precautions” beginning on page 252.*

All batteries must be charged before use. The 7530 battery can be charged with a variety of chargers. These include:

- 6-Gang Charger (Model #HU3006) – charges up to six Lithium-Ion batteries at one time.
- Portable Docking Module (Model #HU4001 or HU1005 and HU3220 or HU3220) – charges the 7530 battery (with the battery installed in the unit).
- Combo Charger (Model #HU3002) – a desktop charger that charges the 7530 internal battery along with a spare battery pack.

## Switching The 7530 Hand-Held On And Off

- Combo Docking Station (Model #HU4002) – operates as both a charger and a docking station. Operating as a charger, both the battery installed in the computer and a spare battery can be charged simultaneously.
- Quad Docking Station (Model #HU4004) – can charge the battery of up to four 7530s inserted in the docking station while transferring data through an Ethernet connection.
- Powered Cradle (Model #HU1000, HU1010) – can charge the 7530 with the battery installed in the hand-held.

It can take from 1.5 to 4 hours to charge a battery. The 7530's intelligent charging system protects the battery from over-charging by terminating the charge process when the battery is at maximum capacity.



**Note:** Refer to “Monitoring The Battery And Maximizing Run Time” on page 53 for additional information about the 7530 battery.



**Important:** To avoid damaging the battery, chargers will not begin the charge process until the battery temperature is between 0°C (32°F) and 39°C (102°F). If the battery is too hot or cold, the battery status LED flashes yellow and the charge is suspended. Refer to Table 3.1, “Charge LEDs” on page 43 for details.

## 3.3 Switching The 7530 Hand-Held On And Off

### Switching On The 7530

- Press and hold down the <ENTER/ON> key for at least one second.
- When all four LEDs flash orange, release the <ENTER/ON> button.

A splash screen displaying the *Pision Teklogix* logo and the *Microsoft® Windows® CE. net* logo appears followed by the startup desktop.



**Note:** If the 7530 is in suspend state, pressing <ENTER/ON> key ‘wakes’ the unit from this state. The screen in which you were working before the computer entered suspend state is displayed.



## Switching Off The 7530



**Important:** *Keep in mind that turning off the 7530 does not result in a complete reboot; rather, the unit enters a power-saving, “suspend” state. When the 7530 is turned on from suspend state, operation resumes within a few seconds.*

To switch off the 7530:

- Press the <BLUE> key, and then press the <ENTER/ON> key.



**Important:** *If the word ‘BLUE’ is displayed in uppercase in the taskbar area at the bottom of the screen, this key is locked “on” – the 7530 will not switch off. Press the <BLUE> key again to unlock it; then press <BLUE> <ENTER/ON> to switch the 7530 off.*

*If, however, you’ve disabled the “Blue Key” in the ‘One Shot’ dialogue box (see “Keyboard One Shot Modes” on page 94), the 7530 can be turned off even when the <BLUE> key is locked ‘on’.*

## 3.4 The Keyboard

The 7530 offers two types of keyboard layouts – a 58-key keyboard and a 36-key, large button keyboard. Most of the keys on these keyboards operate much like a desktop computer. Where a key or key function is not consistent with the PC keyboard, the differences are noted.

The <BLUE> and <ORANGE> modifier keys provide access to additional keys and system functions. These functions are colour coded in *orange* and *blue* print above the keyboard keys.

### 3.4.1 Modifier Keys

The <SHIFT>, <CTRL>, <ALT>, <BLUE> and <ORANGE> keys are *modifier* keys. Pressing a modifier key changes the function of the next key pressed. For example, on a 58-key keyboard, a square bracket is printed in *orange* print above the <4> key. Pressing the <ORANGE> key followed by the <4> key displays a square bracket rather than the number 4.

## Activating Modifier Keys

The <SHIFT>, <CTRL> and <ALT> keys operate much like a desktop keyboard except that they are not chorded (two keys held down simultaneously). The modifier key must be pressed first followed by the key whose function you want modified.

### 3.4.1.1 Activating Modifier Keys

When a modifier key is pressed once, it is displayed in lowercase letters in the taskbar at the bottom of the 7530 screen. For example, if the <CTRL> key is pressed, ctrl key is displayed at the bottom of the unit screen. Once the next key is pressed, the modifier key becomes inactive and disappears from the taskbar.

### 3.4.1.2 Locking Modifier Keys

When a modifier key is pressed twice, it is ‘locked’ on. A ‘locked’ modifier key is displayed in uppercase letters in the taskbar. For example, pressing the <BLUE> key twice locks it on – it is displayed as BLUE KEY in the taskbar at the bottom of the computer screen.

The locked modifier key will remain active until it is pressed a third time to unlock or turn it off. Once a modifier key is unlocked (pressed a third time), the uppercase representation at the bottom of the screen is no longer displayed.



**Note:** *The locking function of the <ORANGE> and <BLUE> keys can be disabled so that pressing either of these keys **once** will lock the keys ‘on’. If you disable the ‘One Shot’ function of either of these keys, pressing the <BLUE> and/or <ORANGE> key **once** will lock the key ‘on’. Pressing the same key a second time will unlock or turn it ‘off’. Refer to “Keyboard One Shot Modes” on page 94 for details.*

## 3.4.2 The Keys

### The <SHIFT> Key

The <SHIFT> key is used to display uppercase alpha characters and provide access to the symbols above the numeric keys.

### The Arrow Keys

The Arrow keys move the cursor around the screen in the direction of the arrow – up, down, left and right. The cursor is the flashing box or underline character that indicates where the next character you type will appear.

### The <BKSP/DEL> Key

The <BKSP> key (sometimes referred to as destructive backspace) moves the cursor one character to the left, erasing the incorrectly entered key stroke.

The <DEL> key (<BLUE> <BKSP>) erases the character at the cursor position.

### The <CTRL> And <ALT> Key

The <CTRL> and <ALT> keys modify the function of the next key pressed and are application dependent.

### The <TAB> Key

Typically, the <TAB> key moves the cursor to the next field to the right or downward.

### The <ESC> Key

Generally, this key is used as a keyboard shortcut to close the current menu, dialogue box or activity and return to the previous one.

### The <SPACE> Key

Pressing this key inserts a blank space between characters. In a Windows dialogue box, pressing the <SPACE> key enables (√) or disables a checkbox.

### The <SCAN> Key

Pressing the <SCAN> key – the yellow key with the star-burst scan symbol on it – activates the scanner beam while pressed. For units that *do not have* internal scanners, this key is inoperable.

## 3.4.3 The 58-Key Keyboard

In addition to alphanumeric keys that are directly accessible on the keyboard (no key combination is required) and the keys described in this chapter, the 58-key keyboard also provides function keys and macro keys.

Function keys <F1> through <F24> can be used with the CE operating system or another application. The additional function keys – <F25> through <F30> along with the macros are not used as part of the Windows CE operating system.

All function keys and macro keys can be custom defined for each application. The Tekterm application utilizes these keys. Refer to “Additional Keyboard Functions” on page 147 for details about Tekterm keys.

## 3.4.4 The 37-Key Keyboard

On 37-key 7530s, all alpha characters are printed on the unit plastic in *orange* typeface above the numeric keys. To access an alpha character, you must first press the <ORANGE> key and then press the numeric key above which the alpha character you want to type is printed.

Because the alpha keys on a 37-key keyboard are laid out much like the letters on a telephone – generally in groups of three letters per numeric key – you need to take a few extra steps to access the alphabetic characters. The examples in this section help illustrate how to access alpha characters.

### Choosing A Single Alpha Character



**Note:** *Keep in mind that the following examples assume that ‘One Shot’ is enabled for the <ORANGE> key. Refer to “Keyboard One Shot Modes” on page 94 for details.*

The examples below illustrate how to access A, B and C, all of which are printed in *orange* characters above the numeric key, <2>.

To choose the letter ‘a’:

- Press the <ORANGE> key, and press the numeric key <2>.

To choose the letter ‘b’:

- Press the <ORANGE> key twice to lock it ‘on’, and press <2> **twice**.
- Press the <ORANGE> key again to unlock or turn it off.

To choose the letter ‘c’:

- Press the <ORANGE> key twice to lock it ‘on’.
- Press <2> **three** times, and then
- Press the <ORANGE> key again to unlock or turn it off.

### Creating Uppercase Letters

To display a capital letter:

- Press the <ORANGE> key and then the <SHIFT> key *before* typing the alpha character.

## Choosing More Than One Alpha Character From The Same Key

If you need to choose more than one alpha character from a single key, you'll need to press the 'Accept' key between alpha selections. The 'Accept' key is presented as an arrow  $\Rightarrow$  symbol above the '0' (zero) key. Pressing this key signals the 7530 to display the alpha character you've chosen and await the next selection from the same key.

For example, suppose you want to type the letters 'a', 'b' and 'c'. These letters are all accessible from the numeric key, <2>.

To type the letter 'a':

- Press the <ORANGE> key twice to lock it 'on', and then press the numeric key, <2>.
- Press the 'Accept' key <  $\Rightarrow$  > to indicate that the letter 'a' should be accepted and that another letter from the same key will be chosen.

To type the letter 'b':

- Press the <2> key **twice**.
- Press <  $\Rightarrow$  > to accept the letter 'b'.

To type the letter 'c':

- Press the <2> key **three** times.

When you have completed your alpha selections *from this key*, you can do one of the following:

- If you want to choose additional alpha characters from **another** key(s), leave the <ORANGE> key 'on', and press the next numeric key that supports the alpha character you require.
- If you **do not** want to choose any additional alpha characters, press <ORANGE> again to unlock or turn 'off' the key and end alpha selection.

## Choosing Multiple Alpha Characters From A Range Of Keys

If you plan on choosing alpha characters from a number of different keys, you are **not** required to press the 'Accept' <  $\Rightarrow$  > key after each alpha selection. The <  $\Rightarrow$  > key is only required when you are choosing more than one alpha character from the **same** key – e.g., 'a', 'b' and 'c' from the <2> key.

## The Keypad Backlight

Suppose you want to type the letters ‘a’, ‘d’ and ‘g’. These alpha characters are accessed from the numeric keys <2>, <3> and <4>.

- With the <ORANGE> key locked ‘on’ (press twice), press <2> to type the letter ‘a’.
- Press <3> to type ‘d’, and press <4> to type the letter ‘g’.
- To end alpha selection, press the <ORANGE> key a third time to unlock it.

### 3.4.5 The Keypad Backlight

The intensity of the keypad backlight and the conditions under which this backlight is activated can be configured using the Keyboard icon in the Windows CE Control Panel. The behaviour of the keypad backlight is tailored in the Keyboard Properties dialogue box. Refer to “Keyboard Backlight” on page 93 for details about this option.



**Note:** *Keep in mind that this option may be restricted to supervisory use only.*

## 3.5 The Display

7530s are equipped with display backlighting to improve character visibility in low light conditions. The backlight switches on when a key is pressed and the ambient light is below the set threshold. A light sensor on the front of the hand-held determines the ambient light level. On some displays, the contrast can also be adjusted to further improve character visibility.

### 3.5.1 Adjusting The Display Backlight

The behaviour of the display backlight – the ambient light threshold below which the backlight will become active and the intensity of the backlight – can be specified in the Display Properties dialogue box in the Windows CE Control Panel.





**Note:** *Refer to “Display Backlight” on page 89 for details about the Display Properties dialogue box.*



## 3.5.2 Adjusting The Contrast



**Note:** *In addition to the manual adjustments described in this section, the display contrast can also be adjusted using the Windows CE Control Panel. Refer to “Display Contrast” on page 88 for details about this dialogue box.*

The display contrast can be adjusted from the unit keyboard using the <BLUE> key and function keys <F1> and <F2>. Pressing <F1>  darkens the display, and pressing <F2>  lightens the display. Keep in mind that adjusting the contrast on a colour display is much less pronounced than on a monochrome display.

To adjust the display contrast:

- Press the <BLUE> key twice to lock it on, and then press <F1>  to darken the display or <F2>  to lighten the display.
- Once you’ve successfully adjusted the display contrast, remember to press the <BLUE> key again to turn it ‘off’.

## 3.5.3 Calibrating The Touchscreen

If your 7530 touchscreen has never been calibrated or if you find that the stylus pointer is not accurate when you tap on an item, use the Stylus Properties dialogue box in the Windows CE Control Panel to recalibrate the screen.

- In the Control Panel, choose the Stylus icon to display the Stylus Properties window.

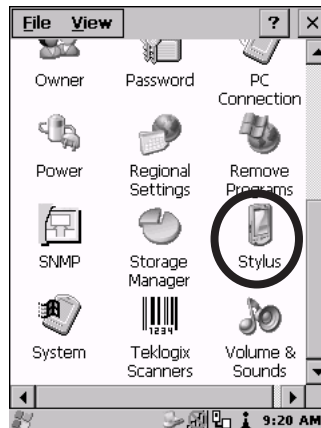


Figure 3.4 Stylus Icon

- Select the Calibration tab, and then choose the 'Recalibrate' button.



Figure 3.5 Calibration Screen

- Follow the directions on the calibration screen to calibrate the screen.

## 3.6 7530 Indicators

7535s use LEDs (Light Emitting Diode), onscreen messages and audio tones as indicators.

### 3.6.1 LEDs

The 7535 is equipped with four tri-coloured LEDs. This section outlines what these LEDs indicate.



**Important:** *If an LED is illuminated in red, the operator should be cautious as this generally indicates an abnormal operating condition or active laser emission.*





Figure 3.6 Keyboard LEDs

### 3.6.1.1 Charge LED

The lower-right LED is reserved for internal charger/power status. This indicator is active even when the 7535 is inserted in a docking station (and in suspend mode) so that the charge status of the battery can be detected easily.

Function	Charge LED Behaviour
External power not available.	LED off.
Fully charged to within 95% of charge capacity.	LED displays solid green colour.
Quick charge successfully completed to within 75% of charge capacity.	LED flashes slow green.
Charge in progress.	LED displays solid yellow colour.
Cell temperature out of range for charge.	LED flashes yellow.
Unable to charge battery.	LED displays solid red colour.
Charge circuit failure.*	LED flashes fast red.*

\*If the charge fails, refer to the charger troubleshooting sections in *Chapter 7: Peripheral Devices & Accessories* beginning on page 254 for helpful details.

Table 3.1 Charge LEDs

**Radio Traffic LED**

### 3.6.1.2 Radio Traffic LED

The upper-left LED on your 7530 flashes either orange or green to indicate when the radio transmits and receives data.



**Note:** *Keep in mind that while the standard 802.11b radio supports the transmit/receive LED, not all radios support this function.*

Function	Radio Traffic LED Behaviour
Radio Transmit	LED flashes orange.
Radio Receive	LED flashes green.

Table 3.2 Transmit and Receive LEDs

### 3.6.1.3 Scan LED

Successful scans are indicated in two ways – with a scan LED and with an audio tone.

Function	Scan LED Behaviour
Scan in progress	LED displays solid red during scan.
Successful scan	LED displays solid green after decode. Off when scan ended.
Unsuccessful scan	LED flashes red.

Table 3.3 Scan LED

### 3.6.1.4 User Application LED

This indicator is available for user-loaded custom Windows CE applications. Refer to the *7535 SDK Manual* for details about this LED. Neither Windows CE nor Tekterm use this LED.

## 3.6.2 Onscreen Indicators

The taskbar at the bottom of the screen displays a variety of system status indicators.

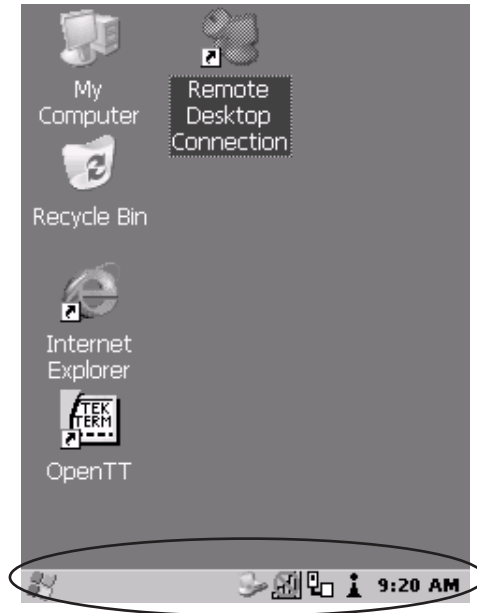


Figure 3.7 Taskbar

This display changes dynamically, and only those icons that are applicable are displayed. For example, if a radio is not installed in your 7535, the radio signal icon is not displayed in the taskbar.



### Windows® Start Button

If you have a touchscreen, you can display the Start Menu by tapping on the Windows® Start button in the taskbar.

**Onscreen Indicators**blue  
key**BLUE  
KEY** Modifier Key Indicators

<SHIFT>, <CTRL>, <ALT>, <BLUE> and <ORANGE> are modifier keys that have onscreen indicators to show when a key is active or locked. If a modifier key is pressed once to activate it, the key is displayed in the taskbar in *lowercase* characters – for example, pressing the <BLUE> key once displays *blue key* in the taskbar. If a modifier key is pressed twice, it is ‘locked on’ and the onscreen indicator is displayed in *uppercase* letters in the taskbar – for example, pressing <BLUE> twice displays *BLUE KEY* in the taskbar.

**Battery Gauge**

The battery shaped icon displayed in the taskbar provides a visual indication of the remaining battery power. The icon acts as a meter that is either full, at three-quarter level, half, quarter level or empty.

When the battery level is low – approximately 15 minutes from empty – a warning window pops up. When the battery power is completely depleted, a final warning window indicates that the 7535 will be powered down.

If the 7535 is using external AC power, an AC icon is displayed in the taskbar.



Full



75%



50%



25%



Empty



AC Connection

**Battery Charge**

The battery charge icon is displayed in the taskbar when the 7535 hand-held battery is being charged.

**Radio Signal Quality**

Increasing radio signal quality is represented by longer, filled bars within this icon.

Good  
ReceptionWeak  
ReceptionNo Radio  
Link



## Tethered Devices

When a peripheral is attached to the tether port and activated, an associated icon appears in the taskbar. The sample to the left indicates that a USB device is connected to the tether port.



Scanner



USB Device



RFID



Serial Device



Scan-See



## Docking Device

When a 7535 is inserted in a docking station, charger or cradle, an associated icon appears in the taskbar.



Gang Charger, Combo Charger &  
Combo Docking Station



Quad Docking Station



Power Cradle





Portable Docking  
Module (PDM)



## Security Level

Security levels can be set to limit user access to 7535 settings. In addition, applications can be restricted to prevent inadvertent changes.

### 3.6.3 Audio Indicators

The 7535 beeper provides a variety of sounds and can be configured to emit a sound when a key is pressed, a keyboard character is rejected, scan input is accepted or rejected, an operator's entry does not match in a match field or the battery is low. The volume function keys are located in the top row of the keyboard. The *increase* volume key is labelled with a plus symbol  and the *decrease* volume function key is labelled with a minus symbol .



## Adjusting The Beeper Volume

### 3.6.3.1 Adjusting The Beeper Volume

**On 63-key keyboards**, the volume function keys are accessed by pressing <BLUE> <F5> and <F6>.

**On 36-key keyboards**, the volume function keys are accessed by pressing <BLUE> <F3> and <F4>.

To adjust the beeper volume:

- Press the <BLUE> key twice to lock the key 'on' and then, press the *increase volume* function key  or the *decrease volume*  function key until the volume is meets your requirements.
- Remember to press the <BLUE> key again to turn it 'off'.

## 3.7 Internal Scanners



**Important:** For detailed scanner specifications and decode zone tables, refer to “Internal Scanner Specifications” beginning on page 281.

The scanner installed in your unit can be configured using the Scanner Properties dialogue box in the Control Panel.

The 7535 can be equipped with a:

- One dimensional (1D) internal laser scanner,
- Internal PDF laser scanner, or a
- Two dimensional (2D) internal imager scanner.

It is critical that you review the *warnings* listed in “Laser Warnings” on page xvi in the Approvals and Safety section at the beginning of this manual before using any of the scanners described in this chapter. “Scanning Techniques” outlines the mechanics of a successful scan. In addition, review “Scan LED Indicators” on page 49 to better understand how to interpret whether or not a bar code has been successfully scanned. Finally, “Troubleshooting” on page 50 provides some helpful suggestions should the scan fail.

## 3.7.1 Scanning Techniques



**Note:** *The scanning techniques described here apply to internal and external scanners.*

- Hold the scanner at an angle. Do not hold it perpendicular to the bar code.
- Do *not* hold the scanner directly over the bar code. In this position, light can reflect back into the scanner's exit window and prevent a successful decode.
- Scan the entire bar code. If you are using a 1D or PDF laser scanner, make certain that the scan beam crosses every bar and space on the bar code, including the margins on either end of the symbol.
- If you are using a 2D imaging scanner, make certain the red, oval shaped framing mark is centered within the bar code you want to scan.
- Hold the scanner farther away for larger bar codes.
- Hold the scanner closer for bar codes with bars that are close together.

## 3.7.2 Scan LED Indicators

The 7535 scanner LED (the lower-left LED) indicates whether or not your scan is successful. The LED behaves as follows:

- Scan In Progress: scan LED displays solid red colour.
- Successful Scan: scan LED displays solid green colour and turns off when the scan is ended.
- Unsuccessful scan: scan LED flashes red.

A bar code icon appears on the screen during a scan. While the scanner beam is active, the onscreen message states – SCANNING. If the scan is successful, the bar code data is displayed on the screen until the scan button (or pistol trigger) is released.

### 3.7.3 Troubleshooting

If the scanner is not working, investigate the following:

- Is the 7530 on?
- Check that the bar code symbology being scanned is enabled for the 7535 you are using. Check any other parameters that affect the scanning procedure or the bar code.
- Check the bar code to make sure it is not damaged. Try scanning a different bar code to verify that the problem is not with the bar code.
- Check that the bar code is within the proper range.
- Does the hand-held display the warning without scanning? This suggests a hardware problem in the 7530.
- Is the laser beam scanning across the bar code?
- Once the scan beam has stopped, check the scanner window for dirt or fogging.

### 3.7.4 Operating One Dimensional (1D) Internal Laser Scanners

- Turn the 7530 on. Wait until the unit has booted up completely.



**Important:** *If an aiming dot is available on the installed scanner, the dot will be enabled for a configurable time period (including off), after which normal scanning begins. Refer to “Dot Time (msec)” on page 120 for details.*

*Double-clicking the trigger will override the aiming delay and initiate an immediate scan. Note that the aiming dot is standard on long-range and high visibility internal scanners.*

- Aim at the bar code and press the scan key or the trigger. A scan beam and a warning indicator appear until a successful decode is achieved or six seconds have elapsed.



## 3.7.5 Operating Internal PDF Laser Scanners

This scanner decodes PDF417 two-dimensional bar codes.

- Turn the 7530 on. Wait until the unit has booted up completely.
- Aim at the bar code and press the scan key or the trigger. The beam expands into a rectangle covering the bar code to properly scan it. The scan beam and a warning indicator are visible until a successful decode is achieved or three seconds have elapsed.

## 3.7.6 Operating Internal Two Dimensional (2D) Imager Scanners

An imager scanner takes a snap shot of a single bar code or multiple bar codes (at one time). It can find a bar code regardless of its orientation – that is, even a bar code printed at a 45 degree angle to the 7530 will be decoded successfully.



**Note:** When scanning **multiple** bar codes, ensure that all of the desired bar codes are within the field of view of the scanner. It is possible that even when all bar codes are within the field of view, not all of them may be decoded. Only successfully decoded bar codes are passed to the application program. The application program then issues a warning, asking that you scan the missing bar codes.

When scanning a **single** bar code, ensure that only the desired bar code is within the field of view of the scanner.

Because imager scanners generally have a shorter depth of field than laser scanners, some practise may be required to find the optimal distance from the types of bar codes being scanned. Although the imager includes illumination LEDs, ambient light will help the imager decode the bar codes, especially if the bar code is far from the 7535.



**Important:** Keep in mind that the imager scanner is a camera, and the LED illumination is a flash. Glare can be an issue on reflective media such as plastic coated bar codes, just as glare is an issue for photographers. When pointing at a shiny surface, either shift the bar code to the side or top, or angle the bar code so that the glare reflects away from the imager scanner.

- Turn the 7535 computer on. Wait until the unit has booted up completely.
- Aim at the bar code and press the scan key or the trigger.

## Connecting & Disconnecting Tethered Peripherals

- When the scan button or trigger is pressed, a red, oval shaped light (the framing marker) is displayed. Centre the framing marker in the field – either in the centre of the bar code you want to scan or in the centre of the area in which multiple bar codes are to be scanned.

Illumination LEDs will flash and a picture of the bar code(s) is taken.

## 3.8 Connecting & Disconnecting Tethered Peripherals

Tethered peripherals such as scanners and printers connect to the hand-held computer with a quick release, circular connector. When a peripheral is connected to the hand-held, the 7535 detects the peripheral and loads the necessary drivers for it. An icon in the taskbar at the bottom of the screen provides a visual representation of the peripheral and indicates that it is ready for operation.

To attach the peripheral to the round, tether port on the side of the 7535:

- Insert the barrel of the plug into the tether port and rotate slowly until it clicks into place. The red dot on the port and on the connector should be aligned.

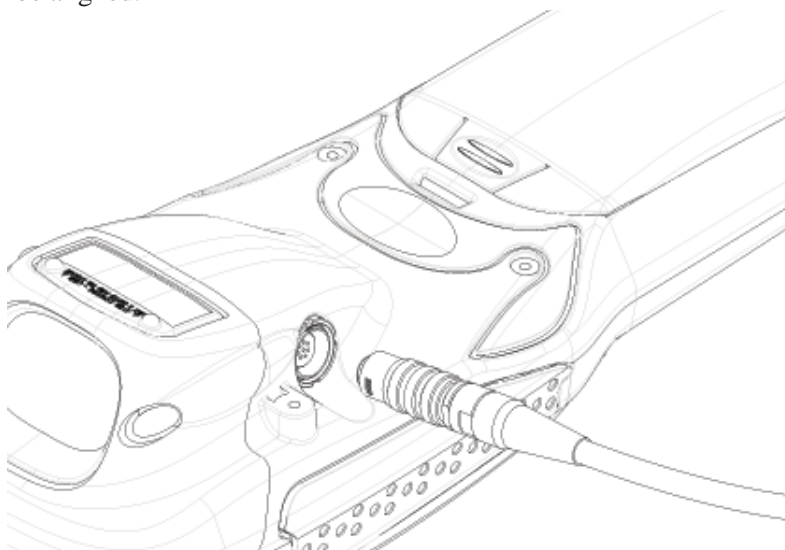


Figure 3.8 Attaching The Cable To The Tether Port

To remove the peripheral:

- Grasp the *shell* of the plug, and pull it back gently to unlock and release the connector.

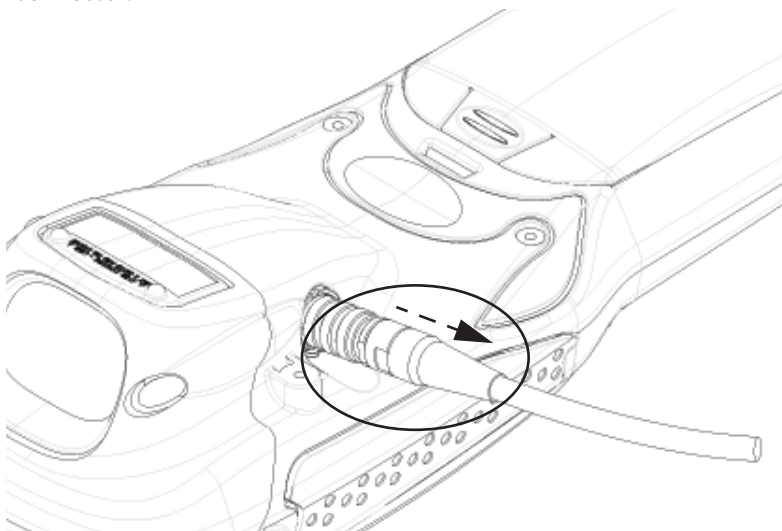


Figure 3.9 Disconnecting The Tether Cable



**Important:** *Never attempt to disconnect a peripheral by pulling the connector by the wire. The connector is locked into place and can only be unlocked and removed by pulling back the plug shell.*

## 3.9 Monitoring The Battery And Maximizing Run Time

Under normal operating conditions, fully charged batteries last for 10 hours. As Lithium-Ion batteries age, their capacity decreases gradually, and they are generally considered depleted after approximately 2 years of use (less than 60% of original capacity remaining). Keep in mind however that heavy usage or operating the 7535 at temperature extremes will shorten the battery life.

Lithium-Ion batteries do not require conditioning cycles and the 7535 battery system (including chargers) requires no user interaction to maintain peak performance.

## Monitoring The Battery And Maximizing Run Time

To maximize the run time of your batteries, consider the following:

- The display backlight is the largest drain on the battery. Try to keep its brightness as low as possible.
- The hand-held is ‘event’ driven – that is, when the unit is not in use, it reverts to *sleep* mode (even when it appears to be running), saving battery power. Events include a key press, touchscreen taps and scan triggers. Power consumption is reduced if you avoid unnecessary events, and allow the unit to *sleep* as much as possible.
- The 7530 battery is a ‘smart battery’ with built-in intelligence. The taskbar battery icon is a linear gauge used to estimate the remaining run time of the battery. It is important to note that the battery capacity icon displays quarter percentages of *nominal* capacity (the capacity of a new battery). An aged battery, even when fully charged, shows somewhat less capacity than nominal.

Double-tapping on the battery icon displays a dialogue box that provides detailed information about the battery status and performance. If the remaining capacity indication seems inaccurate, the battery may need recalibration. Recalibration requires that the battery be fully charged, discharged and then charged again before use. *If the battery is fully discharged and charged on a regular basis, recalibration should not be necessary.*

- When the hand-held is switched off, it goes into a low-power, suspend state but continues to draw a small amount of power from the battery. This should not be an issue unless the unit is left in suspend state for more than a week – in this case, the battery should be removed.
- Batteries left unused for durations of more than one or two months should be fully charged, discharged and then charged again before use. This recalibrates the gas gauge and allows the internal electronics to determine the actual capacity of the battery.
- The hand-held can determine when the useful life of the battery has expired and will notify the user. Chargers may reject batteries that have exceeded their lifespan.

## 3.9.1 Storing Batteries

Long term battery storage is not recommended. If storage is necessary:

- Always try to use a ‘first-in first-out’ approach to minimize storage time.
- Lithium-Ion batteries age much faster at elevated temperatures. Store batteries at temperatures between 0° C and 20°C.
- Always charge batteries to 40 to 60% before storing them. Batteries can be damaged by an over-discharge phenomenon that occurs when an empty battery is stored for a long period of time such that the cell voltage drops below a lower limit.
- To minimize storage degradation, recharge stored batteries to 40 to 60% every 4 or 6 months to prevent over-discharge damage.
- A ‘never used’ Li-Ion battery that has been stored for 3 years may have limited or no useful life remaining once put into service. Think of batteries as perishable goods.

## 3.10 Monitoring The Network Connection

If your hand-held is equipped with a wireless LAN radio, it will typically associate with the nearest access point. The radio signal quality meter in the taskbar indicates the relative strength of the communication link.

To access the radio signal icon from the keyboard:

- Press <BLUE> <0> to display the Start Menu.
- Choose `System Tray` from the menu.
- Use the <LEFT> and <RIGHT> arrow keys to highlight the radio signal icon in the taskbar.
- Press <ENTER> to display the wireless statistics box dialogue box.

***If you have a touchscreen:***

- Tap on the radio icon in the taskbar to display the wireless statistics dialogue box.



**Note:** *Moving in and out of the radio coverage area can have varying effects on a network session. At times, you may need to renew your connection by logging in again.*