7535-RFID Hand-Held Computer

User Manual

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ISO 9001 Certified
Quality Management System

PSION TEKLOGIX

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APPROVALS AND SAFETY SUMMARY

Declaration Of Conformity

Product:	**7535 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.:	7535 Hand Held Micro-computer with Portable Docking Module
Year of Manufacture:	2003

Standard(s) to which Conformity is Declared:

The 7535 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.

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 7535 hand-held.

Chapter 2: Basic Checkout
describes the steps required to get the 7535 ready for operation.

Chapter 3: Getting To Know Your 7535
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 7535, 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 7535 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 7535 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 7535 Hand-Held Computer

Figure 1.1 7535 With 58-Key Keyboard

Figure 1.2 7535 Docking Port

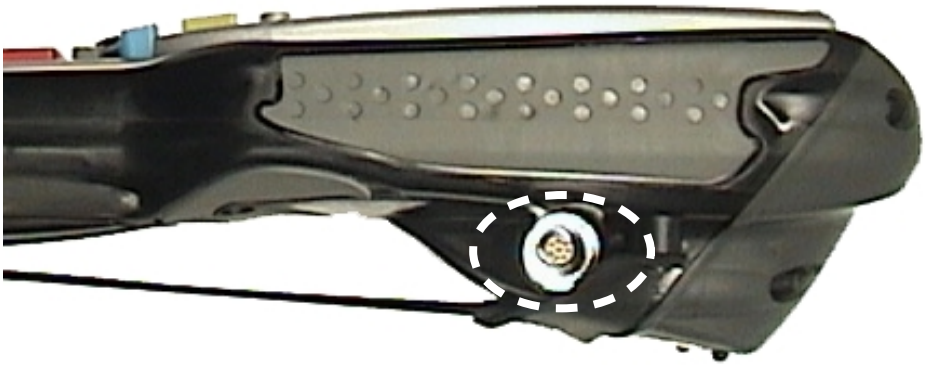

Figure 1.3 Tether Port

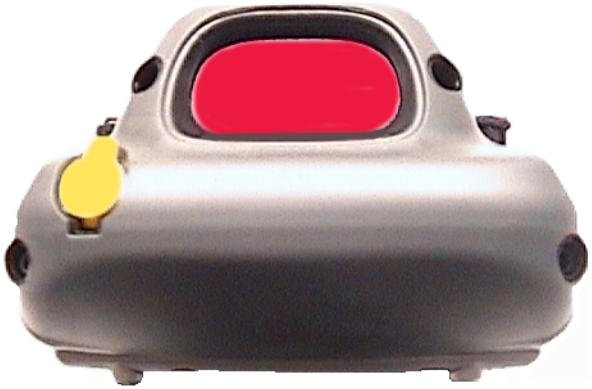

Figure 1.4 Scanner Window

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 7535 For Operation

Typically, 7535 hand-helds are configured at the factory and arrive ready for use. Although the 7535 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 7535 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 7535 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.

7535 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 7535 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.

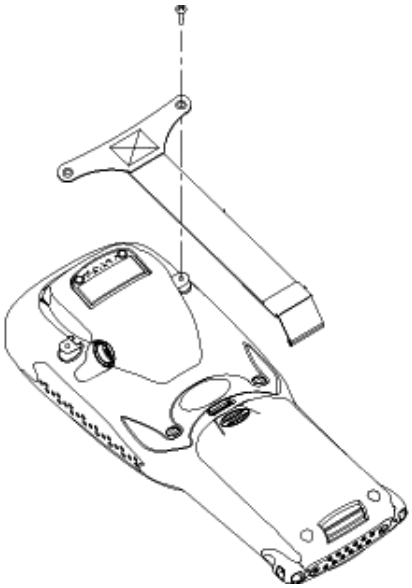

Figure 2.1 Attaching The Hand Strap

- 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.

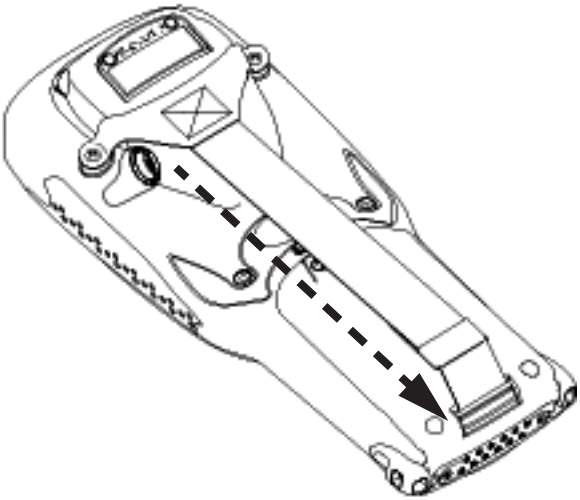

Figure 2.2 Hooking The Hand Strap To The 7535

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 7535 using the four threaded inserts in the upper part of the 7535 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 7535 align with the holes in the pistol grip.

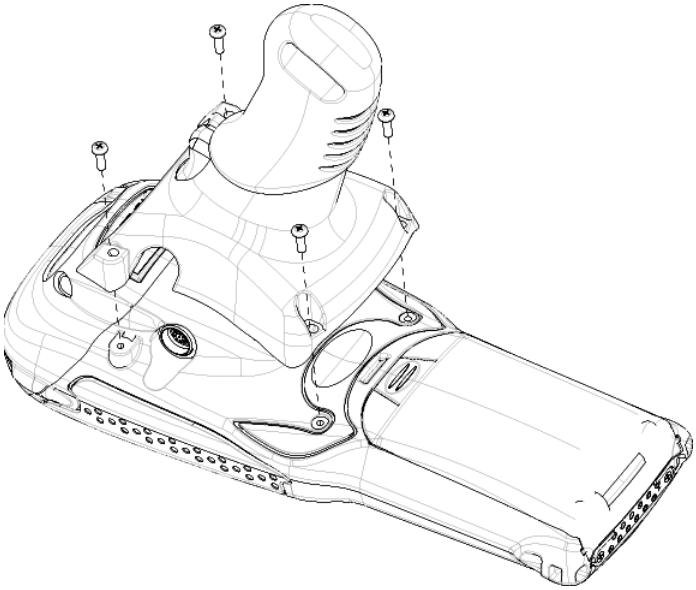

Figure 2.3 Attaching The Pistol Grip

- Using a Phillips screwdriver, securely fasten the pistol grip to the back of the 7535.

2.2 Powering Up The 7535 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 7535. The PDM can power your hand-held with or without a battery installed in the 7535. 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 7535 On

If you are not using a docking station or PDM:

- Slide the ***charged*** battery with the contoured plastic facing you into the 7535. Click the battery into place.

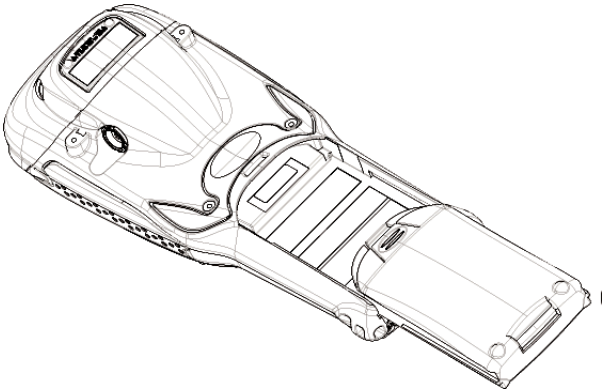

Figure 2.4 Installing The Battery

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 7535 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.*

- 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.

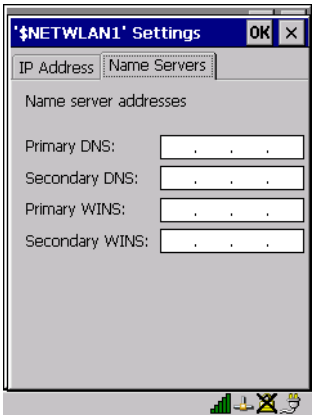

Figure 2.13 Name Servers Tab

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.

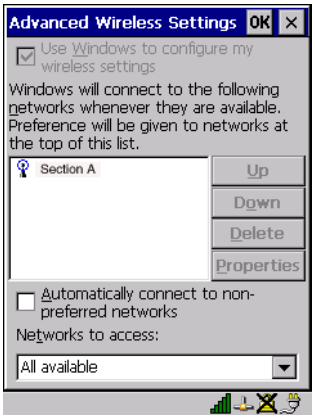

Figure 2.14 Advanced Settings

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 7535 and the PC in the same way that you would between PC drives.
- Back up 7535 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 7535 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 7535 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 7535:

- 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 7535 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 7535 after configuring the radio.*

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3.1 Features Of The 7535

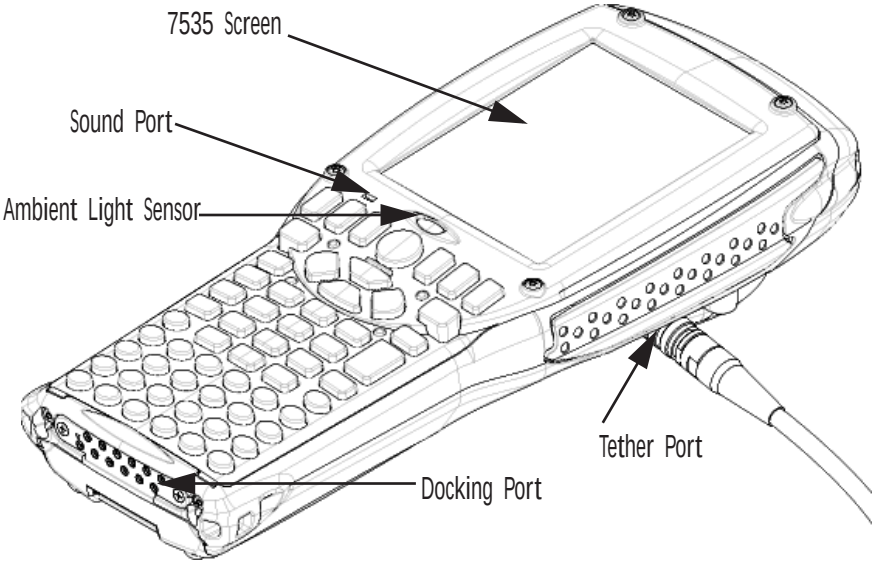


Figure 3.1 Front Of 7535

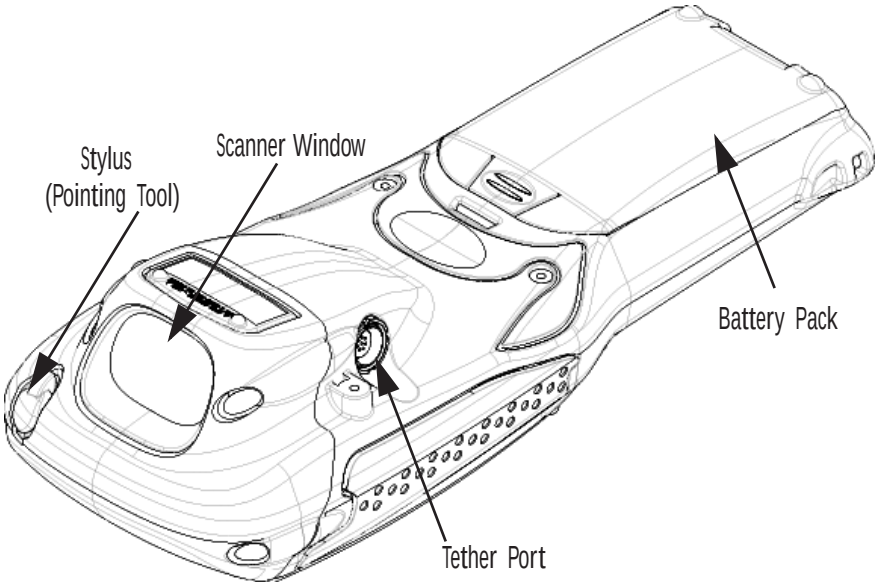


Figure 3.2 Back Of 7535

3.2 The Battery

The 7535 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 <u>critical</u> 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 7535 HAND-HELD <u>BEFORE</u> 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 7535 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 7535. Click the battery into place.

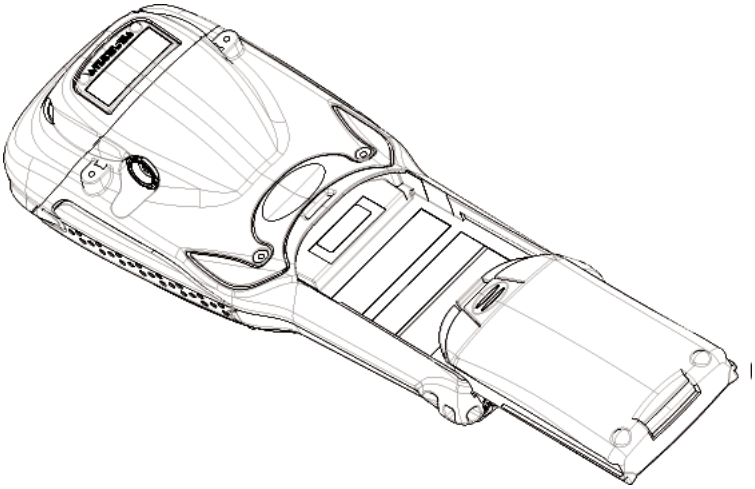


Figure 3.3 Installing The Battery Pack

- 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 7535 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 7535 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 7535s inserted in the docking station while transferring data through an Ethernet connection.
- Powered Cradle (Model #HU1000, HU1010) – can charge the 7535 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 7535 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 7535 Hand-Held On And Off

Switching On The 7535

- 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 7535 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 7535

Important: ***Keep in mind that turning off the 7535 does not result in a complete reboot; rather, the unit enters a power-saving, "suspend" state. When the 7535 is turned on from suspend state, operation resumes within a few seconds.***

To switch off the 7535:

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

Important: ***If the word 'BLUE' is displayed in uppercase in the taskbar area at the bottom of the screen, this key is locked "on" – the 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 7535 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 7535s, 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.

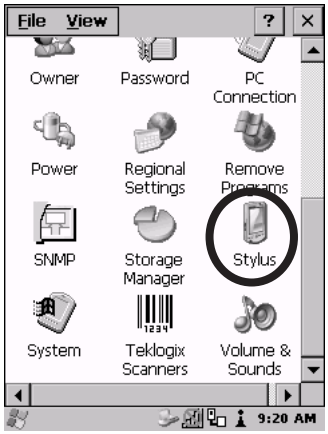


Figure 3.4 Stylus Icon

- 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 7535 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.

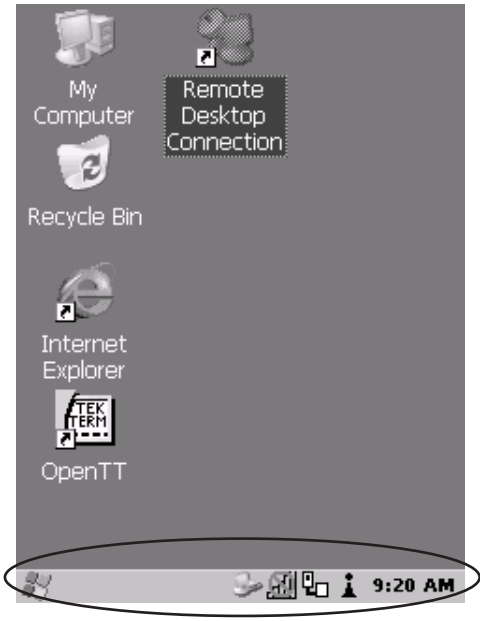


Figure 3.7 Taskbar

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

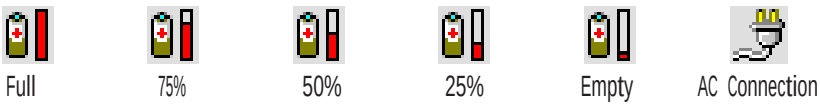
<SHIFT>, <CTRL>, <ALT>, <BLUE> and <ORANGE> are modifier keys that have onscreen indicators to show when a key is active or locked. If a modifier key is pressed once to activate it, the key is displayed in the taskbar in *lowercase* characters – for example, pressing the <BLUE> key once displays blue 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 7535 will be powered down.

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

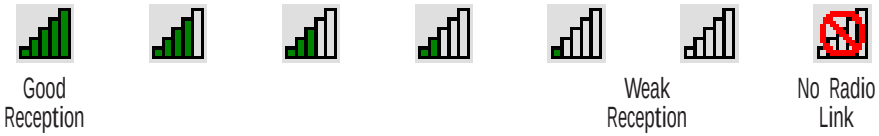


Battery Charge

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.



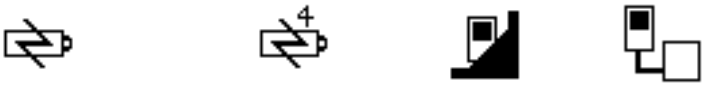
Tethered Devices

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



Gang Charger, Combo Charger & Combo Docking Station | Quad Docking Station | Power Cradle | Portable Docking Module (PDM)

Security Level

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

3.6.3 Audio Indicators

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

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 7535 on?
- Check that the bar code symbology being scanned is enabled for the 7535 you are using. Check any other parameters that affect the scanning procedure or the bar code.
- Check the bar code to make sure it is not damaged. Try scanning a different bar code to verify that the problem is not with the bar code.
- Check that the bar code is within the proper range.
- Does the hand-held display the warning without scanning? This suggests a hardware problem in the 7535.
- 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 7535 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 7535 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 7535 will be decoded successfully.

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

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

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

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

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

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

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

3.8 Connecting & Disconnecting Tethered Peripherals

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

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

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

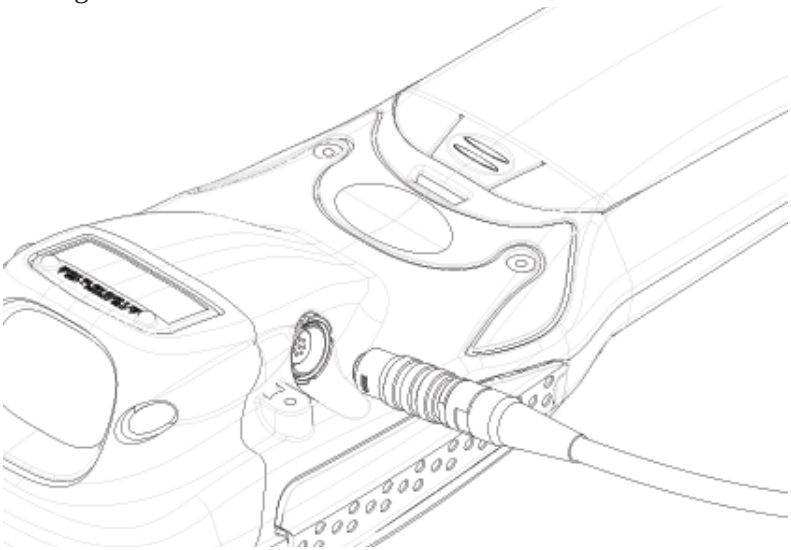


Figure 3.8 Attaching The Cable To The Tether Port

To remove the peripheral:

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

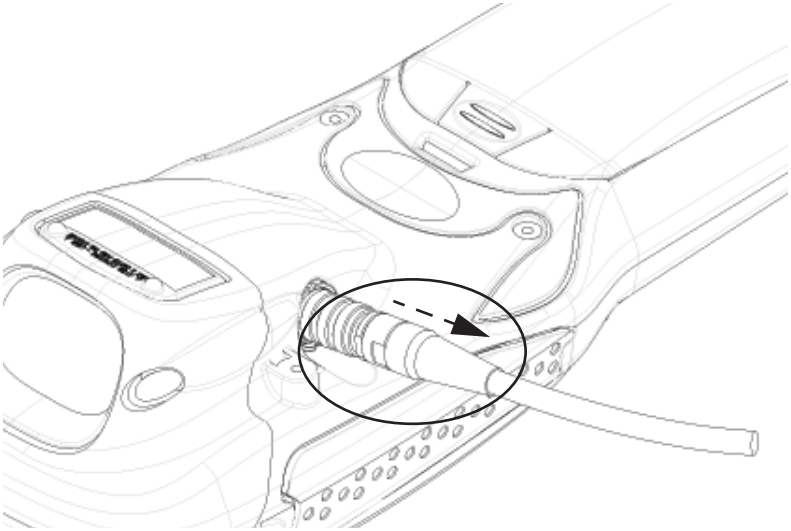


Figure 3.9 Disconnecting The Tether Cable

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

3.9 Monitoring The Battery And Maximizing Run Time

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

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

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 7535 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 7535 is properly inserted in a docking station, a dock icon is displayed in the taskbar at the bottom of the 7535 screen. The 7535 also detects the presence of the Ethernet network. Review the documentation provided with the user application installed in your 7535 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 7535

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 7535 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.

WORKING WITH WINDOWS CE 4

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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 7535 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 Touch-screen” on page 41.*

A touchscreen is an ***optional*** feature. A 7535 equipped with a touchscreen has a *stylus* – a pointing tool that looks like a pen – stored in a slot at the top of the 7535. 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 7535.*

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 7535 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 7535 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

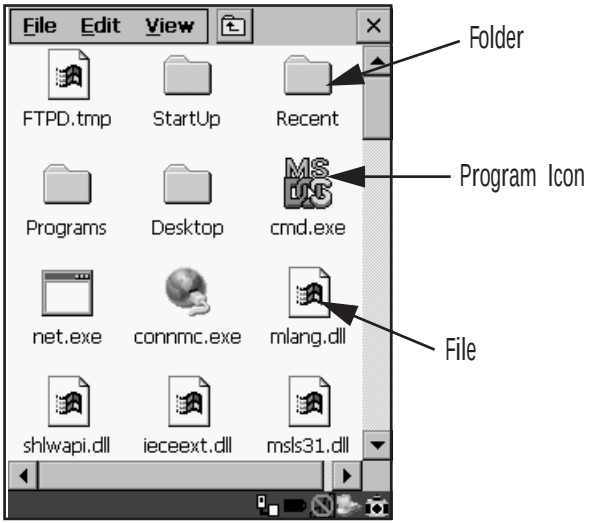

Figure 4.1 Working With Windows Icons

- 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 7535 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.*

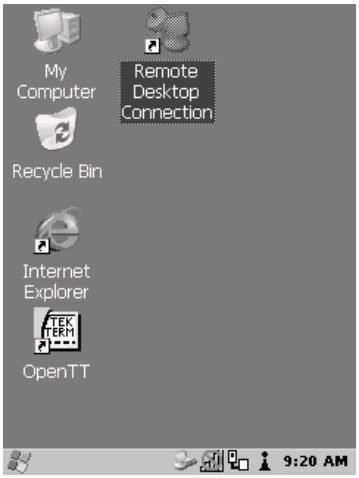

Figure 4.2 The 7535 Startup Desktop

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 7535 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 7535 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

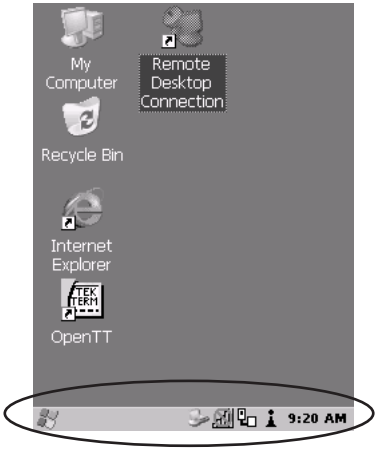

Figure 4.3 The Taskbar

The 7535 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.

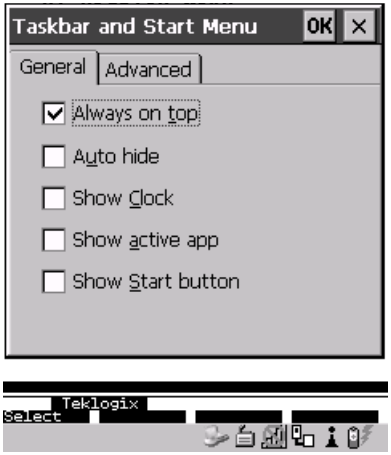

Figure 4.4 Taskbar And Start Menu Settings

- 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 7535'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).

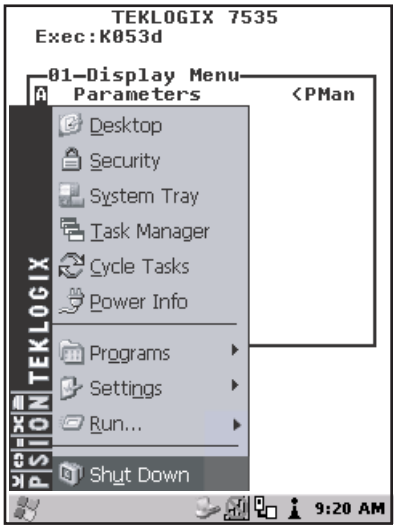

Figure 4.5 Start Menu

- 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 7535 – Teklogix, Supervisor or User.

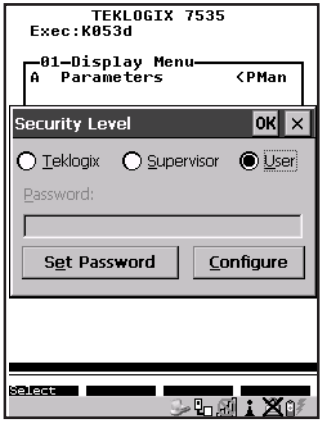

Figure 4.6 Security Levels

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.

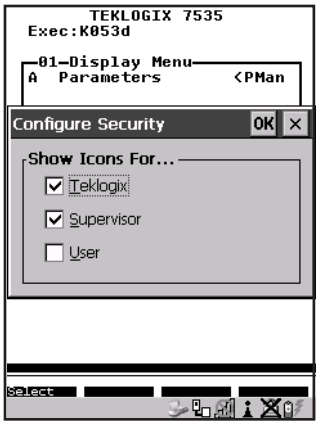

Figure 4.7 Configuring Security

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.

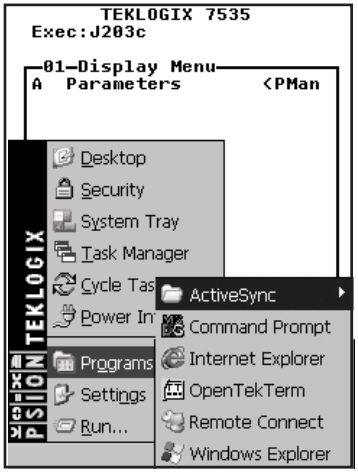

Figure 4.9 Program Sub-Menu

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 7535 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 7535 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). "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.

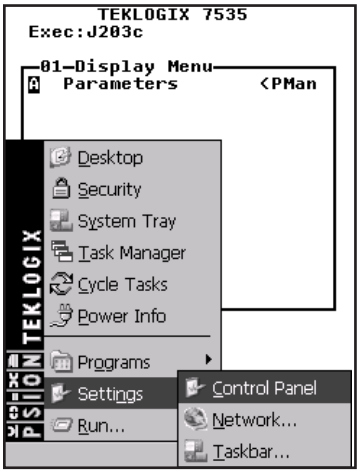

Figure 4.10 Settings Sub-Menu

Control Panel

The Control Panel contains applets used to configure hardware, the operating system and the shell. If your 7535 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 7535 radio or execute an existing configuration. Refer to “Configuring An IEEE 802.11 Radio Installed In The 7535” 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.

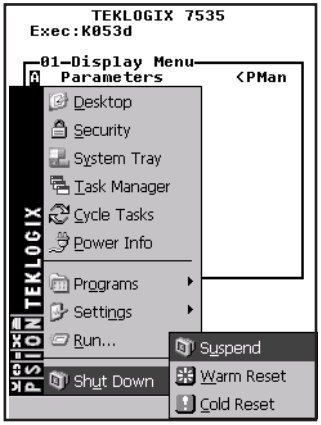

Figure 4.12 Shutdown Sub-Menu

Note: *This menu varies slightly depending on the security level chosen. When the 7535 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 7535 starts Bootloader rather than Windows CE.*

Suspend

The Suspend option suspends the 7535 immediately – this is equivalent to turning the hand-held off.

Warm Reset

The Warm Reset option resets the 7535, leaving all saved files and (registry) settings intact. Any unsaved data is lost.

Cold Reset

The Cold Reset option resets the 7535. 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.)

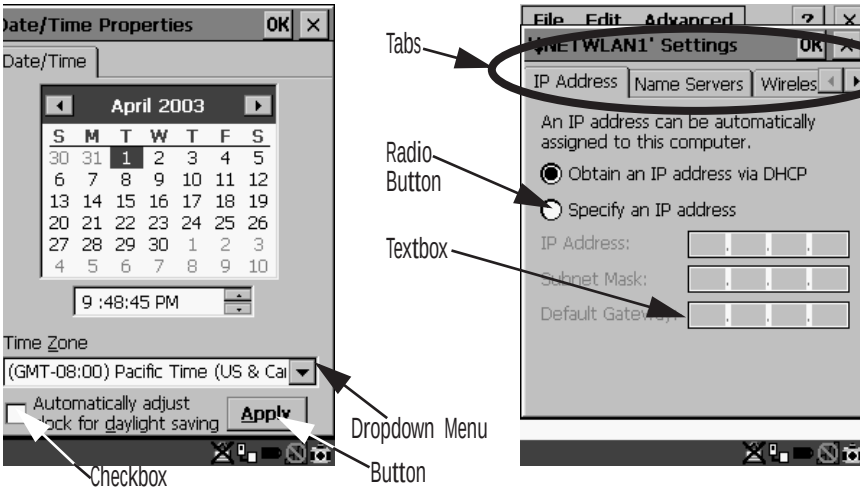

Figure 4.13 Dialogue Boxes

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 7535 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 7535.

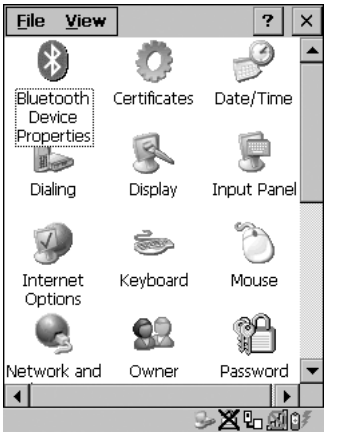


Figure 5.1 Control Panel

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 7535.

Date/Time

Date/Time

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

Display

Display

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

Keyboard

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 & Sounds

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

Mouse Properties

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

Owner

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

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

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 7535 scanner will successfully read.

Network And Dial-up Connections

Displays a network window from which the 7535 radio can be configured and an existing configuration can be executed. Refer to "Configuring An IEEE 802.11 Radio Installed In The 7535" 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.

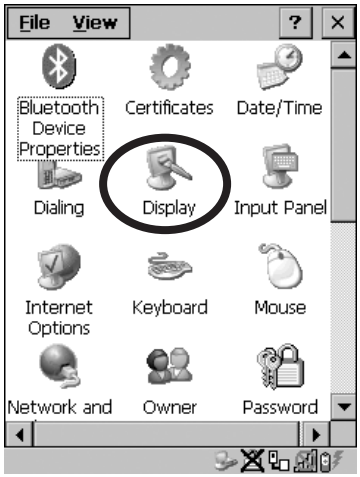


Figure 5.2 Choosing The Display Icon

5.5.1.1 Display Contrast

The Contrast tab allows you to adjust the 7535 display contrast to suit the environment in which you are using the hand-held.

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

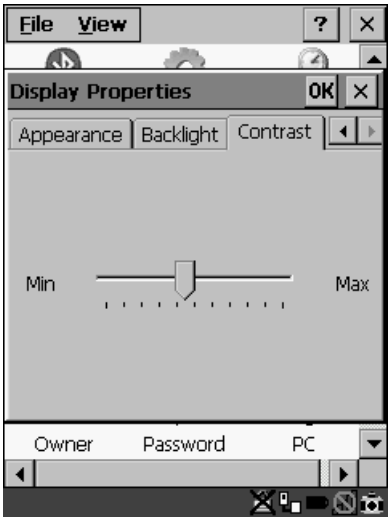


Figure 5.3 Display Contrast Properties

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.

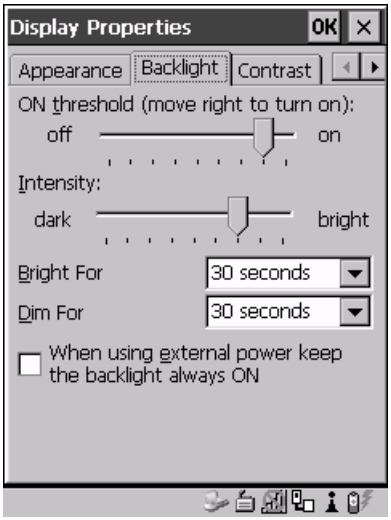


Figure 5.4 Display Backlight Properties

Note: *Backlight changes take affect immediately. You do not need to reset the 7535.*

ON Threshold

The 7535 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 7535 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 7535 is operating with external power*** (not battery power). If the 7535 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.

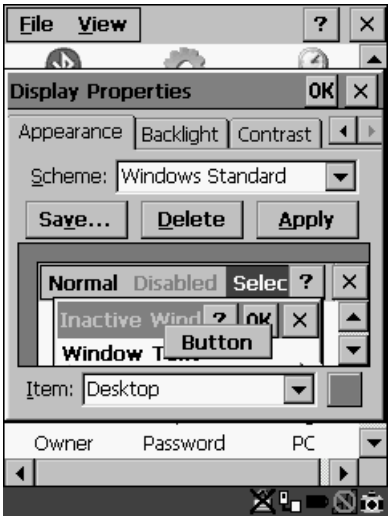


Figure 5.5 Display Appearance Properties

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.

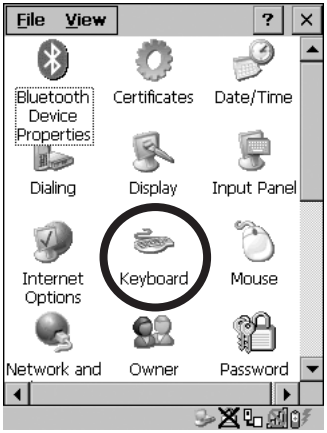


Figure 5.6 Choosing The Keyboard Icon

5.5.2.1 Key Repeat

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

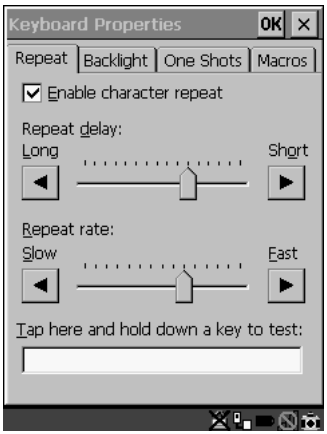


Figure 5.7 Key Repeat Properties

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.

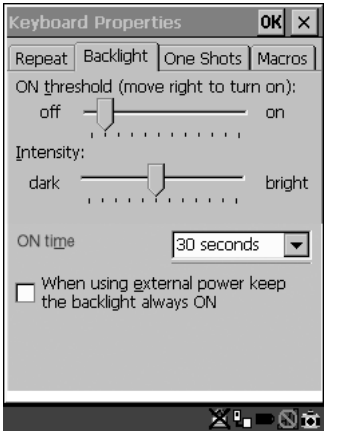


Figure 5.8 Keyboard Backlight Properties

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 7535 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.

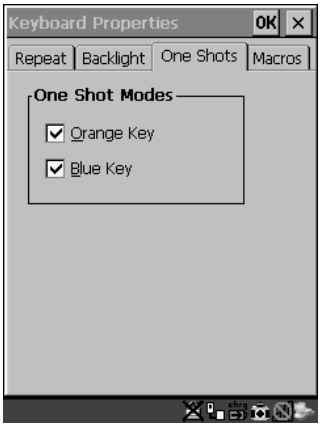


Figure 5.9 Keyboard One Shot Properties

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.

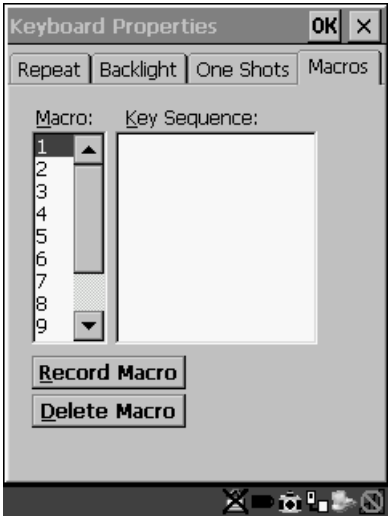


Figure 5.10 Macro Dialogue Box

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.

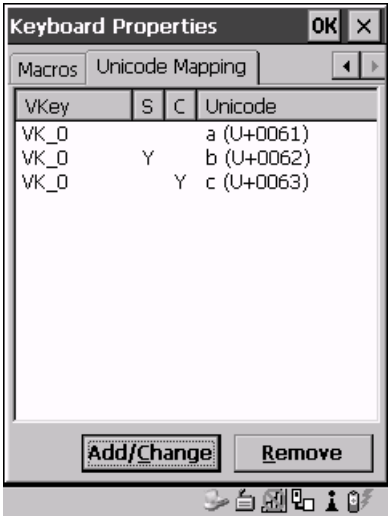


Figure 5.12 Unicode Mapping

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>.

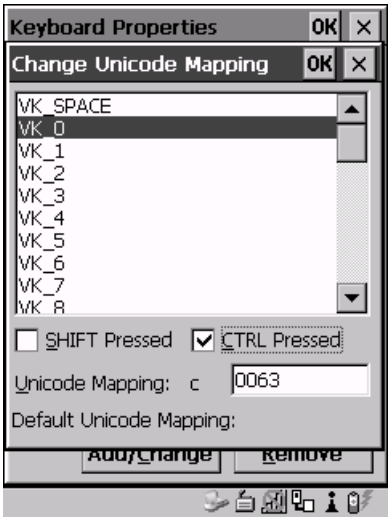


Figure 5.13 Adding And Change Unicode Values

- 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 7535 units. The conditions under which 7535s 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

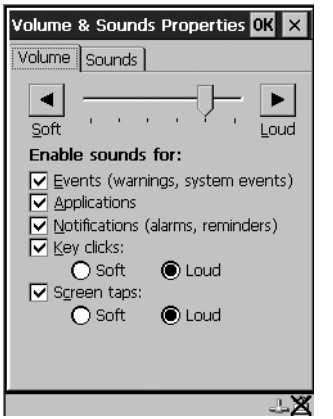


Figure 5.15 Volume Settings

- 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 7535 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.

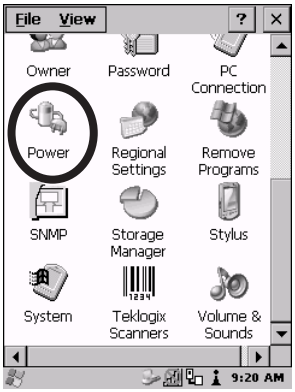


Figure 5.16 Choosing The Power Icon

5.5.4.1 Battery Capacity

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

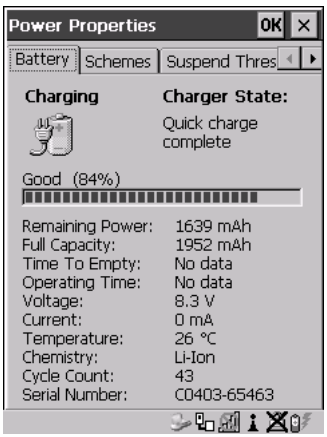


Figure 5.17 Power Battery Properties

The Battery tab details information about the battery installed in your 7535.

5.5.4.2 Power Saving Schemes

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

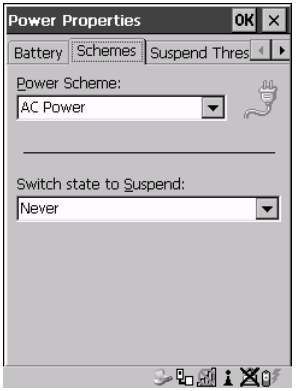


Figure 5.18 Power Scheme Properties

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 7535 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 7535 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.

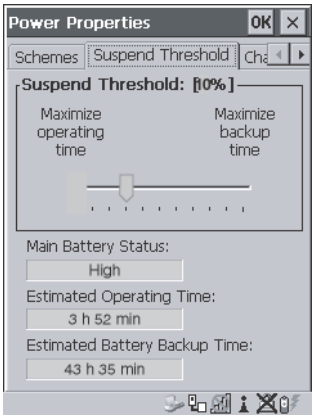


Figure 5.19 Suspend Threshold Properties

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 7535 will enter suspend state. You will not be able to resume until the battery is charged, or you operate the 7535 using AC power. The allowable threshold ranges from 0 to 50%. The default value is 0%.

Note: *The7535 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 7535 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 7535 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 7535 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.

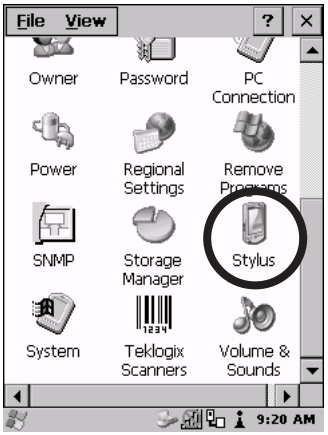


Figure 5.20 Stylus Icon

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.

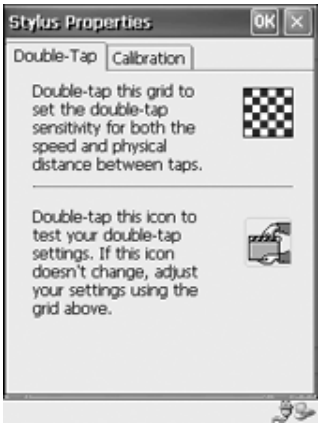


Figure 5.21 Setting Stylus Sensitivity

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.

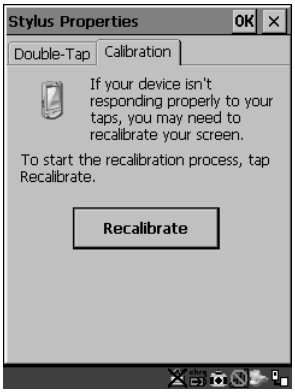
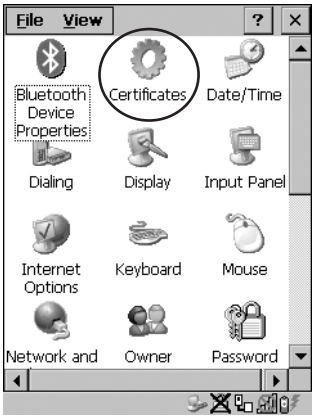


Figure 5.22 Calibrating The Touchscreen

- 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 7535 security.

Figure 5.23 Certificates Dialogue Box

For a detailed description about Certificate setup for both the server and client-side devices (7535s), refer to the following website:

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

Note: *When importing certificates, the 7535 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

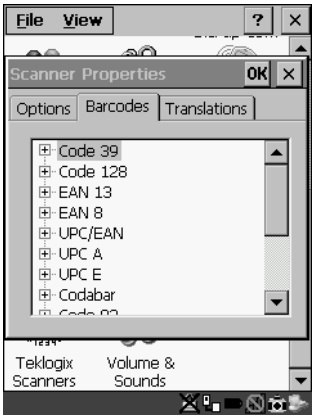


Figure 5.46 Bar Code Selection

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 7535 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)".

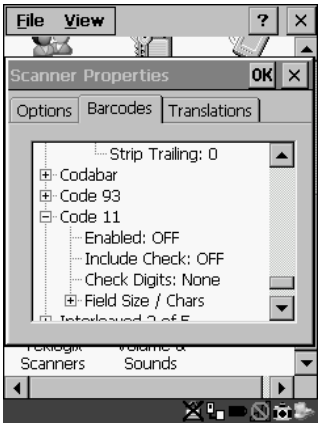


Figure 5.47 Code 39 Bar Code Settings

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 7535 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 7535 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.*