7530 Hand-Held Computer

User Manual

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ISO 9001 Certified
Quality Management System

PSION TEKLOGIX

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150 Greenleaf Avenue, Unit F
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APPROVALS AND SAFETY SUMMARY

Declaration Of Conformity

Product:	**7530 Hand Held Micro-computer with Portable Docking Module**
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; ±4kV CD; ±8kV AD EN 61000-4-3; 3V/m, 80-1000 MHz EN 61000-4-4; ±1kV Power lines EN 61000-4-5; ±1kV 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 the undersigned hereby declare that the equipment specified above conforms to the above directives and standards.

Manufacturer:	Rob Williams Vice President of Engineering Psion Teklogix Inc. Ontario
Legal Representative	Domique 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:	2003

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	**Legal Representative in U.S.**
Signature	Signature
Rob Williams Full Name	Joe Musgrave Full Name
Vice President of Engineering Position	V.P. Global Solutions, Americas Position
Mississauga, Ontario, Canada Place	Erlanger, KY 41018, USA Place
July 4, 2003 Date	July 4, 2003 Date

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.**



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 0.1 Watts/Kg with body tissue. The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.



CAUTION!

Danger of explosion if a 7535 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!

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

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1.1 About This Manual

This manual describes how to configure, operate and maintain the Psion Teklogix 7535 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 7535 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 7535 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 world-wide 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 7535 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.

  - 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 58-Key Keyboard



Figure 1.2 7530 Docking Port

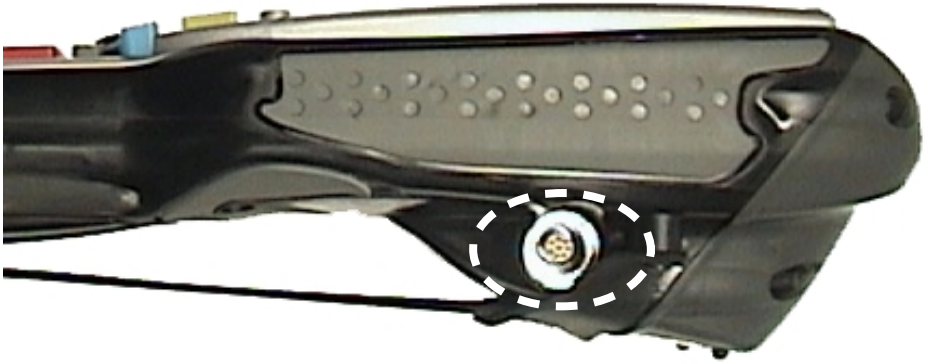


Figure 1.3 Tether Port

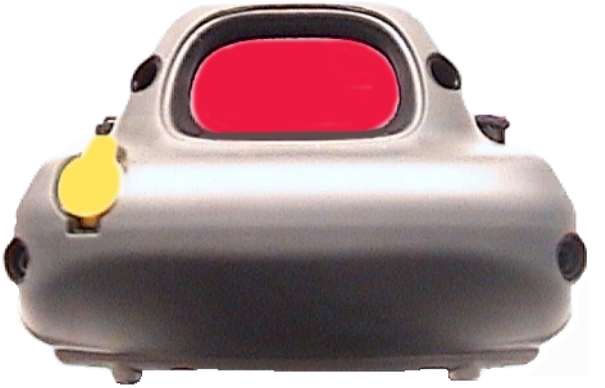


Figure 1.4 Scanner Window

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.***

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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 7535 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 7535 near the top of the unit.

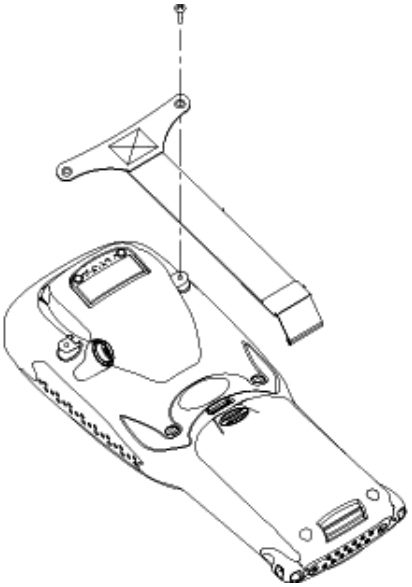


Figure 2.1 Attaching The Hand Strap

- Stretch the handstrap toward the base of the 7535, and hook the bottom of the handstrap into the slot near the base of the battery pack.

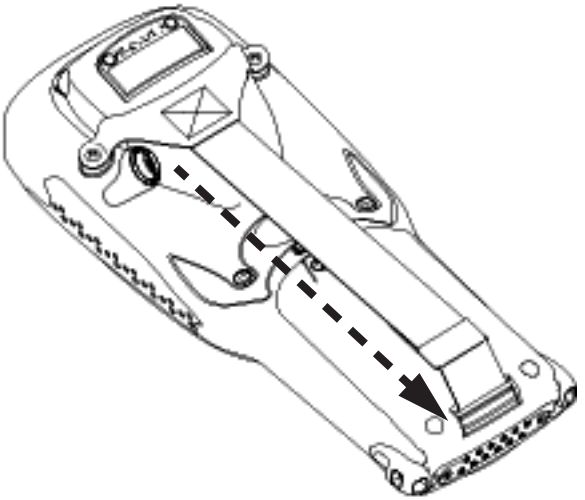


Figure 2.2 Hooking The Hand Strap To The 7530

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.*

- 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.

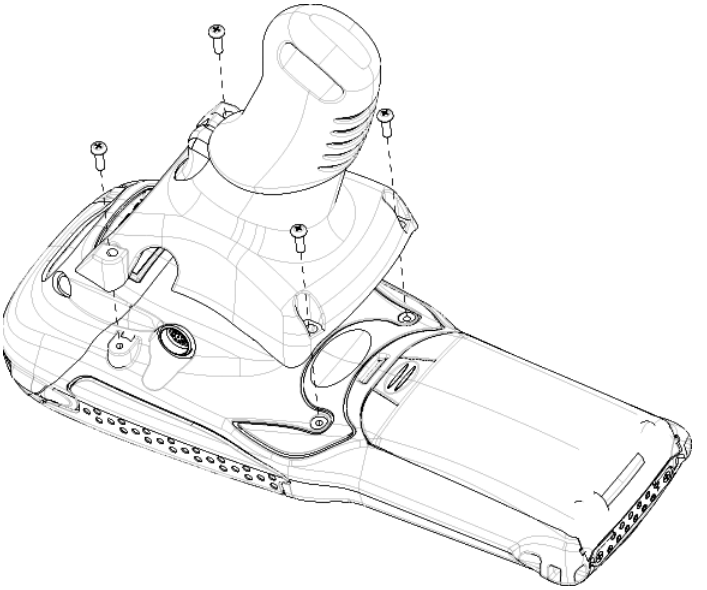


Figure 2.3 Attaching The Pistol Grip

- 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.

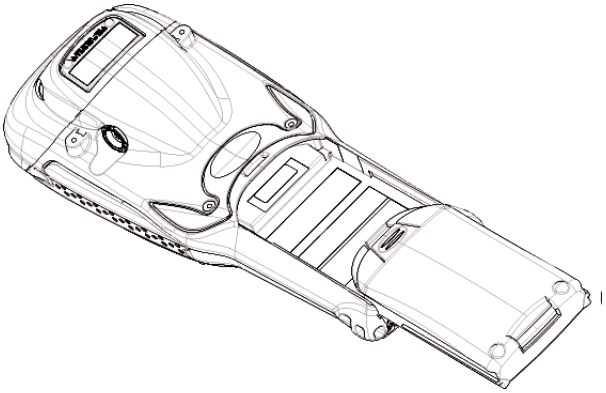


Figure 2.4 Installing The Battery

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 7535 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.

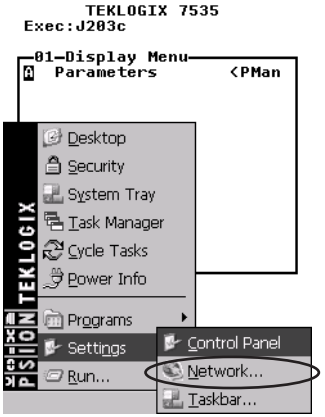


Figure 2.5 Network And Dial-Up Connections

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

2. 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

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

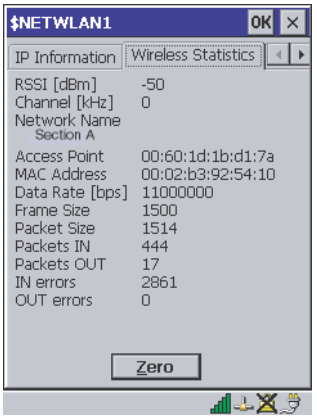


Figure 2.7 Wireless Statistics

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.*

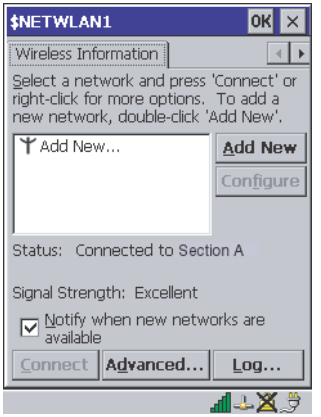


Figure 2.8 Wireless Information Tab

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, 7535 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

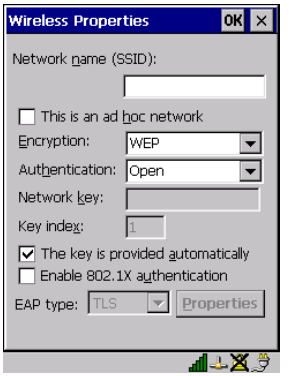


Figure 2.9 Wireless Properties Dialogue Box

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.

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.

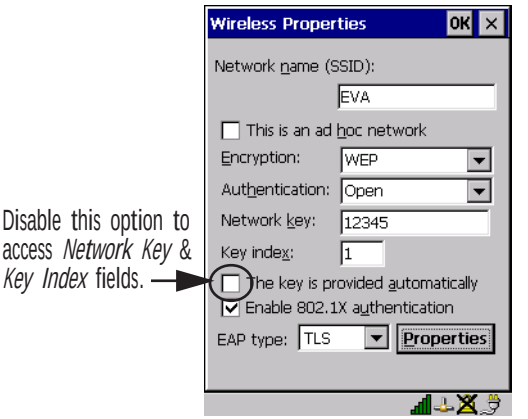


Figure 2.10 Accessing Network Key And Key Index

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.

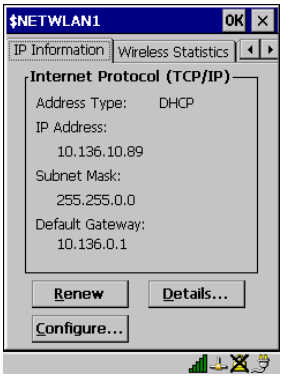


Figure 2.11 IP Information

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>.

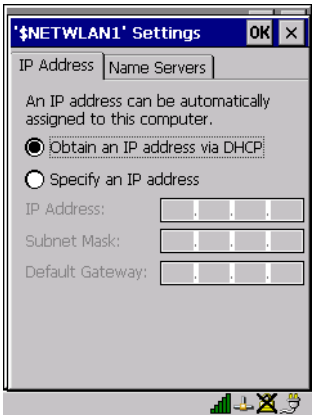


Figure 2.12 Defining An IP Address

- 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.

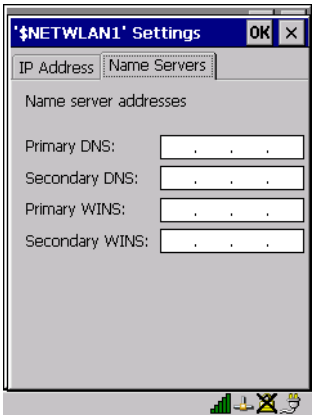


Figure 2.13 Name Servers Tab

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.

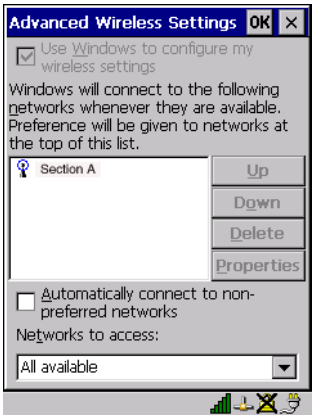


Figure 2.14 Advanced Settings

2.2.5.1 Rearranging Preferred Networks

The 7535 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 Delete 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 7535 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® ActiveSync® To Work With Files

ActiveSync® – Microsoft PC connectivity software – can be used to connect the 7535 to PCs running this software. By connecting the 7535 to a PC with a cable and running ActiveSync on the PC, you can:

- View 7535 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.mspx

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

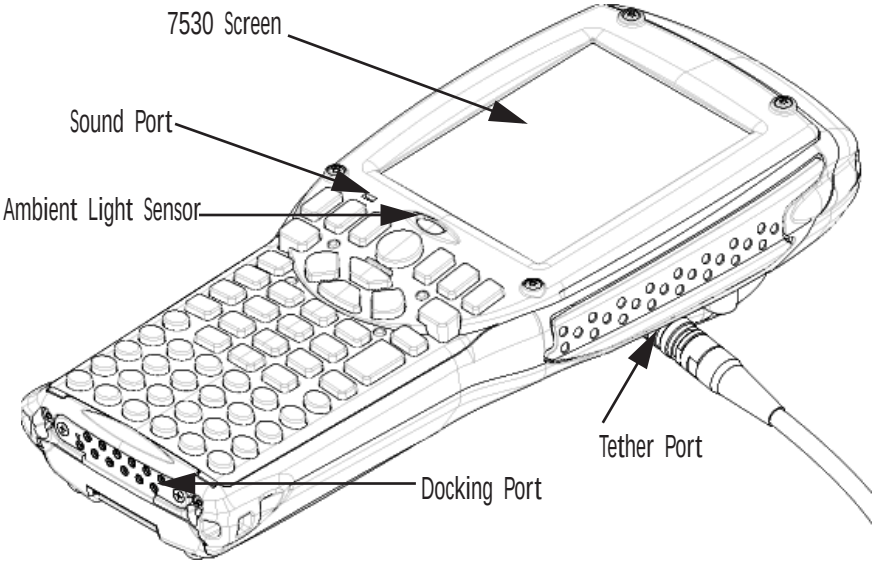


Figure 3.1 Front Of 7530

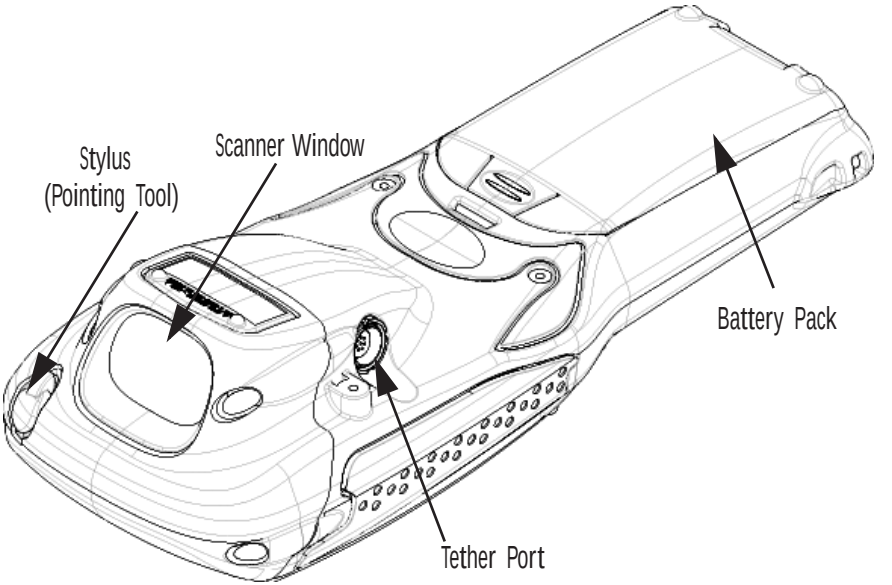


Figure 3.2 Back Of 7530

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.

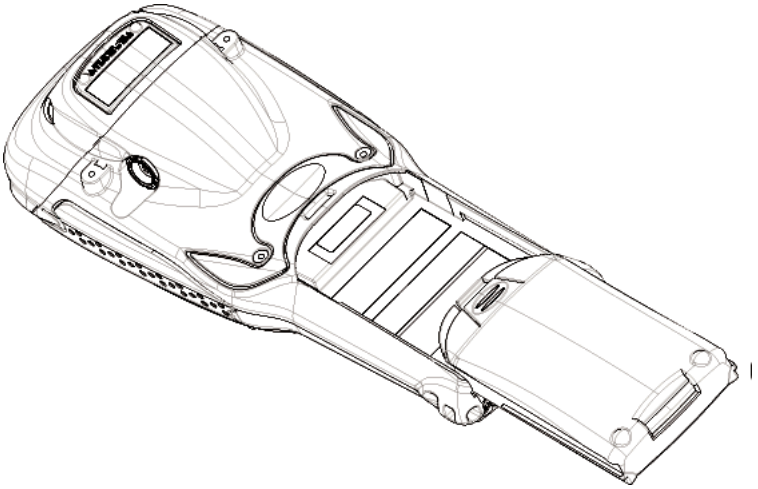


Figure 3.3 Installing The Battery Pack

- 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 7535 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 7535 internal battery along with a spare battery pack.

- 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 7535'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 *Psion 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 <u>not</u> 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 <u>uppercase</u> in the taskbar area at the bottom of the screen, this key is locked "on" – the 7535 will not switch off. Press the <BLUE> key again to unlock it; then press <BLUE> <ENTER/ON> to switch the 7535 off.***

If, however, you've disabled the "Blue Key" in the 'One Shot' dialogue box (see "Keyboard One Shot Modes" on page 94), the 7535 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.

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 7535 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 36-Key Keyboard

On 36-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 36-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 ⇒ symbol above the '0' (zero) key. Pressing this key signals the 7535 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 < ⇒> 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 < ⇒> 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' < ⇒> key after each alpha selection. The < ⇒> 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.

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

7535s 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 7535 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.

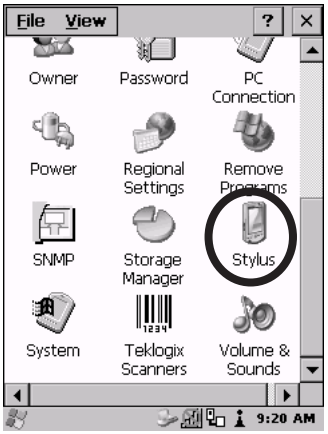


Figure 3.4 Stylus Icon

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

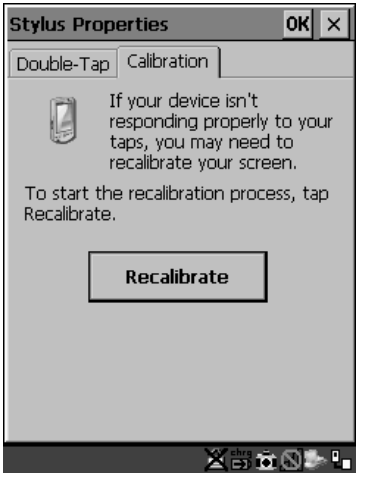


Figure 3.5 Calibration Screen

- 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

3.6.1.2 Radio Traffic LED

The upper-left LED on your 7535 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 Manua*l 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.

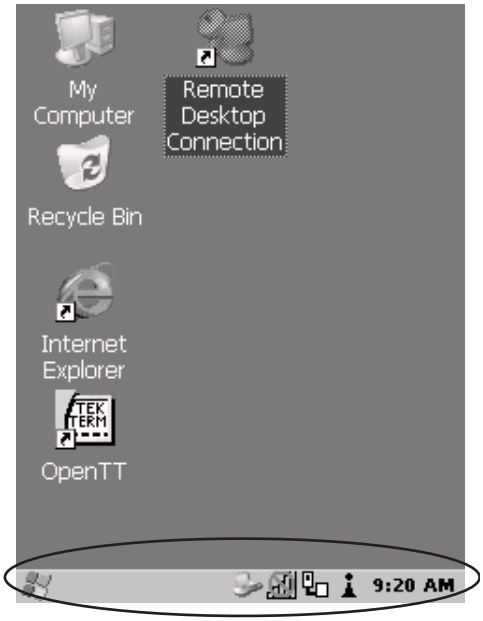


Figure 3.7 Taskbar

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.

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 7530 will be powered down.

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

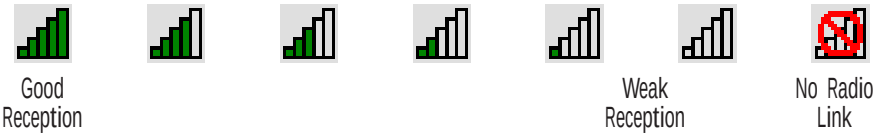


Battery Charge

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.





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 7530 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 7530 settings. In addition, applications can be restricted to prevent inadvertent changes.

3.6.3 Audio Indicators

The 7530 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  .

3.6.3.1 Adjusting The Beeper Volume

On 58-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 7530 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 7530 computer on. Wait until the unit has booted up completely.
- Aim at the bar code and press the scan key or the trigger.

- 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 7530:

- 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.

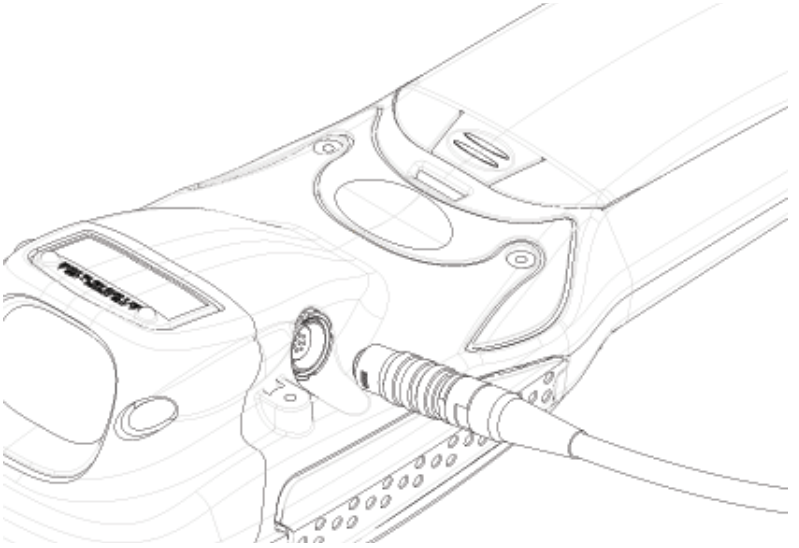


Figure 3.8 Attaching The Cable To The Tether Port

To remove the peripheral:

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

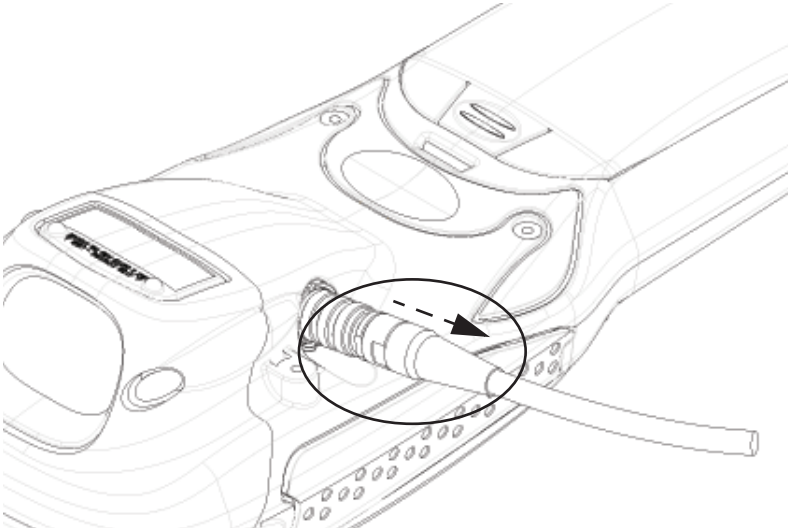


Figure 3.9 Disconnecting The Tether Cable

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 7530 at temperature extremes will shorten the battery life.

Lithium-Ion batteries do not require conditioning cycles and the 7530 battery system (including chargers) requires no user interaction to maintain peak performance.

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 7535 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.*

3.11 Uploading Data In A Docking Station

The Combo Docking and Quad Docking peripherals allow the 7530 to link to an Ethernet network. They are typically used to upload transaction data to a server computer when a radio link in not available. When a 7530 is properly inserted in a docking station, a dock icon is displayed in the taskbar at the bottom of the 7530 screen. The 7530 also detects the presence of the Ethernet network. Review the documentation provided with the user application installed in your 7530 before preforming data uploads.

3.12 General Maintenance

3.12.1 Caring For The Touchscreen

The top of the touchscreen is a thin, flexible polyester plastic sheet with a conductive coating on the inside. The polyester can be permanently damaged by harsh chemicals and is susceptible to abrasions and scratches. Using sharp objects on the touchscreen can scratch or cut the plastic, or crack the internal conductive coating.

The chemicals listed below must not come into contact with the touchscreen:

- mustard,
- sodium hydroxide,
- concentrated caustic solutions,
- benzyl alcohol, and
- concentrated miner acids.

If the touchscreen is used in harsh environments, consider applying a disposable screen protector (PN HU6110). These covers reduce the clarity of the display slightly but will dramatically extend the useful life of the touchscreen. When they become scratched and abraded, they are easily removed and replaced.

3.12.2 Cleaning The 7530



Important: ***Do not immerse the unit in water. Dampen a soft cloth with mild detergent to wipe the unit clean.***

- Use ***only*** mild detergent or soapy water to clean the hand-held unit.
- Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The 7530 has a plastic case that is susceptible to harsh chemicals. The plastic is partially soluble in oils, mineral spirits and gasoline. The plastic slowly decomposes in strong alkaline solutions.
- To clean ink marks from the keypad and touchscreen, use isopropyl alcohol.

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4.1 Navigating In Windows CE And Applications

Graphic user interfaces like Windows CE for portable devices and desktop Windows (2000, XP, etc.) utilize 'point and click' navigation. An equivalent keyboard shortcut is also available for every 'point and click' action.

Windows CE supports the same 'point and click' user interface and keyboard shortcuts as desktop Windows with one difference – the 'point and click' action is accomplished using a touchscreen rather than a mouse. Actions can be performed using any combination of keyboard shortcuts or touchscreen tapping (provided your 7530 is equipped with a touchscreen).

4.1.1 Navigating Using A Touchscreen And Stylus



Note: *If the touch screen is not registering your screen taps accurately, the touchscreen may need recalibration. Refer to "Calibrating The Touchscreen" on page 41.*

A touchscreen is an ***optional*** feature. A 7530 equipped with a touchscreen has a *stylus* – a pointing tool that looks like a pen – stored in a slot at the top of the 7530. The stylus is used to select objects on the touchscreen.



Note: *To prevent damage to the touchscreen, use only the stylus (pen) supplied with your 7530.*

To open a file, launch an applet or open a folder:

- Double-tap the stylus on the appropriate icon.

4.1.2 Navigating Using The Keyboard

If your 7530 has a standard screen (rather than a touchscreen), choosing icons and navigating dialogue boxes, displaying the desktop, and so on requires keyboard input. If your unit has already been fully configured and your application is launched at startup, you'll have little need for keyboard navigation.

Operation	Key or Key Combination
Switch between active applications	<ALT> <TAB>
Open task manager	<ALT> <ESC>
Move the cursor	Arrow keys
Open file, folder or icon	<ENTER>
Exit & Save	<ENTER>
Close/Exit & Do Not Save	<ESC>
Navigate Dialogue Boxes	<TAB> To move cursor up <SHIFT> <TAB> To display the contents of the next 'tab' in a dialogue box <CTRL> <TAB>
Select Radio Button/Press Button	<SPACE>
Go to Start Menu	<BLUE><0>

Table 4.1 Keyboard Navigation

Keep in mind that unlike a desktop computer, the 7530 does not support key chording (pressing two keys at the same time). You must press one key followed by the next in sequence.

Refer to "Working With Files, Folders And Programs" on page 63 for additional details about keyboard navigation.

4.2 Working With Files, Folders And Programs

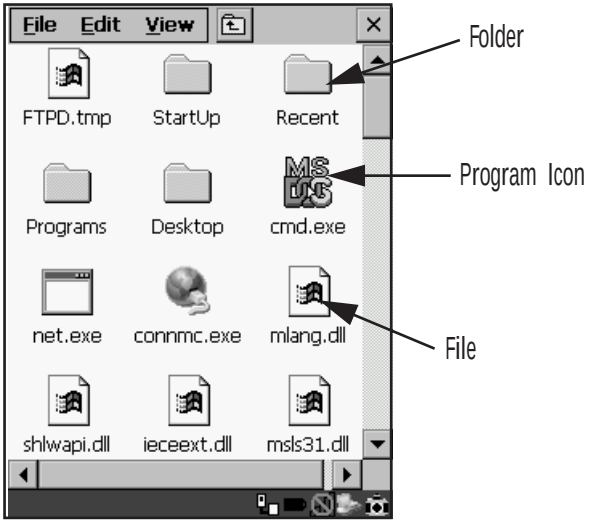


Figure 4.1 Working With Windows Icons

- Use the arrow keys to highlight the icon you want to open or launch.
- Press <ENTER>.

If you have a touchscreen:

- Double-tap on the appropriate icon – either a folder icon, a program icon or a file icon – to open or launch your selection.

4.3 The Startup Desktop

When the 7530 boots up, the startup desktop (shell) is displayed. Any applications stored in the Startup folder start up immediately.

Note: *The startup folder is located in \Windows\StartUp and \Flash Disk\StartUp.*

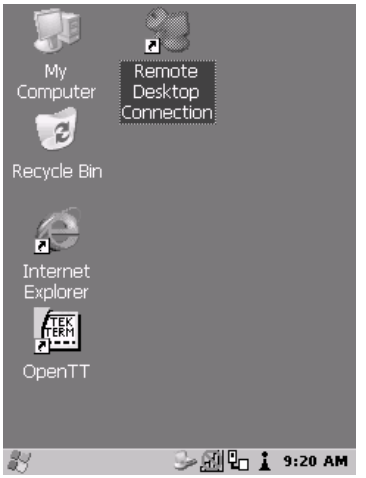


Figure 4.2 The 7530 Startup Desktop

To access desktop icons:

- Use the arrow keys to highlight the icon, and press <ENTER> to launch the highlighted icon.

Note: *If the arrow keys do not highlight the desktop icons, the desktop may not be selected. Press <BLUE> 0 (zero) to display the* Start Menu*, and select* Desktop*. Now the desktop will be "in focus" and the arrow keys will highlight the icons.*

If you have a touchscreen:

- Tap on the icon to open a window or, in the case of an application icon, launch an application.

4.3.1 The Desktop Icons

The icons displayed in the startup desktop operate in much the same way as those displayed on any standard PC desktop that is running Windows®.

My Computer

Choosing this icon displays the contents of your 7530 computer. If you're not sure how to work with the files, folders and programs displayed, refer to "Working With Files, Folders And Programs" on page 63.

Recycle Bin

This option temporarily contains items that were deleted, allowing you to either permanently delete or restore these items.

Internet Explorer

Choosing this icon launches Internet Explorer – a standard Windows CE version. Keep in mind that your supervisor will need to set up access using the Internet Options and the Network and Dial-up Connections icons in the Control Panel.

Remote Desktop Connection

This option allows your 7530 to communicate with a remote desktop PC. "Remote Desktop Connection" on page 83 provides a website with step-by-step instructions.

4.3.2 The Taskbar



Figure 4.3 The Taskbar

The 7530 is equipped with a taskbar at the bottom of the screen. It displays icons through which you can view the battery capacity and radio signal quality of your unit. If the hand-held is attached to a charger, cradle, docking station or PDM, an associated icon is displayed. In addition, the taskbar displays the application(s) currently running on your unit and the security level assigned to your 7535.

The taskbar also displays active modifier keys – <SHIFT>, <ALT>, <CTRL>, <BLUE> and <ORANGE>. Keys that have been locked "on" are displayed in *uppercase* letters. For example, if you press the <CTRL> key twice to lock it "on", it is displayed as CTRL KEY in the taskbar.

4.3.2.1 Using The Taskbar

- Press <BLUE> <0> to display the Start Menu.
- Type <Y> to choose `System Tray` from the menu.
- Use the arrow keys to highlight the icon in the taskbar about which you'd like more information.
- Press <ENTER> to display the appropriate dialogue box.

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

- Using the stylus, tap on the indicator you want to view – the battery icon for example – to display a dialogue box listing the current battery capacity information.

4.3.2.2 Customizing The Taskbar

To customize the taskbar so that it displays only those icons you require:

- Press <BLUE> <0> (zero) to display the Start Menu.
- Highlight the Settings option, highlight Taskbar... in the sub-menu, and press <ENTER>.

The Taskbar and Start Menu dialogue box is displayed.

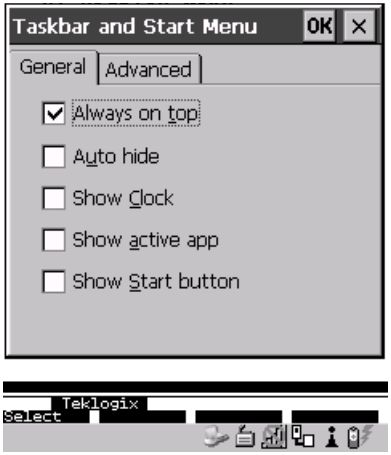


Figure 4.4 Taskbar And Start Menu Settings

- Under the General tab, highlight the options you want to activate, and press the <SPACE> key to select them. A check mark indicates active items.

If you have a touchscreen:

- Tap the stylus on the items you want to activate or deactivate. The check mark indicates active items.

4.4 The Start Menu

Note: *Some of the Start Menu items may be disabled based on the 7530's current security settings.*

The Start Menu lists the operations you can access and work with. It is available from the startup desktop or from within any application.

To display the menu:

- Press <BLUE> <0> (zero).

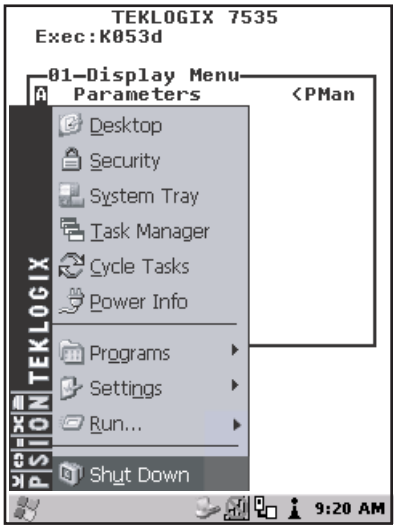


Figure 4.5 Start Menu

- Use the arrow keys to highlight a menu item, and press <ENTER>, ***or***

If the menu item has an underlined character:

- Type the underlined alpha character – for example, to display the `Power Info` dialogue box, type the letter *p*.

If you have a touchscreen:

- Tap on the Windows® Start button in the taskbar. Tap on the item in the menu with which you want to work.

4.4.1 The Desktop

Choosing the `Desktop` option from the Start Menu displays the 7535 desktop.

4.4.2 Security Settings

Choosing the Security option from the Start Menu displays a dialogue box in which you can define the access level for the 7530 – Teklogix, Supervisor or User.

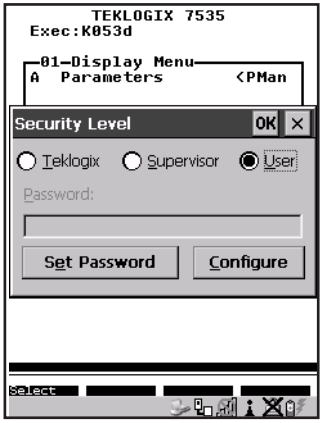


Figure 4.6 Security Levels

Security Level

These security levels define the options accessible to the operator in the Start Menu and the taskbar. When you change security levels, you'll need to enter the appropriate password in the Password textbox. The security level is represented by an icon in the shape of a lock in the taskbar.

Changing A Password

Note: *Keep in mind that this is the same password as that assigned through the* Password *control panel applet. Refer to "Control Panel Icons" on page 84.*

To assign a password:

- Choose a security level, and enter the existing password in the Password field
- Choose the Set Password button.

A dialogue box labelled Password Properties is displayed.

- Type the new password in the Password: text box
- In the Confirm Password: text box, retype the new password.

Configuring Security

Choosing the Configure button displays the Configure Security dialogue box.



Figure 4.7 Configuring Security

This dialogue box allows you to determine which security levels will have an associated icon displayed in the taskbar. By default, a security icon is not displayed for user-level security.

4.4.3 The System Tray

The `System Tray` option allows access to the icons in the taskbar at the bottom of the screen. The taskbar displays indicators such as a battery capacity gauge and the security level. These indicators are attached to dialogue boxes that provide additional information.

- Choose `System Tray` from the Start Menu.

When `System Tray` is chosen, the taskbar icons become accessible. To display the dialogue box attached to an icon:

- Use the arrow keys to highlight an icon – for example – the security icon.
- Press <ENTER> to display the security level dialogue box.

If you have a touchscreen:

- Tap on the icon with which you want to work. The associated dialogue box is displayed.

4.4.4 The Task Manager

The `Task Manager` option allows you to switch to another task or to end an active task. To display the task manager window:

- Press <BLUE><0><T>, ***or***
- Press <ALT> <ESC>.



Figure 4.8 Task Manager

4.4.5 Cycle Tasks

When `Cycle Tasks` is selected (and the Task Manager is not open), you can cycle through active applications. To choose this option:

- Press <BLUE><0>, and type <C>, *or*
- Press <ALT> <TAB>.

4.4.6 Power Info

Selecting `Power Info` from the Start Menu displays the Power Properties dialogue box. This dialogue box indicates the remaining charge capacity of the battery.

4.4.7 Programs

With `Programs` highlighted, press the <RIGHT> arrow key to display a sub-menu of options.

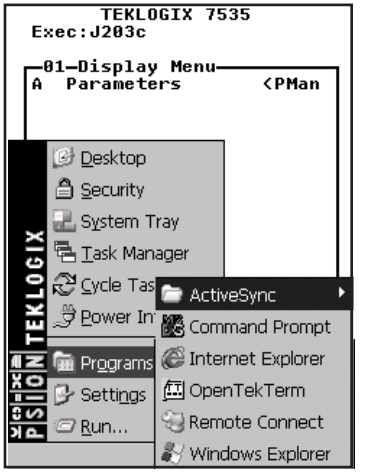


Figure 4.9 Program Sub-Menu

This sub-menu allows you to choose ActiveSync and Command Prompt, and you can access the Internet Explorer, installed applications (e.g., Open Tekterm), Remote Desktop Connection or Windows Explorer.

ActiveSync®

This option allows you to connect to another device using ActiveSync.

Command Prompt

Command Prompt is used to access the DOS command prompt. At the prompt, you can type DOS commands such as *dir* to display all the directories in the drive.

Internet Explorer

The 7535 is equipped with Microsoft® Internet Explorer consistent with all Windows CE devices on the market. You can access the Internet Options icon through the Start Menu under `Settings>Control Panel` or by double-tapping on the desktop icon labelled My Computer and then, double-tapping on the Control Panel icon.

Windows Explorer

Windows Explorer installed on your 7530 is consistent with all Windows CE.NET 4.2 devices. You can access this option either from the Start Menu under `Programs>Windows Explorer`.

Remote Desktop Connection

Remote Desktop Connection is a 7530 application used to connect to a Windows Terminal Server so that you can run a "session" on the Server machine using the 7530 (Windows CE device). "Remote Desktop Connection" on page 83 provides a website with details about this option.

4.4.8 Settings

With `Settings` highlighted, pressing the <RIGHT> arrow key displays a sub-menu of options, including Control Panel, Network and Dial-up Connections and Taskbar and Start Menu settings.

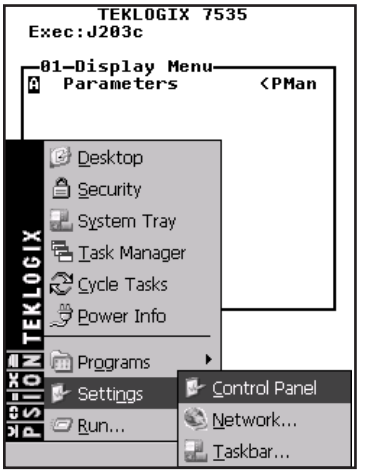


Figure 4.10 Settings Sub-Menu

Control Panel

The Control Panel contains applets used to configure hardware, the operating system and the shell. If your 7530 is running with the Psion Teklogix Tekterm application or another application, additional configuration applets may appear in the Control Panel.

Network And Dial-Up Connections

The Network and Dial-up Connections window allows you to configure the 7530 radio or execute an existing configuration. Refer to “Configuring An IEEE 802.11 Radio Installed In The 7530” on page 18 for radio setup details.

Taskbar And Start Menu

The Taskbar and Start Menu option displays a dialogue box in which you can customize the taskbar, choosing which options will be displayed. Refer to “Customizing The Taskbar” on page 67 for additional details about this option.

4.4.9 Run

Choosing the Run option from the Start Menu displays a dialogue box in which you can enter the name of the program, folder or document you want to open or launch.



Figure 4.11 Run Dialogue Box

4.4.10 Shutdown

With Shutdown highlighted, pressing the <RIGHT> arrow key displays a sub-menu of options, including Suspend, Warm Reset and Cold Reset.

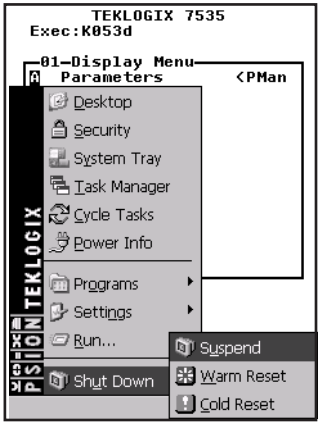


Figure 4.12 Shutdown Sub-Menu

Note: *This menu varies slightly depending on the security level chosen. When the 7530 is set to* ***User*** *level, the* Shutdown *option is replaced by* Suspend. *A sub-menu is not available.*

At ***Teklogix*** *security level, an additional option is available in the sub-menu –* Bootloader. *This option behaves like cold-reset, except that the 7530 starts Bootloader rather than Windows CE.*

Suspend

The Suspend option suspends the 7530 immediately – this is equivalent to turning the hand-held off.

Warm Reset

The Warm Reset option resets the 7530, leaving all saved files and (registry) settings intact. Any unsaved data is lost.

Cold Reset

The Cold Reset option resets the 7530. Any files not stored in permanent memory are lost. However, the registry settings are saved.

4.5 Using A Dialogue Box

A dialogue box (like the samples in Figure 4.13) appears when you need to make selections and enter further information.

You can move between dialogue items by tapping on them, or by pressing the arrow keys and the <TAB> key. (<SHIFT> <TAB> moves the cursor backwards.)

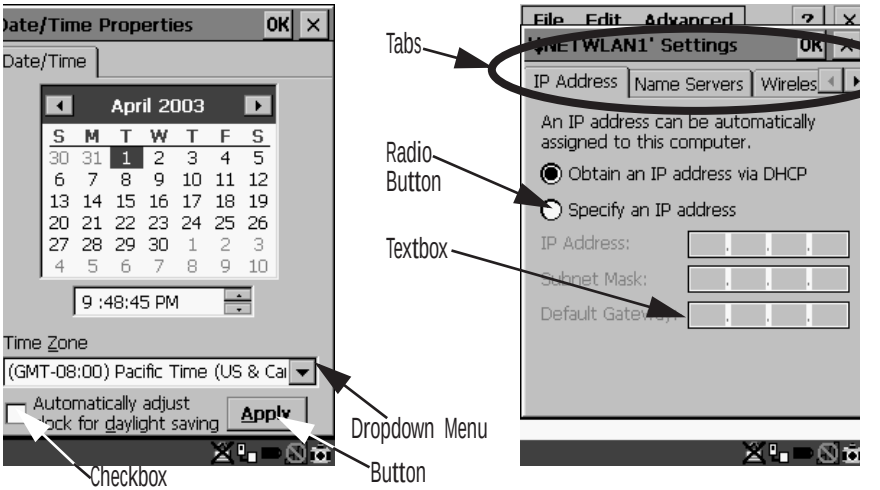


Figure 4.13 Dialogue Boxes

Note: *If your unit is **equipped with a touchscreen**, you can use the stylus to tap on an element in a dialogue box to select or deselect it, display dropdown menu items, save your selections, and so on.*

Dialogue boxes contain one or more of the following elements:

Tab: A tab separates different elements of a dialogue box. Press the <TAB> key until a tab in the dialogue box is highlighted. To display adjoining tabs, press the <RIGHT> or <LEFT> arrow key. **To display the information in the next tab from anywhere in the window, press <CTRL> <TAB>.**

Textbox: A textbox requires that you type information. Press the <TAB> key to highlight the textbox and then type the appropriate information.

Dropdown: This type of menu is identified by up and down arrows next to the dropdown menu to indicate that additional options are available. Press the <TAB> key to highlight the menu, and use the arrow keys on your keyboard to cycle through the options.

Checkbox: This box allows you to select or deselect an option. To select or deselect a checkbox, press the <TAB> key to highlight the checkbox, and press the <SPACE> key to select (√) or deselect it.

Radio buttons: These buttons allow you to choose from a number of options. For example, in the sample screen in Figure 4.13 on page 76 you can choose to 'Obtain an IP address via DHCP' or 'Specify an IP address'. Press the <TAB> key to highlight a radio button option, and then select a radio button by pressing the arrow keys to highlight the appropriate option.

Buttons: This type of button allows you to 'Save', 'Delete' and so on the options you've chosen in a dialogue box. Use the <TAB> key to highlight the button you want to use. Press the <ENTER> key to activate it.

Saving Your Choices: Once you've made all your changes, press the <ENTER> key to save your changes and exit the window.



Note: *A dialogue box item that is displayed in grey text indicates that it is not currently available.*

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5.1 Remote Desktop Connection

Remote Desktop Connection is a 7530 application used to connect to a Windows Terminal Server so that you can run a "session" on the Server machine, using the 7535 (Windows CE device).

Refer to the following website for step-by-step information about setting up this connection:

http://www.microsoft.com/WindowsXP/pro/using/howto/gomobile/remotedesktop/default.asp

5.2 Pocket PC Compatibility

The 7535 supports the AYGShell API set that allows PocketPC-compatible applications to run on the hand-held. Microsoft® Windows® CE.NET 4.2 is designed to include application programming interface (API) compatibility support for the Microsoft Windows Powered Pocket PC 2002 shell in 7535s running Windows® CE.NET 4.2.

The website listed below describes the APIs exposed through AYGShell and the application compatibility between Windows Powered Pocket PC 2002-based applications and Windows CE.NET 4.2-based devices:

http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dncenet /html/WINCENET_CEPCC_App.asp

5.3 The Control Panel

The Windows CE Control Panel provides a group of icons through which you can set a variety of system-wide properties, such as mouse sensitivity, network configuration and the desktop color scheme.



Note: *If you are uncertain how to move around a dialogue box and make selections, review "Using A Dialogue Box" on page 76.*

When the 7535 boots up, the startup desktop (shell) is displayed, and any applications stored in the Startup folder start up immediately.

To access the Windows CE Control Panel:

- Press BLUE> <0> to display the Start Menu.
- Highlight Settings in Start Menu, and press the <RIGHT > arrow key to highlight the Control Panel option.
- Press the <ENTER> key to display the contents of the Control Panel window.

If you have a touchscreen:

- Use the stylus to tap on the Windows Start button in the taskbar to display the Start Menu. Tap on Settings>Control Panel.

The Control Panel folder contains icons used in the setup of your 7530.

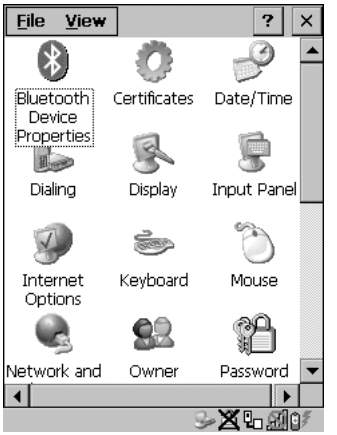


Figure 5.1 Control Panel

5.4 Control Panel Icons

The Windows CE Control Panel provides a group of icons that allow you to customize and adjust settings on your 7530.



Date/Time

Allows you to set the current Month, Date, Time and Time Zone on your unit.



Display

Changes the appearance (window colour scheme) on the unit desktop.



Keyboard

Toggles character repeat on and off and specifies delay and rate for repeated characters. It also allows you to adjust the keyboard backlight threshold and intensity.



Volume & Sound

Allows you to adjust the volume of the beep that is emitted to indicate events like warnings, key clicks and, if your unit is equipped with a touch-screen, screen taps.

Sounds (wave files) cannot be reproduced on 7535 units. The beeper volume and the conditions under which it sounds are tailored from within the application installed on your unit.



Mouse Properties

For units equipped with touchscreens, this icon allows you to customize the sensitivity and speed of the stylus double-tap.



Owner

Provides fields in which you can specify owner information. A 'Notes' tab allows additional information to be entered and displayed when the unit is powered up. 'Network ID' tab information is used to access network resources. (This information should be provided by your System Administrator.)



Password

Allows you to assign a password to restrict access to elements of the unit. Once assigned, password access cannot be circumvented so it is important that you write down your password and keep it in a safe place. Refer to "Security Settings" on page 69 for details.



Power

Displays battery pack power status. (Alternately, battery status can be accessed through the taskbar.) The 'Power Scheme' tab allows you to determine a suspend states, and the 'Charger' tab determines whether or not a battery that requires it, can be recalibrated. (Refer to "Power Saving Schemes" on page 101 for details.)



Regional Settings

Allows you to specify the local language the display text will use along with the format of numbers, currency, time and date for your region.



Remove Programs

Lists the programs that can be removed from your unit. To remove a program, select it and then click on the Remove button.



Stylus

Adjusts how Windows CE recognizes your double-tap (as slow or rapid successive taps).

Under the 'Calibration' tab, you can recalibrate your touchscreen by tapping on the 'Recalibrate' button and following the directions on the calibration screen.



System

Displays system and memory properties. Under the Memory tab, you can allocate memory between storage memory and program memory.



Dialing

Specifies dialing settings, including area code, country code, dial type and the code to disable call waiting. You can store multiple patterns – for example, 'Work', 'Home', and so on using this dialogue box.



Certificates

A public key is transmitted as part of a certificate. The certificate assigned through this icon is used to ensure that the submitted public key is, in fact, the public key that belongs to the submitter. The client checks that the certificate has been digitally signed by a certification authority that the client explicitly trusts. "Certificate Assignment" on page 105 directs you to the appropriate setup information.



PC Connection

Enables direct connections to a desktop computer. Selecting the 'Change Connection' button allows you to change the type of direct connect to your PC.



Teklogix Scanners

Used to set up scanner parameters and choose the bar code symbologies that the 7530 scanner will successfully read.



Network And Dial-up Connections

Displays a network window from which the 7530 radio can be configured and an existing configuration can be executed. Refer to "Configuring An IEEE 802.11 Radio Installed In The 7530" on page 18 for details.



Internet Options

Used to configure your Internet browser including options such as identifying the default and search page that the browser applies when connecting to the Internet, setting the cache size, specifying the Internet connection options, and defining the security level that is applied when browsing.



SNMP

SNMP (Simple Network Management Protocol) is the protocol used to monitor and manage devices attached to a TCP/IP network.

5.5 Basic Setup

5.5.1 Display Properties

- In the Control Panel, choose the Display icon.

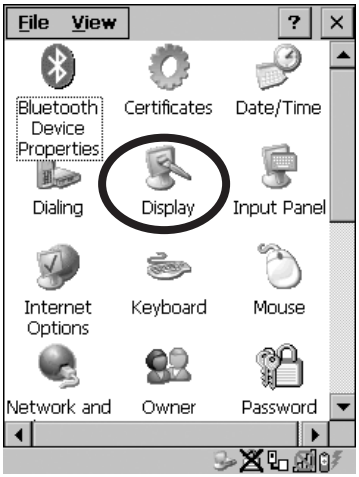


Figure 5.2 Choosing The Display Icon

5.5.1.1 Display Contrast

The Contrast tab allows you to adjust the 7530 display contrast to suit the environment in which you are using the hand-held.

- In the Display Properties dialogue box, open the Contrast tab.

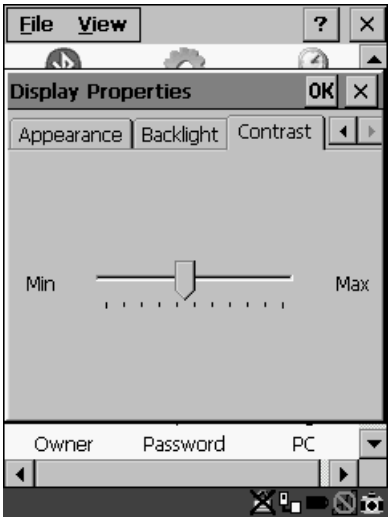


Figure 5.3 Display Contrast Properties

Sliding bar in the Contrast tab to the ***left*** decreases or ***darkens*** the display contrast. Sliding the bar to the ***right*** to increases or ***lightens*** the display contrast.

5.5.1.2 Display Backlight

The backlight is activated for a configurable amount of time if the ambient light is below a specified threshold and if the 7535 is in use (key press, scanner trigger or data received from the host). The Display Properties dialogue box in the Control Panel allows you to specify the intensity of the backlight along with how the backlight behaves in low-light conditions and when the unit is not in use.

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

- In the Display Properties dialogue box, open the Backlight tab.

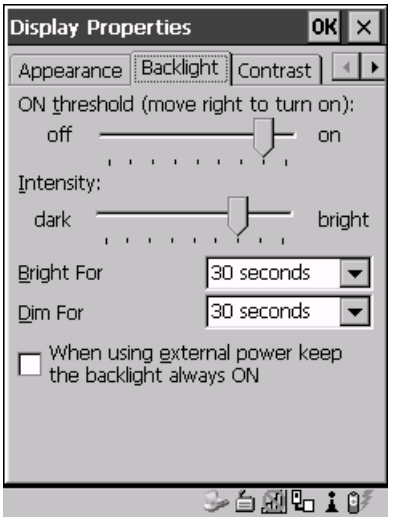


Figure 5.4 Display Backlight Properties

Note: *Backlight changes take affect immediately. You do not need to reset the 7530.*

ON Threshold

The 7530 is equipped with an ambient light sensor. This sliding bar allows you to determine how dark the ambient light needs to be before the backlight turns on.

Intensity

This parameter is used to adjust the light intensity of the 7530 backlight. Sliding the bar to the left lowers the light intensity, and sliding it to the right raises the intensity.

Bright For

The value chosen from this dropdown menu determines the duration of time that the backlight stays on at the configured intensity when a unit is not in use.

Dim For

The value chosen from this dropdown menu determines the duration of time that the backlight stays on at half the configured intensity (dimmed backlight) when a unit is not in use.

External Power Checkbox

When you select (√) the checkbox next to 'When using external power keep the backlight always ON.', the backlight remains ON at the configured intensity ***when the 7530 is operating with external power*** (not battery power). If the 7530 is drawing power from its battery, this option is ignored and the other parameters defined in Display Properties dialogue box take affect.

5.5.1.3 Display Appearance

- In the Display Properties dialogue box, open the Appearance tab.

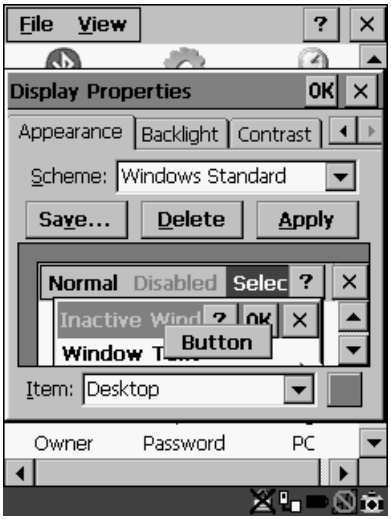


Figure 5.5 Display Appearance Properties

This dialogue box allows you to customize the display colour scheme.

5.5.2 Keyboard Properties

This icon displays the Keyboard Properties dialogue box in which you can adjust the repeat rate of the keys, the intensity of the keyboard backlight and the behaviour of the <BLUE> and <ORANGE> modifier keys. This dialogue box also allows you to define macro keys and Unicode characters.

- In the Control Panel, choose the Keyboard icon.

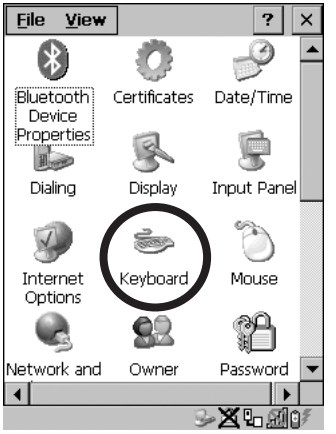


Figure 5.6 Choosing The Keyboard Icon

5.5.2.1 Key Repeat

- In the Keyboard Properties dialogue box, open the Repeat tab.

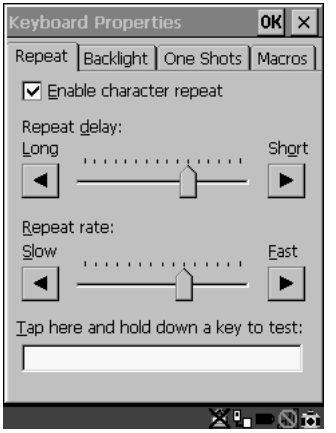


Figure 5.7 Key Repeat Properties

Repeat Delay

The value assigned for this parameter determines the delay in milliseconds between repeat characters. Sliding the Repeat Delay bar to the left increases the delay between key repeats while sliding the bar to the right shortens the repeat delay time.

Repeat Rate

The value assigned for the Repeat Rate parameter determines how quickly the key you press repeats and is measured in characters per second (cps). Sliding the bar to the left slows the repeat rate, and sliding the bar to the right increases the repeat rate.

Note: *Use the field at the bottom of this dialogue box to test the repeat delay and rate settings you've chosen.*

5.5.2.2 Keyboard Backlight

- In the Keyboard Properties dialogue box, open the Backlight tab.

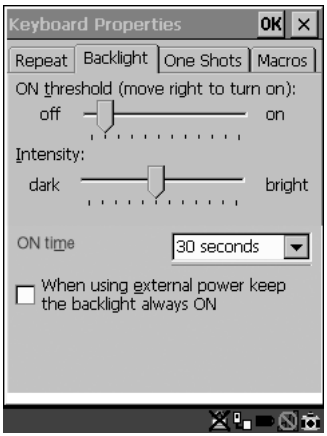


Figure 5.8 Keyboard Backlight Properties

ON Threshold

The ON Threshold sliding bar allows you to determine how dark the ambient light needs to be before the keyboard backlight turns on.

Intensity

This parameter is used to adjust the light intensity of the 7530 keyboard backlight. Sliding the bar to the left darkens the keyboard backlight intensity, and sliding it to the right lightens the intensity.

ON Time

The value chosen from this dropdown menu determines the duration of time that the keyboard backlight stays on when a unit is not in use.

5.5.2.3 Keyboard One Shot Modes

- In the Keyboard Properties dialogue box, open the One Shots tab.

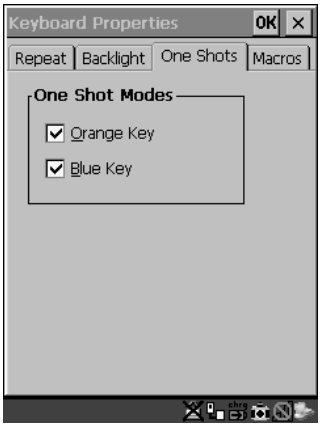


Figure 5.9 Keyboard One Shot Properties

When these options are enabled (√), the <ORANGE> and <BLUE> keys only remain active until the next key is pressed. If the 'One Shots' options are disabled (the checkbox is left blank), the <ORANGE> and <BLUE> keys are locked 'on' when pressed only **once**; they remain 'on' until they are pressed a second time to unlock them.

Note: *Keep in mind that checking the taskbar lets you know whether or not these keys are locked on. When the <ORANGE> and <BLUE> keys are locked 'on', the taskbar at the bottom of the screen displays them in* ***uppercase*** *characters –* BLUE KEY *and* ORANGE KEY. If *these keys are displayed in* ***lowercase*** *characters in the taskbar, you'll know that the* Blue Key *and the* Orange Key *are* ***not*** *locked. They will become inactive following a key press.*

5.5.2.4 Keyboard Macro Keys

- In the Keyboard Properties dialogue box, open the Macros tab.

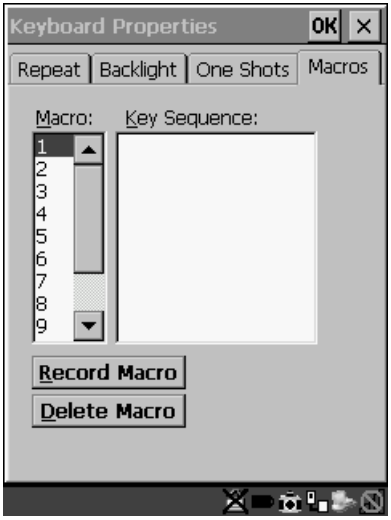


Figure 5.10 Macro Dialogue Box

A macro has 20 programmable characters (or "positions"). The macro keys can be programmed to replace frequently used keystrokes, along with the function of executable keys including <ENTER>, <BKSP> and <DEL> (<BLUE>-<BKSP>), function keys and arrow keys.

Recording And Saving A Macro

You can program up to 12 macro keys on a **58-key** keyboard and 6 macro keys on a **36-key** keyboard.

- In the Macro: menu, highlight a macro key number – for example, macro 1 to assign a macro to macro key <M1>. Press the <TAB> key twice to highlight the Record Macro button, and press <ENTER>.

A message screen is displayed instructing you to 'Please Enter Key Strokes'.



Figure 5.11 Recording A Macro

- Type the macro sequence you want to assign to the Macro key. You can type text and numbers, and you can program the function of special keys into a macro.
- When you've finished recording your macro sequence, press the key sequence – <CTRL> <ALT> <ENTER>.

A new screen displays the macro sequence you created. The Save Macro button is highlighted.

- Press <ENTER> to save your macro.

Note: *If you want to discard the macro you've just created, press the <TAB> key to highlight the Discard Macro button and press <ENTER>.*

Executing A Macro

To execute a macro:

- Press the macro key to which you've assigned the macro. For example, if you created a macro for macro key '1', press <M1> to execute the macro.

Deleting A Macro

To delete a macro:

- In the Macros tab, use the arrow keys to highlight the macro number you want to delete.
- Press <TAB> to highlight the Delete Macro button, and press <ENTER>.

5.5.2.5 Unicode Mapping

- In the Keyboard Properties dialogue box, open the Unicode Mapping tab.

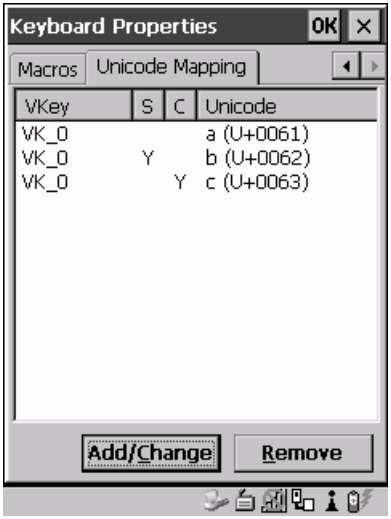


Figure 5.12 Unicode Mapping

The Unicode Mapping tab is used to map combinations of virtual key values and <CTRL> and <SHIFT> states to Unicode™ values. This tab shows the configured Unicode character along with the Unicode value. For example, the sample screen above shows “a (U+0061)” indicating that the character “a” is represented by the Unicode value “0061”, and so on. Keep in mind that Unicode configurations are represented as hexidecimal rather than decimal values.

All user-defined Unicode mappings are listed in the Unicode Mapping tab in order of virtual key value, and then by order of the shift state. If a Unicode mapping is not listed, the Unicode mapping is mapped to the default Unicode value.

Adding And Changing Unicode Values

Important: ***Changes to Unicode mappings are not saved until you exit the* Keyboard Properties *dialogue box.***

- Press <TAB> to highlight the Add/Change button, and press <ENTER>.

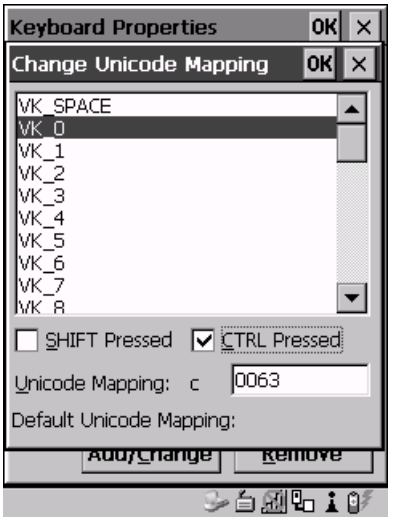


Figure 5.13 Adding And Change Unicode Values

- Highlight the a value in the Unicode mapping list – in the sample screen above, a value will be assigned to virtual key 0 (VK 0).
- Press <TAB> to position the cursor in the 'Unicode Mapping' field and type a Unicode value for the highlighted key.

Note: *To add a shifted state – <SHIFT> and/or <CTRL>, press <TAB> to position the cursor in the checkbox next to 'SHIFT Pressed' and/or 'CTRL Pressed'. Press <SPACE> to select (√) the shift state you want to assign.*

Removing Unicode Values

- In the 'Unicode Mapping' tab, highlight the item you want to delete, and press <TAB> to highlight the Remove button.
- Press <ENTER> to delete the value.

5.5.3 Volume And Sound Properties

Note: *Sounds (wave files) cannot be reproduced on 7530 units. The conditions under which 7530s emit sounds are tailored from within the application installed on your unit.*

- In the Control Panel, choose the Volume & Sounds icon.

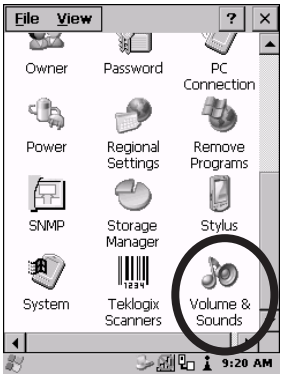


Figure 5.14 Choosing The Volume Icon

5.5.3.1 Volume Adjustments

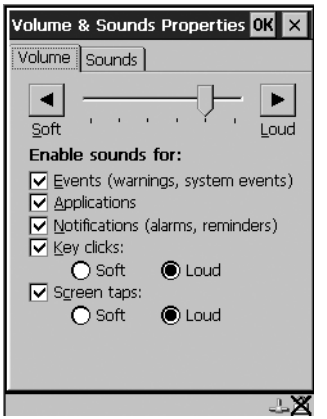


Figure 5.15 Volume Settings

- Slide the volume button to the left to lower the beeper volume or to the right to increase the beeper volume.
- Under the heading 'Enable sounds for:', enable (√) the conditions under which you want the 7530 to emit a beep.

5.5.4 Power Management Properties

This icon displays a Power Properties dialogue box that indicates the unit's battery capacity and allows you to manage battery use.

- In the Control Panel, choose the Power icon.

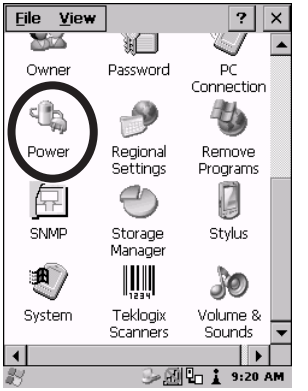


Figure 5.16 Choosing The Power Icon

5.5.4.1 Battery Capacity

- In the Power Properties dialogue box, open the Battery tab.

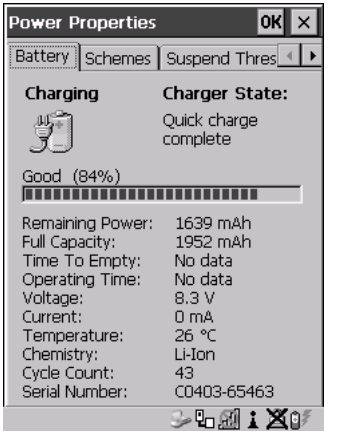


Figure 5.17 Power Battery Properties

The Battery tab details information about the battery installed in your 7530.

5.5.4.2 Power Saving Schemes

- In the Power Properties dialogue box, open the Schemes tab.

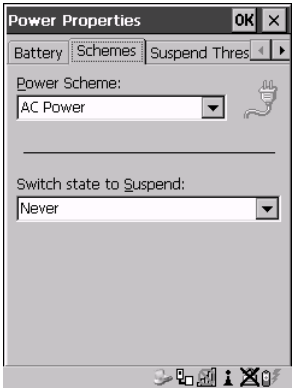


Figure 5.18 Power Scheme Properties

Power Scheme

This dropdown menu allows you to specify whether the unit is using AC Power or Battery Power.

Switch State To Suspend

Important: ***Psion Teklogix recommends setting the Suspend value to 10 minutes. Setting 'Switch State To Suspend' to 'Never' will adversely affect the battery run time.***

To further reduce power consumption, carefully consider the duration of time that the display backlight is 'on' (see "Display Backlight" on page 89).

When the 7535 is idle – not receiving any user input (a key touch, a scan, and so on) or system activity (serial data, an activity initiated by an application, and so on), the hand-held uses the value assigned in the Switch State To Suspend field to determine when the unit will go to sleep (appear to be off).

When the time in the Suspend field elapses without any activity, the unit enters Suspend state. In Suspend state, the 7530 CPU enters a *sleep* state, and the radio is shut off. The state of the device (RAM contents) is preserved. Pressing <ENTER> wakes the system from suspend state. When the 7530 is in suspend state, the network connection will not be broken immediately. If the connection is dropped, you must re-establish the network connection.

5.5.4.3 Suspend Threshold

- In the Power Properties dialogue box, open the Suspend Threshold tab.

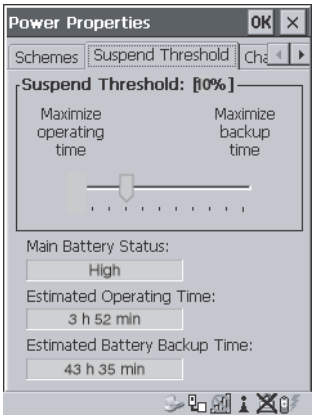


Figure 5.19 Suspend Threshold Properties

Suspend Threshold

The sliding bar in this tab is used to set the battery capacity (as a percentage value) at which the hand-held will be forced into a *suspend* state. For example, if you slide the bar in the Suspend Threshold tab to the right to the 10% level, when the battery capacity falls to 10%, the 7530 will enter suspend state. You will not be able to resume until the battery is charged, or you operate the 7530 using AC power. The allowable threshold ranges from 0 to 50%. The default value is 0%.

Note: *The7530 hand-held does not enter suspend state when it is using AC power.*

Main Battery Status

This field indicates the status of the main battery.

Estimated Operating Time

This field estimates the length of time the 7530 can remain 'on' (operating) before reaching the configured Suspend Threshold.

Estimated Battery Backup Time

This field displays the amount of time the state of the 7530 will be maintained in *suspend* at the currently configured Suspend Threshold.

5.5.4.4 Charger Details

- In the Power Properties dialogue box, open the Charger tab.

When the 7530 is in a Combo Dock, enabling (√) Allow Battery Calibration in this tab allows a battery requiring recalibration to be fully discharged and recharged.

Recalibration occasionally extends the battery charge time. If you prefer that the battery always be charged in the shortest time possible, *do not* check this box.

5.5.5 Stylus Properties

Note: *Touchscreen calibration may not be enabled on your unit. If your screen appears to require recalibration, contact your supervisor.*

- In the Control Panel, choose the Stylus icon.

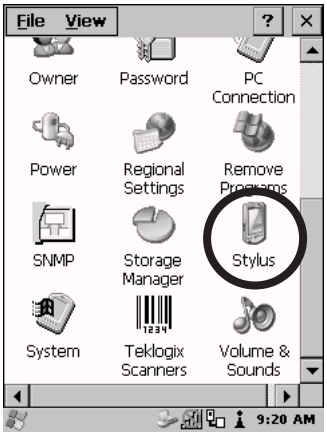


Figure 5.20 Stylus Icon

5.5.5.1 Setting Double-Tap Sensitivity

- In the Double-Tap tab, follow the directions to tailor the sensitivity of the stylus when you tap on the touchscreen.

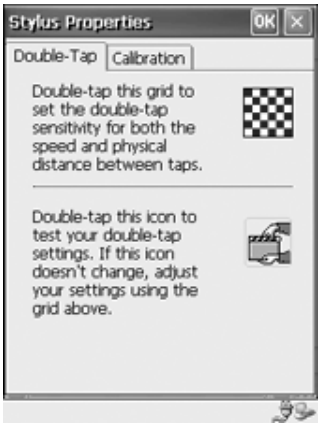


Figure 5.21 Setting Stylus Sensitivity

5.5.5.2 Touchscreen Calibration

Touchscreens rarely require recalibration. However, if your touchscreen has never been calibrated or if you find that the stylus pointer is not accurate when you tap on an item, follow the directions below.

- Choose the Calibration tab and then tap on the Recalibrate button.

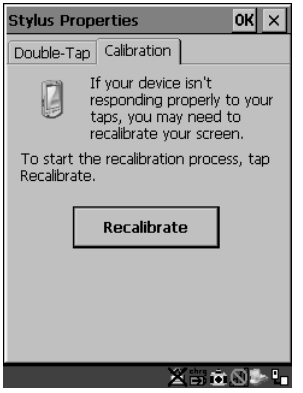
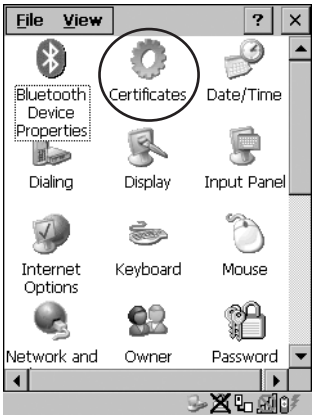


Figure 5.22 Calibrating The Touchscreen

- Follow the directions in the Calibration tab to recalibrate the screen.

5.5.6 Certificate Assignment

- In the Control Panel, choose the Certificate icon.



The dialogue box is used in conjunction with 802.1x authentication to enhance 7530 security.



Figure 5.23 Certificates Dialogue Box

For a detailed description about Certificate setup for both the server and client-side devices (7530s), refer to the following website:

www.microsoft.com/windows2000/techinfo/planning/walkthroughs/default.asp - "Security Services"

Note: *When importing certificates, the 7530 only recognizes .cer files.*

5.7 Scanner Properties Setup

The Teklogix Scanners icon in the Control Panel provides dialogue boxes in which you can tailor bar code options and choose the bar codes your scanner will recognize.

5.7.1 Scanner Options

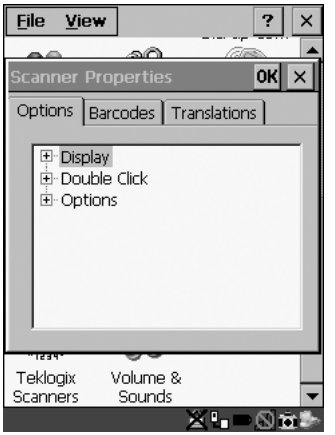


Figure 5.45 Bar Code Options

To display the sub-menus available in the Options tab:

- Highlight the option you want to work with, and press the right <ARROW> key.

To change a parameter:

- Highlight the parameter and press the <RIGHT> arrow key, *or* press the <SPACE> key.

  If a field requires text entry, a text field is displayed in which you can type the appropriate value.

Display Parameters

Scan Result

When this parameter is enabled (set to 'ON'), the type of bar code and the result of the scan appear on the screen. Note that this information is only displayed after a successful decode and is visible only while the scanner trigger is pressed. When the trigger is released, this information is cleared from the screen.

Scan Indicator

When this parameter is enabled (set to 'ON'), the laser warning logo appears on the display whenever the scanner is activated.

Scan Result Time (sec)

The value assigned to the "Scan Result Time (sec)" parameter determines how long the scan results of a successful scan are displayed on the screen. Time is measured in seconds, and a value of "0" (zero) disables the parameter.



Note: *To remove the scan result from the screen before the "Result Time" has expired, point the scanner away from the bar code and press the trigger.*

Scan Beep

This parameter determines whether or not the 7535 emits an audible scanner 'beep' when a scan is performed. Set this parameter to either 'ON' to enable the beeper or 'OFF' to disable it.

Scan Log File

If this parameter is enabled, the input barcode and the modified/translated output bar code are logged in the file \Flash Disk\ScanLog.txt. Keep in mind that if the 'Scan Log File' is enabled, there is a slight performance effect when performing multiple scans since the log file is written to persistent storage.

Double Click Parameters

Click Time (msec)

This parameter controls the maximum gap time (in milliseconds) for a double-click. If the time between the first and second clicks of the scanner trigger is within this time, it is considered a double-click. The allowable range is `0` to `1000`. A value of zero disables this feature.

A double-click produces different results depending on whether or not a value is assigned in the "Click Data" parameter. When a value is ***not*** assigned for the "Click Data", double-clicking the scanner trigger overrides the target dot delay set in the "Dot Time" parameter and initiates a normal scan sweep. If a value ***is*** assigned for the "Click Data" parameter, double-clicking the scanner trigger inserts the "Click Data" value rather than initiating a scan.

Click Data

For both integrated and external scanners, this parameter determines which character is sent to the application installed in your 7535 following a double-click. A dialogue box appears, asking that you press the key you want to insert. The ASCII/Unicode key value of the keypress is displayed.

Pressing the <ESC> key in this dialogue box resets the data to zero.

Options

Dot Time (msec)

The value selected for "Dot Time (msec)" determines (in milliseconds) how long the targeting dot remains on before the scanner switches to a normal scan sweep. The allowable values are: `0, 0.1, 0.5, 1.0, 1.5, 2.0, 2.5` and `3.0` seconds. A value of `0` (zero) disables the target dot.

Short Code

When enabled (set to 'ON'), this parameter allows scanning of short I 2 of 5 bar codes (2 characters). When disabled, these short bar codes are rejected.

Enabling "Short Code" may reduce the robustness of the decoding since the 7535 must decode more potential bar codes; it is therefore not recommended for general-purpose bar codes with 4 or more characters.

Verify

The value entered for this parameter determines the number of correct additional decodes required *after* the initial decode before a bar code is accepted. Higher values significantly increase the time it takes to decode a bar code but also improve the reliability of the decoded bar code.

Security

This parameter controls the tolerance for decoding edge-to-edge bar codes (Code 93, Code 128, UPC/EAN). Lower values have a lower tolerance for misreads, but they also increase the time it takes to decode the bar code. The default value of `30` is generally a good compromise setting.

5.7.2 Bar Codes

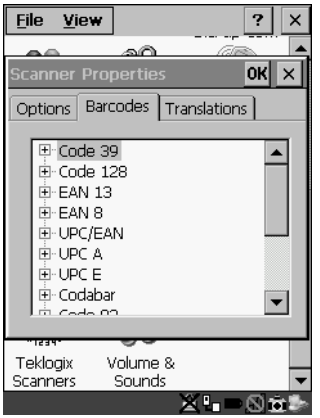


Figure 5.46 Bar Code Selection

All the available bar code symbologies can be selected from this menu.

Important: ***To improve the decode speed and performance, enable (set to 'ON') only those codes that are required by the application.***

Keep in mind that some bar code types are only available when an internal imaging scanner is installed. The bar code settings do not affect the operation of internal or external decoded scanners. These scanners must be configured by scanning special configuration bar codes. These configuration bar codes affect the communication speed or data format between the scanner and the 7530 and must not be changed. The scanner manufacturer provides programming manuals for configuration purposes.

- For Symbol, refer to "Programming Guide P300".
- For PSC, refer to "Powerscan Programing guide (PSC)".

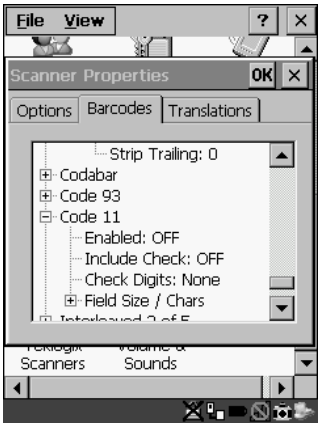


Figure 5.47 Code 39 Bar Code Settings

A 'plus' sign (+) to the left of the each bar code listed in this Barcodes tab indicate that that a sub-menu of parameters is attached. To work with a sub-menu:

- Highlight the bar code you want to work with, and press the <RIGHT> arrow key to display the sub-menu.
- Use the <UP> and <DOWN> arrow keys to highlight a parameter.
- To change a parameter value, press <SPACE> *or* the <RIGHT> arrow key. If a field requires text entry, a text box is displayed in which you can enter the appropriate value.

5.7.2.1 Code 39 Settings

Full Ascii

If this parameter is enabled (set to 'ON'), the characters +, %, and / are used as escape characters. The combination of an escape character and the next character is converted to an equivalent ASCII character.

Include Check

If this parameter is enabled (set to 'ON'), the check digit is included with the decoded bar code data.

AIAG Strip

If this parameter is enabled (set to 'ON'), the AIAG data identifier is removed from each decoded Code 39 label. The data identifier occurs in the first position next to the Code 39 start character. It can be a single alphabetic character or a series of numeric digits followed by an alphabetic character. This identifier defines the general category or specific use of the data contained in the rest of the bar code.



Note: *If your unit is operating with the Psion Teklogix TESS application, this parameter should* ***not*** *be used in conjunction with the TESS AIAG feature. This is because the 7530 hand-held performs the strip function before it processes the data through the AIAG feature; if the prefix is stripped, the data is not identified as AIAG.*

Error Accept

If the "Err Accept" and "AIAG Strip" parameters are enabled (set to 'ON'), all label data without an AIAG identifier character is accepted. If the "Err Accept" parameter is disabled and the "AIAG Strip" parameter is enabled (set to 'ON'), the label data is not accepted.

Mod Checks

Mod 43 Check

If this parameter is enabled (set to 'ON'), the Mod 43 check digit is calculated.

Mod 10 Check

If this parameter is enabled (set to 'ON'), the Mod 10 check digit is calculated.

None

If you choose 'None', a check is not executed.

Field Size/Chars

Field Size

The field size is the length of the field after the first character is stripped and the prefix and suffix characters are added. If the field size is non-zero, only bar codes of that length are passed through.

Prefix Char

This character, if non-zero, is added before a successfully decoded bar code. Press the key you want to insert in the dialogue box attached to this parameter. The ASCII/Unicode key value of the keypress is displayed.

Pressing the <ESC> key in this dialogue box resets the data to zero.

Suffix Char



Note: *The appended character is treated as any other keyboard character. For example, if <BKSP> is pressed, the usual action for that key is performed. If your unit is operating with the Psion Teklogix ANSI emulation application, the 7530 transmits the escape sequence associated with the function immediately after the bar code data.*

This character, if non-zero, is added after a successfully decoded bar code. Press the key you want to insert in the dialogue box attached to this parameter. The ASCII/Unicode key value of the keypress is displayed.

Pressing the <ESC> key in this dialogue box resets the data to zero.

Strip Leading

This parameter determines the number of characters that will be removed from the beginning of the bar code before the prefix character is added.



Note: *For Code 39 bar codes, the "AIAG Strip" is performed before the "Strip Leading".*

Strip Trailing

The value entered in this parameter determines the number of characters that will be removed from the end of the bar code before the suffix character is added.

5.7.2.2 Code 128 Settings

Include Sym

Setting "Include Sym" to 'ON' causes the group separator(s) and start code contained in this type of bar code to be displayed on the screen.



Note: *This option is available only when 'EAN/UCC 128' is selected.*

Variations

When using Code 128, you can choose the variation or type of bar code variation the scanner will recognize. The options available are `Standard`, `UCC` and `EAN/UCC`. These options are described below.

Standard

Enable (set to 'ON') "Standard" if Code 128 is desired.

UCC 128

"UCC" is a variation of Code 128.

EAN/UCC 128

To successfully scan this type of bar code, "EAN/UCC" must be enabled (set to 'ON'). "EAN/UCC" bar codes include group separators and start codes.

Field Size/Chars

Refer to the description beginning on page 123 for details.

5.7.2.3 EAN 13 Settings

Include Country

If this parameter is enabled (set to 'ON'), the country code is included with the decoded bar code data.

Include Check

If this parameter is enabled (set to 'ON'), the check digit is included with the decoded bar code data.

Addendum



Important: ***Before "Addendum" can take effect, the "Short Code" parameter in the Options menu (see page 120) must be enabled (****set to 'ON'****).***

An addendum is a separate bar code, supplementary to the main bar code.
This parameter provides three options: `Disabled`, `Optional` and `Required`. Depending on the value chosen for this parameter, an addendum is recognized or ignored.

When "Addendum" is set to `Disabled`, the scanner does not recognize an addendum. If this parameter is set to `Optional`, the scanner searches for an addendum and if one exists, appends it to the main bar code. When the parameter is set to `Required`, the scanner does not accept the main bar code without an addendum.

Prefix/Suffix

Prefix Char

This character, if non-zero, is added before a successfully decoded bar code. Press the key you want to insert in the dialogue box attached to this parameter. The ASCII/Unicode key value of the keypress is displayed.

Pressing the <ESC> key in this dialogue box resets the data to zero.

Suffix Char

This character, if non-zero, is added after a successfully decoded bar code. Press the key you want to insert in the dialogue box attached to this parameter. The ASCII/Unicode key value of the keypress is displayed.

Pressing the <ESC> key in this dialogue box resets the data to zero.

Strip Leading

This parameter determines the number of characters that will be removed from the beginning of the bar code before the prefix character is added.



Note: *The appended character is treated as any other keyboard character. For example, if <BKSP> is pressed, the usual action for that key is performed. If your 7530 is operating with the Psion Teklogix ANSI emulation application, the hand-held transmits the escape sequence associated with the function immediately after the bar code data.*

Strip Trailing

The value entered in this parameter determines the number of characters that will be removed from the end of the bar code before the suffix character is added.

5.7.2.4 EAN 8

Include Check

If this parameter is enabled (set to "Y"), the check digit is included with the decoded bar code data.

Addendum



Important: ***Before "Addendum" can take effect, the "Short Code" parameter in the Options menu (see page 120) must be enabled (set to 'ON').***

Refer to "Addendum" on page 125.

Prefix/Suffix

See "Size/Chars" beginning on page 126.

5.7.2.5 UPC And EAN Settings

Field Size/Char

Refer to page 123 for details.

5.7.2.6 UPC A Settings

Include Number Sys

If this parameter is enabled (set to 'ON'), the number system digit is included with the decoded bar code data.

Include Check

If this parameter is enabled (set to 'ON'), the check digit will be included with the decoded bar code data.

Addendum



Important: ***Before "Addendum" can take effect, the "Short Code" parameter in the Options menu (see page 120) must be enabled (set to 'ON').***

Refer to "Addendum" on page 125.

Prefix/Suffix

Refer to page 126 for details.

5.7.2.7 UPC E Settings

Convert to UPC-A

Setting this parameter to 'ON' results in a non-standard decoding that returns 12 digits from the 6 digit UPC E bar code.

Include Number Sys

If this parameter is enabled (set to 'ON'), the number system digit is included with the decoded bar code data.

Include Check

When enabled (set to 'ON'), the check digit is included with the decoded bar code data.

Addendum



Important: ***Before "Addendum" can take effect, the "Short Code" parameter in the Options menu (see page 120) must be enabled (****set to 'ON'****).***

Refer to "Addendum" on page 125.

Prefix/Suffix

Refer to page 126 for details.

5.7.2.8 Codabar

Field Size/Char

Refer to page 123 for details.

5.7.2.9 Code 93

Field Size/Char

Refer to page 123 for details.

5.7.2.10 Code 11

Include Check

If "Include Chk" is enabled (set to 'ON'), the check digit is included with the decoded bar code data.

Check Digit

This parameter can be set to `None`, `One Check Digits` or `Two Check Digits`.

If this parameter set to `One Check Digits`, it is assumed that the last digit is a check digit.

If this parameter is set to `Two Check Digits`, it is assumed that the last two digits are check digits.

Field Size/Chars

Refer to page 123 for details.

5.7.2.11 Interleaved 2 of 5

Mod 10 Chk

If this parameter is enabled (set to 'ON'), the Mod 10 check digit is calculated. This calculation is the same as the Code 39 Mod 10 check digit.

ITF Chk

If this parameter is enabled (set to 'ON'), the ITF-14/16 Mod10 check digit is calculated.

Include Check

If this parameter is enabled (set to 'ON'), the check digit is included with the decoded bar code data.

Field Size/Chars

Refer to page 123 for details.

5.7.2.12 MSI Plessey

One Check Digit

If this parameter is enabled (set to 'ON'), it is assumed that the last digit is a check digit.

Include Check

If this parameter is enabled (set to 'ON'), the check digit is included with the decoded bar code data.

Field Size/Chars

Refer to page 123 for details.

5.7.2.13 Discrete 2 of 5

Mod 10 Check

If this parameter is enabled (set to 'ON'), the Mod 10 check digit is calculated. This calculation is the same as the Code 39 Mod 10 check digit.

ITF Check

If this parameter is enabled (set to 'ON'), the ITF-14/16 Mod10 check digit is calculated.

Include Check

If this parameter is enabled (set to 'ON'), the check digit is included with the decoded bar code data.

Field Size/Chars

Refer to page 123 for details.

5.7.2.14 IATA 2 of 5

Mod 10 Check

If this parameter is enabled (set to 'ON'), the Mod 10 check digit is calculated.

ITF Check

If this parameter is enabled (set to 'ON'), the ITF-14/16 Mod10 check digit is calculated.

Include Check

If this parameter is enabled (set to 'ON'), the check digit is included with the decoded bar code data.

Field Size/Chars

Refer to page 123 for details.

5.7.2.15 Postal: Australian

Size/Chars

Refer to page 123 for details.

5.7.2.16 Postal: Japanese

Size/Chars

Refer to page 123 for details.

5.7.2.17 Postal: Korean

Size/Chars

Refer to page 123 for details.

5.7.2.18 Postal: PlaNET

Size/Chars

Refer to page 123 for details.

5.7.2.19 Postal: PostNET

Size/Chars

Refer to page 123 for details.

5.7.2.20 Postal: Royal Mail

Size/Chars

Refer to page 123 for details.

5.7.2.21 2D DataMatrix

Inverse Video

If enabled (set to 'ON'), this parameter allows symbols that contain light cells on a dark background to be decoded.

Rectangular Symbols

When enabled (set to 'ON'), this parameter allows rectangular DataMatrix symbols to be decoded.

Small Symbols

If enabled (set to 'ON'), DataMatrix symbols of small physical size can be successfully decoded.

Field Size/Chars

Refer to page 123 for details.

5.7.2.22 2D Maxicode

Field Size/Chars

Refer to page 123 for details.

5.7.2.23 2D PDF-417

Field Size/Chars

Refer to page 123 for details.

5.7.2.24 2D Micro PDF-417

Field Size/Chars

Refer to page 123 for details.

5.7.2.25 2D QR Code

Inverse Video

If enabled (set to 'ON'), this parameter allows symbols that contain light cells on a dark background to be decoded.

Field Size/Chars

Refer to page 123 for details.

5.7.2.26 2D RSS Code

Field Size/Chars

Refer to page 123 for details.

5.7.2.27 Aztec

Field Size/Chars

Refer to page 123 for details.

5.7.3 Translations



Figure 5.48 Translation Tab

- In the Translation tab, choose the Add button.

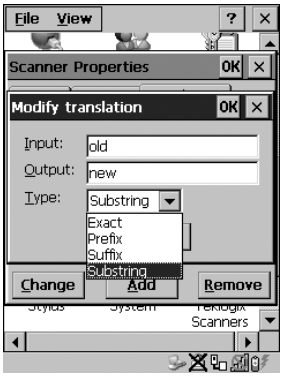


Figure 5.49 Translation Dialogue Box

Input

This value is compared with the decoded bar code reading. If there is a match, the "Output" string is translated into the decoded bar code.

Output

If there is a match between the decoded bar code and the corresponding "Input" string, the decoded bar code will be translated into the "Output" string. This string entry parameter can be null, or it may contain any combination of standard and special characters (e.g., function keys, <ENTER>, etc.).

Type

The value chosen from this dropdown menu determines what is compared with the decoded bar code reading – the beginning of decoded bar code, the end of decoded bar code, the entire decoded bar code or anywhere within the decoded bar code (default).

5.8 SNMP (Simple Network Management Protocol) Setup

Simple Network Management Protocol (SNMP) is the protocol used to monitor and manage devices attached to a TCP/IP network (providing they support SNMP). SNMP uses Management Information Bases (MIBs) that define the variables an SNMP Network Management Station can access. Each product has a defined set of MIBs that determine how SNMP operates, the type of access allowed and so on.

All Teklogix products support the TEKLOGIX-GENERIC-MIB – a MIB that defines some common features across Teklogix products. All devices also support MIB-II, a management information base that defines the common features of TCP/IP networks. The SNMP Agent software embedded in the 7530 product supports SNMPv1 (RFC 1157).

- In the Control Panel, choose the SNMP icon.

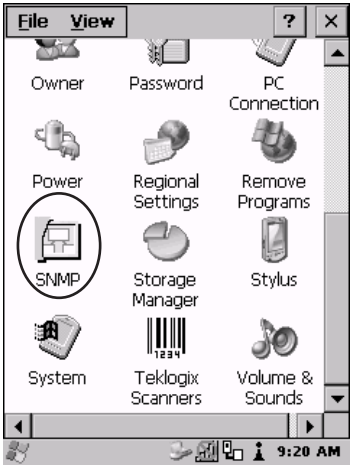


Figure 5.50 SNMP Icon

5.8.1 Contact Tab

The SNMP dialogue box is displayed.



Figure 5.51 Contact Tab

Contact

This field identifies the contact person for this managed node along with information about how to get in touch with this person. The content of this parameter is accessible through MIB-II's `sysContact` object.

Location

This parameter is used to identify the physical location of this node (e.g., Warehouse A: Pillar 32B). The content of this parameter is accessible through MIB-II's `sysLocation` object.

5.8.2 Communities Tab



Figure 5.52 Community Settings

The “Communities” tab provides a means of limiting access to SNMP managed devices to those SNMP Managers with matching “community names”, as specified by RFC 1157.

Enable SNMP

Enabling (√) ‘Enable SNMP’ allows the device to respond to SNMP queries and to send Traps. After enabling this option and rebooting the device, the SNMP Agent will automatically start up. To disable this feature, remove the check mark from the check box.

5.8.2.1 Adding A Community

- Choose the Add button to add a new 'community'.



Figure 5.53 Adding A Community

Name

The value assigned here is the name assigned by the network administrator to the set of devices to which this managed node belongs.

Rights

This menu allows you to specify access – that is, 'Read-Only' or Read-Write'

5.8.2.2 Modifying A Community Setting

To modify an existing community:

- Highlight the community you want to alter.
- Choose the Change button.



Figure 5.54 Changing Or Removing A Community

A Modify Community dialogue box is displayed, listing the community you highlighted.

- Edit the Name and/or Rights, and press <ENTER> to save your changes.

5.8.2.3 Removing An Existing Community

To remove an item:

- Highlight the community you want to remove in the Communities tab and then choose the Remove button.

A Delete Confirmation screen is displayed.

- To remove a community, choose the Yes button.
- If you decide not to remove the community, choose the No button.

5.8.3 Trap Destination Tab

A trap is an unsolicited report sent to SNMP Managers by the SNMP Agent running on the managed node. This option allows you to define where the report will be sent.



Figure 5.55 Trap Destination Tab

5.8.3.1 Enabling Authentication TRAPS

Enabling (√) 'Enable Authentication TRAPS' allows authorization traps to be sent when a failure is detected (e.g., an SNMP message received with a bad community name).

5.8.3.2 Adding A Destination

To add a new destination:

- Choose the Add button.



Figure 5.56 Adding A Trap Destination

- Type a destination in the text box provided, and press <ENTER>.

5.8.3.3 Changing A Destination

To change an existing trap destination:

- Highlight the destination you want to alter in the Trap Destination tab, and then choose the Change button.

A dialogue box like the one displayed when you *add* a destination is displayed.



Figure 5.57 Changing A Destination

- Make the changes to the destination, and press <ENTER> to save the changes.

5.8.3.4 Removing A Trap Destination

To remove a trap destination:

- In the Trap Destination tab, highlight the destination you want to delete.
- Choose the Remove button.

A Delete Confirmation screen is displayed.

- To remove a destination, choose the Yes button.
- If you decide not to remove the destination, choose the No button.

5.8.4 Permitted Hosts Tab

For security reasons, the Network Administrator may want to restrict SNMP-node access to a known sub-set of SNMP Managers. This tab lists the IP addresses of all the SNMP Managers which are allowed to monitor and manage this device. If no entries are listed, the device will accept SNMP queries from any host.

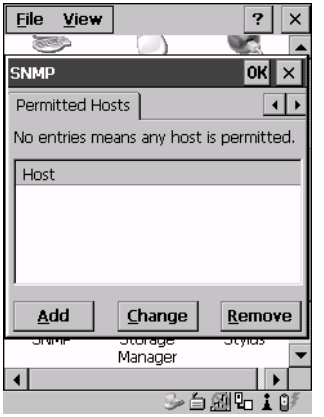


Figure 5.58 Permitted Hosts Tab

5.8.4.1 Adding A Host

To add a new host:

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

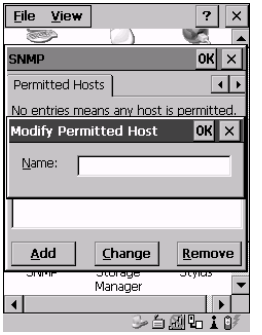


Figure 5.59 Adding A Host

- Type a new host IP address in the text box provided, and press <ENTER>.

5.8.4.2 Changing A Host

To change an existing host IP address:

- Highlight the IP address you want to alter in the Permitted Hosts tab, and then choose the Change button.

A dialogue box like the one displayed when you *add* a host is displayed.

- Make the necessary changes, and press <ENTER>.

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6.1 The Tekterm Application

Tekterm is a powerful emulation application ideally suited for real time data transaction applications associated with mainframes and servers. The 7535 includes unique features that support Tekterm – a Psion Teklogix application that has the ability to maintain multiple simultaneous sessions with a variety of host computers.

6.2 Additional Keyboard Functions

In addition to the standard keyboard functions (see "The Keyboard" on page 35), Tekterm supports function keys, softkeys and macro keys.

6.2.1 Function Keys And Softkeys

6.2.1.1 Function Keys

The 7535 is equipped with a series of function keys each of which is defined in the application software. Depending on the type of keyboard your 7535 has – 58-key or 36-key – the number and location of the function keys on the keyboard varies slightly.

58-Key Keyboard Function Keys

The 58-key keyboard is equipped with thirty function keys. Function keys <F1> to <F6> are located across the top of the keyboard and are directly accessible – a key combination is not required. Function keys <F7> to <F30> are colour coded in *blue* print above the alpha keys and are accessed using a key combination – <BLUE> followed by the appropriate alpha key.

To access function keys **<F7>** to **<F30>**:

- Press the <BLUE> key followed by the alpha key to which the function key you want to use is mapped. For example:
  To access function key <F7>, press <BLUE> <C>.
  To access function key <F8>, press <BLUE> <D>, and so on.

36-Key Keyboard Function Keys

The 36-key keyboard is equipped with thirty function keys. Function keys <F1> to <F4> are located across the top of the keyboard and function keys <F5> to <F10> are located at the bottom of the keyboard.

Additional function keys – <F11> to <F20> – are colour coded in *orange* print above function keys <F1> to <F10>.

To access function keys **<F11>** to **<F20>**:

- Press the <ORANGE> key followed by the appropriate function key.
  For example:
  To access function key <F11>, press the <ORANGE> key followed by <F1>.
  To access function key <F12>, press <ORANGE> followed by <F2>, and so on.

To access function keys <F21> to <F30>, you'll need to press <SHIFT> <F1> to <F10>.

To access function keys **<F21>** to **<F30>**:

- Press the <SHIFT> key followed by the appropriate function key.
  For example:
  To access function key <F21>, press the <SHIFT> key followed by <F1>.
  To access function key <F22>, press <SHIFT> followed by <F2>, and so on.

6.2.1.2 Softkey Function Keys

To speed the process of moving through menus and changing parameters, function keys <F1> to <F5> have been programmed to perform specific actions in the Tekterm menus. Table 6.1 describes these function keys.

These softkeys can be reprogrammed to perform different functions within TESS and ANSI applications.



Important: ***If your 7530 is equipped with a touchscreen, tapping the stylus on the appropriate softkey label executes the function of the softkey providing that the labels are visible at the bottom of the 7535 screen. See "Softkeys" on page 182 if they are not visible.***

Function Key	Softkey Function
<F1>	NEXT – Displays the next sub-menu
<F2>	PREV – Displays the previous menu.
<F3>	DEFLT – Restores parameters to default settings – even after pressing <F4> to save the changes.

<F4>	SAVE – Saves a change to a parameter value.
<F5>	LITRL – Literal mode allows special characters to be entered in a string parameter such as macro key strings.

Table 6.1 Softkeys



Note: *The SAVE onscreen label only appears when a parameter value has been changed and has not yet been saved.*

6.2.2 Macro Keys



Important: ***Refer to "Keyboard Macro Keys" on page 95 for details about creating macros.***

7535 hand-helds are equipped with a series of macro keys that can be programmed to replace frequently used keystrokes, along with the *function* of executable keys like the <ENTER> key, the <BKSP> key, any function key and arrow key, and so on.

58-Key Keyboard Macro Keys

7535s with 58-key keyboards have twelve macro keys – <M1> to <M12>. These keys are colour coded in *orange* print above alpha keys <O> to <Z>.

To access a macro key:

- Press the <ORANGE> key followed by the appropriate alpha key from O to Z. For example:
  To access macro key <M1>, press <ORANGE> <O>.
  To access macro key <M2>, press <ORANGE> <P>, and so on.

36-Key Keyboard Macro Keys

36-key keyboards are equipped with six macro keys – <M1> to <M6>. Macro keys <M1> to <M2> are directly accessible in the bottom row of the keyboard – a key combination is not required.

Macro keys <M3> and <M4> are colour coded in *orange* print above macro keys <M1> and <M2>.

- To access <M3>, press the <ORANGE> key followed by <M1>
- To access <M4>, press <ORANGE> <M2>.

Macro keys <M5> to <M6> are colour coded in *blue* print above macro keys <M1> and <M2>.

- To access <M5>, press the <BLUE> key followed by <M1>.
- To access <M6>, press <BLUE> <M2>.

6.3 Keyboard Modes

6.3.1 View Mode

Placing the 7530 keyboard in View mode allows you to choose another screen font and to pan the contents of the screen.

To place the computer keyboard in View mode:

- Press <CTRL> <ALT> <V>.

When the hand-held is in View mode, the onscreen message – *View* – is displayed in the status area at the bottom of the screen.

Keep in mind that this is a toggle key combination – pressing <CTRL> <ALT> <V> a second time turns View mode off.

6.3.1.1 Changing Font Sizes

To cycle through the available fonts (with the unit in View mode):

- Press the <F> key.

Each time you press the <F> key, the font on the screen changes. Once you've displayed the appropriate font:

- Press <CTRL> <ALT> <V> to exit View mode.

6.3.1.2 Panning The Screen Contents

If the content of a screen is too large to fit in the margins of the 7535 display, the content can be *panned* or shifted to bring the information outside the margins into view. Normally, the Arrow keys move the cursor around the screen in the direction of the arrow pressed. However, if the 7535 is operating in View mode, the <LEFT>, <RIGHT>, <UP> and <DOWN> arrow keys pan the entire content of the screen rather than the cursor.

- Press <CTRL> <ALT> <V> to place the 7535 in View mode. An onscreen message – View – is displayed in the status area of the screen.

Panning relies on the values set in the “Use Increment”, “X Increment” and “Y Increment” parameters to determine the number of columns (spaces) and rows (lines) the screen contents shift.

- In the “More Parameters” menu, position the cursor on “View Manager” and press <F1>.
- First, enable the “Use Increment” parameter – set it to “Y”.

“X Increment” determines the number of columns (spaces) the screen pans when the <LEFT> or <RIGHT> arrow key is pressed in View mode.

“Y Increment” determines the number of rows (lines) the screen pans when the <UP> or <DOWN> arrow key is pressed in View mode.

- Assign a value to the “X Increment” and “Y Increment” parameters.

To pan the screen contents:

- Press the <RIGHT>, <LEFT>, <UP> or <DOWN> arrow key.



Note: *Pressing the <LEFT> arrow pans the screen to the right, pressing the <RIGHT> arrow pans the screen to the left, and so on.*

6.3.1.3 Exiting View Mode

To exit View mode and resume normal operation:

- Press <CTRL> <ALT> <V> again.



Note: *You can press the <BLUE> key followed by the appropriate arrow key each time you want to pan the contents* ***one*** *increment at a time in the direction of the arrow key without placing the 7530 in View mode.*

6.3.2 Using The Task Manager To Switch Between Applications

To display the Task Manager screen:

- Press <BLUE> <0> to display the Start Menu.
- Highlight Task Manager, and press <ENTER>, ***or***
- Just type the underlined alpha character – in this case, the letter 't'.



Figure 6.1 Task Manager Screen

Note: ***A shortcut*** *– to bypass the* Start Menu *and go directly to the 'Task Manager' screen, press <ALT> <ESC>.*

To switch between applications:

- Highlight the application you want to work with, and press <ENTER>.

To end or close an application:

- Highlight the application you want to end, press <TAB> to highlight the <End Task> button, and press <ENTER>.

6.3.2 Using The Task Manager To Switch Between Applications

To display the Task Manager screen:

- Press <BLUE> <0> to display the Start Menu.
- Highlight Task Manager, and press <ENTER>, ***or***
- Just type the underlined alpha character – in this case, the letter 't'.



Figure 6.1 Task Manager Screen

Note: ***A shortcut*** *– to bypass the* Start Menu *and go directly to the 'Task Manager' screen, press <ALT> <ESC>.*

To switch between applications:

- Highlight the application you want to work with, and press <ENTER>.

To end or close an application:

- Highlight the application you want to end, press <TAB> to highlight the <End Task> button, and press <ENTER>.

6.4 The Tekterm Status Area

Tekterm provides a status area just above the softkey labels. The status area indicates the operating condition of the hand-held.

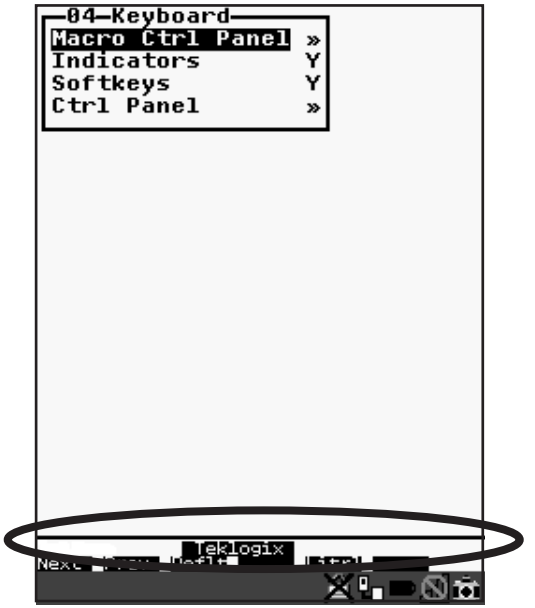


Figure 6.2 Status Area

Table 6.2 outlines the options displayed in the status area.

Status Area Indicators	
Security Level Within Tekterm	The security level assigned within the Tekterm application is displayed in the status area. One of the following is displayed – User, Supervisor or Teklogix.
View Mode	When <CTRL><ALT><V> is typed to place the 7535 in View mode, this information is displayed in the status area.

Table 6.2 Status Area

6.5 TESS Emulation

TESS (Teklogix Screen Subsystem) is the normal operating mode of Psion Teklogix computers. Teklogix protocol emulation software resident on network controllers or a Psion Teklogix Software Development Kit (SDK) and installed in the host converts host screens to TESS commands. The 9150 Access Point is also equipped with protocol emulation software.



Note: *If the message "RESET: Press Enter" flashes at the bottom of the TESS screen when you turn on the 7530, press the <ENTER> key once.*

6.5.1 Configuration



Note: *Each TESS session must have a unique name assigned to it. The title you assign will be displayed in the Display Menu.*

The process of renaming an existing TESS session and adding a new session is described in the section titled, "Applications" on page 194.

A unique number must be assigned in the "Terminal #" parameter for **each** TESS session. Refer to "Terminal #" in the section titled "TESS Settings" on page 212 for details.

6.5.2 Working With Multiple Sessions

To display another session in TESS:

- Go to the startup 'Display Menu'. If you are in a TESS session, press <CTRL><ALT><0> to go to the 'Display Menu'.
- Type the letter corresponding to the application you want to launch. For example, suppose the sessions are listed in the "Display Menu" as '`D TESS1`' and '`E TESS2`'. To launch the session named `TESS2`, type the letter *e*.

6.5.3 The Field Types

Fixed Field – displays information that cannot be changed from the keyboard.

Entry Field – allows the operator to enter data. This type of field is usually shown as: "……"

Match Field – the host computer loads data in the format of the expected entry. If the entered data does not match the expected format, the unit emits a long beep.

Auto-tab Field – automatically moves the cursor to the next field when the current field is filled.

Bar code only Field – is filled with data from a bar code reader. Keyboard entries are not accepted in this type of field.

Serial I/O Field – is filled with data coming from a serial port. Keyboard input is not accepted in this type of field.

6.5.4 IBM 5250 Emulation Keys

The following keys allow the Psion Teklogix computer to better emulate the functions of a true IBM 5250 terminal.



Note: *These keys are active at all times in TESS applications.*

Key Function	Key Sequence	Cursor Movement
Field Advance or Tab	<BLUE> <O> (PgDn key)	Cursor moves to the first position in the next input field. If already in the last field, the cursor moves to the first input field on the screen.
Field Backspace	<BLUE> <I> (PgUp key)	Cursor moves to the beginning of the current field. If already in the first position, the cursor moves to beginning of the previous field.
Field Exit	<BLUE> <P> (End key)	Current field is cleared from the cursor position to the end of the field, and the cursor moves to the next input field.
Home	<BLUE> <N> (Home key)	Cursor moves to the first input field on the screen.

6.5.5 Data Entry

The 7535 accepts data until the operator presses a key that sends a transmission to the host computer. The following actions cause the 7535 to transmit:

- Pressing a function key or the <ENTER> key (which is considered to be <F0>) causes the 7530 to transmit.
- Completing data entry into a “transmit on entry” field also causes the 7535 to transmit.

There are several ways to configure the 7530 hand-held to complete a data field:

- Pressing <ENTER> after entering data.
- Pressing a function key after entering data.
- Pressing an arrow key after entering data.
- Filling an auto-tab field.

6.5.5.1 TESS Edit Modes And Cursor Movement

The TESS editing modes and cursor movements in each type of mode are described in the table below.

Field mode	Press <CTRL> *f* to enter *field* mode. In this mode, once data entry into a field has been completed, the entry cannot be changed without retyping the entire field. In field mode, the <RIGHT> and <LEFT> arrow keys do not perform any functions. Pressing the <UP> or <DOWN> arrow key completes the entry field and then, moves the cursor to the previous or next field.
Fcursor mode	Press <CTRL> *u* to enter *fcursor* mode. In this mode, once data entry into a field has been completed, the entry cannot be changed without retyping the entire field. In fcursor mode, the <UP>, <DOWN>, <LEFT> and <RIGHT> arrow keys move the cursor between fields.
Insert mode	Press <CTRL> *i* to enter *insert* mode. In this mode, data can be entered between two characters that have been previously entered. In insert mode, the <RIGHT> and <LEFT> arrow keys move the cursor right and left within a field. The <UP> and <DOWN> arrow keys complete the entry field and move the cursor to the previous or next field.
Replace mode	Press <CTRL> *r* to enter *replace* mode. In this mode, data can be entered over previously entered characters. In replace mode, the <RIGHT> and <LEFT> arrow keys move the cursor to the right and left within a field. The <UP> and <DOWN> arrow keys complete the entry field and move the cursor to the previous or next field.



Note: *When the "Enter on Arr" parameter is disabled (set to "N"), the <UP> and <DOWN> arrow keys do not complete an entry field. Refer to page 225 for details about this parameter.*

6.5.5.2 <DEL> Key Behaviour In TESS

Field mode	• In a left justified field, the <DEL> key erases all characters in the field and places the cursor in the left most position of that field. • In a right justified field, the <DEL> key erases all characters in the field and places the cursor in the right most position of that field. • If the <DEL> key is used to clear data in a field that has been pre-filled by the host application, the field is flagged as modified and the updated information is sent to the host in the next response message.
Replace mode	• In both left and right justified fields, the <DEL> key erases characters beginning from the current cursor position to the end of the field. The cursor remains in the same position in the field. • If the <DEL> key is pressed while cursor is in the right most position in the field, the 7535 emits a keyboard error beep. • If the <DEL> key is used to clear data in a field that has been pre-filled by the host application, the field is flagged as modified and the updated information is sent to the host in the next response message.
Insert mode	• In both left and right justified fields, the <DEL> key erases the characters from one character position to right of the cursor to the end of the field. • If the <DEL> key is pressed while the cursor is in the right most position in the field, the 7535 emits a keyboard error beep. • If the <DEL> key is used to clear data in a field that has been pre-filled by the host application, the field is flagged as modified and the updated information is sent to the host in the next response message.
Fcursor mode	• Refer to “Field Mode” at the beginning of this table. The <DEL> key operates in the same manner in “Fcursor mode” as it does in “Field mode”.

6.5.5.3 <BKSP> Key Behaviour In TESS

Field mode	• In a left justified field, the <BKSP> key erases the character directly to the left of the cursor and then moves the cursor one position to the left. When the last character in the field is deleted, the field displays the value that it contained before it was modified, and the field is opened. • In a right justified field, the <BKSP> key erases the character on which the cursor is positioned and shifts the remaining characters to the right by one position. When the last character in the field is deleted, the field displays the value that it contained before it was modified, and the field is opened. • If the <BKSP> key is pressed when the field is empty, the 7535 emits a keyboard error beep. • The <BKSP> key does not delete data pre-filled by the host application. • If the <BKSP> key is pressed in a field that has not been modified, the 7535 emits a keyboard error beep. • If data is entered into a field and is then deleted before the field is completed, the field remains unmodified when the cursor leaves the field or when the screen is transmitted.
Replace mode	• In a left justified field, the <BKSP> key erases the character on which the cursor is positioned unless it is one position to the right of the last character in the string; in this case, the <BKSP> key erases the character to the left of the cursor. • In a right justified field, the <BKSP> key erases the character on which the cursor is positioned. The remaining characters are then shifted to the left of the cursor, and the cursor is shifted to the right by one position. • If the <BKSP> key is pressed while the cursor is in the right-most character position of the field, the cursor does not shift to the left when that character is erased; it remains in the right most position in the field. • When the last character in a field is erased, the field remains empty – that is, any pre-filled data is not displayed. Pressing the <BKSP> key in the empty field results in a keyboard error beep. • The <BKSP> key can delete data pre-filled by the host application. • If data is entered in a field and is then deleted before the field is completed, the field remains unmodified when the cursor leaves the field or when the screen is transmitted.

Insert mode	• In a left justified field, the <BKSP> function erases the character on which the cursor is positioned, unless it is at the right end of the character string; in this case, it erases the character to the left of the cursor. When the last character in a field is erased, the field remains empty, and any further <BKSP> functions in the empty field result in a keyboard error beep. • In a right justified field, the <BKSP> function erases the character that is to the right of the cursor and then shifts the data remaining to the right one position. • If the <BKSP> key is pressed while the cursor is in the right-most character position of that field, the cursor does not shift to the left when that character is erased; it remains in the right-most position in the field. • When the last character in a field is erased, the field remains empty – i.e. any pre-filled data is not displayed. Pressing the BKSP key in the empty field sounds a keyboard error beep. • The <BKSP> key can delete data pre-filled by the host application. • If data is entered into a field and then deleted before the field is completed, the field remains unmodified when the cursor leaves the field or when the screen is transmitted.
Fcursor mode	• Refer to “Field Mode” at the beginning of this table. The <BKSP> key operates in exactly the same manner in “Fcursor mode” as it does in “Field mode”.

6.5.6 TESS Status Message

- Press <CTRL> <S> to continuously display the status message in the lower left corner of the screen.
- Press <CTRL> <W> to make this message appear only when the 7535 locks. The message should look similar to the sample below:

```
V6.0 fld 0.6
```

“V6.0” is the TESS version number. “fld” indicates that TESS is currently in *field* mode. *Insert* and *replace* mode are represented as “ins” and “rep” respectively. The number “0.6” indicates the response time of the last transmission in seconds. Press <CTRL> <T> to display the unit number instead of the TESS version number.

6.5.7 Lock Messages

When information is transmitted to the host computer, the keyboard locks to prevent further data entry until the 7535 receives a reply. A locked state is indicated by either “LOCK-B” (base) or “LOCK-H” (host) in the lower left corner of the display.

When the reply is received by the 7535, the lock message disappears and the keyboard can be used again.

6.5.8 Control Commands

A group of <CTRL> key commands can be used within TESS to dictate how the 7535 will operate under a variety of conditions.

- <CTRL> <P> – Reprints the last print page sent from the host. This key combination will not print anything if a print page from the host was not previously received at the 7535 hand-held.
- <CTRL> <S> – Displays the 7535 status continuously. Below is a sample status line as it might appear at the bottom of your screen:
  `Lock-B/Lock-H  fld  enh  “application name”`
- <CTRL> <W> – Displays the 7535 status when the unit is in “Lock B” or “Lock H” mode. The status line would be similar to the sample above.
- <CTRL><T> – Displays the 7535 status with the terminal number instead of the name.
  `Lock-B/Lock-H  rep  “terminal nn”`
- <CTRL> <H> – Displays a menu of available hosts.

6.5.9 Resetting A TESS Session

Resetting a TESS session requires that <CTRL> C be pressed three times within a two second period to generate the “RESET – User request” message.

- Press and hold down the <CTRL> key, and press the <C> key three times ***within a two second period***.
- Press <ENTER>.

This procedure restarts the TESS session without affecting the rest of the 7535.

6.5.10 The Local Menu

The host can store local procedures in the 7530 for use when the unit is off-line. A menu of these procedures appears whenever <CTRL> <L> is pressed (see Figure 6.3).

- Press the function key corresponding to the procedure you want to perform. Local procedures will not function when the "Lcl Process" and "Queuing" parameters are disabled (see "Lcl Process – Save on Reset" on page 219 and "Queuing" on page 219).

Although using local procedures eliminates the advantages of an on-line 7530, it allows work to continue when the host is unavailable. The "LOCK-B/H" messages are replaced with "NEXT-B/H" in this mode.

```
      LOCAL MENU
F1 -
F2 -
F3 -
F4 -
F5 -
F6 -
F7 -
F8 -
F9 - Select Host
```

Figure 6.3 Local Menu

6.5.11 Selecting Another Host Computer

- Press <CTRL> <H> or <F9> from the local menu to display a menu of available hosts.

This menu appears only when more than one host is available.

```
Select Host: ......
F1 - Host 1  F2 - Host 2
```

Figure 6.4 Select Host Screen



Note: *This feature will not function when the "Lcl Process" and "Queuing" parameters are disabled (see "Lcl Process – Save on Reset" on page 219 and "Queuing" on page 219).*

6.5.12 Queuing Mode

In some applications, queuing mode can decrease the computer lock time. In queuing mode, the host computer may send several pages to a 7530 without waiting for a response. These pages are stored in a queue within the 7530 hand-held. The operator completes the entries on the first page and then, presses a function key.

The 7530 simultaneously transmits to the host and displays the next page in the queue. The computer does not lock, allowing the operator to enter data on the next page immediately. This continues as long as there are pages in the queue.

Queuing mode is used for repetitive tasks, and the queued screens look identical. The 7530 displays a "Next" message indicating that a new page is on the display. "Next" messages also contain information about radio communications: "NEXT-B" indicates that the 7535 has data to transmit to the base station. "NEXT-H" indicates that the base station has acknowledged a transmission. Unlike lock messages, "Next" messages do not lock the keyboard. Keying is allowed while "Next" messages are displayed.

While queuing mode may improve apparent response time, it can present difficulties to hosts that are operating in real time. It should only be used after careful consideration of the host environment. The 7530 must be configured for queuing mode (see the "Queuing" parameter on page 219). Additional information on queuing can be found in the *TESS (Teklogix Screen Subsystem) Manual*.

6.6 ANSI Emulation

The Psion Teklogix 7530 in ANSI mode operates like most other ANSI terminals. This means software that supports ANSI terminals requires little or no changes.

6.6.1 Configuration

To configure the 7530 for ANSI mode, the "Name" and "Type" of session – in this case, ANSI – must be specified in the Applications menu. This menu is described in the section titled, "Applications" on page 194.

Next, a unique number must be assigned using the "Terminal #" parameter. This number should be unique across the entire system – that is, each 7530 and each application session in each 7530 across your system must have a unique number assigned. This parameter is described in the section titled "ANSI Settings" on page 195.

Once the 7530 is configured, an ANSI operation can be selected from the startup "Display Menu".

6.6.2 Sending Data To The Host

7530 hand-helds running ANSI sessions transmit characters to the host as soon as they are typed. The 7530 provides parameters that determine when the computer transmits characters to the host.

The 7530 can be configured to transmit after a number of characters are typed in (the “Xmit Count” parameter) or after some time has elapsed (the “Xmit Wait” parameter), or both. This reduces overhead on the radio link and improves response time. See page 202 for more information about these parameters.

You can also determine whether the 7530 transmits immediately after the <ENTER> key, an arrow key, or a function key is pressed.

The 7530 computer also responds immediately to the device attribute requests “CSIc”, “CSI0c” and “ESCZ”.



Note: *For a more detailed description of the parameter settings for ANSI, refer to “ANSI Settings” on page 195.*

6.6.3 Psion Teklogix Keyboard And VT220 Equivalent Keys

The Psion Teklogix keyboard differs from most ANSI terminals. Table 6.3 maps the equivalent VT220 keys.

Psion Teklogix Key	Equivalent VT220 Key
<UP> arrow	Up arrow
<DOWN> arrow	Down arrow
<RIGHT> arrow	Right arrow
<LEFT> arrow	Left arrow
<F1>-<F4>	PF1-PF4
<F5>	None
<F6>-<F10>	F6-F10
<F11>	F11 (ESC)
<F12>	F12 (BS)
<F13>	F13 (LF)
<F14>	F14
<F15>	Help
<F16>	Do
<F17>-<F20>	F17-F20

Psion Teklogix Key	Equivalent VT220 Key
<F21>	Find
<F22>	Insert Here
<F23>	Remove
<F24>	Select
<F25>	Previous Screen
<F26>	Next Screen
<F27>-<F36>	None

Table 6.3 Psion Teklogix Keyboard And VT220 Equivalent Keys

6.6.4 Block Mode (Local Editing)

The Psion Teklogix 7530s support “block mode” (or Local Editing). Application programs must be specifically written to support this mode. For software that supports this mode, the keys shown in Table 6.4 have special meaning.

Key	Function
<ENTER>	Starts transmission of data.
Function keys	Start transmission of data.
Arrow keys	Move cursor to the next unprotected position in the appropriate direction.
<SHIFT> <RIGHT> arrow	Moves the cursor to the next unprotected area.
<SHIFT> <LEFT> arrow	Moves the cursor to the previous unprotected area.
<DEL>	Deletes the character to the left of the cursor, and moves cursor one position to the left.
<CLR>	Erases the data in an area and moves the cursor to the first position in the area.

Table 6.4 Function Of Keys In Block Mode

6.6.5 Working With Sessions



Important: ***Use only lowercase letters when entering commands at the "TCP >" prompt.***

6.6.5.1 Establishing A New Session

- Press <CTRL>, and type a lowercase *a*.

At the TCP> prompt:

- Type *tel* in lowercase letters followed by the *Host Name* or *IP address*.
- Press <ENTER>.
- Log in as usual to begin working with the new session.

6.6.5.2 Listing Sessions And Moving To Other Sessions

To list the current sessions:

- Press <CTRL>, and type a lowercase *a*.

At the TCP> prompt:

- Type *sess* in lowercase letters, and press <ENTER>.

To move to another session:

- At the TCP> prompt, type *sess* in lowercase letters followed by the session number to which you want to move.
  e.g., Type *sess 2* to move to session 2.
- Press <ENTER>.

6.6.5.3 Closing A Session

To close a session:

- Press <CTRL>, and type a lowercase *a*.
- At the TCP> prompt, type *cl* in lowercase letters followed by the session number you want to close.
  e.g., Type *cl 2* to close session 2.
- Press <ENTER>.

6.6.5.4 Printing A Screen

To print each line of a screen with a CR/LF between each line:

- Press <CTRL>, and type *p*.

The screen will be printed using the port configured as “Print”.

6.6.5.5 Smart Echo – Disabling

In some circumstances – like entering a password – you many want to temporarily disable “smart echo”, disguising the characters you type with ‘.’ (periods).

- Press <CTRL> <ALT> <P>, and type a ‘.’ (period).
- Type the necessary information using the keyboard, and then press <ENTER> to return to “smart echo mode.

6.7 The Radio Statistics Screen

A radio statistics screen is automatically created when the Open Tekterm application is launched.

To access the radios statistics screen, you’ll need to use the ‘Applications’ menu to assign a radio title:

- In the ‘More Parameters’ menu, choose ‘Applications’.
- In the ‘Type’ field, choose `RadioStats`.
- In the ‘Title’ field, type a name for the radio screen – e.g., `Radio`.
- Press <F4> to save your changes, and then reset the 7535 – press and hold down the <BLUE> and <ENTER> keys for a minimum of 6 seconds.
- In the ‘Display’ menu, type the letter corresponding to the radio statistics screen. For example, in the sample screen below, you’d type *d* to display the radio statistics screen.

```
01 Display Menu
A   Parameters
B   TESS
C   ANSI
D   Radio
```

802.IQ Stats Screen

```
802.IQ Stats
AP/Controller MAC 00:00:00:00
Terminal MAC 00:00:00:00:00:00
bootnum: C33B
rm       12  xm       7
rb       50  xi       1
ra        7  xa      12
bt        0  xr       1
rt (avg/lst)     10000:   0

fr:00 ar:00
fh:00 ah:00
ca:0 tn:0 sts:0
typ:0 msk:0 Q:0
AcQ:1 TxQ:1

-----Address Info-------------
Radio Address 0

End of statistics.
```

- AP/Controller mac — MAC address of the Teklogix access point/controller with which this 7535 is currently associated.
- Terminal MAC — MAC address of the 7535 hand-held computer.
- bootnum — e.g., C33B – the boot number of the network controller. This number increments each time the controller reboots so that 7535s can detect the reboot when they reinitialize.
- rm — number of unique received messages.
- xm — number of unique transmitted messages.
- rb — number of received beacons. This number should continuously increment.
- xi — number of initializations with the network controller.
- ra — number of received acknowledgements. (Normally, this number should match the value in `xm`.)
- xa — number of transmitted acknowledgements. (Normally, this number should match the value in `rm`.)
- bt — beacon timeouts. Number of times the beacon has not been received as expected.

- xr — number of retransmissions. This number should remain low if radio coverage is adequate.
- rt — average round trip time. This number represents the milli-seconds taken to send a message and receive a response from the base station.

Cellular Protocol message numbers:

- fr — forward remote number (hex).
- ar — acknowledged remote number (hex).
- fh — forward host number (hex).
- ah — acknowledged host number (hex).
- ca — radio address. This is the Cellular Address, including session number (hex).
- tn — host terminal number of session (decimal).
- sts — session status (hex).
- typ — data stream type (hex).
- msk — message mask (hex).
- Q — memory address of first message in receive queue (i.e. if 0 then the receive queue is empty).
- AcQ — number of messages that have been sent but not yet acknowledged by the Cellular Master (decimal).
- TxQ — number of messages waiting to be sent (decimal).

6.8 The Tekterm Startup Display Menu

The values assigned to Tekterm parameters can be viewed and adjusted to optimize communication at the site in which a 7530 is operating. While some parameters are accessible through the “Parameter Manager”, others can be adjusted through the Windows CE Control Panel. This section provides a description of all parameters and how to adjust them.

- Press <CTRL> <ALT> <0> (zero) to work with the ‘Display’ menu.

From this startup menu, you can launch the “Parameters” menu along with TESS and/or ANSI sessions. You can also display the Radio Statistics screen.

```
01 Display Menu
A   Parameters
B   TESS
C   ANSI
```

Note: *Aside from the ‘Parameters’ menu, all other applications listed in the ‘Display Menu’ are created in the ‘Applications’ menu. Refer to “Applications” on page 194 for details.*

To launch an application, either type the letter to the left of the application you want to use, or tap the stylus on the item.

For example, to display the “Parameters” menu:

- Type the letter *a*, ***or***
- Tap the stylus on the “Parameters” item.

Note: *To return to the ‘Display Menu’, press <F2> – the ‘Previous’ key.*

6.9 Working With Menus

The 7535 offers two ways to navigate menus and choose values – you can either use the keyboard or, ***if your unit is equipped with a touchscreen***, you can select items by tapping a stylus on the screen.

There are four types of parameters: numeric, Y/N, alpha and string entry. Some menus have sub-menus attached to them and others utilize a Control Panel dialogue box to make adjustments.

Important: ***Depending on the method you use when working with menus, review either “Using The Keyboard To Navigate Through Menus” on page 170 or “Using The Touchscreen To Navigate Through Menus” on page 173.***

6.9.1 Using The Keyboard To Navigate Through Menus

- Press the <UP> and <DOWN> arrow keys to move the cursor up and down the current menu.

The currently selected parameter name will be displayed in reverse video.

6.9.1.1 Sub-Menus

The "**»**" character appearing to the right of the menu item indicates that it has a sub-menu.

Displaying Sub-Menus

To display a sub-menu:

- Use the <UP> and <DOWN> arrow keys to position the cursor on the menu item with the sub-menu you want to display.
- Press <F1> – the "NEXT" menu function key.

Returning To The Previous Menu

- Press <F2> – the "PREV" function key, ***or***
- Press <ESC>.

6.9.1.2 Numeric Parameters

Numeric parameters are displayed in reverse video. To increment or decrement a number:

- Press the <RIGHT> or <LEFT> arrow keys, ***or***
- Type the desired number in the field. Negative values are entered by typing a "-" (minus) sign and then the number.
- Press <ENTER>.

Each numeric parameter has a preset range of numbers assigned to it – for example, a preset range of 1 through 10. If you attempt to enter a number which either exceeds 10 or falls below 1, the incorrect value will be rejected – the original value for this parameter, if any, will be displayed.

6.9.1.3 Y/N Parameters

Y/N parameters can only be enabled (Y) or disabled (N). To enable or disable a Y/N parameter:

- Press the <RIGHT> or <LEFT> arrow key *once*, ***or***
- Type *y* to enable or *n* to disable the parameter.

Some Y/N parameters have sub-menus. For these parameters, a double right arrow (**»**) appears next to the "Y" or "N".

6.9.1.4 Alpha Parameters

Alpha characters appear in reverse video in this type of parameter. The allowable values for alpha parameters consist of a predetermined set of acceptable letters or words. To cycle through the set:

- Press the <RIGHT> or <LEFT> arrow keys.

6.9.1.5 String Entry Parameters



Important: ***For detailed information about using string entry fields to program macro keys, refer to "Macro Control Panel" on page 181.***

A sequence or string of characters can be entered in this type of parameter. When a string entry parameter contains data, it is displayed in reverse video. (Empty fields are not displayed in reverse video.) The methods that can be used to enter information in string entry parameters are described in this section.

In string entry parameters, the <UP> arrow, <DOWN> arrow, <ENTER> and <BKSP> keys have the following functions:

- The <UP> and <DOWN> arrow keys move the cursor between entry fields in the direction of the arrow.
- <ENTER> completes the entry field.
- <BKSP> deletes the character to the left of the cursor.
- <DEL> (key combination <BLUE> <BKSP>) clears the entire field.

Choosing An ASCII Character With The Arrow Keys



Important: Make sure the <CTRL> and <SHIFT> keys are turned off!

By pressing either the <RIGHT> or <LEFT> arrow key, you can cycle through a set of printable characters not directly accessible from the keyboard.

- Press the <RIGHT> arrow to display the next character in this sequence, and the <LEFT> arrow to display the previous one.

Adding Additional ASCII Characters

When you've chosen an ASCII character and want to add another one in the same field, the cursor must be moved to the right of the existing character. Normally, pressing the <RIGHT> arrow key moves the cursor to the right, but in a string entry field, pressing the <RIGHT> arrow key cycles through the available ASCII characters instead. **If you've already chosen an ASCII character** and want to add another one in the field, you need to take a few extra steps to move the cursor to the right.

To add another ASCII character in the string entry field, next to the one you've already chosen:

- Type a numeric character – for example, type the number 7.
- Next, press the <BKSP> key.

The cursor is now positioned to the right of the previously selected ASCII character.

- Press the <RIGHT> or <LEFT> arrow key to scroll through the ASCII characters, and select another character.

Entering Information In A String Entry Field

In addition to using the fixed set of ASCII values assigned to this type of parameter, you can also type text in a string entry field.

- Type the required text in the string entry field – including letters, numbers and symbols.
- Press <ENTER> to save the text.

Entering Unicode Values

Unicode is a trademark of The Unicode Consortium. To enter a Unicode™ value for one-time use:

- Press and hold down the <ALT> key while typing a four digit decimal value that represents the Unicode™ character you want to display.
- Release the <ALT> key.



Important: ***If you have a set of Unicode™ values that you use frequently, you may want to create and save them in a pop-up window so that you can access them whenever necessary. Refer to "Custom Characters (Unicode™)" on page 191 for details.***

6.9.2 Using The Touchscreen To Navigate Through Menus

6.9.2.1 Sub-Menus

The "**»**" character appearing to the right of the menu item indicates that it has a sub-menu.

Displaying Sub-Menus

To display a sub-menu:

- Tap the stylus on the menu item with the sub-menu you want to display.

Returning To The Previous Menu

- If the softkey labels are visible at the bottom of the screen, tap the stylus on the "PREV" (previous) softkey label.
- If the softkey labels are not visible, you'll have to press <F2> – the "PREV" function key.

6.9.2.2 Numeric Parameters

Numeric parameters are displayed in reverse video.

- To ***decrease*** the numeric value, tap the stylus on the ***left*** side of the number.
- To ***increase*** the numeric value, tap the stylus on the ***right*** side of the number.

Each numeric parameter has a preset range of numbers assigned to it – for example, a preset range of 1 through 10. If you attempt to enter a number which either exceeds 10 or falls below 1, the incorrect value will be rejected – the original value for this parameter, if any, will be displayed.

6.9.2.3 Y/N Parameters

Y/N parameters can only be enabled (Y) or disabled (N). To enable or disable a Y/N parameter:

- Tap the stylus on the Y/N value – the value will toggle between "Y" and "N".

Some Y/N parameters have sub-menus. For these parameters, a double right arrow (**»**) appears next to the "Y" or "N".

- Tap the stylus on the sub-menu arrow (**»**) to display the sub-menu.

6.9.2.4 Alpha Parameters

Alpha characters appear in reverse video in this type of parameter. The allowable values for this type of parameter consist of a predetermined set of acceptable letters or words. To cycle through the set:

- Tap the stylus on the alpha field to cycle through the options.

6.9.2.5 String Entry Parameters

You'll need to use the keyboard to enter values in string entry fields. Refer to "String Entry Parameters" on page 171 for details.

6.9.3 Saving Changes To Parameters

Whenever a parameter value is altered, the new value must be saved. To do this:

- Press <F4> – the “SAVE” key.

If you are using a touchscreen:

- Tap the stylus on the “SAVE” softkey label.
- If the softkey labels are not visible, you’ll have to press <F4> – the “SAVE” function key.

If a parameter value is changed and the menu exited before the change is saved, a dialogue box appears asking whether or not the operator wants to save the changes.

6.9.4 Retrieving Default Parameter Values



Important: ***When <F3> – the DEFAULT key – is pressed, all parameter values revert to the factory defaults, including those values that you’ve changed and saved.***

- Press <F3> – the “DEFAULT” function key, ***or*** tap the stylus on the “DEFAULT” softkey label – to reinstate the default parameter values.
- Press <F4> – the “SAVE” function key, ***or*** tap the stylus on the “SAVE” softkey label – to save the changes.
- Reset the 7535. See "Resetting The 7535 Hand-Held Computer" in the next section.

6.10 Resetting The 7530 Hand-Held Computer

Some parameter adjustments require that the 7530 be reset before the changes can take effect. 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 are preserved. When the 7530 is reset, the screen displays the Psion Teklogix and Microsoft® Windows® CE.net splash screen before displaying the startup desktop.

6.11 The Parameters Menu

- At the 'Display' menu, type *a* to display the Parameters menu.

01 Parameters		Range
More Parameters	»	see page 177
Security	User	see page 176
Display	»	see page 177

The "Parameters" menu allows you to adjust the screen contrast and select a security level. With a *Supervisory* or *Teklogix* password, you can also access the parameters listed in the "More Parameters" sub-menu.

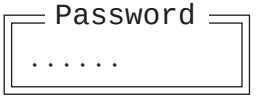
6.11.1 Security Settings

To access the "More Parameters" sub-menus, the "Security" parameter must be set to either a *Supervisor* or a *Teklogix* level password. The default security level is *User*.

01 Parameters		Range
More Parameters	»	see page 177
Security	**User**	**see text**
Display	»	see text

- Position the cursor on "Security", and press the <RIGHT> arrow key to display the *Supervisor* option.
- Press <ENTER>.

A Password screen is displayed.



- Type the supervisory level password – it is set at the factory to *123456*.
- Press <ENTER>.

Changing A Password



Important: ***"Sup. Password" on page 186 describes how to change a supervisory level password and how to change "User" options.***

6.12 Display Options

The 'Display' sub-menu is used to adjust your unit's display properties.

- Press <F1> to access the 'Display' sub-menu.

02 Display	Range
Backlight Ctrl Panel »	see text
Contrast Ctrl Panel »	see text

The Display Properties dialogue box is displayed where you can adjust the appearance, backlight and contrast of your 7530 display.

Important: ***'Display Properties' dialogue box options are described in detail beginning on page 88.***

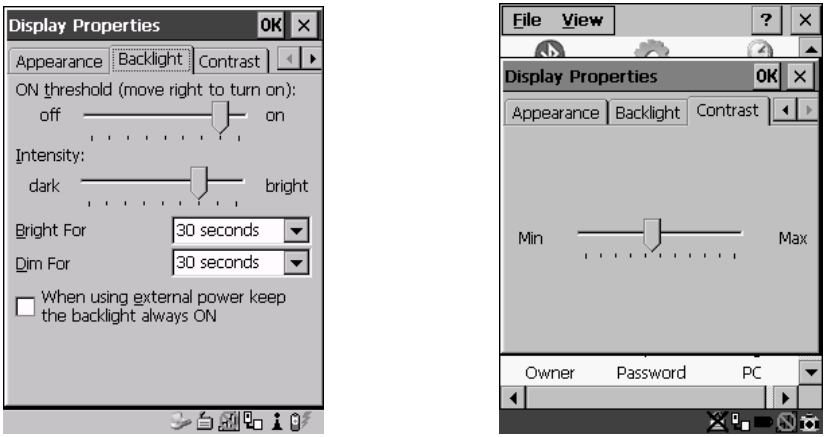


Figure 6.5 Display Properties

6.13 More Parameters

The "More Parameters" sub-menus contain the Tekterm parameters and can only be accessed with the proper security password – either a *Supervisory* or a *Teklogix* password. (Refer to "Security Settings" on page 176 for details.)

Warning: ***Parameters should not be altered without a clear understanding of how they operate. Parameters that are incorrectly set can increase response time or cause communication difficulties. Generally, parameters are configured for each site during installation.***



Note: *Parameters can also be remotely modified using SNMP. Refer to "SNMP (Simple Network Management Protocol) Setup" on page 134 for details.*

- At the startup 'Display' menu, type '*a*' to display the 'Parameters' menu.

```
01 = Parameters                          Range
 More Parameters   »                     see page 177
 Security          Supervisor            see page 176
 Display           »                     see page 177
```

- To open the 'More Parameters' menu, press <F1>.

```
02 = Parameters
 Radio                »
 System               »
 Scanner Ctrl Panel   »
 View Manager         »
 Applications         »
 Ports                »
 Network              »
```

6.14 Radio Parameters

Important: ***Radio parameters should not be changed from their factory settings without a clear understanding of your system.***

The 7530 is equipped with an Intel 802.11b radio.

- Press <F1> to display the 'Radio' sub-menu.

```
03 Radio
802.11                »
```

- Press <F1> to access the '802.11' sub-menu.

```
04 802.11 DS SS
802.IQ v1         N   »
```

- Set '802.IQ v1' to 'Y' to activate these parameters. and press <F1> to display '802.IQ v1' parameters.

```
05 802.IQ v1                    Range
Auto Radio Addr   Y      Y/N
Radio Address     0      1-3840
Initial RTT       0      0-1000
Protocol Type     2457   1501-65535
```

802.IQ v1

When 802.IQ v1 is set to "Y", the attached sub-menu of parameters is enabled.

Auto Radio Addr

If this parameter is enabled (set to "Y"), a request is sent to the network controller to assign a radio address to the hand-held computer radio.

If "Auto Radio Addr" is set to "N", the value entered in the "Radio Address" parameter is used. (Refer to "Radio Address" in this section for details about manually assigned radio addresses.)

Important: ***Ensure that all 7530s grouped in the system use the same addressing process – that is, if you choose to use automatic radio addressing, use this addressing process for all units operating in the same system. If you choose to assign radio addresses manually using the "Radio Address" parameter, use this process for all units in the same system.***

Radio Address

The value entered in the “Radio address” parameter is used to identify the 7530 over the radio link. A unique value from 1 to 3840 must be assigned for each 7530 hand-held computer.

Initial RTT (Round Trip Time)

Round trip time is the elapsed time between a *hand-held computer transmission* and an *access point acknowledgement*. Each 7535 continuously adjusts the acceptable round trip time, calculating the average elapsed time over a number of transmissions. If an acknowledgement takes longer to receive than the average round trip time calculated, the computer will resend the transmission.

Because 7530s cannot calculate an *average* round trip time without a number of transmissions, a starting point or “Initial Round Trip Time” is required. The computer uses the time assigned to the “Initial RTT” parameter as a starting value for round trip calculations. Once the 7530 begins transmitting and receiving data, this value will be adjusted to reflect the actual average round trip time between transmissions and acknowledgements.

Protocol Type

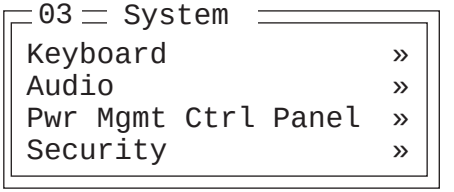
“Protocol Type” is used to identify the Ethernet packet frame type sent by the 7530. The default value – `2457` – assigned to this parameter identifies the Teklogix 802.IQ protocol Ethernet packet frame types.

The “Protocol Type ID” should only be altered if the default value is already being used to specify another application Ethernet frame type.



Important: ***If you change the value assigned to “Protocol Type ID”, ensure that all 7530s and 9150s in your system use the same number.***

6.15 System Parameters



6.15.1 Keyboard

```
04 = Keyboard
Macro Ctrl Panel   »
Indicators         Y
Softkeys           Y
Ctrl Panel         »
```

6.15.1.1 Macro Control Panel

- Highlight 'Macro Ctrl Panel', and press <F1> to display the Macros tab in the Keyboard Properties dialogue box.

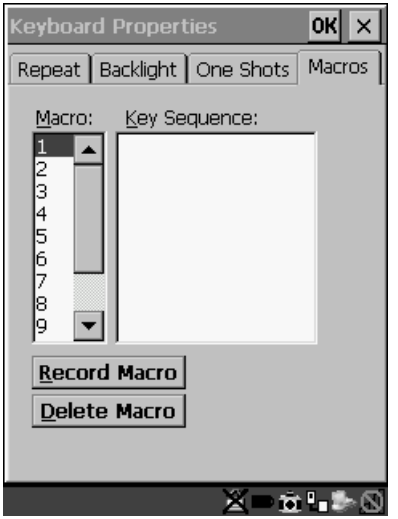


Figure 6.6 Macro Dialogue Box

Important: ***Refer to "Keyboard Macro Keys" on page 95 for detailed instructions about creating macros.***

Important: ***For information about using the macro keys you've created, refer to "Macro Keys" on page 149.***

6.15.1.2 Indicators

When the “Indicators” parameter is enabled (set to “Y”), onscreen indicators are displayed to indicate the operating condition of the 7535. Refer to “Onscreen Indicators” on page 45 for a list of possible indicators.

6.15.1.3 Softkeys

Enabling (setting to “Y”) the “Softkeys” parameter displays softkey labels at the bottom of the screen to indicate the function of each softkey. To block the display of softkey labels, set this parameter to “N”.

Softkeys are function keys which are programmed to execute specific actions when pressed. Refer to Table 6.1 on page 149 for a list of softkey labels.

6.15.1.4 Ctrl Panel

This menu item displays the Keyboard Properties dialogue box in which you can adjust the repeat rate of the keys, the intensity of the keyboard backlight and the behaviour of the <BLUE> and <ORANGE> keys.

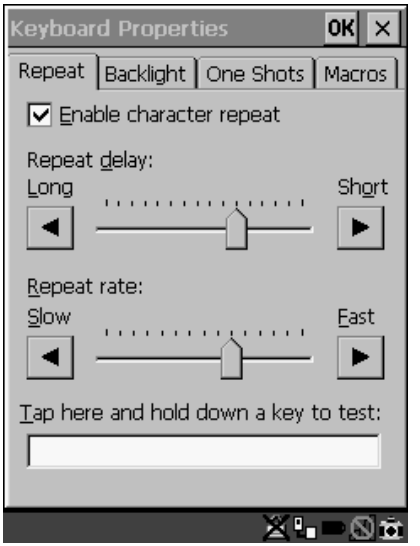


Figure 6.7 Keyboard Properties

Important: ***Refer to “Keyboard Properties” on page 92 for details about this dialogue box.***

6.15.2 Audio

04 = Audio		Range
Beep Tone	3000	800-3000
Beep Time	250	0-2000
Error Tone	1000	800-3000
Error Time	1000	0-2000
Scan Tone 1	1500	800-3000
Scan Time 1	100	0-2000
Scan Tone 2	2000	800-3000
Scan Time 2	100	0-2000
Scan Tone 3	2500	800-3000
Scan Time 3	100	0-2000
Sounds Ctrl Panel	»	see text

Beep Tone And Beep Time

These parameters regulate the frequency and duration of beeps emitted in a TESS or ANSI session when one of the following is received at the 7535: an *advisory*, a *hey you* or a *bell* character. Tone is measured in hertz and time in milliseconds.

Error Tone And Error Time

These parameters determine the frequency and duration of each error tone. Tone is measured in hertz and time in milliseconds.

Scan Tone 1 And Scan Time 1

“Scan tone 1” and “Scan time 1” determine the frequency and duration of the first beep of a multiple beep. Tone is measured in hertz and time in milliseconds.

Scan Tone 2 And Scan Time 2

“Scan tone 2” and “Scan time 2” determine the frequency and duration of the second beep of a multiple beep. Tone is measured in hertz and time in milliseconds.

Scan Tone 3 And Scan Time 3

“Scan tone 3” and “Scan time 3” determine the frequency and duration of the third beep of a multiple beep. Tone is measured in hertz and time in milliseconds.

Sounds Ctrl Panel

This option displays the Volume & Sounds Properties dialogue box.

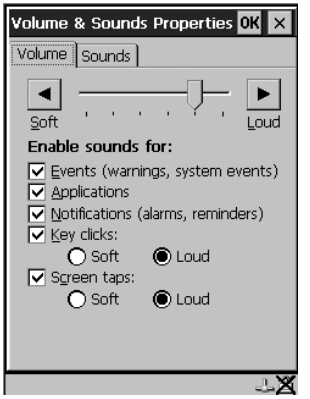


Figure 6.8 Adjusting The Volume

This dialogue box is used adjust the beeper volume and to select the conditions under which the 7530 will emit a beep.

Important: ***Refer to "Volume And Sound Properties" on page 99 for details about this dialogue box.***

6.15.3 Power Mgmt Ctrl Panel

This menu item displays the Power Properties dialogue box.

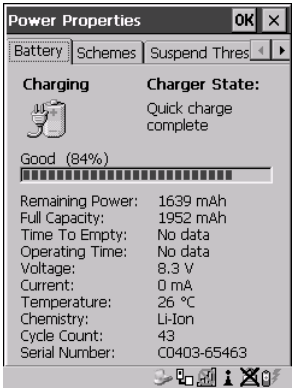


Figure 6.9 Power Properties Dialogue Box

Important: ***Refer to "Power Management Properties" on page 100 for details about this dialogue box.***

6.15.4 Security

04 = Security		Range
Default mode	User	Supervisor, Teklogix
User	»	see text
Sup. password	######	see text
Allow Teklogix	Y	Y/N

6.15.4.1 Default Mode

The value assigned to this parameter determines the operator's level of access to 7530 parameters. The allowable values are *User*, *Supervisor* and *Teklogix*. "Default mode" is set to *User*.

At *User* level, the operator is restricted to a small group of parameters. These are listed in the "User" sub-menu. Refer to "User Level Options" on page 185 for details. Choosing *Supervisor* allows access to all the parameters available in the 7530.

The Teklogix level password is only available to Psion Teklogix personnel.

- Press the <LEFT> or <RIGHT> arrow key to select the appropriate security level – User, Supervisor or Teklogix.

6.15.4.2 User Level Options

05 = User		Range
Screen switch	Y	Y/N
View Mode	Y	Y/N
Font Chg	Y	Y/N



Important: ***Only* Supervisor *and* Teklogix *level passwords can change the values of the* User *options.***

Screen Switch

When set to "Y", the operator can use the "Split screen" parameter to toggle between screens when multiple applications are running on the 7535. Refer to "Split Screen" on page 188 for details about using this function.

Font Chg

When “Font Chg” is set to “Y”, operators at the User level can change the font size of their 7535s.

6.15.4.3 Sup. Password



Note: *Only a* Supervisor *or* Teklogix *level password can change the Supervisor password.*

The supervisory password is set at the factory to *123456*. You should change the default password to better protect the 7535 settings. When you’ve changed the password, ***write down the new password and file it in a secure place***. If the password is lost, the parameters can only be changed by Psion Teklogix personnel.

Your password can have up to six alphanumeric characters. To change your password:

- Position the cursor on “Sup. password” and type a new value in the string entry field.
- When you’ve completed the change, press <ENTER> and then, press <F4> – the SAVE function key – to save your change.



Important: ***When you change your password, set all the 7535s to the same password.***

6.15.4.4 Allow Teklogix

Setting this parameter to “Y” allows Psion Teklogix personnel to use their support level password to access 7530 parameters. If ‘Allow Teklogix’ is set to “N”, only your supervisory level password can be used to access the parameters.



Warning: ***If you set this parameter to “N”, the Psion Teklogix support level password will be rejected. Keep in mind that if you then lose your supervisory level password, you will need to clear the entire configuration setup on all terminals to gain access to the parameters menu.***

6.16 Scanner Control Panel

This menu item displays a Scanner Properties dialogue box in which you can set up the particulars of your unit's scanner performance, choose the bar codes which will be decoded, and so on.



Figure 6.10 Scanner Properties Dialogue Box

Important: ***Refer to "Scanner Properties Setup" beginning on page 118 for details about setting up your scanner.***

6.17 View Manager

View Manager		Range
Display Shift	Y	Y/N
Block Cursor	Y	Y/N
Use Increment	N	Y/N
X-increment	5	1..40
Y-increment	5	1..12
Split Screen	»	see text
Custom Chars	»	see text
Font Override	N»	see text
Default Colours	»	see text

Display Shift

If this parameter is enabled (set to "Y"), the display in application screens shifts so that there are no blank columns on the left-most side of the display.

Block Cursor

When this parameter is enabled (set to “Y”), the cursor is presented as a flashing block. When “Block Cursor” is set to “N”, the cursor is presented as a flashing underline character.

Use increment

When “Use increment” is enabled (set to “Y”) and the cursor is moved off the display, the screen contents shift by the values specified in the “X-increment” and “Y-increment” parameters.

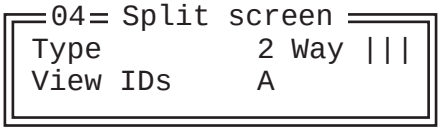
X-increment

This parameter determines the number of spaces the screen shifts once the cursor moves out of view. The value assigned here doesn’t take effect until “Use Increment” is set to “Y”.

Y-increment

This parameter determines the number of spaces the screen shifts once the cursor moves out of view. The value assigned here doesn’t take effect until “Use Increment” is set to “Y”.

6.17.1 Split Screen



This parameter allows you to split the display view so that more than one application screen can be displayed at the same time. The split screen parameters, “Type” and “View IDs”, are used to tailor the screen view for your needs.

Type And View IDs

The “Type” parameter determines how a screen will be split. The 7535 supports up to four application screens. The “View IDs” parameter determines which application screens will be displayed in each pane of the split screen. “Moving Between Split Screens” on page 190 describes how to move the cursor from one split screen to the next.

6.17.1.1 Splitting And Displaying Screens

Before splitting the screen, you need to determine which applications should appear in each pane of the split screen. The available applications are listed in the main "Display Menu". Each application listed in the "Display Menu" is preceded by a letter – for example, `Parameters` is preceded by an `A`. This letter is used in the "View IDs" string entry field to fix each pane of a split screen to a corresponding application.

If you need to display the startup "Display Menu":

- Press <CTRL> <ALT><0>.

To split a screen:

- With the cursor on the "Type" parameter, use the <RIGHT> or <LEFT> arrow key to scroll through the types of split screens available.

The vertical and horizontal lines displayed at the "Type" parameter indicate how the screen will be split – for example, in the sample screen on page 190, the vertical lines indicate the screen will be vertically split into two segments. The screen can also be split horizontally 3 ways or 4 ways.

Once you've indicated how you want to split the screen in the "Type" parameter:

- Use the <DOWN> arrow key to move the cursor to the "View IDs" parameter.
- For each application you want to display, type the letter corresponding to the application.

  For example, suppose you want to split the screen into two vertical segments with the *Parameters* menu in the left pane of the screen and a *TESS* session in the right pane. In the "Display Menu", the letter **A** represents "**`Parameters`**" and **B** represents "**TESS**". The "Type" and "View ID" values would be represented as follows:

```
04= Split screen
Type          2 Way |||
View IDs      AB
```

- Press <ENTER>.

To display the split screen on the 7535:

- Press <CTRL> <DOWN> arrow.

6.17.1.2 Moving Between Split Screens

To move the cursor from one pane in a split screen to the next:

- Press <CTRL> <RIGHT> or <LEFT>. The cursor moves in order from the left-most pane to the right and from the top-most pane to the bottom.

6.17.1.3 Toggling Between Full & Split Screens

To toggle between a split and full screen format:

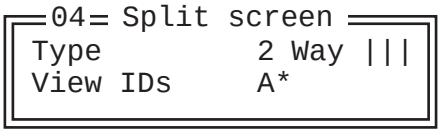
- Press <CTRL> <DOWN> arrow.

The application displayed when toggling from a split to a full screen format is determined by the cursor location in the split screen. For example, if the cursor is in the pane of a split screen in which the TESS application is displayed and <CTRL> <DOWN> is pressed to display a full screen, the TESS application will be displayed in the full screen.

6.17.1.4 Using The Asterisk As A Wild Card

When a screen is split, the application displayed in each pane is fixed in the "View IDs" parameter. Using an asterisk * in the "View IDs" parameter indicates that a particular pane in the split screen is not fixed to any particular application and can be changed as required.

For example, suppose you want to split the screen into two vertical segments with the left pane containing the "Parameters" menu and the right pane containing no fixed application. The "Type" and "View IDs" parameters would be completed as follows:



To change the application displayed in the pane with no fixed application:

- If the cursor is not currently in the pane, press <CTRL> <RIGHT> or <LEFT> arrow to move the cursor into the appropriate screen.
- Press <CTRL> <ALT><0> to display the startup "Display Menu".
- Type the letter corresponding to the new application you want to display.

6.17.2 Custom Characters (Unicode™)

Note: *The Unicode ™ characters created here are accessible only within the Tekterm application. To create Unicode ™ characters that are accessible system-wide, refer to "Unicode Mapping" on page 97.*

The "Custom Characters" parameter allows you to create Unicode™ characters not available directly from the keyboard, including accented characters. Unicode is a trademark of The Unicode Consortium. You can create up to 20 Unicode™ characters that will be stored in a pop-up menu accessible from any application.

6.17.2.1 Creating A Unicode™ Character

Note: *You can create a Unicode™ character by pressing and holding down the <ALT> while typing the decimal value that represents the Unicode™ character you want to use. However, you will need to press <ALT> and retype the decimal value each time you want to use the special character.*

The advantage to creating special characters using the "Custom Chars" parameters is that the characters you create in the customer characters table are saved in a pop-up window that is accessible from any application.

- In the Parameters menu, highlight "View Manager" and press <F1>.
- Highlight "Custom Chars", and press <F1> to display the custom characters table.

```
04 Custom Chars
Font  Small
U+    0000
U+    0000
•
•
•
```

- Position the cursor on the Fonts at the top of the table.
- Press the <LEFT> or <RIGHT> arrow keys until the character set you want to use is displayed.

You can create up to 20 Unicode™ characters in the custom characters table.
To create a Unicode™ value:

- Replace the *0000* value with a hex value that represents the Unicode™ character you want to use.

- Press the <DOWN> arrow key to accept the value and move the cursor to the next field.

When you have finished creating the Unicode™ characters you want to use:

- Press <F4> to save your changes.
- Reset the 7535 – press and hold down the <ENTER> and <BLUE> key simultaneously for a minimum of six seconds.

6.17.2.2 Displaying The Unicode™ Pop-up Window

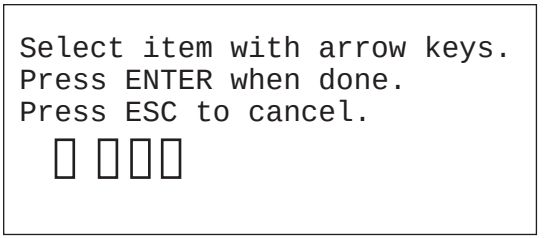
The Unicode™ values you create are stored in a pop-up window that you can access from any application.

To display the pop-up window within any application:

- Press <CTRL> <ALT> <A>.



Note: *Unicode™ characters that cannot be displayed on your screen with the font you are currently using are displayed as rectangles in the pop-up window. (See the sample menu on page 192.) However, the actual Unicode™ value you created will be sent to the host.*



- Use the <LEFT> or <RIGHT> arrow key to position the cursor on the Unicode™ value you want to use, and press <ENTER>.

To close the pop-up menu when you're done:

- Press the <ESC> key.

Font Override

```
04= Font Override
Font Code     0
... is font   18x32
Font Code     1
... is font   18x32
Font Code     2
... is font   10x26
Font Code     3
... is font   18x32
Font Code     4
... is font   8x20
```

This parameter is used to redefine the font to which 5 different font codes refer.

Default Colours

```
04= Default Colours          Range
Foreground    Black      | see text
Background    White      | see text
```

Foreground And Background

This menu is used to select the foreground and background colours used within Tekterm. If an unreadable combination is assigned – the foreground and background have the same value – the foreground colour will be inverted.

The allowable values are: `Red`, `Green`, `Yellow`, `Blue`, `Magenta`, `Cyan`, `White` and `Black`.



Note: *The 7530 must be reset – press and hold down the <BLUE> and <ENTER> keys for a minimum of six seconds – in order for the new colour assignments to take affect.*

6.18 Applications

"TESS" and "ANSI" applications require unique names so that several different sessions of "TESS" and "ANSI" can operate simultaneously. 7530s can support up to 8 sessions at one time.

03 Applications	Range
Type1 #1 ANSI	None, ANSI,TESS
Title1 #1 parts	see text
Settings 1 »	see text
.	
.	
.	
Type1 #8 None	
Title1 #8	
Settings 8 »	



Important: ***These applications will become active only after the changes made in the Application screen are saved by pressing <F4> – the SAVE key.***

Type And Title

Up to eight applications can be entered in this parameter. The "Type #" field indicates the type of session you will be running. The "Title #" parameter should be completed with a name that is meaningful to the operator.

- The available options for the "Type #" field are TESS, ANSI and None. Use the <RIGHT> or <LEFT> arrow key to scroll through the options.
- The "Title #" field needs a name that is meaningful to the operator. In addition, "TESS" and "ANSI" applications require unique titles so that several different sessions of "TESS" and "ANSI" can operate simultaneously. These titles will appear in startup "Display Menu". Each session will have its own set of parameters.
- To display the "Settings" menu for your application, position the cursor on "Settings", and press <F1> – the NEXT key.



Note: *Before you can access the "Settings" menu, you must first complete the "Name" and "Type" fields.*

6.18.1 ANSI Settings

04 Ansi		Range
Auto Term #	N»	see text
Terminal #	1	1..1024
Host Conn	»	see text
Screen	»	see text
Xmit Modes	»	see text
Kbd Modes	»	see text
Edit Modes	»	see text
Serial	»	see text
Host Char Set	»	see text
Anchor View	N»	see text

Each session you create has its own “Settings” parameters. Additional ANSI information is documented in “ANSI Emulation” on page 162.

Auto Term#

Note: *Refer to “Group” on page 195 for additional instructions.*

When this parameter is set to “Y”, a unique number is assigned for the ***current ANSI session***. If “Auto Term#” is set to “Y”, any value assigned to the “Terminal #” parameter is ignored.

Note: *“Auto Term#” is available when* `802.IQv2` *is assigned to the “Host Conn” parameter or when* `802.IQv1` *is enabled in the Radio Menu (see “802.IQ v1” on page 179).*

Group

Auto Term#		Range
Group	1	1-5

When “Auto Term#” is set to “Y”, the ‘Group’ parameter is used to identify the *group* or pool of numbers from which an auto-address is chosen.

Terminal

For ***every*** application session you create, the “Terminal #” assigned must be non-zero and unique. This parameter defines the number for the ANSI session and uniquely identifies all transmissions to and from the 7530.

Other applications running in the 7530, such as a TESS session or another ANSI session must ***each*** have a different number. In addition, each Psion Teklogix 7530 using the radio link must have a unique number.

6.18.1.1 Host Conn

Host Conn		Range
Conn Type	Telnet	802.IQv2, 9010t, Telnet
Settings	»	see text

Conn Type

The options for this a parameter vary depending on the type of application you are running – ANSI or TESS and the type of radio installed in your terminal.

For ANSI applications, this parameter allows you to choose one of the following types of connections: `802.IQv2, 9010t` (TCP Direct) or `Telnet.` Keep in mind that choosing `Telnet` allows the terminal to communicate directly with the host.

Settings



Note: *The "Settings" sub-menu is* ***not*** *available when* `802.IQv2` *is selected as the "Conn Type". In addition, this sub-menu varies depending on which option you've selected –* `Telnet` *or* `9010t`.

Telnet Settings		Range
Host		see text
Port	23	0-32767
ENTER Pmpt	Press ENTER to connect	see text
ESC Prompt	Press ESC to cancel	see text
Auto Login	N»	Y/N
Func Key Remap	N»	Y/N

9010t Settings		Range
Host		see text
Port	9999	0-9999

Host

This parameter is used to assign a host IP address using the format ###.###.###.### or a host name if DNS is used.

Port

"Port" specifies the `9010t` (TCP Direct) or `Telnet` port number. The default `9010t` port number assigned is 9999, the maximum allowable value. The default `Telnet` port number assigned is 23 with a maximum allowable value of 32767.

ENTER Pmpt

This string indicates that the terminal is waiting for the user to press <ENTER> at the time of connection.

ESC Prompt

This string indicates that the user can press the <ESC> key to terminate a connection attempt before the connection is established.

Auto Login

Auto Login		Range
Login Prompt	gin:	see text
Login		see text
Password Prompt	word:	see text
Password		see text
Password Echo	Y	Y/N
Login Failed	incorrect	see text

The "Auto Login" parameters are used to define whether or not the terminal will attempt to log in automatically.

The Auto Login sequence is as follows:

1. Host sends "Login Prompt".
2. Terminal responds with "Login".
3. Host sends "Password Prompt".
4. Terminal responds with "Password".
5. Host may send password echo.
6. Terminal ignores password echo if "Password Echo" is set to "Y", otherwise skip to step 7.
7. Terminal looks for "Login Failed" in next transmission from host.
8. Login successful or Login failed and return to step 1.

Login Prompt

When the terminal receives the string assigned to this parameter, it will respond with "Login".

Login

The terminal responds with this string when it receives a "Login Prompt".

Password Prompt

When the terminal receives this string, it responds with a "Password".

Password

The terminal responds with this string when it receives a "Password Prompt".

Password Echo

When this parameter is set to "Y", the host will echo data back to the terminal after receiving a "Password".

Login Failed

When the terminal receives this string, it assumes that the login attempt has failed and returns to the "Enter Pmpt".

Func Key Remap

In ANSI, each function key has a default string associated with it. When a function key is pressed, the corresponding default string is sent to the host. The 'Func Key Remap' table allows these function key character sequences to be redefined.

07 Func Key Remap

F 1	1B	4F	50	00	00	00	00
F 2	1B	4F	51	00	00	00	00
F 3	1B	4F	52	00	00	00	00
•							
•							
•							
F28	1B	5B	34	32	7E	00	00
F29	1B	5B	34	33	7E	00	00
F30	1B	5B	34	34			

To change values:

- Press the <UP> or <DOWN> arrow key to highlight a function key.
- Press the <TAB> key to move through the string of values.
- Either type new values, or press the <LEFT> or <RIGHT> arrow key to change the values.

6.18.1.2 Screen

05 Screen		Range
# of Pages	4	0..16
# of Rows	24	4..60
# of Cols	80	80 or 132
Default Font	16x30	see text
80-col. Font	16x30	see text
132-col. Font	16x30	see text
Video	»	see text
Label F1-F6	»	see text
Colour override	N»	see text

of Pages

This parameter defines how many pages are accessible to application programs. The ANSI control functions – Next Page (NP) and Previous page (PP) – are used to select another page. These pages are independent of each other so that if lines of text scroll off a page, the other pages are unaffected.

There is no error indication from the hand-held computer if the memory required by the selected number and size of pages exceeds the memory available in the computer.

of Rows

This parameter defines the logical page length (in lines) used by the host computer application. Emulator systems trim the host application screens to this length. This page length cannot be smaller than the length of the hand-held's display. Display panning is used if the page is longer than the display.



Note: *The value in this parameter must be an even number.*

of Cols

This parameter defines the logical page width (in characters) used by the host computer application. Emulator systems trim the host application screens to this width. This page width cannot be smaller than the width of the display. Display panning is used if the page is wider than the display.



Note: *The value in this parameter must be an even number.*

Default font

This parameter determines the default font that appears when the 7535 memory is reset.

- Use the <RIGHT> or <LEFT> arrow key to scroll through the available options.

80-col. font & 132-col. font

These parameters are used to set the font size on the screen if the default font is not acceptable. An escape sequence must be sent from the host before a hand-held can switch to either `80-col.font` or `132-col.font`.

- Use the <RIGHT> or <LEFT> arrow keys to scroll through the size options for these parameters.

Video

06 Video		Range
Bold	NONE	see text
Blink	BLNK	see text
Reverse	REV	see text
Underline	ULIN	see text

The possible attributes for these parameters are: “BLNK” (blink), “ULIN” (underline), “REV” (reverse), and “NONE” (normal).

Bold

This parameter specifies the actual video attributes to be assigned to fields created with the “Bold” ANSI attribute.

Blink

This parameter specifies the actual video attributes to be assigned to fields created with the “Blink” ANSI attribute.

Reverse

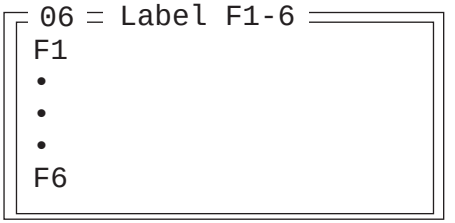
This parameter specifies the actual video attributes to be assigned to fields created with the “Reverse” ANSI attribute.

Underline

This parameter specifies the actual video attributes to be assigned to fields created with the “Underline” ANSI attribute.

Label F1-F6

Note: *This menu uses string entry fields. For detailed information about completing this type of field, refer to* “String Entry Parameters” on page 171.



Softkeys are function keys that have been programmed to perform specific actions in your application. These keys are identified through ***softkey labels*** – reverse video labels that are displayed at the bottom of the screen. These softkey ***labels*** can be reconfigured using the menu attached to the “Label F1-F6” parameter.

To edit a label:

- Position the cursor in the appropriate function key field within the Label menu, and type a new name – preferably one that describes the corresponding key’s function.

Note: *Although you can enter up to 9 characters for each softkey label, the text will be shortened to better fit in the available space on your display.*

Colour Override



Note: *This menu is available only if the 7535 is equipped with a colour display.*

06 Colour Override		Range
Foreground	Black	see text
Background	White	see text

Foreground And Background

When “Colour Override” is set to ‘Y’, the colours chosen in this menu are displayed in the ANSI sessions. These colour settings will override the “Default Colours” set from within the “View Manager” menu. Refer to “Default Colours” on page 193 for details.

The allowable values are: `Red`, `Green`, `Yellow`, `Blue`, `Magenta`, `Cyan`, `White` and `Black`.

6.18.1.3 Xmit Modes

05 Xmit Modes		Range
Xmit Count	99	0..99
Xmit Wait	1	0..999
Dev Attr	←[?62;1;2;6c	see text
Auto-Answer		see text
7 bit	Y	Y/N
Block Mode	»	see text

Xmit Count

This parameter determines how many characters from the keyboard or scanner are buffered by the 7535 before being transmitted to the host. If 0 (zero) is selected, the hand-held transmits only according to the “Xmit Wait” parameter. If the ANSI block mode features are used, this parameter should be set to 99.



Note: *If the 7535 is not in local edit mode, the* <ENTER>*, arrow,* <CTRL>*, and function keys cause an immediate radio transmission regardless of the “Xmit Count” parameter setting.*

Xmit Wait

This parameter determines the length of time the 7530 collects keystrokes before transmitting them to the host. This value is specified in increments of one 10th of a second (i.e., a value of 10 represents 1 second). If 0 (zero) is selected, the computer transmits only according to the “Xmit Count” parameter.



Note: *If the 7530 is not in local edit mode, the* <ENTER>*, arrow,* <CTRL>*, and function keys cause an immediate radio transmission regardless of the “Xmit Wait” parameter setting.*

Dev Attr

This string entry parameter specifies a device attribute string. This string can be up to 16 characters long. The computer sends this string to the host when it receives a DA or DECID control. The example shown in the “Xmit Modes” screen sample on page 202 is the device attribute sent to a VAX, identifying the Psion Teklogix hand-held computer as a VT220 terminal. This parameter may or may not be set, depending on the requirements of the host computer.

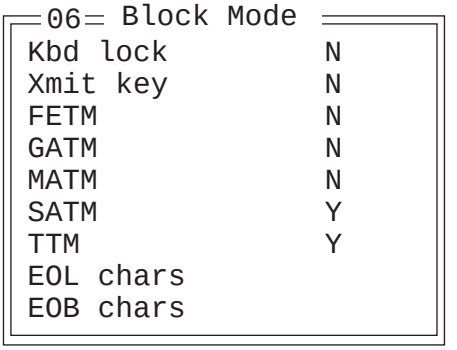
Auto-Answer

This string can be up to 30 characters long and is sent by the 7530 as a reply to an “ENQ” character from the host. The “Auto-Answer” string is programmable in the same manner as the keyboard macros. For example, this string can be used to automatically send the username and password when logging into the host. Refer to "Macro Control Panel" beginning on page 181 for additional details about macros.

7 bit

When this parameter is disabled (set to “N”), the hand-held computer transmits 8 bit controls. When enabled (set to “Y”), the hand-held transmits 7 bit controls. This parameter applies to character mode, block mode, and media copy mode.

Block Mode



All modes in this section affect the data stream sent to the host computer, the serial port and the console port. These modes apply to the Block mode (Local Editing) and the Media Copy function, unless otherwise noted. Consult the *Teklogix ANSI Terminal Programmer's Manual* for more information.

Kbd lock

When this parameter is disabled (set to "N"), the 7530 does not lock the keyboard after a block mode transmission. When enabled (set to "Y"), the keyboard is locked after a transmission. The application program must unlock the keyboard by resetting the Keyboard Action Mode (KAM), using the Reset Mode (RM) or Enable Manual Input (EMI) controls.

Xmit key

When this parameter is disabled (set to "N"), the key that causes the 7530 hand-held to transmit is not sent to the host as part of the transmitted data. When enabled (set to "Y"), the key that causes a transmission is sent after the page data has been sent to the host. This parameter applies only to block mode.

FETM

When the Format Effector Transfer Mode (FETM) parameter is disabled (set to "N"), Format Effectors are inserted in data sent to the host or included in data when transferred to the console or serial ports. When enabled (set to "Y"), the Format Effectors are not inserted into the data sent to the host and are not included in the data transferred to the console or serial ports.

GATM

When the Guarded Area Transfer Mode (GATM) parameter is disabled (set to "N"), only unguarded data is transmitted to the host or transferred to the console or serial ports. When enabled (set to "Y"), both guarded and unguarded data can be transmitted to the host or transferred to the console or serial ports.

MATM

When the Multiple Area Transfer Mode (MATM) parameter is disabled (set to "N"), only the selected area containing the cursor can be transmitted to the host or transferred to the console or serial ports. When enabled (set to "Y"), all selected areas can be transmitted to the host or transferred to the console or serial ports. This mode is significant only if the Selected Area Transfer Mode (SATM) is disabled.

SATM

When the Selected Area Transfer Mode (SATM) parameter is disabled (set to "N"), the selected areas defined by SSA/ESA and DAQ can be transmitted to the host or transferred to the console or serial ports. When enabled (set to "Y"), the full contents of the buffer can be transmitted to the host or transferred to the console or serial ports.

TTM

When the Transfer Termination Mode (TTM) parameter is disabled (set to "N"), the cursor position determines the end of the string that can be transmitted to the host or transferred to the console or serial ports. When enabled (set to "Y"), the cursor position is ignored.

EOL chars

This string entry parameter specifies a string of up to 8 characters that are sent after each line in a block transmission. If the parameter is not used, the rules specified in "Transmitted Data Stream" are used to determine end of line characters.

EOB chars

This string entry parameter specifies a string of up to 8 characters that are sent after each block transmission.

6.18.1.4 Kbd Modes

05 Kbd Modes		Range
Arrow mode	cursor	cursor, field
Echo mode	Smart	Smart, Local, Host
BKSP key	DEL	DEL, BS
PrintScreen key	16	1..255
Xmit Enter	Y	Y/N
Insert	N	Y/N
Newline	N	Y/N
Disable kbd	N	Y/N
DEC Cursor Keys	cursor mode	see text

Arrow mode

This parameter determines whether arrow keys move the cursor within a field or between fields. When set to “field”, pressing an arrow key causes the cursor to move to the next field in the direction of the arrow. When set to “cursor”, pressing the <LEFT> and <RIGHT> arrow keys move the cursor within the current field.

Echo Mode

This parameter selects echo mode for the 7530. The available modes are “Local”, “Host”, and “Smart”.

Local: In this mode, any character entered using the keyboard is displayed before being sent to the host. Certain keys cause additional action at the 7530, as shown in Table 6.5 on page 207.

Host: In this mode, the hand-held computer sends all keyboard entries to the host and displays only data received from the host.

Smart: This mode reduces or eliminates the delay between typing a character on the keyboard and displaying the character echoed by the host computer. The 7530 displays all printable characters on the screen before sending them to the host. The hand-held compares the characters echoed by the host to the characters placed on the page and fixes the display if the host echoes are different.

The maximum number of characters waiting for echo is 25. Any additional characters are sent to the host but not displayed. When the 7530 is in *insert* mode, smart echo is disabled.

Key	Function
ENTER	In newline mode, this key moves the cursor to the first column of the next line. In line feed mode, this key moves the cursor to column one of the current line.
CTRL-G (Bell)	The 7530 beeps.
CTRL-H (Backspace)	The cursor moves back one space.
CTRL-I (Tab)	The cursor moves to the next horizontal tab stop.
CTRL-J (Line Feed) CTRL-L (Form Feed)	The cursor moves down one line in the same column.
CTRL-K (Vertical Tab)	The cursor moves down to the next line with a vertical tab set.
DEL	This key deletes the character to the left of the cursor and moves the cursor to the left by one position.

Table 6.5 Function Of Special Keys In Local Echo Mode

BKSP Key

This parameter determines whether the <BKSP> key acts as a delete key, erasing the character to the right of the cursor, or a backspace key, erasing the character to the left of the cursor.

PrintScreen Key

This parameter determines the “hot-key” for printing the screen contents via the 7535 serial port. The default is <CTRL> P (16).



Note: *The 7530’s port must be set to “printer” (see“Ports– Tether And Console” on page 235).*

Xmit Enter

The <ENTER> key normally enters data into a field and moves the cursor to the next field. However, some applications require that the <ENTER> key start a transmission from the 7530. When enabled (set to "Y"), this parameter causes the <ENTER> key to start a transmission.

Insert

When this parameter is disabled (set to "N"), it behaves in "replace" mode – a character entered at the keyboard or received from the host replaces the character at the cursor position. The cursor then advances one character position. When enabled (set to "Y"), the character entered at the keyboard or received from the host is inserted at the cursor position after shifting the characters at and following the cursor forward one position. The cursor is advanced one position. The extent of the characters affected by the shift depends on the setting of the "Edit Extent" parameter (see page 209).

Newline

When this parameter is disabled (set to "N"), an LF character received from the host causes the cursor to move down one line in the same column. In addition, the <ENTER> key transmits a CR. When enabled (set to "Y"), an LF character received from the host causes the cursor to move to the first column of the next line. The <ENTER> key transmits both a CR and an LF.

Disable kbd

Setting this parameter to "Y" disables the keyboard and scanner. When this parameter is set to "N", the keyboard and scanner are enabled.

6.18.1.5 Edit Modes

04 Edit Modes		Range
Auto wrap	N	Y/N
Erasure mode	N	Y/N
Tab stop mode	N	Y/N
Edit extent	Line	see text
Disp controls	N	Y/N

Auto wrap

If “Auto wrap” is disabled (set to “N”), characters received when the cursor is at the right edge of the screen replace the previously displayed characters. If “Auto wrap” is enabled (set to “Y”), the cursor wraps to the next line when the current line is filled. The display scrolls up if the cursor is at the bottom margin.

Erasure mode

When this parameter is disabled (set to “N”), erase functions can only erase unprotected characters. When enabled (set to “Y”), the erase functions can erase characters regardless of their protected state.

Tab stop mode

When this parameter is disabled (set to “N”), the setting and clearing of horizontal tab stops apply to the same horizontal position of all lines on the page. When enabled (set to ‘Y”), horizontal tab setting and clearing apply only to the current line.

Edit extent

This parameter selects the extent of the display to be affected by the ICH and DCH controls and received character insertion. The possible values are `Line`, `Area`, `Display` or `Fld`. The shifting caused by ICH, DCH and character insertion is confined to the selected extent.

Disp controls

When this parameter is disabled (set to “N”), any control codes received from the host are performed as described. When enabled (set to “Y”), any received control functions are displayed and are not performed. If any C0 or C1 controls are received from the host, their standard ANSI mnemonics are displayed in reverse video. Other characters are displayed as normal characters. This mode can also be set with the Set Mode (SM) control but can only be reset from the Parameters menu.

6.18.1.6 Serial

05 Serial		Range
Primary Port	Any Available	see text
Secondary Port	Any Available	see text
Async In	N	Y/N
Start	0	0..255
End	0	0..255

Primary Port & Secondary Port

ANSI print commands (such as 'MC' or Media Copy) control the transfer of data to and from the serial and console ports on the 7535. At the 7535, the value assigned at the 'Primary Port' and 'Secondary Port' parameters determines which port the ANSI print command will identify and use as primary and secondary. The allowable options are: `Any Available`, `Ist printer`, `2nd printer`, `3rd printer`, `4th printer`, `1st Serial`, `2nd Serial`, `3rd Serial`, `4th Serial` and `Disabled`.

Async In

When this parameter is enabled (set to "Y"), the serial (async) port is ready to receive input at all times.

Start/End

These parameters specify the "start" and "end" characters of input received from the serial (async) port.

6.18.1.7 Host Char Set

The 'Host Char Set' menu allows you to specify a character set in the 'Lower' and 'Upper' character tables.

```
05 Host Char Set
Lower  VT220 Fren Cdn.
Upper  Arabic IR-127
```



Note: *When an 8-bit set is selected from the 'Lower' character set, the 'Upper' character set will change to the same value. The 'Upper' character set cannot be altered until a non-8-bit value is assigned for the 'Lower' character set.*

To choose ‘Lower’ and ‘Upper character sets:

- Position the cursor on the ‘Lower’ or ‘Upper’ parameter, and press the <RIGHT> or <LEFT> arrow key to display the character set options.
- Press <F4> to save your selection to memory.

Important: ***When a character sent from the host cannot be displayed, a rectangular box is used as a substitute.***

6.18.1.8 Anchor View

05 = Anchor		Range
x origin	1	1..24
y origin	1	1..80

When enabled (set to “Y”), this parameter locks the display at a defined location on the screen, preventing it from shifting when the cursor is moved. The “x origin” and “y origin” coordinates specify where the screen origin, the upper left corner of the screen, will be fixed.

x origin and y origin

The “x origin” parameter is used to specify the column to which the upper left corner of the screen will be anchored. The “y origin” parameter is used to specify the row coordinate to which the screen will be anchored.

6.18.2 TESS Settings

04 = TESS		Range
Auto Term #	N»	
Terminal #	1	see text
Host Conn	»	see text
Screen	»	see text
Characters	»	see text
Tests	»	see text
Features	»	see text
Scanner	»	see text
Fields	»	see text
Anchor View	N»	see text
Emulation	»	see text

Each session you create has its own “Settings” parameters. Additional TESS information is documented in “TESS Emulation” on page 154.

Auto Term#

Note: *“Auto Term#” is available when* `802.IQv2` *is assigned to the “Host Conn” parameter (page 213) or when* `802.IQv1` *is enabled in the Radio Menu (see “802.IQ v1” on page 179).*

When this parameter is set to “Y”, a unique unit number is assigned for the ***current TESS session***. If “Auto Term#” is set to “Y”, any value assigned to the “Terminal #” parameter is ignored.

Group

Auto Term#		Range
Group	1	1-5

When “Auto Term#” is set to “Y”, the ‘Group’ parameter is used to identify the *group* or pool of numbers from which an auto-address is chosen.

Terminal

For ***every*** application session you create, the "Terminal #" assigned must be non-zero and unique. This parameter defines the terminal number for the TESS session and uniquely identifies all transmissions to and from the 7530.

Other applications running in the 7530, such as an ANSI session or another TESS session must ***each*** have a different number. In addition, each Psion Teklogix 7530 using the radio link must have a unique number.

6.18.2.1 Host Conn.

Host Conn		Range
Conn Type	802.IQv2	see text
Settings	»	see text

Conn Type

The options for this a parameter vary depending on the type of application you are running – ANSI or TESS.

For TESS applications, this parameter allows you to choose one of the following types of connections: `802.IQv2`, `9010t` (TCP Direct), `2392/Telnet`, `3274/Telnet` and `5250/Telnet`.

Settings



Note: *The "Settings" sub-menu is not available when* `802.IQv2` *is selected as the "Conn Type"*

Settings		Range
Host		see text
Port	9999	0-9999

Host

This parameter is used to assign a host IP address using the format ###.###.###.###

Port

"Port" specifies the port number. By default, the port is assigned the value 9999.

6.18.2.2 Screen

05 Screen		Range
# of Cols	80	20..132
# of Rows	24	4..100
Origin Scroll	N	Y/N
Field Scroll	N	Y/N
Pages Saved	16	1..16
App. Parameter	0	-1..79
Label F1-6	»	see text
Colour Override	N»	see text

of Cols

This parameter defines the logical page width (in characters) used by the host computer application. Emulator systems trim the host application screens to this width. This page width cannot be smaller than the width of the 7535 display. Display panning is used if the page is wider than the display.

Note: *The value in this parameter must be an even number.*

of Rows

This parameter defines the logical page length (in lines) used by the host computer application. Emulator systems trim the host application screens to this length. This page length cannot be smaller than the length of the hand-held computer's display. Display panning is used if the page is longer than the display.

Note: *The value in this parameter must be an even number.*

Origin Scroll

When enabled (set to "Y"), the display window moves to the origin (upper-left corner) after "LOCK-H" or "LOCK-B" messages.

Field Scroll

When enabled (set to "Y"), the display window moves to the left after entering a new entry field.

Pages Saved

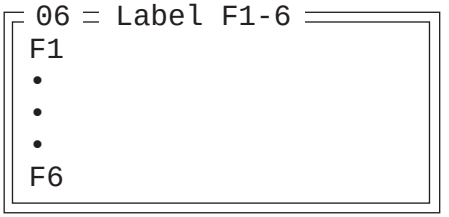
This parameter determines the number of pages that can be stored and recalled at the 7530. Storing frequently used page data at the 7530 reduces the need for the host to retransmit complete page data over the radio link. Retransmitting data can reduce the system response time. Increasing the number of saved pages decreases the available memory for other functions.

App. Parameter

The “Application” parameter is sent to the host system as part of the response to the TESS query command. Enter zero to disable this parameter.

Label F1-F6

Note: *This menu uses string entry fields. For detailed information about completing this type of field, refer to “String Entry Parameters” on page 171.*



Softkeys are function keys that have been programmed to perform specific actions in your application. These keys are identified through ***softkey labels*** – reverse video labels that are displayed at the bottom of the screen. These softkey ***labels*** can be reconfigured using the menu attached to the “Label F1-F6” parameter.

To edit a label:

- Position the cursor in the appropriate function key field within the Label menu, and type a new name – preferably one that describes the corresponding key’s function.

Note: *Although you can enter up to 8 characters for each softkey label, the text will be shortened to better fit in the available space on your display.*

Colour Override



Note: *The menu is available only if your 7530 is equipped with a colour display.*

```
06 Colour Override        Range
Foreground    Black       see text
Background    White       see text
```

Foreground And Background

When “Colour Override” is set to ‘Y’, the colours chosen in this menu are displayed in the TESS sessions. These colour settings override the “Default Colours” set from within the “View Manager” menu. Refer to “Default Colours” on page 193 for details.

The allowable values are: `Red`, `Green`, `Yellow`, `Blue`, `Magenta`, `Cyan`, `White` and `Black`.

6.18.2.3 Characters

```
05 Characters                Range
Char Set          »          see text
V Match Char      0          0..255
H Match Char      0          0..255
Fill Chr          46         0..255
Upper Case        N          Y/N
```

Char Set

```
06 Char Set
ISO          N »
IBM          Y »
DEC          N »
Misc.        N »
```

This menu contains all the character sets available with your Psion Teklogix computer. In this menu, the “Y” or “N” is used to visually guide you to the selected character set. For example, in the sample menu above, the “Y” next to IBM indicates that a character set has been chosen from this group.

To choose a character set:

- Position the cursor on the appropriate item – for example, ISO – and press <F1> to display the character set options.
- To activate a character set, press the <RIGHT> or <LEFT> arrow key to set it to "Y".



Important: ***If you choose a Chinese character set from the 'Misc.' menu and a character sent from the host cannot be displayed on the 7535 screen, a shaded box character is used as a substitute. Please review "Default font" on page 226.***

If you are using a Korean character set, a right arrow character is used as a substitute.

V Match Chr

This parameter enables visible field matching and defines the character that identifies visible field match data from the host. Field matching allows the host to pre-load data into an entry field that is compared with the user's input. The hand-held beeps if the entered data does not match. Visible field matching means that the data to be matched is displayed in the entry field.

Enter the decimal value for the ASCII character that will be used by the host to identify visible match field data. Enter 0 (zero) to disable this feature.



Note: *Another method of field matching is available directly through the TESS data stream.*

H Match Chr

This parameter enables hidden field matching and defines the character that identifies hidden field match data from the host. Field matching allows the host to pre-load data into an entry field that is compared with the user's input. The 7535 beeps if the entered data does not match. Hidden field matching means that the data to be matched is not displayed in the entry field.

Enter the decimal value for the ASCII character that will be used by the host to identify hidden match field data. Enter 0 (zero) to disable this feature.



Note: *Another method of field matching is available directly through the TESS data stream.*

Fill Chr

This parameter specifies the character that identifies empty entry fields. Enter the ASCII decimal equivalent of this character. The most commonly used characters are:

_	(underline)	Enter 95
.	(period)	Enter 46



Note: *7530s in some systems may use the "space" character with the host using reverse video attributes to mark entry fields.*

Upper Case

When this parameter is enabled (set to "Y"), lowercase input is converted to uppercase.

6.18.2.4 Tests

05= Tests		Range
AutoRep Fn	7	0..63
AutoRep T/O	5	0..255

AutoRep Fn

This parameter determines which function key is sent to the host in auto reply mode. The value represents the number of the function key – ***not*** the ASCII decimal equivalent. After sending this key, the unit locks and waits for the host to unlock the 7530. To disable "AutoRep Fn", set the "AutoRep T/O" parameter to zero.

AutoRep T/O

This parameter determines the time (in seconds) between the 7535 unlocking and the next transmission of the function key specified by the above parameter. A value of zero disables auto reply mode.

6.18.2.5 Features

05= Features		Range
Printer	Y	Y/N
Binary print	N	Y/N
Queuing	Y	Y/N
Lcl Process	Y »	see text
Send Mile	N	Y/N
Next X	N	Y/N
Kbd Locked	N	Y/N
Remap Passthru	N	Y/N
Disable Beep	N	Y/N
Serial	»	see text

Printer

This parameter enables and disables the pins in the serial port used for printers or other external devices.

Binary print

When this parameter is enabled (set to “Y”), the page displayed on the 7530 computer is spooled as is, except for trailing white-space removal. When disabled (set to “N”), each line of the page displayed on the hand-held is preceded by a linefeed (LF) and followed by a carriage return (CR).

Queuing

This parameter enables and disables queuing mode (see “Queuing Mode” on page 162). It also enables TESS procedures to be loaded into the 7530. This parameter should be enabled if local procedures and the ability to switch between hosts within a TESS session are required. Changes to this parameter take effect only after the 7530 is reset.

Lcl Process – Save on Reset

The menu item “Local Process” has a sub-menu attached to it – “Save on Reset”. When this parameter is enabled (set to “Y”), data stored in the 7530 is saved if the unit is reset. Local procedures are defined on page 161.

Send Mile

This parameter controls the sending of a milestone from the 7530 after a “hey_you” command. Consult the *Teklogix Screen Subsystem (TESS) User Manual* for more information on milestones.

Next X

This parameter enables and disables the next messages used in queuing mode.

Kbd Locked

This parameter allows you to lock (set to “Y”) or unlock (set to “N”) the keyboard for all alphanumeric input in TESS. When the keyboard is locked, the function keys, arrow keys and the <ENTER> key are still functional. The 7535 emits an error beep if a character is rejected because the keyboard is locked. Changes to this parameter take effect only after the unit is reset.

Remap Passthru

When this parameter is set to “Y”, passthru data is remapped from the host charset to the port charset. (Normally passthru data is sent as is to the port without any remapping.)

Disable Beep

Setting this parameter to “y” disables the beep generated by the ‘o’, ‘G’ and ‘#’ TESS commands. Keep in mind that Error and Scan beeps are ***not*** disabled.

Serial

06= Serial		Range
Serial Port	Any Available	see text
Serial Out	Y	Y/N
Serial In	N	Y/N
SI mode		see text
SI prefix	10	0..255
SI suffix	13	0..255
SI CRC	N	Y/N
SI Fkey	0	0..255
SO prefix	10	0..255
SO suffix	13	0..255
SO CRC	N	Y/N

Serial Port

TESS print commands control the transfer of data to and from the serial and printer ports on the 7530. At the 7530 computer, the value assigned at the 'Serial Port' parameter ranks which port the TESS print command will identify and use as the first to fourth port. The allowable options are: `Any Available`, `1st Serial`, `2nd Serial`, `3rd Serial`, `4th Serial` and `Disabled`.

Serial Out

This parameter enables serial port output fields.

Serial In

This parameter enables the serial port input fields. If enabled (set to "Y"), the TESS application has exclusive use of the serial port. Acceptance of data in a SI field is determined by the SI prefix and suffix.

SI mode

The possible values for this parameter are `field` (the default) and `command`. When the SI mode is set to `field`, data received through the serial port is displayed in the serial input fields. If you are using *serial-input fields*, make sure the "SI mode" parameter is set to `field`.

When "SI mode" is set to `command`, data received by the serial port is transmitted as Passthrough data to the host.



Note: *"Command" mode is supported by SDKs but* ***not*** *by emulations.*

SI prefix

This parameter determines the start-of-message character on serial input. Enter an ASCII numeric equivalent from 0 to 255 to represent the start character. A value of `0` (zero) indicates no prefix.

SI suffix

This parameter determines the end-of-message character on serial input. Enter an ASCII numeric equivalent from 0 to 255 to represent the end character. A value of `0` (zero) indicates no suffix.

SI CRC

This parameter enables or disables CRC validity check on serial input. When enabled (set to "Y"), a packet is rejected if the CRC is not valid.

Also, when this parameter is enabled (set to "Y"), each time a DLE (^P=0x10) character is encountered in the serial input, it is removed and the character following it will be replaced with its 1's complement.

SI Fkey

This parameter allows you to choose the function key you want appended to the serial input. For example, entering a value of "1" appends <F1> to serial input. A value of "0" (zero) disables this parameter; a suffix is not added.



Note: *Data is transmitted as soon as the function key has been appended.*

SO prefix

This parameter determines the start-of-message character on serial output. Enter an ASCII numeric equivalent from 0 to 255 to represent the start character. A value of "0" (zero) indicates no prefix.

SO suffix

This parameter determines the end-of-message character on serial output. Enter an ASCII numeric equivalent from 0 to 255 to represent the end character. A value of "0" (zero) indicates no suffix.

SO CRC

When this parameter is enabled (set to “Y”), a CRC16 value is appended to the serial output message.

Also, when this parameter is enabled (set to “Y”), for each control character in the serial output stream, a DLE is inserted to precede that character. The control character is replaced with its 1’s complement.

6.18.2.6 Scanner

05 Scanner		Range
Cont Nxt Fld	Y	Y/N
Append Enter	Y	Y/N
Append F0	Y	Y/N
Mixed AIAG	N	Y/N
Rjct if Alpha	N	Y/N
Beam Lockout	N	Y/N

Cont Nxt Fld

This parameter only applies to string entry data. When enabled (set to “Y”), this parameter allows bar codes that are longer than the field length to continue in the next field.

If “ContNxtField” is disabled (set to “N”), OFF data will flow into the next field.

Append Enter

When enabled (set to “Y”), “Append Enter” causes an <ENTER> code to be appended to the bar code. The <ENTER> code completes the entry of the bar code and moves the cursor to the next field.

Append F0

When enabled (set to “Y”), this parameter causes an <F0> code to be appended to the bar code. The <F0> code completes the entry of the bar code data in the field.

Mixed AIAG

When this parameter is enabled (set to “Y”), AIAG labels are always accepted and processed – even if mixed with keyboard input. The AIAG label can replace the partially entered keyboard data. If this parameter is disabled, AIAG labels are rejected if field entry is in progress.

Rjct if Alpha

When the cursor is in a numeric field and “Rjct if Alpha” is enabled (set to “Y”), bar codes containing alphabetic characters are rejected.

Beam Lockout

When enabled (set to “Y”), this parameter disallows scanner use when the current session is in “LOCK-H” mode.

6.18.2.7 Fields

05 Fields		Range
Field Order	Y	Y/N
Enter To F0	Y	Y/N
Enter On Arrow	Y	Y/N
Video	»	see text
All Fld Video	Y	Y/N
Default Font	16x30	see text
Entry Mode	field	see text
Open Fky Only	N	Y/N
Ign Bcode_fld	N	Y/N
Enh Edit Mode	N	Y/N
Valid Numerics	+-%*/.,$	see text

Field Order

This parameter determines the mode of cursor movement between fields. The *next* field can be defined by location on the screen or by the assignment of field numbers. When enabled (set to “Y”), the cursor moves according to field location. If disabled (set to “N”), the cursor moves according to the numeric order of the fields.

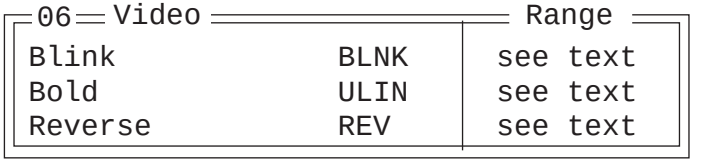
Enter To F0

The <ENTER> key normally enters data into a field and moves the cursor to the next field. However, some applications require that the <ENTER> key start a transmission from the 7535. When enabled (set to "Y"), this parameter causes the <ENTER> key to be interpreted as <F0> which starts a transmission.

Enter On Arr

When this parameter is enabled (set to "Y"), the arrow keys can be used to complete data entry into a field.

Video



Blink

The value assigned to this parameter specifies the actual video attributes to be assigned to fields created with the "Blink" TESS attribute – that is, "BLNK" (blink), "ULIN" (underline), "REV" (reverse) or "NONE" (normal).

Bold

The value assigned to this parameter specifies the actual video attributes to be assigned to fields created with the "Bold" TESS attribute – that is, "BLNK" (blink), "ULIN" (underline), "REV" (reverse) or "NONE" (normal).

Reverse

The value assigned to the "Reverse" parameter specifies the actual video attributes to be assigned to fields created with the "Reverse" TESS attribute – that is, "BLNK" (blink), "ULIN" (underline), "REV" (reverse) or "NONE" (normal).

All Fld Video

Usually, the video attributes apply only to the text that is in an entry field. When this parameter is enabled (set to "Y"), the entire field (including blanks) takes on the video attributes. Some systems use this option to identify empty entry fields with reverse video.

Default font

This parameter determines the default font that appears when the memory is reset.

- Use the <RIGHT> or <LEFT> arrow key to scroll through the options.

Entry Mode

"Entry Mode" parameters allow you to select a data entry mode. The modes are: `insert`, `replace`, `field` and `fcursor`. "TESS Edit Modes And Cursor Movement" on page 156 describes these modes in detail.

Open Fky Only

When this parameter is enabled (set to "Y"), the screen is open for function keys only, and the cursor is not positioned. When this parameter is disabled, the screen is open for data entry, and the cursor is placed in the first field (if it exists).

Ign Bcode_fld

When this parameter is enabled (set to "Y"), fields that were defined as "bar code only" accept data from the keyboard as well as the bar code reader. In effect, they behave as data entry fields.

Enh Edit Mode

This mode provides extended (enhanced) functions to users of Psion Teklogix' IBM 5250 terminal emulation. When this parameter is enabled (set to "Y"), the arrow keys move the cursor anywhere on the screen, ***unrestricted by fixed or entry fields***.

Certain 5250 emulation keys (e.g. Field Exit) that were originally available only when "Enh Edit Mode" was set to "Y" are now active at all times in TESS applications.

Refer to "IBM 5250 Emulation Keys" on page 155 for details about these keys.

Valid Numerics

This parameter is used to configure valid characters for numeric fields to a maximum of 39 characters. Since this field is numeric, numbers 0 through 9 do not need to be configured. The default values for this parameter are: + - % / . , $.

6.18.2.8 Anchor View

05 = Anchor		Range
x origin	1	1..24
y origin	1	1..80

When enabled (set to "Y"), this parameter locks the display at a defined location on the screen, preventing it from shifting when the cursor is moved. The "x origin" and "y origin" coordinates specify where the screen origin, the upper left corner of the screen, will be fixed.

x origin and y origin

The "x origin" parameter is used to specify the column to which the upper left corner of the screen will be anchored. The "y origin" parameter is used to specify the row coordinate to which the screen will be anchored.

6.18.2.9 Emulation

Note: *These parameters are only accessible when one of the following TESS 'Host Conn' options is selected: '2392/Telnet', '3274/Telnet' or '5250/Telnet'.*

2392/Telnet Emulation

05 = Emulation		Range
Send CR with Fkey	N	Y/N
Features	»	see text

Send CR with FKEY

A function key press generates a string of text to be sent back to the host. If this parameter is enabled, a carriage return is appended to the function key.

Features – 2392/Telnet

06 = Features		Range
Clear Entry Fields	N	Y/N
Passthru Printing	N	Y/N
AIAG Character	0	0-255
Barcode Character	0	0-255
Serial IO Character	0	0-255
Fixed Field Ovrhd	5	0-80
Enable Alarm	N	Y/N
Command Region Up	0	0-24
Command Region Down	0	0-24
Command Region Left	0	0-80
Command Region Right	0	0-80

Clear Entry Fields

When this parameter is set to 'Y', an empty entry field is created in place of an entry field filled with spaces.



Note: *This operation is only performed on screens received from the host. Data sent to the host remains unaffected.*

Passthru Printing

Setting this parameter to 'Y' allows the host to send data directly to the 7535 serial port. This option is most commonly used for printing.

AIAG Character

This parameter is used to enter a decimal representation of the ASCII character code of the AIAG character. A value of 0 (zero) disables this feature.

When a bar code data is scanned, the 7530 searches for AIAG fields on the current page that can accept the bar code data. The application program distinguishes an entry field as AIAG by preceding the field with this special mode character which indicates the existence of AIAG fields.

Barcode Character

Barcode-input-only fields are special entry fields that only accept input from a bar code reader. The application program identifies a barcode-input-only entry field by preceding the field with a special character.

This parameter is used to enter a decimal representation of the ASCII character code of the barcode-input-only character. A value of 0 (zero) disables this feature.

Serial IO Character

Serial I/O fields are special entry and fixed fields that accept input from and output to a serial port. The application program distinguishes this field as Serial I/O by preceding the field with a special character. If this character precedes a *fixed* field, the data will be sent to the 7530's serial port. If it precedes an *entry* field, the field accepts data from the 7530's serial port.

This parameter allows you to enter a decimal representation of the ASCII character code of this special character. A value of 0 (zero) disables this feature.

Fixed Field Ovrhd

This parameter defines the maximum number of characters allowed within two adjacent, fixed fields that can be sent as a single field. For example, if two fields are 4 characters apart and this parameter is set to 5, these fields are joined into a single field of data. The allowable range for this field is 0 to 80.

This feature affects fields with the "Normal" display attribute only.

Enable Alarm

If this parameter is set to 'Y', the 7530 emits a beep when the word ALARM appears on the application screen, in the location specified by the "Command Region" parameter.

Command Region Up & Down And Command Region Left & Right

The value assigned to the 'Command Region Up' and 'Command Region Down' parameters represent rows on the 7530 screen. The allowable values range from 0 to 24.

The value assigned to 'Command Region Left' and 'Command Region Right' parameters represent columns ont he 7530 screen. The allowable values range from 0 to 80.

These four numbers represent the row and column addresses of the upper left corner and the lower right corner of the command region. Currently, the only commands supported in the command region are ALARM and FONT:

3274/Telnet Emulation

05 = Emulation		Range
Fujitsu Host	N	Y/N
Intl EBCDIC	N	Y/N
Nulls in Fields	N	Y/N
IP for SysReq	N	Y/N
BRK for Attn	N	Y/N
LU Name Enabled	N	Y/N
LU Name		see text
Features	»	see text
FKEY0-7	»	see text
FKEY8-15	»	see text
FKEY16-23	»	see text
FKEY24-31	»	see text
FKEY32-39	»	see text

Fujitsu Host

If this parameter is set to 'Y', data is sent in Fujitsu format. Enabling 'Fujitsu Host' causes the standard IBM formatting codes (for start of field, setting buffers, etc.) to be replaced by the codes used by Fujitsu host computers.

Intl EBCDIC

If this parameter is enabled (set to 'Y'), the 'international' EBCDIC character set is used, swapping the positions of the ! and] characters.

Nulls in Fields

Setting this parameter to 'Y' allows 'null' characters – e.g., hyphens (-) or periods (.) – to fill in empty entry fields.

IP for SysReq

When the system request key is pressed, a Telnet "Interrupt Process" command is generated. The "Interrupt Process" command is sent to the host in place of the standard mechanism used to send the system request key press to a host using Telnet.

BRK for Attn

When the attention key is pressed, a Telnet “Break” command is generated. This command is sent to the host in place of the standard mechanism used to send the attention key press to a host using Telnet.

LU Name Enabled

If enabled (set to ‘Y’), this parameter allows the 7530 to negotiate a specific device name for itself.

LU Name

The value assigned in this field is used when the “LU Name Enabled” parameter (see above) is set to ‘Y’. The current terminal number is appended to the name to generate a unique device name (for example, LUA00001).

Features – 3274/Telnet

06 = Features		Range
Clear Entry Fields	N	Y/N
Passthru Printing	N	Y/N
AIAG Character	0	0-255
Barcode Character	0	0-255
Serial IO Character	0	0-255
Fixed Field Ovrhd	5	0-80
Enable Alarm	N	Y/N
Command Region Up	0	0-24
Command Region Down	0	0-24
Command Region Left	0	0-80
Command Region Right	0	0-80

These parameters are identical to those described for 2392/Telnet. Refer to "Features – 2392/Telnet" beginning on page 228.

FKEY0-7, FKEY8-15, FKEY16-23, FKEY24-31 And FKEY32-39

```
06 = FKEY0-7
FKEY0     ENTER
FKEY1     F1
FKEY2     F2
FKEY3     F3
FKEY4     F4
FKEY5     F5
FKEY6     F6
FKEY7     F7
```

The sub-menus attached to these parameters allow you to map the 7530 function keys.

5250/Telnet Emulation

```
05 = Emulation                                  Range
WEC                    Advisory                 see text
Remap Underline to     None                     see text
Intl EBCDIC            N                        Y/N
Nulls in Fields        Y                        Y/N
Term Type              IBM-5251-11              see text
Virtual Dev Enable     N                        Y/N
Virtual Dev Prefix                              see text
Features               »                        see text
FKEY0-7                »                        see text
FKEY8-15               »                        see text
FKEY16-23              »                        see text
FKEY24-31              »                        see text
FKEY32-39              »                        see text
```

WEC (Write Error Code)

This parameter determines the type of WEC used. If set to “advisory”, a TESS advisory message is generated when the host sends a WEC command to the 7530. Otherwise, if set to “screen text”, the 7530 locks the keyboard and displays the error message contained in the WEC command on the screen at the line specified by the host. In this case, the 7530 must be unlocked manually using the function key mapped to RESET.

Remap Underline To

This parameter allows you to remap the underline cursor to: `blink`, `bold` or `reverse`.

Intl EBCDIC

If this parameter is enabled (set to 'Y'), the 'international' EBCDIC character set is used, swapping the positions of the ! and] characters.

Nulls In Fields

Setting this parameter to 'Y' allows 'null' characters – e.g., hyphens (-) or periods (.) – to fill in empty entry fields.

Term Type

The value assigned for this parameter – IBM-5555-001 or IBM-5251-11 – indicates the type of terminal to report during the Telnet negotiations. It determines how the AS/400 host treats the terminal. IBM-5251-11 is a standard 5250 terminal. IBM-5555-001 is a Korean language terminal.

Virtual Dev Enabled

If enabled (set to 'Y'), this parameter allows the 7530 to negotiate a specific device name for itself.

Virtual Dev Prefix

The prefix assigned in this field is used when the "Virtual Dev Enabled" parameter (see above) is set to 'Y'. The current terminal number is appended to the prefix to generate a unique device name. You can assign up to 10 upper-case alphanumeric characters in this field.

Features – 5250/Telnet

06 = Features		Range
Clear Entry Fields	N	Y/N
Passthru Printing	N	Y/N
AIAG Character	0	0-255
Barcode Character	0	0-255
Serial IO Character	0	0-255
Fixed Field Ovrhd	5	0-80
Enable Alarm	N	Y/N
Command Region Up	0	0-24
Command Region Down	0	0-24
Command Region Left	0	0-80
Command Region Right	0	0-80

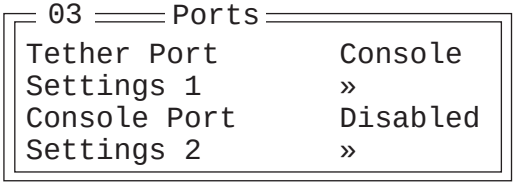
These parameters are identical to those described for 2392/Telnet. Refer to "Features – 2392/Telnet" beginning on page 228.

FKEY0-7, FKEY8-15, FKEY16-23, FKEY24-31 And FKEY32-39

06 = FKEY0-7	
FKEY0	ENTER
FKEY1	F1
FKEY2	F2
FKEY3	F3
FKEY4	F4
FKEY5	F5
FKEY6	F6
FKEY7	F7

The sub-menus attached to these parameters allow you to map the 7535 function keys.

6.19 Ports– Tether And Console



6.19.1 Tether And Console Port Peripheral Options

The “Tether Port” and “Console Port” options allow you to enable, disable and specify the accessories attached to these ports. Both the Tether Port and the Console Port have the same options. These are: `Disabled`, `Serial`, `Console`, `Printer` and `Scan-See`.

To scroll through the options for each port:

- Press the <RIGHT> or <LEFT> arrow key.

These ports operate differently depending on the accessories selected.

- Disabled – indicates that the serial port is not being used.
- Serial – standard serial port.
- Console – used to connect another PC to the 7535. A communication program is required so that communication can proceed between the 7535 and the PC.
- Printer – all TESS print operations are directed to the port. All ANSI media copy operations to the “primary port” are directed to this port.
- Scan-See – TESS and ANSI accepts input from the Scan-See through the Tether or Console port.

6.19.2 Tether And Console Port Parameter Settings

The parameters for the “Tether Port” and “Console Port” are identical.

04 Settings		Range
Character Set »		see text
Baud	9600	see text for range of baud rates
Data Bits	8	6..8
Parity	none	none odd even mark space
Stop Bits	1	1, 1.5, 2
Flow Ctrl	None	None Software Hardware Both
Buffer	512	1..2048
Retries	3	1..100
Input Tmo	2	1..100
Output Tmo	5	1..100
Test	Y	Y/N

Character Set

These menus define the character set for the 7530 port.



Important: ***When a character sent from the host cannot be displayed, a right arrow character is used as a substitute.***

Char Set	
ISO	N »
IBM	Y »
DEC	N »
Misc.	N »

This menu contains all the character sets available with your Psion Teklogix computer. In this menu, the “Y” or “N” are used to visually guide you to the selected character set. For example, in the sample menu above, the “Y” next to IBM indicates that a character set has been chosen from this group.

Choosing A Character Set

To choose a character set:

- Position the cursor on the appropriate item – for example, ISO – and press <F1> to display the character set options.
- To activate a character set, press the <RIGHT> or <LEFT> arrow key to set it to "Y".



Important: ***If you choose a Chinese character set from the 'Misc.' menu and a character sent from the host cannot be displayed on the screen, a shaded box character is used as a substitute.***

If you are using a Korean character set, a right arrow character is used as a substitute.

Baud

This parameter determines the bit rate of the port. Allowable values include: `110` `300` `600` `1200` `2400` `4800` `9600` `14.4`kbps `19.2`kbps `38.4`kbps `56.0`kbps `57.6`kbps `115.2`kbps `128.0`kbps or `256.0`kbps.

Data Bits

This parameter determines the number of bits for the data going through this port. Possible values are: `6, 7, 8`.

Parity

This parameter determines the type of parity checking used on the data going through the port. The options are: `none`, `odd`, `even`, `mark` and `space`.

Stop Bits

This parameter specifies the number of stop bits – `1, 1.5, 2` – used for asynchronous communication.

Flow Control

This parameter selects the type of flow control used in your hand-held computer. The 7535 can perform `Software` or `Hardware` handshaking, or you can choose `Both` to enable both of these options.

The function of each mode is as follows:

Enable: Used to input and output data.

Supports XON/XOFF or no handshaking.

Print: Used to output data only. All input characters ***except*** XON and XOFF are ignored.
Supports XON/XOFF or no handshaking.

Output: Used to output data only. All input characters are ignored.
Supports no handshaking.



Note: *To enable the input and/or output, 'serial in' and/or 'serial out' must be enabled in the TESS menu.*

Buffer

The value assigned to this parameter determines the size of the serial buffer used by the application for both input and output. The buffer controls the amount of data the application can send *to* or receive *from* a serial device.

Retries

This parameter determines the number of times the 7530 attempts to transmit a byte from the serial port. If the count specified in this parameter is exceeded, the transmission fails.

Input Tmo

This parameter sets the time in tenths of a second that the 7530 waits before passing received data to the TESS or ANSI tasks.

Output Tmo

The value assigned at this parameter determines the maximum number of milliseconds that the application will wait for a 'write' sent to the port to succeed before it is aborted. The 'write' may be one or several bytes in length.

Test

When this parameter is enabled (set to "Y"), data is output through the serial port to make certain that it is operating appropriately.

6.19.3 Tether And Console Port Scan-See Parameters

When ‘Scan-See’ is specified as the peripheral for either the Tether or the Console port, the parameters listed under the “Scan-See” sub-menu are used to tailor the operation of this type of scanner. The other parameters listed in this menu – “Character Set”, “Baud” and so on – are identical to those described beginning on page 235.

```
05 Scan See
Character Set »
Baud          9600
Data Bits     8
Parity        none
Stop Bits     1
Retries       3
Input Tmo     2
Scan-See      »
```

6.19.3.1 Scan-See Sub-Menu — Mapping The Viewport

```
05 Scan-See                          Range
Anchor Line        1          0...1
Anchor Column      19         0...19
Follow Cursor      Y          Y/N
Line Offset        0          -25...25
Column Offset      0          -80...80
Wraparound         N          Y/N
Panning            Y          Y/N
Line Scrolling     N          Y/N
Brightness         3          0 to 5
Arrows             Bright     Bright Horz Vert
Version            2          0...2
XON/XOFF           Y          Y/N
```

The Scan-See display is mapped to a specific area on the 7535 screen – called the *viewport* – and is continuously updated to reflect that portion of the screen. The Scan-See viewport is defined as follows:

Anchor Line/Anchor Column

A location on the Scan-See display – the *anchor* – is chosen as a reference point.

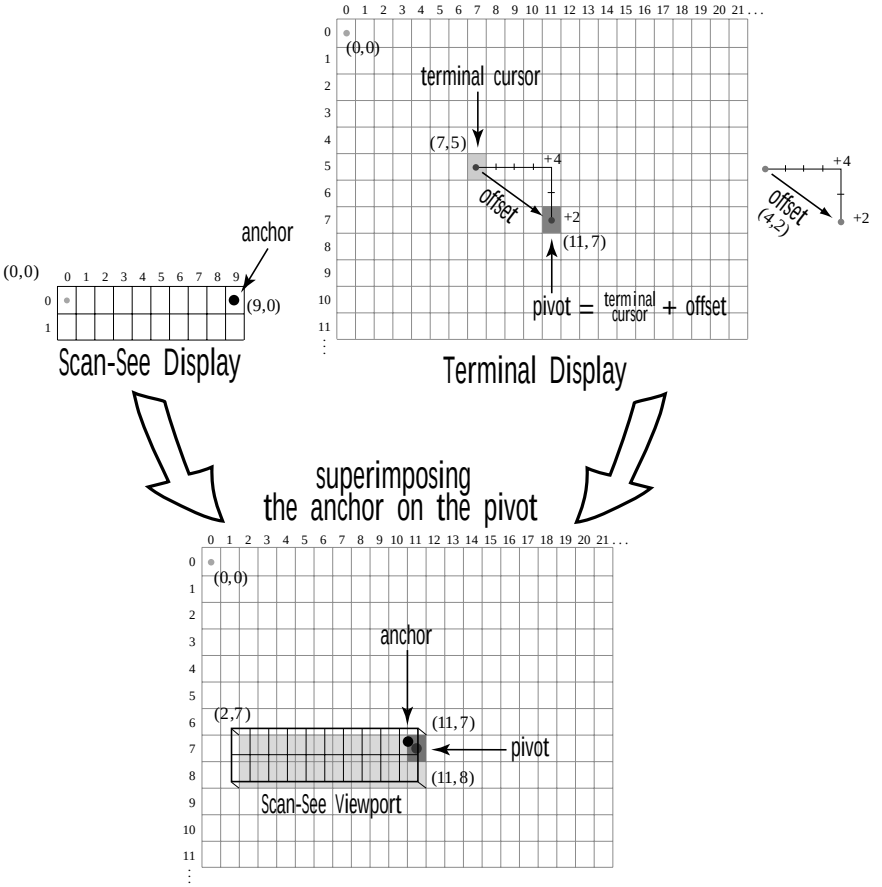
Line Offset/Column Offset

A predefined displacement – the *offset* – is added to the location of the 7535 cursor to create a point – the *pivot*. This pivot is mapped to the *anchor*, and whatever is displayed in its vicinity is also displayed on the Scan-See.

For example:

- the *anchor* is chosen as **(9,0)** whereas "**9**" is the column and "**0**" is the line (on the Scan-See display)
- the *offset* is chosen as **(4,2)**
- the cursor on the 7535 is currently located at **(7,5)**
- the *pivot* would thus be located at **(7+4, 5+2)** or **(11,7)**
- and so the area displayed on the Scan-See will be: **(11–9,7–0)** to **(11–9+9,7–0+1)** or **(2,7)** to **(11,8).** [1]

[1] These computations assume that "Wraparound" (described on page 242) is disabled (set to "N") and that "Follow Cursor" (described on page 242) is enabled (set to "Y").



Note: *To enter negative values, press the "-" (minus) key and then, type the number you want to use.*

The <LEFT> arrow key can also be used to decrement the value assigned to the parameter. Each time the <LEFT> arrow is pressed, the number is decremented by one. For example, to enter a value of "–5", start from zero and press the left arrow key five times.

Follow Cursor

When the "Follow Cursor" parameter is disabled (set to "N"), the cursor is always assumed to be located at the origin. Using the previous example:

- the area displayed will be **(4–9,2–0)** to **(4–9+9, 2–0+1)**, or, after clipping values that are negative or higher than 80: **(0,2)** to **(4,3)**.

Wraparound

When "Wraparound" is enabled (set to "Y"), the Scan-See display is treated as a one-line by 20 column display, rather than 2 lines by 10 columns.

Panning

If "Panning" is disabled (set to "N"), the Scan-See viewport does not move when the cursor moves one position to the right, and the *pivot* is still inside the Scan-See display. However, the Scan-See display is updated to reflect the changes within that viewport. If the *pivot* goes outside the viewport, or if the 7535 display changes without the cursor being moved, the viewport is re-synchronized to coincide the *pivot* with the *anchor.*

Line Scrolling

When "Line Scrolling" is enabled (set to "Y"), the Scan-See display is treated as two separate one line by 10 column displays. The top line always displays the previous value of the bottom line. In an application where the cursor skips from one entry field to another, the field that the cursor just entered is displayed on the top line, and the next field is displayed at the bottom.



Note: *When this feature is enabled (set to "Y"), the "Panning" option should be disabled to prevent updates to both lines after every keystroke*

Brightness

The "Brightness" parameter controls the backlight brightness of the display. It only has an effect on Model 7000 Scan-Sees – scanners equipped with LED (light emitting diode) displays.

Arrows

The "Arrows" parameter assigns one of three possible functions to the two arrow keys on the Scan-See keyboard:

Value	Function
"Bright"	Arrow keys control Scan-See display brightness
"Horiz"	Arrow keys control "Column Offset"
"Vert"	Arrow keys control "Line Offset"

Table 6.6 "Arrow" Parameter Options



Note: *For "Horiz" and "Vert," changing the offset will take affect only after the 7535 display has been updated.*

Version

Scan-See units with serial numbers that read 1594120224 or higher contain firmware that implements a different communication protocol with the 7535 than older units. The "Version" numbers represent the following unit versions:

Value	Scan-See Version
0	• First LED version – up to serial number 1594080275; these are encased in grey plastic.
1	• Model 7000 LED units – versions after the serial number above; these are also encased in grey plastic.
2	• Metrologic 7000M LCD units; these are encased in grey plastic. • Psion Teklogix 7000M LCD units; these are encased in black plastic.

Table 6.7 Scan-See Versions



Note: *To interface the 7535 to the Scan-See units with older firmware (serial number lower than 1594120224), set "Parity = space"; all other parameters are identical to the newer firmware.*

XON/XOFF



Important: ***IF YOU ARE USING TRANSCEIVERS WITH YOUR SCAN-SEE, this parameter must be set to "Y".***

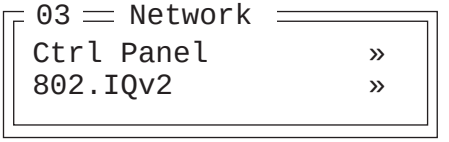
When this parameter is set to "Y", the XON and XOFF characters are *not* passed to the TESS or ANSI tasks. A received XOFF character stops the serial port from transmitting. A received XON character starts the serial port transmissions again.

6.19.3.2 Scan-See Keyboard Mapping

- **Digits (0-9)** are passed verbatim
- The **CLR** key forces a sign-on message and display refresh. This only occurs when CLR is pressed and the CLR key on the display is pressed, then released.
- The three **F-keys** are mapped to F1, F2 and F3, respectively.
- The **ENT** key is mapped to the carriage-return ('\r') character.
- The two arrow keys are handled locally, and control the brightness, and the line and column offsets, as described on page 242.
- Bar-code data is stripped off any identifying headers (symbology, etc.) and passed verbatim.

The Scan-See is capable of displaying only a subset of the default PC-8 ASCII character set. Any characters that cannot be displayed are currently translated to '.'.

6.20 Network



6.20.1 Network Ctrl Panel Settings

This option displays a Windows CE screen where you can set up your radio, launch an existing network connection or create a new connection. The radio icon (NETWLAN1in the sample screen) in this window is used to configure the radio installed in the 7530

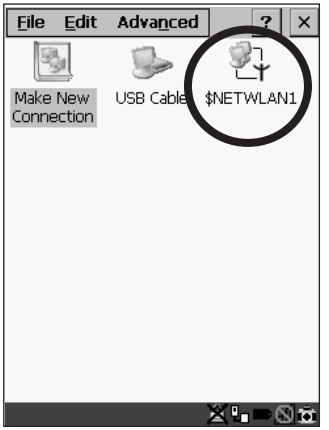


Figure 6.11 Network Settings

Important: ***Follow the steps outlined in "Configuring An IEEE 802.11 Radio Installed In The 7530" on page 18 for details about configuring your radio.***

6.20.2 802.IQ v2

Important: ***For setup information about 802.IQ v2, refer to the "9400 and 9450 Network Controllers User Manual" and/or the "9150 Wireless Gateway User Manual".***

04 = 802.IQ v2		Range
Port	8888	see text
More Parameters	»	see text

Port

"Port" specifies the UDP port used by 802IQ v2. The default value is 8888. Keep in mind that the value assigned here must match the value set at the network controller.



Note: *When using 802.IQ v2, make certain that the* 7530 *"Net Mask" matches the network controller net mask.*

More Parameters



Important: ***The 802.IQ radio items listed in this menu are only available to Psion Teklogix personnel.***

05 = 802.IQ v2 Parameters		Range
Auto Radio Addr	Y	Y/N
Radio Address	0	1 to 3840
Initial RTT	100	500...5000

Auto Radio Addr

If this parameter is set to "Y", the 7530 requests an automatically assigned radio address.



Note: *If 'Auto Radio Addr' is enabled (set to "Y"), any value assigned to the 'Radio Address' parameter is ignored.*

Radio Address



Important: ***"Radio Address" only takes effect when "Cellular" is enabled (set to "Y").***

The value entered in the "Radio address" parameter is used to identify the 7535 hand-held over the radio link. A unique value from `1` to `3840` must be assigned for each 7530.

Initial RTT (Round Trip Time)

Round trip time is the elapsed time between a *7530 hand-held computer transmission* and an *access point acknowledgement*. Each 7530 continuously adjusts the acceptable round trip time, calculating the average elapsed time over a number of transmissions. If an acknowledgement takes longer to receive than the average round trip time calculated, the 7530 will resend the transmission.

Because 7530s cannot calculate an *average* round trip time without a number of transmissions, a starting point or "Initial Round Trip Time" is required. The 7530 uses the time assigned to the "Initial RTT" parameter as a starting value for round trip calculations. Once the 7530 begins transmitting and receiving data, this value will be adjusted to reflect the actual average round trip time between transmissions and acknowledgements.

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7.1 External Bar Code Readers

7.1.1 PowerScan™ Standard, LR and XLR Bar Code Scanners



Note: *Refer to "SE1200 High Performance & Long Range Specs" on page 281 for detailed specifications.*

The 7530 supports Psion Teklogix' PowerScan™ industrial bar code scanner with standard, long range and extra long range options.

To connect this scanner to the 7530, attach the device to the tether port at the upper-right side of the 7530. Before using the bar code reader, you may need to change some parameters. For details, review "Scanner Properties Setup" on page 118 and "Bar Codes" on page 121.

7.1.2 Entering Data With The Bar Code Reader



Note: *For helpful scanning tips, refer to "Scanning Techniques" on page 49.*

When a label is scanned successfully, the 7530 will beep if configured appropriately and the scan LED will flash. Occasionally, the bar code labels are poorly printed or damaged and cannot be read properly. In this case, use the keyboard to enter data from the label.

7.2 The 7530 Battery



Note: *Battery specifications are detailed in"Lithium-Ion Battery Pack" on page 288.*

7530 Lithium-Ion batteries operate for a minimum of ten hours[1] after a charge. These batteries do not require conditioning. Typical battery life is 300 cycles or 3 years average use. A full charge is completed in 4 hours with a typical charge time of 1.5 hours.

[1] Times are approximate and may vary depending on operating conditions.

7.2.1 Lithium-Ion Battery Safety Precautions



Important: ***It is critical that this safety information be reviewed and that all warnings be strictly followed.***



Warning: ***BATTERIES ARE CONSIDERED HAZARDOUS WASTE and must be returned to Psion Teklogix for proper disposal. All used batteries must be forwarded to one of the following offices:***

Psion Teklogix Inc.
2100 Meadowvale Blvd.
Mississauga, Ontario
Canada
L5N 7J9

Psion Teklogix Corp.
1810 Airport Exchange Blvd.
Suite 500
Erlanger, Kentucky
USA 41018

Psion Teklogix S.A.
La Duranne; 135 Rue Rene Descartes; BP 421000
13591 Aix-En-Provence
Cedex 3; France



Warning: ***TO PREVENT the battery from leaking acid, generating heat or exploding, adhere to precautions listed below.***

- The battery incorporates built-in safety devices. To ensure their proper function, do not disassemble or alter any parts of the battery.
- Do not short-circuit the battery by directly connecting any of the exposed terminals with metal objects such as wire. Do not transport or store the battery together with metal objects such as necklaces, hair pins, etc.
- Do not dispose of batteries in fire.
- Do not use or leave the battery near a heat source such as a fire or heater.
- Do not immerse the battery in water.
- When charging, use the battery charger specifically designed for the battery.
- Do not pierce, strike, throw or step on the battery.
- Do not directly solder the battery.
- Do not connect the battery to an electrical outlet, vehicle cigarette lighter, etc.
- Do not put battery into a microwave oven or pressurized container.
- Do not use the battery in combination with primary batteries (such as dry-cell batteries) or batteries of different capacities or brands.
- Immediately remove the battery from the device or battery charger and stop use if the battery gives off an odor, generates heat, becomes discoloured or deformed, or in any way appears abnormal during use.

- Do not continue charging the battery if it does not recharge within the specified charge time.
- The battery may burst or ignite if the battery leaks. Always ensure that it is away from any exposed flames.
- If leaking electrolyte sprays into your eyes, rinse them with clean running water, and immediately seek medical attention.
- Do not store the battery in extremely high temperatures (e.g., a vehicle, strong direct sunlight, etc.). This may cause the battery to overheat or ignite, and it may also reduce the performance and service life of the battery.
- Do not use in areas where static electricity is greater than what the manufacturer guarantees.
- Keep batteries out of reach of children.



7.3 Important Charger Safety Instructions

- **SAVE THESE INSTRUCTIONS** – This manual contains important safety and operating instructions for battery charger s.
- Before using the battery charger, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
- The mains power cord shall comply with national safety regulations of the country where the equipment is to be sold.
- Use of an attachment not recommended or sold by the battery charger manufacturer may result in fire, electric shock, or personal injury.
- To reduce risk of damage to the electric plug and cord when unplugging the charger, pull the plug rather than the cord.
- Make sure the cord is positioned so that it is not stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not operate the charger with a damaged cord or plug.
  Replace immediately.
- Do not operate the charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; it should be inspected by qualified service personnel.
- Do not disassemble the charger; it should be repaired by qualified service personnel. Incorrect reassembly may result in electric shock or fire.
- To reduce risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.
- An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in fire or electric shock.
  If an extension cord must be used, make sure:
  - The plug pins on the extension cord are the same number, size, and shape as those on the charger.

  - The extension cord is properly wired and in good electrical condition and that the wire size is larger than 16 AWG.
- Do not expose the charger to rain or snow.
- Do not place batteries in the charger if they are cold from extended exposure to a freezer or outside temperatures below 10°C (50°F). Allow them to warm up to room temperature for at least two hours.
- Do not use the charger if, after an overnight charge, any of the batteries feel warmer than the charger housing. The charger should be inspected by qualified service personnel.
- Do not use the charger if any of the batteries or the charger get more than luke-warm. The equipment should be inspected by qualified personnel.

7.4 Chargers



Note: *Initially, new batteries that have been fully charged may indicate less than 100% charge. No special conditioning is required. The full capacity of the battery will reach 100% after 5 cycles through the charger.*

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.



Important: ***To preserve battery integrity, the charger will proceed with a charge only when the battery temperature falls between 0˚ C and 39˚ C (32˚ F to 102˚ F). If the battery is too hot or cold, the battery status LED flashes yellow and the charge is suspended.***

7.5 Gang Charger

The gang charger is designed to charge up to six 7530 Lithium-Ion batteries at one time. Your charger is shipped with the appropriate IEC mains power cord. If the supplied power cord is incorrect for your country, contact Psion Teklogix for assistance (see *Appendix A: Support Services And Worldwide Offices*).



Note: *The gang charger is shipped with a user manual. It is critical that this manual be reviewed for additional information and updates.*

7.5.1 Installation

The gang charger can be wall mounted using the wall mount kit – PN 1010039 – or it can be operated on a flat surface. Install the charger in an area that is free from excessive dirt, dust and contaminants. The ambient temperature must be in the range 0˚ C to 39˚ C (32˚ F to 102˚ F). The charger will not charge batteries outside of this temperature range. For maximum performance, it is recommended that the charger be operated at room temperature – a temperature range between 18˚ C to 25˚ C (64˚ F to 77˚ F).

The charger can consume up to 2A @ 120VAC or 1A @ 240VAC. Check to ensure the mains circuit supplying the charger is adequate for this loading (especially if several chargers are being powered from the same circuit).

After unpacking the unit:

- Visually check the charger for damage.
- Install the IEC power cord and apply power.

A green indicator in the lower-right lights to indicate power is present. All charge indicators flash momentarily at powerup to indicate that the charger is ready for operation.

If you choose to wall mount the charger, follow the instructions packaged with the mounting bracket kit. Be sure to locate the charger in an area where there is no risk of injury to persons walking in the vicinity.

7.5.2 Operator Controls

The gang charger does not have operator controls or a power switch.

7.5.3 Charge Indicators

Each battery charge slot is equipped with a tri-coloured LED to indicate the charge status of the battery. When 7535 batteries are inserted in the charger, the colour and behaviour of the LEDs associated with the charge wells in use indicate the status of the charge.

LED Behaviour	Icon	Charge Status
Off		No battery detected in the slot.
Solid green		Battery is fully charged.
Flashing green		Battery is charged to 75% capacity.
Solid yellow		Charge in progress.
Flashing yellow		Battery temperature out of charge range between 0˚ C to 39˚ C (32˚ F to 102˚ F). This icon indicates that the charger is waiting to charge. Charging is attempted every five minutes until the battery is within the appropriate temperature range.
Solid red		Battery rejected (at insertion) or unable to complete charge on battery
Flashing red		Charging circuit problem. Refer to “Troubleshooting” on page 257.

Table 7.1 Gang Charger Indicators

7.5.4 Charging Batteries

- Install the battery with the battery contacts facing the charger. Slide the battery between the guide rails until it lightly latches in place.

The LED directly below the slot in which a battery is inserted lights up immediately. A solid yellow LED indicates that the battery is being charged. If the battery temperature is outside 0˚ C to 39˚ C (32˚ F to 102˚ F), the LED flashes yellow until the temperature is acceptable. A fully discharged battery will normally take between 1.5 and 4 hours to charge. When the battery charge reaches 75%, the indicator flashes green. At full capacity, it turns solid green.

When the battery is fully charged, the charger stops applying power; the battery cannot be overcharged if left in the charger slot. The 75% charge indicator is handy if you need a quick recharge – it often occurs after less than an hour.

7.5.5 Troubleshooting

7.5.5.1 Excessive Charge Duration

The charger is equipped with a recalibration function – a function that fully discharges and then fully recharges the battery. This process is necessary to recalibrate the battery capacity gauge internal to the battery. The charger attempts recalibration when:

- the battery capacity is at less than 30%, and
- the battery has undergone more than 40 partial charge cycles since the last full discharge.

A complete battery discharge takes between 1.5 and 4 hours to complete. When in discharge mode, the LED indicator flashes yellow. The recalibration function extends the charge time by up to 2 hours.

7.5.5.2 Indicator Flashing Red

If the indicator flashes red:

- Remove all batteries and disconnect the mains power cable.
- Wait at least 20 seconds, and then plug the cable in again.

If any of the charge slot LEDs continue to flash red, the charger is defective and requires service. If all indicators are flashing red, there is a power supply problem and the charger requires service.

7.5.5.3 Power LED Does Not Light Up

- Remove all batteries, and unplug the charger.
- Connect another device to the mains outlet to ensure there is power.
- Remove the IEC mains power cable from the charger, and check it for damage.
- Reconnect the mains cable in the charger and mains outlet.

If the power LED still does not light up:

- Unplug the mains cable, and check the fuse at the rear of the charger.

If the fuse appears to be intact, the charger requires service.

7.5.5.4 Indicator Does Not Light When Battery Installed

- Remove the battery, and clean the contacts on the battery and the charge slot.
- Reinstall the battery, and check that it is fully seated in the slot.
- Inspect the charge slot contacts for damage (are they bent, flattened, twisted or broken).
- Try inserting a battery that you know to be working in the charger slot.
- Reconnect the mains power cable, and check that the slot indicator flashes at powerup.

7.6 Combo Charger

The 7535 combo charger is a desktop charger designed to charge the 7535 internal battery along with a spare battery pack. The combo charger provides sufficient power to operate and fast charge the 7530 internal battery, while recharging the spare battery pack.



Note: *The combo charger is shipped with a user manual. It is critical that this manual be reviewed for additional information and updates.*

7.6.1 Installation

Keep the combo charger away from excessive dirt, dust and contaminants. The combo charger will not charge batteries outside an ambient temperature range of 0˚ C to 39˚ C (32˚ F to 102˚ F). It is recommended that this charger be operated at room temperature – between 18˚ C and 25˚ C (64˚ F to 77˚ F) for maximum performance.

After unpacking the unit:

- Visually inspect the charger for possible damage.
- Install the IEC power cord and apply power.

A green LED in the lower-right corner of the front panel lights to indicate that power is present. The charge LED flashes momentarily at powerup. The charger is now ready for operation.

7.6.2 Operator Controls

The combo charger has no operator controls or power switch.

7.6.3 Using the Combo Charger With The 7530

- Gently slide the 7535 into the cradle portion of the combo charger until lightly latched. An icon is displayed indicating that the 7530 is properly installed in the combo charger –  .

The battery charge LED on the 7530 lights up indicating that the unit has external power and battery charging may begin. It is safe to leave the 7530 in the combo charger cradle while it is not in use – the battery will not be overcharged.

7.6.4 Charging The Spare Battery

- Install the battery with the latch facing towards the rear of the charger – slide it between the guide rails until it lightly latches in place.

The LED for the slot lights up immediately. A solid yellow LED indicates the battery is being charged. A flashing yellow LED indicates that the battery temperature is outside the acceptable charge range – between 0˚ C and 39˚ C (32˚ F to 102˚ F).

A fully discharged battery normally takes between 1.5 and 4 hours to charge. When the battery capacity reaches 75%, the LED flashes green. When the battery is at full capacity, the indicator turns solid green.

The combo charger stops applying power to the battery when it is fully charged – there is no risk of overcharge if the battery remains in the charge slot. The 75% charge indicator is handy if you need a quick recharge – a quick charge often takes less than one hour.

7.6.5 Charge Indicators

The spare battery charge slot has an associated tri-colour LED indicator on the lower-right area of the front panel.

LED Behaviour	Charge Status
Off	No battery detected in the slot.
Solid green	Battery is fully charged.
Flashing green	Battery is charged to 75% capacity.
Solid yellow	Charge in progress.
Flashing yellow	Battery temperature outside the charge range of between 0˚ C to 39˚ C (32˚ F to 102˚ F). Charging is attempted every five minutes until the battery is within the appropriate temperature range.
Solid red	Battery rejected (at insertion) or unable to complete charge on battery.
Flashing red	Charging circuit problem. Refer to “Troubleshooting” on page 257 for details.

Table 7.2 Combo Charger Indicators

The combo charger supplies DC power to enable the 7535 internal fast charger. Charge status is displayed on the 7535 charge LED – the lower-right LED. Refer to “Charge LED” on page 43 for details.

Normally, it takes from 1.5 to 4.0 hours to fully charge the 7530 internal battery.



Note: *Battery charging continues whether the 7530 is switched on or off.*

7.6.6 Troubleshooting

The gang charger troubleshooting section also applies to the combo charger. Refer to “Troubleshooting” on page 257, for helpful tips.

7.7 Combo Dock

The combo dock is identical to the combo charger with one exception – the combo dock is equipped with a 10/100 BaseT Ethernet interface. The charging information in “Combo Charger” beginning on page 258 also applies to the combo dock.

7.7.1 Installation

Refer to the “Installation” guidelines for the combo charger beginning on page 258.

- Attach a CAT5 RJ45 network patch cable (shipped with the combo dock) between your network and the RJ45 jack on the rear of the dock.

A green LED is illuminated next to the RJ45 connector when a valid network link is established.

A user application needs to be loaded onto each 7535 that utilizes the combo dock for communication. With the network connected and this application loaded, the combo dock is ready for use.

7.7.2 Using The Combo Dock

- Gently slide the 7530 into the cradle portion of the combo dock until lightly latched. The 7530 detects combo dock and displays the appropriate icon –  .

The battery charge LED (lower-right LED) on the 7530 lights up to show it has external power and may start charging the battery.

Interaction with the 7530 while in the combo dock is a function of the user application software used to communicate with the host network.

7.7.3 Network Access

The combo dock includes a dedicated USB to Ethernet converter. This USB converter appears as a USB slave to the 7530 USB host controller. The 7530 automatically detects insertion into a combo dock and loads the appropriate drivers to communicate with the USB/Ethernet converter.

See “Network Addressing” on page 263 for details about network addressing issues with the combo dock.

7.7.4 Troubleshooting

Troubleshooting issues for the combo dock are identical to those of the quad dock. Refer to “Troubleshooting” on page 264 for helpful tips.

7.8 Quad Dock



Note: *The quad dock is shipped with a user manual. It is critical that this manual be reviewed for additional information and updates.*

The Quad Dock permits each of four docked 7530 hand-helds to communicate with a 10/100 BaseT Ethernet network at greater than 2Mbps. It also provides sufficient power to operate and fast charge the batteries in the 7530s.

7.8.1 Installation

The quad dock should be located away from excessive dirt, dust and contaminants. The ambient temperature must fall between 0˚ C to 39 ˚C (32˚ F to 102˚ F). The 7535 internal charger will not charge batteries outside of this temperature range. For maximum performance, it is recommended that the quad dock be operated at room temperature – from 18˚ C to 25˚ C (64˚ F to 77˚ F).

The quad dock can consume up to 3A @ 120VAC or 1.5A @ 240VAC. Ensure that the mains circuit supplying the unit is adequate, especially if several docks are being powered from the same circuit.

After unpacking the unit:

- Visually inspect the unit for any damage.
- Install the IEC power cord and apply power.

A green indicator in the lower-right corner of the front panel lights up to indicate that power is present.

- Attach a CAT5 RJ45 network patch cable (supplied) between your network and the RJ45 jack on the rear of the dock.

A green LED is illuminated next to the RJ45 connector when a valid network link is established.

A user application must be loaded onto each 7530 that utilizes the quad dock for communication. When the network is connected and this application is loaded, the quad dock is ready for use.

7.8.2 Indicators And Controls

The quad dock has no user controls. It is equipped with a power indicator LED and RJ45 link and traffic indicator LEDs. When a valid network link is established, a green LED is illuminated next to the RJ45 connector.

7.8.3 Using The Quad Dock

- Gently slide the 7535 into the cradle portion of the quad dock until lightly latched.

The 7535 detects that it is in a quad dock and displays the appropriate icon in the taskbar –  . The battery charge LED on the 7535 lights up to show it has external power and may start charging the battery.

Interaction with the 7535 while in the quad dock is a function of the user application software used to communicate with the host network.

7.8.4 Network Access

The quad dock includes a four port 10/100 Ethernet hub. Each of the four downstream ports are connected to dedicated USB-to-Ethernet converters. These USB converters appear as USB slaves to the 7530 USB host controller. The 7530 automatically detects insertion into a quad dock and loads the appropriate drivers to communicate with the USB/Ethernet converters.

7.8.4.1 Network Addressing

Although the USB converters have fixed Ethernet MAC addresses, there is generally no correlation between these addresses and a specific 7530 hand-held. The host application uses standard TCP/IP protocol to name, locate and communicate with a specific 7530 on the network.

If a link is established between a 7530 and a host, the application on the host and on the 7530 must have a recovery mechanism in the event that the 7530 is removed from the dock and the link is interrupted.

7.8.5 Battery Charging

The quad dock supplies DC power to enable the 7530 internal fast charger. Charge status is displayed on the 7530 charge LED (see “Charge LED” on page 43). Battery charging continues whether the 7530 is switched on or off.

Normally, it takes between 1.5 and 4 hours to fully charge the 7530 internal battery.

7.8.6 Troubleshooting

The indicators, applications and drivers required to use and monitor the docking station are installed on the 7530 – no indicators or applications are present on the docking station itself.

7.8.6.1 Network Link Unsuccessful

If a network link fails, the 7530 application alerts the operator that the link was unsuccessful.

7.8.6.2 7535 LED Does Not Light When Docked

- Check that the quad dock has power – is the Power LED on the quad dock illuminated?
- Try inserting the 7530 in another slot in the quad dock.
- Check for dirt or contamination on the docking contacts at the bottom of the 7530. Wipe the contacts with a damp cloth if necessary.
- Check the pogo pins inside the dock cradle for dirt. Gently wipe with a damp cloth if they appear to be dirty or discoloured.
- Check that the pogo pins are not bent or damaged.
- Remove and reinsert the 7530 in the cradle, and check that the latch is holding the unit in place (the pogo pins must be compressed for proper contact).
- Make certain that the battery installed in the 7530 is defective.

7.9 Portable Docking Module (PDM)



Warning: ***The mains power cord for the DC adapter shall comply with national safety regulations of the country where the equipment is to be sold.***

The Portable Docking Module (PDM) clips onto the base of the 7530 and is most often used to charge the 7530 battery when a desktop charger is not convenient. The PDM also offers additional communication ports, making it useful for upgrading software in the 7530 from a USB-equipped laptop computer. Figure 7.2 on page 267 illustrates the connectors on the PDM.

- Align the pins on the PDM with the connectors on the base of the 7530.
- Gently snap the PDM into place on the base of the unit. Figure 7.1 on page 266 provides a visual representation of how to secure the PDM.



Note: *The latching mechanism on the PDM is designed for quick installation and release. It is not meant for heavy duty use.*

Psion Teklogix recommends using a powered cradle or combo charger in harsh environments.

BEFORE DETACHING THE PDM FROM THE 7530, it is ***critical*** that you carry out the following instructions:

- Unplug any external USB devices (mouse, etc.) from the PDM, *or*
- Turn off the 7535 hand-held before removing the PDM.



Warning: ***USB devices that are left attached to a PDM at the time that the PDM is detached from the hand-held can be irreparably damaged (burned out).***

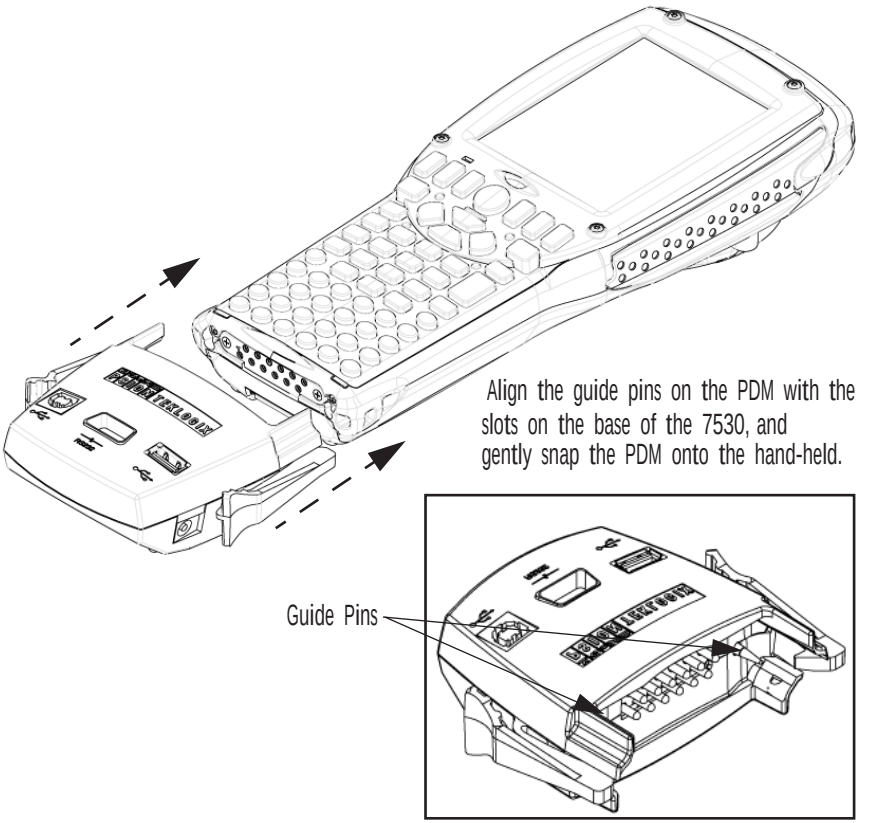


Figure 7.1 Attaching The PDM To The Base Of The 7530

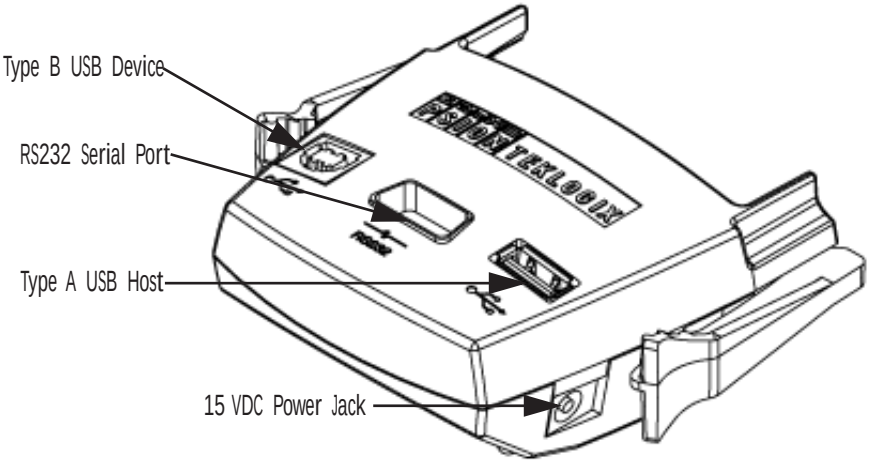


Figure 7.2 PDM Ports And Connectors

The interfaces available on the PDM are as follows:

- DC power jack (15VDC @ 2.5A)
- Type A USB host port (for connection to USB devices such as a mouse, keyboard, printer, etc.)
- Type B USB device port (for connection to a USB host such as a PC)
- RS232D DE9 serial port (for connection to a PC COM port or a serial device such as a printer)

The standard Psion Teklogix PDM kit (PN HU4001) includes the necessary DC power supply, USB cables and RS232D 9-pin cable.

A cigarette lighter adaptor (PN HU3012) is also available to connect the PDM to a 12 VDC vehicle's power. Use only the recommended adaptor with the PDM – it includes transient suppressors that protect your 7530 from damage.

The PDM contains reverse polarity and over voltage protection. If the DC power jack is wired backwards or exceeds 20VDC, the PDM shuts down to protect the 7535, the PDM and the power supply from damage. Psion Teklogix does not recommend substituting the DC power supply provided with your PDM.

The DC power supplied by the PDM is sufficient to operate the 7530 and fast charge its internal battery at the same time. The 7530 can run from a PDM without a battery installed.

7.10 Bluetooth Peripherals

If the 7530 is equipped with a Bluetooth radio, it is possible to communicate with a variety of Bluetooth peripherals, including GSM/GPRS handsets, scanners, printers, and so on. The range of the Bluetooth radio in the 7530 is limited to approximately 2 meters.

Psion Teklogix provides built-in support for the Bluetooth peripherals listed below.

- GSM/GPRS tri-band universal handset
- Bluetooth printer

Keep in mind that Bluetooth and IEEE 802.11b radios both operate in the 2.4GHz band. Although the 7530 includes features to minimize interference, performance of the system will not be optimal if you use both radios simultaneously. Typically, when both radios operate in the 7530 at the same time, they cannot transmit simultaneously – this has a negative impact on overall system throughput. To minimize the impact on the backbone 802.11b network, Psion Teklogix recommends using Bluetooth peripherals that have low transaction rates (such as printers and scanners).

Bluetooth peripherals are configured using the Bluetooth control panel applet. Refer to “Bluetooth Setup” on page 106 for information about setting up your Bluetooth devices for communication. In addition, review the manual shipped with your Bluetooth device to determine the method used to associate with the 7530 host.

7.11 The 7530 Picker Cradle

The 7530 picker cradle is a highly ruggedized, single station dock. Although it provides quick insertion and removal, the cradle holds the 7530 securely even when operated in high vibration environments (such as vehicles not equipped with suspensions).

The7530 base picker cradle can be outfitted with two options – a power module and a port replicator. Psion Teklogix also supplies a range of standard mounts for the hand-held picker cradles, and the 7530 picker cradle is compatible with all of them.

7.11.1 Picker Cradle Mounting Recommendations



Warning: ***Before mounting a picker cradle in a vehicle, there are a number of operator safety issues that require careful attention. An improperly mounted cradle may result in one or more of the following: operator injury, operator visibility obstruction, operator distraction and/or poor ease of egress for the operator. Psion Teklogix strongly recommends that you seek professional mounting advice from the vehicle manufacturer.***

Cable routing within a vehicle cab also requires careful consideration, especially for separately tethered scanners and other devices with loose cables. If you are unable to obtain suitable advice, contact Psion Teklogix for assistance (see *Appendix A: Support Services And Worldwide Offices****). Note also that for better protection, the equipment should be mounted inside the vehicle roll cage.***

Pedestal mounts are recommended for all fixed mount locations because they offer optimal operator access. In addition, for safety reasons, only pedestal mounts with fully locking joints should be used in vehicles. Always adjust the pedestal for the optimum viewing angle, and securely tighten the hex and wing screws.

The most effective way to mount the picker cradle is to use the four #8-32 threaded inserts on the rear of the unit. Bolts must not extend more than 10mm (3/8") into the cradle.

To accommodate the service loop of the connector cable, leave a 4" clearance at the bottom of the cradle. Leave a 7" (minimum) clearance at the top of the cradle to allow easy removal of the hand-held. Also remember to leave at least a 3" clearance at the sides of the cradle to allow activation of the release knobs. Refer to the detailed assembly instructions that are packaged with the cradle when selecting a mounting location.

7.11.1.1 Mounting Template

The picker cradle is shipped with detailed mounting instructions including a drill template.

7.11.2 Wiring Guidelines

Before installing the cables between the cradle and other devices, consider the following:

- Ensure that drilling holes will not damage the vehicle or its wiring.
- Protect cable runs from pinching, overheating and physical damage.
- Use grommets to protect cables that pass through metal.
- Use plastic straps and tie-downs to secure cables and connectors in their desired location, away from areas where they may get snagged or pulled.
- Keep cables away from heat sources, grease, battery acid and other potential hazards.
- Keep cables away from control pedals and other moving parts that may damage the cables or interfere with the operation of the vehicle.

7.11.3 Using The Picker Cradle

If your 7535 is equipped with a shoulder strap or cover, these accessories need to be removed before installing the unit in a picker cradle. There is no need to remove handstraps, pistol grips or tethered devices from the unit.

- Slide the 7530 into the cradle, and press firmly downward until it locks into place. On a vehicle, it's a good idea to pull up on the 7535 to be certain that it is secure.
- To remove the 7530, press firmly on one of the knobs on either side of the cradle until it releases. You do not need to press both knobs.

7.11.4 Maintaining The Picker Cradle

Two latches in the cradle hold the 7530 firmly in place. Although these latches are designed for at least 80,000 cycles, they will wear over time and will no longer lock the 7530 securely in the cradle. For replacement parts and instructions contact Psion Teklogix (see *Appendix A: Support Services And Worldwide Offices*). Partial disassembly is required.

7.11.5 Powered Cradle Installation In High Voltage Vehicles



Warning: ***Voltages exceeding 60VDC are considered hazardous. For powered cradle installations on vehicles with batteries above this voltage, ensure the powered cradle power connector is mounted in a dry location on the vehicle, or that the connector is insulated with an appropriate waterproof material after installation. The connector must also be installed out of the vehicle operator's reach. Exposing an accessible power connector to water or other liquids could create a hazardous situation resulting in serious injury or death.***

Installation of powered cradles in vehicles that operate above 60VDC require special consideration.

Due to the hazardous voltages present on these vehicles, it is necessary to ensure that the powered cradle power supply cable connector is not accessible to the vehicle operator, and does not get exposed to water or other liquids. This can be accomplished in one of the following ways:

- Ensure the power connector is installed in a dry location on the vehicle, away from the vehicle operator's reach (perhaps under a vehicle dash or in a sealed housing).
- Cover the power connector with a waterproof heat shrink material (see "Extreme Wet Environments" note below for additional details).
- Wrap the connector securely with a waterproof electrical tape in an area out of the vehicle operators reach.

All other installation requirements outlined in this document should also be followed for High Voltage vehicles to insure safe installation and operation of the powered cradle.

7.11.5.1 Extreme Wet Environments

For extreme wet environments, or environments where it is difficult to restrict vehicle operator access to the power connector, Psion Teklogix offers a waterproof heat shrink kit (PN 1030022). The kit contains 3 pieces of waterproof, high shrink ratio heat shrink tubing which can be used to encapsulate the entire connector assembly. If using this kit, please ensure that you order sufficient material to cover installation and service, remembering that heat shrink is one-time use, and must be replaced if it is removed from the connector for any reason.

7.11.6 Powered Cradle Installation

The powered cradle option is designed to allow the 7530 to be powered by a vehicle battery. The battery installed in the 7530 is also recharged by the vehicle battery. This option accepts DC power sources over the range 12V to 80V.

The 7530 picker cradle can be ordered with the powered cradle option installed, or it can be retrofitted later at an authorized Psion Teklogix service depot. Service offices are listed in *Appendix A: Support Services And Worldwide Offices*.

The 7530 charging LED (see Section 3.6.1.1 on page 43) indicates that external power is available, and it also indicates the charging status of the internal battery.



Warning: ***Applying a voltage above 90VDC or reversing polarity may result in permanent damage to the cradle power option and will void the product warranty.***



Warning: ***TO AVOID ELECTRIC SHOCK when the powered cradle option is installed, always ensure that the rear panel ground lug on the picker cradle is connected to the vehicle chassis. Failure to do this could result in serious injury or death.***

The metal chassis of the picker cradle must be connected directly to the chassis of the vehicle. A safety ground lug (clearly labelled on the rear of the cradle chassis) is provided for this purpose. The grounding strap must connect from the ground stud on the picker cradle to a solid, reliable contact point on the main portion of the vehicle chassis. It must *not* be connected to battery negative or a terminal block. This grounding strap ensures that if there is a fault in the vehicle wiring or in the picker cradle power module, the picker cradle cannot be at a hazardous voltage with respect to the vehicle chassis.

Connection between the picker cradle ground lug and the vehicle chassis should be done with a 16 gauge ground strap (ground wire). Connect the ground strap to the picker cradle utilizing the ground lug hardware supplied with the picker cradle and a #10 heavy duty wire crimp ring terminal. Torque the ground lug hardware to 23.0 +/- 2.0 in-lbs. Connect the other end of the ground strap to a solid, reliable point on the main portion of the vehicle chassis, ensuring a solid electrical connection.

As with other vehicle cables, the routing of the ground strap should be carefully considered to ensure it does not pose a hazard to the operator or the safe operation of the vehicle. If necessary, secure the ground strap with cable ties or some other mechanical means to prevent loops or loose lengths of wire that could catch on stationary items when the vehicle is in motion.

7.11.6.1 Wiring Vehicle Power To The Cradle

A 1.8 meter (6 foot) extension power cable (PN 13985) is supplied with your power cradle. This cable should be wired to a filtered, fused (maximum 10A) accessory supply on the vehicle. The power cradle draws no more than 8A (less if the accessory supply is greater than 12V). Any additional wiring, connectors or disconnects used should be rated for at least 10A.

The red lead of the power cable attaches to the positive vehicle supply. The black lead connects to the negative supply – this should be connected to a proper terminal block and not to the vehicle body. The power cradle is fully isolated and can be used with both negative and positive chassis vehicles.

You may have the option of connecting power before or after the 'key' switch. It is preferable to wire the power cradle *after* the key switch – that is, it cannot be turned on without the key on. However, if the operator switches the key off repeatedly for long periods during a shift, it may make more sense to wire the cradle *before* the switch.

Keep in mind that the 7530 will continue to operate with or without vehicle power as long as its battery has sufficient charge.

If an unfused power source must be used, a fuse assembly (PN 19440) must be added to the extension power cable (the fuse and instructions are supplied with the cable). Use only a 10A slow blow UL approved fuse in the fuse assembly.

7.11.7 The Port Replicator

The port replicator is an optional accessory that allows tethered devices (e.g., scanners) as well as mounted peripherals (e.g., bar code printers or weigh scales) to be attached to the picker cradle. The replicator can be used with or without the cradle power option.

The functionality of the 7535 tether port is duplicated on the port replicator. In addition to the tether port, the replicator is equipped with a standard 9 pin RS232D serial interface. This interface is typically used for fixed peripherals such as printers. Your serial device likely includes a suitable cable connector for this port.



Note: *The 7530 picker cradle can be ordered with the port replicator option installed, or it can be retrofitted later by an authorized Psion Teklogix service depot. Service offices are listed in Appendix A: Support Services And Worldwide Offices.*

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Note: *Performance specifications are nominal and subject to change without notice.*

8.1 7530 Hand-Held Computer Specifications

Size

- 4" (102mm) width x 2.5" (62.5mm) depth x 9.6" (244mm) length
- Keypad area: 3" (75.5mm) width x 1.4" (36mm) depth

Weight

With battery	21.7 oz (700g)
With pistol grip	add 4.3 oz (125g)

Operating System

Microsoft® Windows® CE.net Version 4.x

Processor And Memory

- 400 MHz XScale PXA255 Processor
- RAM: 64MB SDRAM (Future option 128MB)
- Flash ROM: 32MB FLASH

Power

- 7.2V @ 1800mAh Li-ion rechargeable battery.
- Intelligent fast charge.
- 10 hour battery operation (5 scans, transmit & receive/min).
- Built-in gas gauge & performance monitor.
- Quick swap battery packs.
- Built-in fast charger (1.75 hour typical recharge).
- Self-guiding & latching battery pack design.
- System backup (10 minutes) during battery swap.
- 1 week real-time clock backup.

Communication

Ports	Tether port (optional) with: - one RS232 serial port (decoded scanner, printer) undecoded scanner port USB host port, power out - Docking station port with: one RS232 serial port including diagnostics USB device port, USB host port, power in/out

Environmental

Guaranteed Operating Temperature Range	32°F to 122°F (0°C to +50°C) Short exposure to temperatures outside this range may cause the 7535 monochrome screen to become very dark or light temporarily. Long exposure to temperatures below -40˚C (-40˚F) may damage the screen. Prolonged exposure to temperatures above +60˚C (+140˚F) will damage the main battery and temperatures above +70˚C (+158˚F) may damage the unit.
Storage Temperature	-13°F to 140°F (-25°C to +60°C)
Rain And Dust Resistance	IEC 529, classification IP54.
Humidity	5% - 95% RH non-condensing
Drop Durability	Multiple 5 ft. (1.5m) drops to polished concrete. Cradle shock: 30g in each axis. Cradle vibration: 1.5g RMS PSD (4Hz-500Hz).

Approvals

Safety	UL 1950, CSA C22.2 No950, LVD EN60950
EMC	FCC Part 15 Class B, EMC Directive Class B
Laser	IEC 825-1 Class 2 (EN60825-1), 21CFR1040 Class II

8.2 Radio Specifications

802.11b Direct Sequence Spread Spectrum

Transmit Power	36.1mW
Frequency Range	2.400-2.474 for USA, Canada 2.400-2.484GHz for EU
Channels	1 to 11 for USA, Canada 1-13 for EU countries
Data Rates	1,2,5.5 and 11Mbps

8.3 Bar Code Scanning

Scanner Types	Decoded and non-decoded.
Non-Decoded Codes Supported	Code 39, code 128, EAN 13, EAN 8, EAN 128, UPC-A, UPC-E, Codabar, Code 93, Code 11, Interleaved 2-of-5, MSI/PLESSY, Discrete 2-of-5.
Decoded Codes Supported	Dependent on external scanner choice.
Code Discrimination	Automatic for all selected codes, Non-Decoded input. Decoded input is external scanner dependent.

8.3.1 Internal Scanners

Base Options	High performance, long range, advanced long range, wide angle, imager scanner and 2-D raster laser scanner.

Scan Triggering	If an aiming dot is available on the installed scanner, the aiming dot will be enabled for a configurable time period after which normal scanning begins. Double-clicking trigger will override aiming delay and initiate immediate scan.

8.3.2 Internal Scanner Port

Compatibility	Symbol: SE1200HP 1D non-decoded, standard range SE1200LR 1D non-decoded, long range SE1200ALR 1D non-decoded, advanced long range SE1200 WA, non-decoded wide angle SE2223 PDF decoded raster

8.3.3 External Scanners

Supported Types	Decoded and Non-Decoded 5V only.
Interface	Via tether port.

8.4 Internal Scanner Specifications

8.4.1 SE1200 High Performance & Long Range Specs

Parameter	7530 High Performance (SE 1200HP)	7530 Long Range (SE 1200LR)
Light Source	Visible Laser Diode, 675nm ± 5nm	Visible Laser Diode, 650nm ± 5nm
Laser Class	CDRH Class II DIN EN 60825: July 1993, Class 2	CDRH Class II DIN EN 60825: July 1993, Class 2
Laser Power	1.0 mW Max. Average Radiant Power	1.0 mW Max. Average Radiant Power
Pulse Power Duration	Continuous	Continuous
Scan Angle	42˚ ± 2˚	23˚ ± 2˚
Scan Repetition	36 ± 3 scans/second (bidirectional)	36 ± 3 scans/second (bidirectional)
Skew Tolerance	± 65˚ from normal	± 60˚ from normal
Pitch Angle	± 55˚ from normal	± 65˚ from normal
Roll Tolerance	± 20˚ from vertical	± 10˚ from vertical
Specular Dead Zone	± 2˚ from normal	± 2˚ from normal
Decode Depth of Field	Minimum bar width is 5.0 mil (0.127 mm)	Minimum bar width is 10.0 mil (0.254 mm)
Print Contrast Minimum	20% absolute dark/light reflective measured at 675 nm.	40% absolute dark/light reflectance measured at 675 nm.
Ambient Light Immunity	Sunlight: 8000 ft. candles Artificial Light: 450 ft. candles	Sunlight: 8000 ft. candles Artificial Light: 450 ft. candles

Table 8.1 SE1200HP And SE1200LR Scanner Specifications

8.4.2 SE1200 Advanced Long Range & SE2223 PDF Specs

Parameter	7530 Advanced Long Range (SE 1200ALR)	7530 PDF (SE 2223 PDF)
Light Source	Visible Laser Diode 650 nm	Visible Laser Diode 650 nm
Scan Rate	35 (± 5) scans/sec (bi-directional)	590 scans/sec. 22 frames/sec.
Scan Angle Horizontal: Vertical	 13º ± 2º	 34º 12.5º
Scan Patterns	Linear	Linear and Smart Raster
Minimum Print Contrast	Minimum 40% absolute dark/light reflectance measured at 650 nm	- 35% absolute dark/light reflectance differential (PDF) - 25% absolute dark/light reflectance differential (1-D)
Symbologies	UPC/EAN, Code 128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI UCC/EAN 128, TriOptic Code 39	PDF417, Micro PDF, UPC/EAN, Code 39, Interleaved 2 of 5, Code 128, Codabar, MSI Plessey
Programmable Parameters	Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bi-directional Redundancy, Symbology types/lengths, Data formatting, Serial Parameters, Beeper Tone	Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bi-directional Redundancy, Symbology types/lengths, Data formatting, Serial Parameters, Beeper Tone, Scan Angle, Pattern controls
Ambient Light: Artificial: Sunlight:	 450 ft. candles (4,844 lux) 8,000 ft. candles (86,112 lux)	 450 ft.-candles/4,844 lux 8,000 ft.-candles/86,112 lux with correct enclosure.
Operating Temperature:	-22º to 131ºF (-30º to 55ºC)	22º to 140° F/-30º to 60º C @ 100% duty cycle
Storage Temperature:	-40° to 140°F (-40° to 60°C)	-40º to 158º F/-40º to 70º C
Humidity:	5% to 95% noncondensing	5% to 95% noncondensing
Power: Input Voltage: Input Current: Standby Current:	 5.0 VDC ± 10% 115 mA typical 70 µA max.	 5VDC ± 10% 230mA 6.5mA
Shock	2,000 G	2,000 G

Table 8.2 SE1200 ALR And SE2223 PDF Scanner Specifications

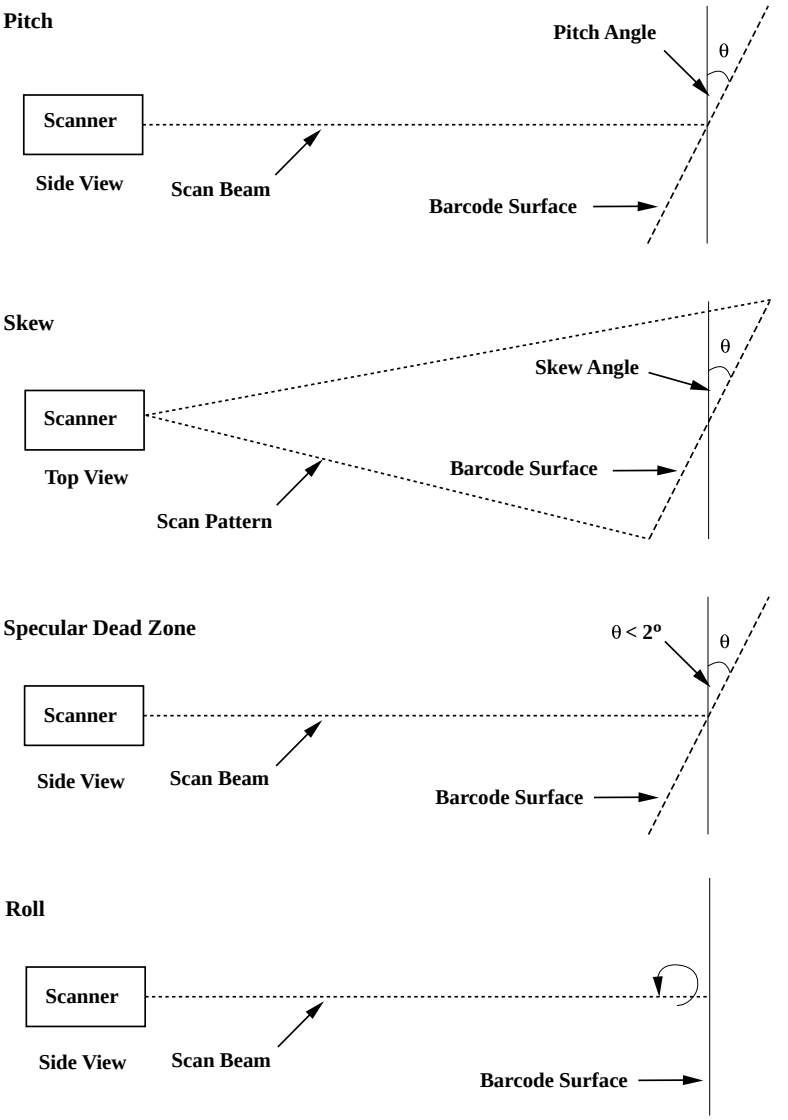


Figure 8.1 Pitch, Skew And Specular Dead Zone

8.4.3 Decode Zones

Bar Code	Read Distance					
	High Performance		Long Range		Advanced Long Range	
	Min	Max	Min	Max	Min	Max
5 mil	3.0"	4.5"				
7.5 mil	3.0"	8.5"				
10 mil	2.5"	12.5"	13.0"	17.5"		
15 mil	2.5"	18.5"	8.5"	33.5"	20.0"	50.0"
20 mil	2.5"	20.5"	9.5"	38.5"	30.0"	60.0"
40 mil	3.0"	29.5"	9.5"	79.5"	30.0"	98.0"
55 mil	3.5"	35.5"	9.5"	89.5"	27.0"	115.0"

Table 8.3 Decode Zones – HP, LR And ALR

Bar Code	Raster Laser Scanner Read Distance	
PDF Bar Codes	S2223	
	Min	Max
6.5 mil	2.5"	6.5"
10 mil	2.5"	9.5"
15 mil	2.5"	15.5"

Table 8.4 Decode Zones – PDF Scanner

8.5 External Scanner Specifications

8.5.1 PowerScan™ LR and XLR Industrial Scanner Specs

Communication

Undecoded	Standard and Intermec-compatible.

Mechanical

Dimensions	6.9 x 11.2 x 18.3 cm (2.7 x 4.4 x 7.2 in)
Weight	Scanner - 280 g (9.9 ozs)
	Cable (82.3 cm 32 in) - 176 g (6.2 ozs)
Cable lengths	Collapsed: 81 cm (32 in)
	Max working: 183 cm (72 in)

Electrical

Operating voltage	4 VDC to 14 VDC
Operating current - nominal	Undecoded: 75 mA @ 5 VDC Decoded: 100 mA @ 5 VDC
Idling current - low power mode	< 50 µA @ 5 VDC

Optical

Light source	Extra bright 650 nm Visible Laser Diode (VLD)
Scan System	Frictionless lifetime flexure mechanism
Rate	35 scans/sec nominal
Depth of field - Long Range	**Paper Labels (decoded)** 7.5 mil 6 to 10 in (15 to 25 cm) 10 mil 5 to 20 in (13 to 51 cm) 15 mil 5 to 32 in (13 to 81 cm) 20 mil 5 to 48 in (15 to 122 cm) 40 mil 8 to 85 in (20 to 216 cm) 55 mil 15 to 108 in (38 to 274 cm) **Reflective Labels (decoded)** 40 mil 22 to 100 in (56 to 254 cm) 55 mil 30 to 104 in (76 to 366 cm) 70 mil 40 to 180 in (102 to 457 cm) 100 mil 45 to 264 in (114 to 671 cm)
Depth of Field-Extra Long Range	**Paper Labels (decoded)** 15 mil 28 to 60 in (71 to 152 cm) 20 mil 28 to 72 in (71 to 182 cm) 40 mil 28 to 144 in (71 to 144 cm) 55 mil 40 to 180 in (102 to 457) **Reflective Labels (decoded)** 40 mil 40 to 180 in (102 to 457 cm) 70 mil 80 to 300 in (2032 to 762 cm) 100 mil 80 to 432 in (203 to 1097 cm)

Print Contrast Ratio	25% minimum
Pitch	± 65˚
Skew	± 55˚
Ambient Light Immunity	Artificial light: 1200 ft. candles. Sunlight: 8000 ft. candles.

Environmental

Temperature Rating	Operating: -22˚ to 122˚ F (-30˚ to 50˚ C) Storage: -40˚ to 158˚ F (-40˚ to 70˚ C)
Humidity	5 to 95% NC
Shock (at 23˚ C)	Withstands multiple 6 foot drops to concrete.
Vibration	Meets MIL-STD-810E
Water and Dust	IEC529 rating IP54DW

Decoding Capabilities

Auto-discriminates between:	UPC A, E/EAN8, 13/JAN8, 13 (P2/P5, Code 128 EAN add-ons) Code 128, MSI/Plessey, Code 39, Interleaved 2 of 5, Code 39 Full Ascii, Standard 2 of 5, Code 93, Codabar,

Safety/Regulatory

Electrical	Complies to: Gost R; TUV; UL; cUL
Emissions	Complies to: FCC-A;EN55022-B BCIQCNS13438; AS/NZS3548; VCCI-B
Laser Classification	CDRH Class 2;IEC60825 Class 2

8.5.2 PowerScan™ Standard Range Scanner Specs

Communication

Undecoded	Standard and Intermec-compatible.

Mechanical

Dimensions	6.9 x 11.2 x 18.3 cm (2.7 x 4.4 x 7.2 in)
Weight	Scanner - 280 g (9.9 ozs) Cable (82.3 cm 32 in) - 176 g (6.2 ozs)
Cable lengths	Collapsed: 81 cm (32 in) Max working: 183 cm (72 in)

Optical

Light source	Extra bright 650 nm Visible Laser Diode (VLD)				
Scan System	Frictionless lifetime flexure mechanism				
Rate	35 scans/sec nominal				
Depth of field - Standard	**Paper Labels (decoded)**				
	7.5 mil	3.0	to	6 in	(9 to 15 cm)
	10 mil	1.5	to	15 in	(4 to 38 cm)
	15 mil	1.0	to	25 in	(2.5 to 64 cm)
	20 mil	1.0	to	35 in	(2.5 to 89 cm)
(paper)	55 mil	6.0	to	60 in	(15 to 152 cm)
	High Density (decoded)				
	3 mil	1.0	to	2 in	(2.5 to 5.1 cm)
	4 mil	1.0	to	3 in	(2.5 to 8 cm)
	5 mil	0.8	to	3.8 in	(2 to 10 cm)
	7.5 mil	0.6	to	4.5 in	(1.5 to 11 cm)
	10 mil	0.2	to	5.5 in	(0.5 to 14 cm)
Print Contrast Ratio	25% minimum				
Pitch	± 65˚				
Skew	± 55˚				
Ambient Light Immunity	Artificial light: 1200 ft. candles. Sunlight: 8000 ft. candles.				

Electrical

Operating voltage	4 VDC to 14 VDC
Operating current - nominal	Undecoded: 75 mA @ 5 VDC Decoded: 100 mA @ 5 VDC
Idling current - low power mode	< 50 µA @ 5 VDC

Environmental

Temperature Rating	Operating: -22˚ to 122˚ F (-30˚ to 50˚ C) Storage: -40˚ to 158˚ F (-40˚ to 70˚ C)
Humidity	5 to 95% NC
Shock (at 23˚ C)	Withstands multiple 6 foot drops to concrete.
Vibration	Meets MIL-STD-810E
Water and Dust	IEC529 rating IP54DW

Decoding Capabilities

Auto-discriminates between:	UPC A, E/EAN8, 13/JAN8, 13 (P2/P5, Code 128 EAN add-ons) Code 128, MSI/Plessey, Code 39, Interleaved 2 of 5, Code 39 Full Ascii, Standard 2 of 5, Code 93, Codabar,

Safety/Regulatory

Electrical	Complies to: Gost R; TUV; UL; cUL
Emissions	Complies to: FCC-A;EN55022-B BCIQCNS13438; AS/NZS3548; VCCI-B
Laser Classification	CDRH Class 2;IEC60825 Class 2

8.6 Lithium-Ion Battery Pack

Technology	Lithium-Ion (Li-Ion)
Operating Temperature	-20˚C to 60˚C (-4˚F to 140˚F)
Charge Temperature	0˚C to 39˚C (32˚F to 102˚F)
Storage Temperature	-30˚C to 60˚C (-22˚F to 140˚C) (Storage at elevated temperatures is not recommended.)
Charge Cycles	Minimum of 300 charge cycles with no deg-

	radation below 70% of nominal capacity
Charge Time	Charge time is typically 1.5 hours.
Voltage	7.4 V nominal (6V min. to 8.4V max.)
Cell Configuration	2 series connected cells
Capacity	1800 mAh nominal at 300mA discharge 20˚C to 6.0V (minimum)
Supported Chargers	6-Gang Charger Combo Charger Combo Docking Station Quad Docking Station

APPENDIX A

SUPPORT SERVICES AND WORLDWIDE OFFICES

A.1 Support Services

Psion Teklogix provides a complete range of product support services to its customers worldwide. These services include post-installation technical support and product repairs.

A.1.1 Canada and USA: Technical Support and Repair Services

In Canada and the U.S.A. these services can be accessed through the Psion Teklogix Helpdesk. The Helpdesk coordinates repairs, helps you troubleshoot problems over the phone, and arranges for technicians or engineers to come to your site.

Canadian and U.S. customers may receive access to technical support services, ranging from phone support to emergency on-site system support, by calling the toll-free number below, or via our secure web site.



Note: *Customers calling the toll-free number should have their Psion Teklogix customer number or trouble ticket number available.*

Voice: 1 800 387-8898

Fax: 1 905 812-6304

Web Site: http://service.psionteklogix.com

A.1.2 International Support

For technical support outside of Canada or the U.S.A., please contact your local Psion Teklogix office. See page A-3 for a listing of worldwide offices.

A.2 WorldWide Offices

Company Headquarters and Canadian Service Centre

Psion Teklogix Inc.
2100 Meadowvale Boulevard
Mississauga
Ontario
Canada L5N 7J9
Tel: +1 905 813 9900
Fax: +1 905 812 6300
Email: salescdn@psion.com

North American Headquarters and U.S. Service Centre

Psion Teklogix Corp.
1810 Airport Exchange Boulevard
Suite 500
Erlanger, Kentucky
USA 41018
Tel: +1 859 371 6006
Fax: +1 859 371 6422
Email: salesusa@psion.com

International Subsidiaries

Psion Teklogix GmbH
Jakob Kaiser Straße 3
D-47877 Willich Münchheide
Deutschland
Tel: +49 2154 9282 0
Fax: +49 2154 9282 59
Email: info@teklogix.de

Psion Teklogix S.A.
La Duranne
135 Rue Rene Descartes
BP 421000
13591 Aix-En-Provence
Cedex 3; France
Tel: +33 (0) 4.42.908.809
Fax: +33 (0) 4.42.908.888
Email: tekeuro@psion.com

Psion Teklogix LTD.
3, Lancaster Court
Coronation Road High Wycombe
Bucks HP123TD, England
Tel: +44 1494 450666
Fax: +44 1494 450155
WWW: www.teklogix.co.uk
Email: tekuk@psion.com

Psion Teklogix AB
Stora Badhusgatan 18-20
411 21 Göthenburg, Sweden
Tel: +46 31 13 15 50
Fax: +46 31 13 57 80
Email: info@teklogix.se

Psion Teklogix Finland
Metsänneidonkuja 8
02130 Espoo
Finland
Tel: +358 9 4307 8390
Fax: +358 9 4307 8395
Email: tekeuro@psion.com

Psion Teklogix Danmark
Vesterballevej 4-6
7000 Fredericia
Danmark
Tel: +45 76 24 0133
Fax: +45 75 94 4679
Email: tedk@psion.com

Psion Teklogix Italia S.r.l
Via Galilei, 47
20092 Cinisello Balsamo
Milan, Italy
Tel: +39 2 6604 5410
Fax: +39 2 6604 5412
Email: tkxitalia@psion.com

Psion Teklogix Benelux
Nieuwe weg 1
2070 Zwijndrecht
Belgium
Tel: +32 (0)3 250 22 00
Fax: +32 (0)3 250 22 20
Email: info@psionteklogix.be

Psion Asia Pacific Pte. Ltd.
210 South Bridge Road
#03-01 Singapore 058759
Tel: +65 67358108
Fax: +65 67335990
E-mail: teksing@teklogix.com

Psion Teklogix de Mexico, S.A. de C.V.
Sierra Mojada 626, 2º Piso
Col. Lomas Barrilaco, C.P. 11010
Mexico, D.F., Mexico
Tel: ++52 55 5 327 1124
Fax: +52 5 327 1123
Email: salesusa@psion.com

Psion Teklogix do Brasil, Ltda.
Al. Casa Branca, 851 - conj. 101 e 102
São Paulo - SP - 01408-001
Brasil
Tel: +55 11 3064 0868
Fax: +55 11 3068 8198
WWW: www.teklogixbrasil.com.br
Email: tekbr@psion.com

Chile Psion Teklogix International Inc.
Avenida Vitacura 2909, Oficina 703
Las Condes
Santiago, Chile
Tel: +56 2 334 9344
Fax: +56 2 233 3868
Email: ventas@psion.com

Psion Teklogix de Argentina, S.A.
Avenida Moreau de Justo 1180
Piso 1, Oficina C-105
Buenos Aires 1107
Argentina
Tel: +54 11 4343 0193
Fax: +54 11 4343 6310
Email: tekar@psion.com

Psion Teklogix España, S.L.
Cityparc Ronda de Dalt
Ctra. Hospitalet 147-149
Edificio Atenas 2° 3ª
08940 Cornellà de Llobregat (Barcelona)
España
Tel: +34 9 3475 0220
Fax: +34 9 3475 0230
Email: teklogix@apdo.com

Psion Teklogix Africa
Postnet Suite 39, Private Bag x11
Halfwayhouse, 1685 Ground Floor East
Waterfall Edge Phase 2, Waterfall Park
Bekker Road MIDRAND 1685
South Africa
Tel: 27-11-805-7440/1/2
Fax: 27-11-805-7444

Psion Teklogix Systems India Pvt. Ltd.
M-74, 1st Floor, "M" Block Market
Greater Kailash-II
New Delhi - 110048
India
Tel: +91 11 621 9257
Fax: +91 11 621 9076
Email: tekind@psion.com

Psion Teklogix B.V.
Venrayseweg 57,
5928 NZ Venlo
Nederlands
Tel: 0031-77-32400.44
Fax: 0031-77-32400.53

A.3 WORLD WIDE WEB

www.psionteklogix.com

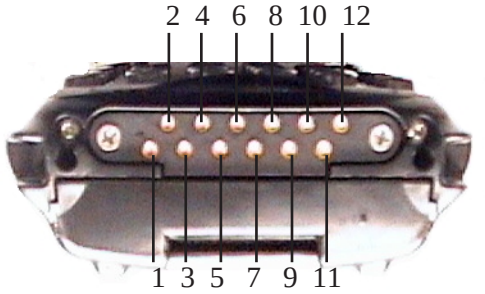
APPENDIX B

PORT PINOUTS

B.1 7535 Tether Port Pinout

The tether port connector incorporates multiplexed undecoded scanner, decoded scanner, RS232 serial, and USB interfaces. In order for it to operate, a special wiring scheme is needed. If you have a need to create cables for the tether port, contact Psion Teklogix and request document # 1010008 “Instruction Tether Port Termination”. Attempting to interface to the tether connector without following this document may cause damage to the 7530 or the tethered device.

B.2 Docking Station Connector



1. Ext 5V Switched. Used by external peripherals. 5V, 1A max.
2. RX Data. Console receive pin.
3. TX Data. Console transmit pin
4. DC Power In. External power adapter plus input (13-15V).
5. USB Host Minus. For connecting USB devices.
6. USB Host Plus. For connecting USB devices.
7. DC Power In. Same as pin 4.
8. Docking Station Id. Identifies device attached to the docking station. Resistor between this pin and ground.

9. Ground.
10. USB Device Minus. When terminal operated as a USB device.
11. USB Device Plus. When terminal operated as a USB device.
12. Ground

B.3 Battery Contacts

These contacts represent right to left numbering with the 7530 docking port pointing toward you.

1. Battery Plus
2. SMBUS CLK
3. Battery ID. Identifies battery type (2 cell-100K resistor to Battery Negative, 3-cell 100K resistor to battery Negative).
4. SMBUS Data.
5. Battery Negative.

APPENDIX C

USB SETUP APPLICATION

C.1 USB Setup

The USB Setup application (PN 1000997) is used to update a Windows PC so that it can connect to a Psion Teklogix 7530.

System Requirements

- Windows® 2000 or XP
- ActiveSync 3.1 or later

The two driver classes that control USB communication are `usbstor` (for communication with a device running `BooSt`) and `wceusbsh` (for communication through ActiveSync with a device running Windows CE). These drivers must be updated with 7530-specific information so that the 7530 can be recognized by your PC.

The install program:

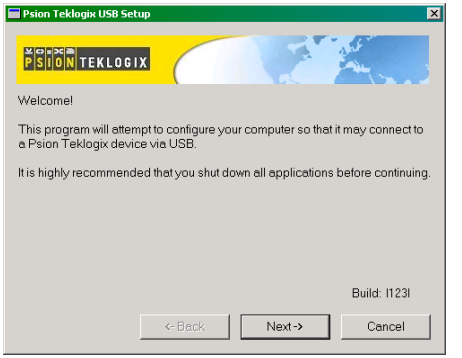
- updates copies of the device installation scripts `usbstor.inf` and `wceusbsh.inf` with Psion Teklogix-specific information,
- sets up a USB connection between the PC and the 7530, *and*
- installs the 7530 as a device on your PC. This may require notifying the PC OS that the device should be reinstalled and then reconnecting the USB device.

C.1.1 Launching The Application

The log file is initialized and the program introduction is written to it.

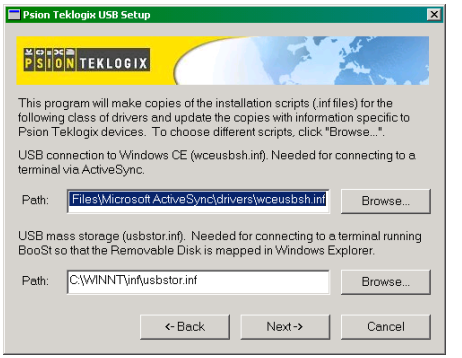
C.1.2 Pre-Installation: Updating usbstor.inf And wceusbsh.inf

1. Welcome Dialogue Box:
   You can click on the <Back> and <Next> buttons to navigate between the pre-install windows. At any time during the pre-installation process, you can tap on <Cancel> to exit the program.



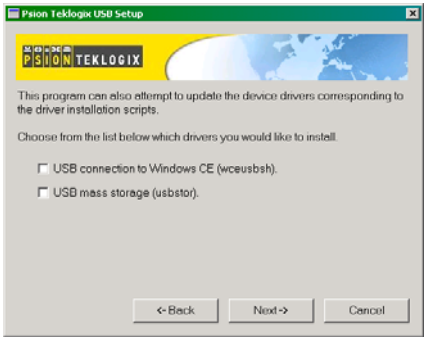
- Shut down all other software programs – especially ActiveSync – to avoid a restart request during installation.
- Tap on the <Next> button.
  The program checks that ActiveSync is installed and that it is a supported version – 3.1 or later. If the version installed on your PC is not supported, you'll need to exit the USB Setup application, and install a later version of ActiveSync.

2. Device Driver INF File Selection Dialogue Box:
   This dialogue box allows you to choose the paths of the appropriate `inf` files. Default file paths are provided in this dialogue box.



- If necessary, tap on the <Browse> buttons to select different paths for the `inf` files.

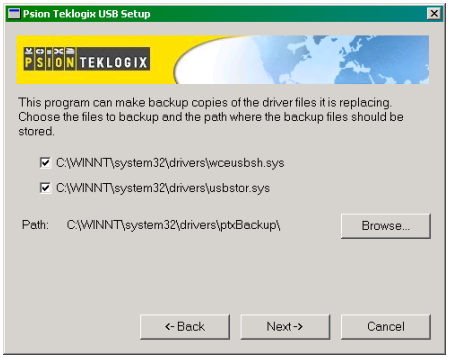
3. Device Driver Install Selection Dialogue Box:
   You can choose to have the device drivers installed immediately by selecting the check box (√), or you can leave the check box blank and Windows will install the 7530 the next time it is connected. It is recommended that the device be installed immediately.



- Select the drivers you want to update – `wceusbsh` and `usbstor`.
- Tap on the <Next> button.

Note: *None of the drivers are updated by default. To complete the process, you must establish USB connections.*

4. Device Driver Backup Selection Dialogue Box:
   The USB Setup application will attempt to back up the driver `.sys` files before attempting the installation. It specifies which files it will try to back up and the location to which it will back them up.



Note: *Both drivers are selected for backup by default. The backup directory is <system directory>\drivers\ptxBackup.*

C.1.3 Installation: Installing The 7530 As a Device On Your PC

1. Install Dialogue Box:
   The `.sys` files you selected are copied to the backup directory. If an unknown error occurs during the backup, you are asked whether you'd prefer to cancel the install or continue with the process. The `wceusbsh.inf` and `usbstor.inf` files are updated.

2. If you indicated that the `wceusbsh` driver should be installed, the Install dialogue box appears again. The USB Setup application will attempt to install the drivers immediately. This will succeed only if a valid USB connection to the device that is running Windows CE exists.

- If the install fails due to an unknown error, the install for this particular driver is aborted.
- If the install fails because there was an inappropriate USB connection, there are two possibilities:
  - An appropriate USB connection was never established between the PC and the 7530 running Windows CE. In this case, when an appropriate USB connection with this device exists, Windows will automatically attempt to install the device driver.
  - An appropriate USB connection exists between the PC and the 7535 running Windows CE, but it has since been severed. Windows may or may not attempt to automatically install the device drivers on the next appropriate USB connection.
- A window is displayed where you can tap on <Cancel> to abort the `wceusbsh` driver installation and continue. It also contains instructions to boot your device into Windows CE and establish a USB connection between the device and the PC. When you create the appropriate connection, Windows automatically installs the device drivers. The 'Found New Hardware' wizard may appear. Your only interaction with this window is to click on the <Finish> button.
- If this is the first appropriate connect between the device and the PC – i.e., there was no previous devnode for the device in the system – the <Continue> button is activated as soon as the connection is made. Where there was a devnode present in the system and it has been marked for reinstall, the <Continue> button will not become active until Windows has

completed the driver installation and the device is no longer marked for reinstall. Only one devnode per device can be 'unset' when the device drivers are finally installed.

3. If you indicated that the `usbstor` driver should be installed, the same steps as described above are carried out for `usbstor` except that the 7530 must be running BooSt. (Press and hold down the <SCAN> <BLUE> <ENTER> keys for a minimum of 6 seconds to launch the BooSt program.) Keep in mind that a device running BooSt has a different hardware ID than when it is running Windows CE.

C.1.4 Post Installation

1. Done Dialogue Box:
   This dialogue box indicates the success or failure of the installation.

- To view the log file, tap on the <Log File> button
- To exit the program, tap on the <Exit> button.

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Boldface indicates a parameter name.

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