

# 7530 G2 Hand-Held Computer User Manual

June 21, 2006      Part No. 8000081.A



**ISO 9001 Certified  
Quality Management System**





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# TABLE OF CONTENTS

Program License Agreements . . . . .	I
Approval And Safety Summary . . . . .	VII
<b>Chapter 1: Introduction</b>	
1.1 About This Manual . . . . .	3
1.2 Text Conventions . . . . .	4
1.3 7530 G2 Features . . . . .	4
1.4 About The 7530 G2 Hand-Held Computer . . . . .	7
1.4.1 The 7530 G2 Hand-Held Computer . . . . .	8
1.4.2 Regulatory Labels . . . . .	9
<b>Chapter 2: Basic Checkout</b>	
2.1 Preparing The 7530 G2 For Operation . . . . .	13
2.1.1 Equipment You Need To Get Started . . . . .	13
2.1.2 Charging The Battery . . . . .	13
2.1.3 Installing The Battery . . . . .	14
2.1.4 Switching On The Hand-Held . . . . .	14
2.1.5 Attaching Carrying Accessories . . . . .	15
2.2 Calibrating The Touchscreen . . . . .	16
2.3 Configuring An IEEE 802.11 Radio In The Unit . . . . .	17
2.3.1 Assigning An IP Address . . . . .	23
2.3.2 Name Servers Tab . . . . .	24
2.3.3 Advanced Features . . . . .	25
2.4 Checking The Scanner . . . . .	26
2.5 Using Microsoft ActiveSync . . . . .	26
2.6 Resetting The Hand-Held . . . . .	27

## Chapter 3: Getting To Know Your 7530 G2

3.1	Features Of The 7530 G2 . . . . .	31
3.2	The Battery. . . . .	32
3.2.1	Battery Safety . . . . .	32
3.2.2	Removing And Installing The Battery Pack . . . . .	32
3.2.3	Battery Chargers . . . . .	32
3.3	The Keyboard . . . . .	33
3.3.1	Modifier Keys . . . . .	34
3.3.2	The Keys . . . . .	34
3.3.3	Function And Macro Keys . . . . .	36
3.3.4	Alphanumeric Keyboard – 63-Key. . . . .	38
3.3.5	Numeric Keyboard – 37-Key . . . . .	38
3.3.6	The Keypad Backlight . . . . .	40
3.4	The Display . . . . .	41
3.4.1	Adjusting The Display Backlight . . . . .	41
3.4.2	Adjusting The Contrast. . . . .	41
3.4.3	Calibrating The Touchscreen. . . . .	41
3.5	7530 G2 Indicators. . . . .	43
3.5.1	LEDs . . . . .	43
3.5.2	Onscreen Indicators . . . . .	45
3.5.3	Audio Indicators . . . . .	47
3.6	Internal Scanners. . . . .	48
3.6.1	Scanning Techniques. . . . .	49
3.6.2	Scan LED Indicators . . . . .	50
3.6.3	Troubleshooting . . . . .	50
3.6.4	Operating One Dimensional (1D) Internal Laser Scanners . . . . .	50
3.6.5	Operating Internal PDF Laser Scanners . . . . .	51
3.6.6	Operating Internal Two Dimensional (2D) Imager Scanners . . . . .	51
3.7	Connecting & Disconnecting Tethered Peripherals . . . . .	52
3.8	Monitoring The Battery And Maximizing Run Time . . . . .	53
3.8.1	Storing Batteries . . . . .	54
3.9	Monitoring The Network Connection . . . . .	55
3.10	Uploading Data In A Docking Station. . . . .	55
3.11	General Maintenance . . . . .	56
3.11.1	Caring For The Touchscreen. . . . .	56



3.11.2 Cleaning The 7530 G2. . . . .	56
--------------------------------------	----

## Chapter 4: Working With Windows CE

4.1 Navigating In Windows CE And Applications . . . . .	59
4.1.1 Navigating Using A Touchscreen And Stylus. . . . .	59
4.1.2 Navigating Using The Keyboard . . . . .	59
4.2 Working With Files, Folders And Programs . . . . .	60
4.3 The Startup Desktop. . . . .	61
4.3.1 The Desktop Icons . . . . .	62
4.3.2 The Taskbar . . . . .	62
4.4 The Start Menu . . . . .	65
4.4.1 The Desktop . . . . .	66
4.4.2 Security Settings. . . . .	66
4.4.3 Programs. . . . .	68
4.4.4 Shortcuts . . . . .	69
4.4.5 Settings. . . . .	71
4.4.6 Run. . . . .	72
4.4.7 Shutdown . . . . .	72
4.5 Using A Dialog Box. . . . .	73

## Chapter 5: Configuration

5.1 Remote Desktop Connection . . . . .	81
5.2 The TekTerm Application . . . . .	81
5.3 Pocket PC Compatibility . . . . .	81
5.4 The Control Panel . . . . .	82
5.5 Control Panel Icons . . . . .	83
5.6 Basic Setup . . . . .	87
5.6.1 Display Properties . . . . .	87
5.6.2 Keyboard Properties . . . . .	90
5.6.3 Volume And Sound Properties . . . . .	100
5.6.4 Power Management Properties . . . . .	102
5.6.5 Stylus Properties . . . . .	107
5.6.6 Manage Triggers. . . . .	109
5.6.7 Certificate Assignment . . . . .	113
5.7 Bluetooth Setup . . . . .	114
5.7.1 The Devices Tab. . . . .	115

## Contents

5.7.2	The Servers Tab . . . . .	118
5.7.3	Outgoing Tab . . . . .	118
5.7.4	Active Conn. Tab. . . . .	119
5.7.5	The Properties Tab . . . . .	120
5.7.6	Bluetooth GPRS Connection . . . . .	121
5.8	Total Recall . . . . .	126
5.8.1	Creating A Backup Profile . . . . .	126
5.8.2	Restoring A Profile . . . . .	130
5.9	IPv6 Support . . . . .	131
5.10	Narrow Band Radio Setup . . . . .	132
5.10.1	Info Tab. . . . .	132
5.10.2	Channel Tab . . . . .	135
5.10.3	Protocol Tab . . . . .	138
5.10.4	Power Tab . . . . .	141
5.10.5	Radio Tab. . . . .	142
5.11	Scanner Settings . . . . .	143
5.11.1	Bar Codes. . . . .	144
5.11.2	Non-Decoded Scanners . . . . .	145
5.11.3	Decoded (Internal) Scanners . . . . .	156
5.11.4	Decoded (Intermec ISCP) . . . . .	173
5.11.5	Imager . . . . .	187
5.11.6	Options Tab . . . . .	196
5.11.7	Translations. . . . .	198
5.11.8	Ports . . . . .	199
5.12	SNMP (Simple Network Management Protocol) Setup. . . . .	204
5.12.1	Contact Tab. . . . .	205
5.12.2	Communities Tab. . . . .	206
5.12.3	Trap Destination Tab. . . . .	208
5.12.4	Permitted Hosts Tab . . . . .	210

## Chapter 6: Peripheral Devices & Accessories

6.1	External Bar Code Readers . . . . .	215
6.1.1	PowerScan™ Standard, LR and XLR Bar Code Scanners . . . . .	215
6.1.2	Entering Data With The Bar Code Reader. . . . .	215
6.2	RD7950 Integrated UHF RFID Reader . . . . .	215
6.3	Batteries . . . . .	215

6.4	Battery Charging . . . . .	216
6.5	Gang Charger . . . . .	216
6.5.1	Installation . . . . .	216
6.5.2	Operator Controls . . . . .	217
6.5.3	Charge Indicators . . . . .	217
6.5.4	Charging Batteries . . . . .	217
6.5.5	Troubleshooting . . . . .	218
6.6	Combo Charger . . . . .	219
6.6.1	Installation . . . . .	219
6.6.2	Operator Controls . . . . .	220
6.6.3	Using the Combo Charger With The 7530 G2 . . . . .	220
6.6.4	Charging The Spare Battery . . . . .	220
6.6.5	Charge Indicators . . . . .	221
6.6.6	Troubleshooting . . . . .	221
6.7	Combo Dock . . . . .	222
6.7.1	Installation . . . . .	222
6.7.2	Using The Combo Dock . . . . .	222
6.7.3	Network Access . . . . .	222
6.7.4	Troubleshooting . . . . .	222
6.8	Quad Dock . . . . .	223
6.8.1	Installation . . . . .	223
6.8.2	Indicators And Controls . . . . .	223
6.8.3	Using The Quad Dock . . . . .	224
6.8.4	Network Access . . . . .	224
6.8.5	Battery Charging . . . . .	224
6.8.6	Troubleshooting . . . . .	224
6.9	Portable Docking Module (PDM). . . . .	225
6.10	Bluetooth Peripherals . . . . .	228
6.11	The 7530 G2 Picker Cradle . . . . .	228
6.11.1	Picker Cradle Mounting Recommendations. . . . .	229
6.11.2	Wiring Guidelines . . . . .	230
6.11.3	Using The Picker Cradle. . . . .	230
6.11.4	Maintaining The Picker Cradle . . . . .	230
6.11.5	Powered Cradle Installation In High Voltage Vehicles . . . . .	231
6.11.6	Powered Cradle Installation . . . . .	231
6.11.7	The Port Replicator . . . . .	233

## Contents

6.12 Tether Adaptor Cables . . . . .	234
--------------------------------------	-----

## Chapter 7: Specifications

7.1 7530 G2 Hand-Held Computer Specifications . . . . .	237
7.2 Radio Specifications . . . . .	239
7.3 Internal Scanner Port. . . . .	240
7.4 RFID Applications. . . . .	240
7.5 External Scanners . . . . .	240
7.6 Internal Scanner Specifications . . . . .	240
7.6.1 SE 1200 High Performance & Long Range Specs. . . . .	241
7.6.2 SE 1200 Advanced Long Range & SE 2223PDF Specs. . . . .	241
7.6.3 SE 1224HP Scanner Specifications . . . . .	243
7.6.4 SE 1524ER – Extended Range Scanner Specifications . . . . .	244
7.6.5 EV15 Imager Specifications . . . . .	245
7.6.6 SX5303 Imager Specifications. . . . .	247
7.7 1900 mAh Lithium-Ion Battery Pack . . . . .	247
7.8 2400 mAh Lithium-Ion Battery Pack . . . . .	248

## Appendix A: Support Services And Worldwide Offices

A.1 Technical Support . . . . .	A-1
A.2 Product Repairs . . . . .	A-1
A.3 Worldwide Offices. . . . .	A-2

## Appendix B: Port Pinouts

B.1 Tether Port Pinout . . . . .	B-1
B.2 Docking Station Connector . . . . .	B-1
B.3 Battery Contacts . . . . .	B-2
B.4 JB5 To USB Type B Cable - PN CA1020 . . . . .	B-3
B.5 JB5 To RS-232 Serial Cable - PN CA1010 . . . . .	B-3

## Appendix C: USB Setup Application

C.1 USB Setup . . . . .	C-1
C.1.1 Launching The Application . . . . .	C-2
C.1.2 Installation Complete Dialog Box . . . . .	C-3

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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: Kyle Day  
Telephone No.: (859) 372-4329

**Equipment Type/Environment:** Computing Devices

**Trade Name / Model No.:** 7530 G2 Hand-Held Micro-computer with  
Portable Docking Module

**Year of Manufacture:** 2006

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

The 7530 G2 Hand Held Micro-computer with Portable Docking Module, supplied by Pision Teklogix, has been tested and found to comply with **FCC PART 15, SUBPART B - UNINTENTIONAL RADIATORS, CLASS B COMPUTING DEVICES FOR HOME & OFFICE USE.**

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

### Applicant

Signature

Mike Doyle

Full Name

Vice President, Engineering

Position

Mississauga, Ontario, Canada

Place

June 2006

Date

### Legal Representative in U.S.

Signature

Kyle Day

Full Name

Vice President, Channel Sales

Position

Erlanger, KY 41018, USA

Place

June 2006

Date

### CE Marking

When used in a residential, commercial or light industrial environment the product and its approved UK and European peripherals fulfil all requirements for CE marking.

### R&TTE Directive 1999/5/EC

This equipment complies with the essential requirements of EU Directive 1999/5/EC (Declaration available: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Cet équipement est conforme aux principales caractéristiques définies dans la Directive européenne RTTE 1999/5/CE. (Déclaration disponible sur le site: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Die Geräte erfüllen die grundlegenden Anforderungen der RTTE-Richtlinie (1999/5/EG). (Den Wortlaut der Richtlinie finden Sie unter: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Questa apparecchiatura è conforme ai requisiti essenziali della Direttiva Europea R&TTE 1999/5/CE. (Dichiarazione disponibile sul sito: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Este equipo cumple los requisitos principales de la Directiva 1995/5/CE de la UE, "Equipos de Terminales de Radio y Telecomunicaciones". (Declaración disponible en: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Este equipamento cumpre os requisitos essenciais da Directiva 1999/5/CE do Parlamento Europeu e do Conselho (Directiva RTT). (Declaração disponível no endereço: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Ο εξοπλισμός αυτός πληροί τις βασικές απαιτήσεις της κοινοτικής οδηγίας EU R&TTE 1999/5/EK. (Η δήλωση συμμόρφωσης διατίθεται στη διεύθυνση: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM))

Deze apparatuur voldoet aan de noodzakelijke vereisten van EU-richtlijn betreffende radioapparatuur en telecommunicatie-eindapparatuur 199/5/EG. (verklaring beschikbaar: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Dette udstyr opfylder de Væsentlige krav i EU's direktiv 1999/5/EC om Radio- og teleterminaludstyr. (Erklæring findes på: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Dette utstyret er i overensstemmelse med hovedkravene i R&TTE-direktivet (1999/5/EC) fra EU. (Erklæring finnes på: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Utrustningen uppfyller kraven för EU-direktivet 1999/5/EC om ansluten teleutrustning och ömsesidigt erkännande av utrustningens överensstämmelse (R&TTE). (Förklaringen finns att läsa på: [www.pSIONTEKLOGIX.COM](http://www.pSIONTEKLOGIX.COM)).

Tämä laite vastaa EU:n radio- ja telepäätelaitedirektiivin (EU R&TTE Directive 1999/5/EC) vaatimuksia. (Julkilausuma nähtävillä osoitteessa: [www.pSIONteklogix.com](http://www.pSIONteklogix.com)).

Psion Teklogix tímto prohlašuje, že 7530 G2 je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1995/5/ES (NV č. 426/2000 Sb.) a Prohlášení o shodě je k dispozici na [www.pSIONteklogix.com](http://www.pSIONteklogix.com). Toto zařízení lze provozovat v České republice na základě generální licence č. GL-12/R/2000.

Psion Teklogix tímto vyhlasuje, že 7530 G2 splňa základné požiadavky a všetky príslušné ustanovenia Smernice 1995/5/ES (NV č. 443/2001 Z.z.) a Vyhlásenie o zhode je k dispozícii na [www.pSIONteklogix.com](http://www.pSIONteklogix.com). Toto zariadenie je možné prevádzkovať v Slovenskej republike na základe Všeobecného povolenia č. VPR-01/2001.

**!** Use of the 802.11g 7530 G2 Hand-Held in France:  
Owing to French Government restrictions, the 802.11g 7530 G2 Hand-Held Computer is limited to indoor use. It may be used outdoors, on private property, only with prior authorization from the French Ministry of Defense.

## FCC Information To Users

### Federal Communication Commission Interference Statement

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 instructions, 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 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.

## Approvals And Safety Summary

This device complies with 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.

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

### **IMPORTANT NOTE:**

#### **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment under 47 CFR 2.1093 paragraph (d)(2), for use in a PDA. End users must follow the specific operating instructions for satisfying RF exposure compliance.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Some equipment in hospitals and aircraft are not shielded from radio frequency energy. Do not use the 7530 G2 hand-held onboard aircraft, or in hospitals, without first obtaining permission.

Do not use near pacemakers. The product may affect the operation of some medically implanted devices such as pacemakers, causing them to malfunction. Avoid placing your product next to such devices. Keep a minimum distance of 20 cm between the device and the product to reduce the risk of interference. If you have any reason to suspect that interference is taking place, turn off the 7530 G2 hand-held and contact your cardiologist for assistance.



**Note:** *To maintain compliance with the FCC RF exposure guidelines, if you wear the 7530 G2 on your body, use the Psion Teklogix approved carrying case.*

*Use of non-approved accessories may violate FCC RF exposure guidelines.*

## Emissions Information For Canada

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. When using the 802.11 radio option, to prevent radio interference, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada. En cas d'utilisation du module radio 802.11, afin d'éviter toute interférence radio avec le service autorisé, l'appareil doit être utilisé à l'intérieur, tout en tant éloigné de toute fenêtre afin de garantir le maximum de protection. Si cet équipement (ou son antenne émettrice) est installé à l'extérieur, il est alors soumis à licence.

## Warning to Users

This product is a Class I/Class II laser product according to CDRH 21 CFR 1040.10 and 1040.11 and Class I/Class 2 laser product according to IEC 60825-1:1993+A1:1997+A2:2001.



### 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 (magnification devices) with this product will increase eye hazard.



#### DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE

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

## Approvals And Safety Summary



### 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 7530 G2 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 XII. Carefully review all battery safety issues.



### VORSICHT!

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

## LITHIUM-ION BATTERY SAFETY PRECAUTIONS



**Important:** *Before charging or using the battery pack, it is critical that the safety information in this section is reviewed and that all warnings are strictly followed.*



**Warning:** ***BATTERIES ARE CONSIDERED HAZARDOUS WASTE and must be returned to Psion Teklogix for proper disposal. Forward all used batteries to one of the following offices:***

Psion Teklogix Inc.  
2100 Meadowvale Blvd.  
Mississauga, Ontario  
Canada  
L5N 7J9

Psion Teklogix Corp.  
1810 Airport Exchange Blvd.  
Suite 500  
Erlanger, Kentucky  
USA 41018

Psion Teklogix S.A.  
La Duranne, 135 Rue Rene Descartes  
BP 421000, 13591 Aix-En-Provence  
Cedex 3; France





**Warning:** ***TO PREVENT the battery from leaking acid, generating heat or exploding, adhere to precautions listed below.***

- The battery incorporates built-in safety devices. To ensure their proper function, do not disassemble or alter any parts of the battery.
- Do not short-circuit the battery by directly connecting any of the exposed terminals with metal objects such as wire. Do not transport or store the battery together with metal objects such as necklaces, hair pins, etc.
- Do not dispose of batteries in fire.
- Do not use or leave the battery near a heat source such as a fire or heater.
- Do not immerse the battery in water.
- When charging, use the battery charger specifically designed for the battery.
- Do not pierce, strike, throw or step on the battery.
- Do not directly solder the battery.
- Do not connect the battery to an electrical outlet, vehicle cigarette lighter, etc.
- Do not put battery into a microwave oven or pressurized container.
- Do not use the battery in combination with primary batteries (such as dry-cell batteries) or batteries of different capacities or brands.
- Immediately remove the battery from the device or battery charger and stop use if the battery gives off an odor, generates heat, becomes discoloured or deformed, or in any way appears abnormal during use.
- Do not continue charging the battery if it does not recharge within the specified charge time.
- The battery may burst or ignite if the battery leaks. Always ensure that it is away from any exposed flames.
- If leaking electrolyte sprays into your eyes, rinse them with clean running water, and immediately seek medical attention.
- Do not store the battery in extremely high temperatures (e.g., a vehicle, strong direct sunlight, etc.). This may cause the battery to overheat or ignite, and it may also reduce the performance and service life of the battery.
- Do not use in areas where static electricity is greater than what the manufacturer guarantees.
- Keep batteries out of reach of children.

## Approvals And Safety Summary

- Always switch the unit off **before** changing the battery. While the battery is being replaced, the 7530 G2 will save its current data for at least 10 minutes.



### IMPORTANT CHARGER AND AC/DC ADAPTOR SAFETY INSTRUCTIONS

- **SAVE THESE INSTRUCTIONS** – This manual contains important safety and operating instructions for battery chargers and AC/DC adaptors.
- Before using the battery charger or AC/DC adaptor, read all instructions and cautionary markings on the (1) AC/DC adaptor, (2) battery charger, (3) battery, and (4) product using the battery.
- The mains power cord shall comply with national safety regulations of the country where the equipment is to be sold.
- Use of an attachment not recommended or sold by the battery charger or AC/DC adaptor manufacturer may result in fire, electric shock, or personal injury.
- To reduce risk of damage to the electric plug and cord when unplugging the charger or AC/DC adaptor, pull the plug rather than the cord.
- Make sure the cord is positioned so that it is not stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not operate the charger or AC/DC adaptor with a damaged cord or plug. Replace immediately.
- Do not operate the charger or AC/DC adaptor if it has received a sharp blow, been dropped, or otherwise damaged in any way; it should be inspected by qualified service personnel.
- Do not disassemble the charger or AC/DC adaptor; it should be repaired by qualified service personnel. Incorrect reassembly may result in electric shock or fire.
- To reduce risk of electric shock, unplug the charger or AC/DC adaptor from the outlet before attempting any maintenance or cleaning.
- An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in fire or electric shock.
- If an extension cord **must** be used, make sure:
  - The plug pins on the extension cord are the same number, size, and shape as those on the charger or AC/DC adaptor.
  - The extension cord is properly wired and in good electrical condition and that the wire size is larger than 16 AWG.
- Do not expose the charger or AC/DC adaptor to rain or snow.

- Do not use the charger if, after an overnight charge, any of the batteries feel warmer than the charger housing. The charger should be inspected by qualified service personnel.
- Do not use the charger if any of the batteries or the charger get more than lukewarm. Do not use the AC/DC adaptor if it gets more than lukewarm. The equipment should be inspected by qualified personnel.



# INTRODUCTION

# 1

1.1 About This Manual . . . . .	3
1.2 Text Conventions . . . . .	4
1.3 7530 G2 Features . . . . .	4
1.4 About The 7530 G2 Hand-Held Computer . . . . .	7
1.4.1 The 7530 G2 Hand-Held Computer . . . . .	8
1.4.2 Regulatory Labels . . . . .	9



## 1.1 About This Manual

This manual describes how to configure, operate and maintain the Psion Teklogix 7530 G2 hand-held computer.

*Chapter 1: Introduction*

provides a basic overview of the 7530 G2 hand-held.

*Chapter 2: Basic Checkout*

describes the steps required to get the 7530 G2 ready for operation.

*Chapter 3: Getting To Know Your 7530 G2*

describes the 7530 G2 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 dialog box.

*Chapter 5: Configuration*

provides a description of the Windows CE Control Panel and how to use it to configure the 7530 G2, along with the scanners attached to the hand-held, and so on.

*Chapter 6: Peripheral Devices & Accessories*

describes the peripherals and accessories available for your 7530 G2 hand-held.

*Chapter 7: Specifications*

details radio, hand-held computer and battery specifications.

*Appendix A: Support Services And Worldwide Offices*

provides helpdesk phone numbers and provides web-based information to help you search for worldwide office addresses and phone numbers.

*Appendix B: Port Pinouts*

includes 7530 G2 pinouts.

*Appendix C: USB Setup Application*

provides detailed instructions on USB application setup.

## I.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.*

## I.3 7530 G2 Features

- Rugged design:
  - IP67 rating protects against dust and temporary water immersion.
  - drop rating up to 2 meters (6.5 feet) onto concrete.
- Processor and memory:
  - 520 MHz XScale PXA 270 processor
  - On-board RAM: 128MB SDRAM
  - On-board ROM: 64MB FLASH
- Operating System:
  - Windows CE 5.0
- Programming environment:
  - HTML, XML
  - Mobile Devices SDK
  - CE.NET SDK
  - Java, Visual C++
  - Standard protocol APIs - Windows sockets (WinCE)
- Wireless communications:
  - IEEE 802.11g 54Mbps 2.4 GHz Compact Flash radio
  - Narrow Band 403-512 MHz PC Card radio
  - On-board Bluetooth radio 2.4 GHz (10m range)



- Application software:
  - Internet Explorer 6 for CE
  - Wordpad
  - Active Sync
  - Optimized for use with Open TekTerm V2.0
  - ANSI
  - TESS terminal emulations
  - IBM 3270, IBM 5250, HP 2392
- User Interface:
  - Display:
    - 320 x 240 (1/4 VGA) graphic colour TFT
    - 3.5" diagonal portrait mode
    - 64K displayable colours
    - Contrast control and automatic backlight
    - Sunlight readable (for outdoor use)
  - Keyboards:
    - 2 formats available
    - 37-key large button (10 F-keys)
    - 63-key alpha (10 F-keys)
    - Illuminated with EL backlight
    - Ergonomic design with ambidextrous one-hand operation with dual [ENTER] keys
    - Dedicated function keys
    - Hard-capped keys
  - Touchscreen options:
    - Passive stylus or finger operation
    - Signature capture
    - Integral stylus holder
    - Ultra-rugged 5-wire technology
  - Sound:
    - Voice Features - speaker and mic

- Indicators and controls:
  - Internal speaker & beeper with volume control, internal mic
  - Multicolour LEDs for radio transmit/receive, scanning, battery status, user applications
- Internal Bar Code Scanners:
  - 1D & 2D scan engines:
    - Standard
    - Long Range
    - Advanced Long Range
    - Enhanced Standard Range (Fuzzy Logic)
    - PDF417 Raster Laser
  - 1D Auto-Ranging
  - 1D Standard Imager
  - 2D Standard Imager
- RFID Applications (*future release*):
  - Tethered reader/writer
  - Multi-protocol support @ 900MHz/ 868 MHz (future)
- Internal expansion slots:
  - One SD I/O (MultiMediaCard) slot
  - One Type II Compact Flash slot
  - One Type III Extended PC Card slot
- External ports:
  - Tether port with:
    - RS232 serial
    - decoded/undecoded scanner, printer
    - USB host
  - Docking Station Port with:
    - RS232 serial
    - USB device support
    - USB host support
    - Power in/out

- Freezer option:
  - Heated scan window to reduce fogging
  - Internal heat control optimizes low temperature performance and battery life
- Power management:
  - Up to 12 hr usage Li-Ion standard battery (reduced in freezer applications)
  - Optional High capacity battery (up to 17 hrs) (reduced in freezer applications)
  - Quick swap packs
  - Advanced Smart Battery with gas gauge
  - Built-in fast charger (2hrs)
  - System backup during battery swap (15 min)
  - 1 week real-time clock backup
- Network Management And Security:
  - SNMP MIB 2 support
  - Remote software download
  - Remote WLAN management
  - Enhanced security for 802.11

## **1.4 About The 7530 G2 Hand-Held Computer**

The 7530 G2 is a rugged, Windows CE based hand-held computer. It is designed to withstand the harshest mobile environments including cold environments like freezers, ports and yards. It supports wide area mobile applications and is built using industry standards-based software and hardware components, making it easy to integrate existing or future site infrastructures.

## 1.4.1 The 7530 G2 Hand-Held Computer



Figure 1.1 7530 G2 With 63-Key Keyboard

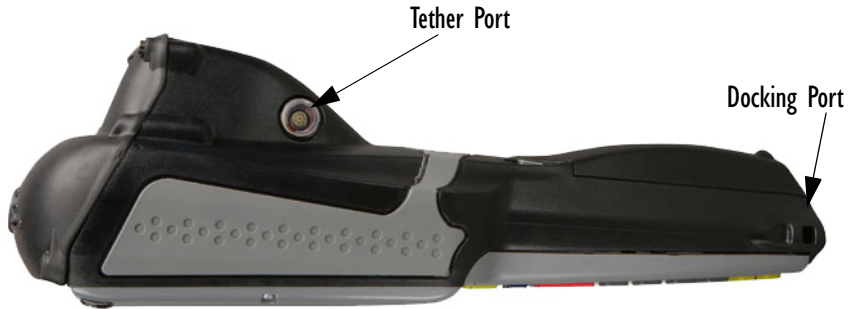


Figure 1.2 7530 G2 Ports

## 1.4.2 Regulatory Labels



This label is affixed below the scanner window.

Figure 1.3 Laser Warning Label

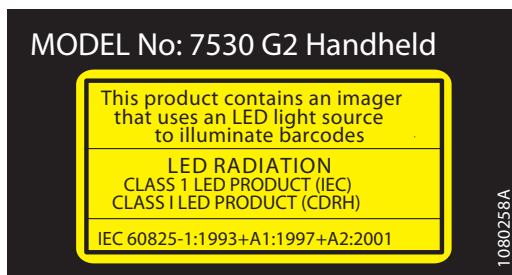


Figure 1.4 LED Radiation Notice Label



# BASIC CHECKOUT

# 2

2.1	Preparing The 7530 G2 For Operation . . . . .	13
2.1.1	Equipment You Need To Get Started . . . . .	13
2.1.2	Charging The Battery . . . . .	13
2.1.3	Installing The Battery . . . . .	14
2.1.4	Switching On The Hand-Held . . . . .	14
2.1.5	Attaching Carrying Accessories . . . . .	15
2.1.5.1	Attaching The Handstrap . . . . .	15
2.1.5.2	Attaching The Pistol Grip . . . . .	16
2.2	Calibrating The Touchscreen . . . . .	16
2.3	Configuring An IEEE 802.11 Radio In The Unit . . . . .	17
2.3.1	Assigning An IP Address . . . . .	23
2.3.2	Name Servers Tab . . . . .	24
2.3.3	Advanced Features . . . . .	25
2.3.3.1	Rearranging Preferred Networks . . . . .	25
2.3.3.2	Deleting A Preferred Network . . . . .	25
2.3.3.3	Changing Network Properties . . . . .	26
2.4	Checking The Scanner . . . . .	26
2.5	Using Microsoft ActiveSync . . . . .	26
2.6	Resetting The Hand-Held . . . . .	27





## 2.1 Preparing The 7530 G2 For Operation

Typically, 7530 G2 hand-helds are configured at the factory and arrive ready for use. Although these hand-helds are 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 service information.

### 2.1.1 Equipment You Need To Get Started

You'll need:

- A 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 #2 Phillips head screwdriver (if you need to attach a carrying strap or pistol grip handle).

### 2.1.2 Charging The Battery



**Important:** *The 7530 G2 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 XII 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.

Batteries can be charged using a gang charger or the unit's internal charger. When using the internal charger, a suitable power source is required. All chargers and docking stations are described in *Chapter 6: Peripheral Devices & Accessories* beginning on page 213.

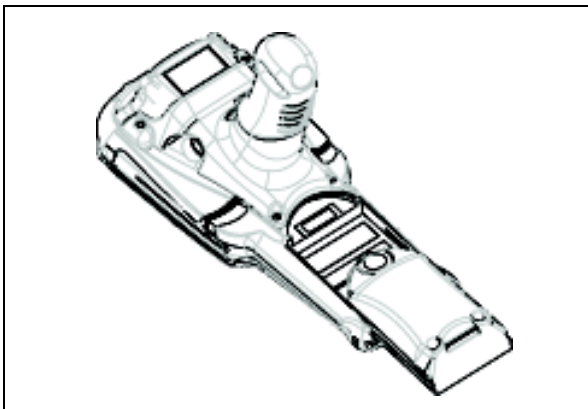


**Note:** *The 7530 G2 Battery Properties dialog box may indicate an incorrect battery capacity until the new battery has been fully charged.*

*It may take several charge/discharge cycles for the battery capacity gauge to register capacity with the full 95% accuracy.*

## 2.1.3 Installing The Battery

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



Keep in mind that if you are using a docking station, you can insert an uncharged battery in the hand-held, 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.



**Important:** *Accidental removal and insertion of the battery during operation may result in the 7530 G2 not booting up normally. Should this occur, remove the battery and allow the internal backup power supply to deplete – approximately 15 minutes. Unsaved data may be lost.*

## 2.1.4 Switching On The Hand-Held

To switch the unit on:

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

A splash screen of the Psion Teklogix logo and the Windows CE logo appears. When Windows CE has successfully loaded, the startup desktop is displayed.



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

## 2.1.5 Attaching Carrying Accessories

Psion Teklogix recommends that a carrying accessory – a handstrap, pistol grip or shoulder strap – be installed on the 7530 G2 before use. If your hand-held is not fitted with a handstrap or pistol grip, you can install either using the carrying accessory kit supplied. You'll need:

- A Phillips head screwdriver.

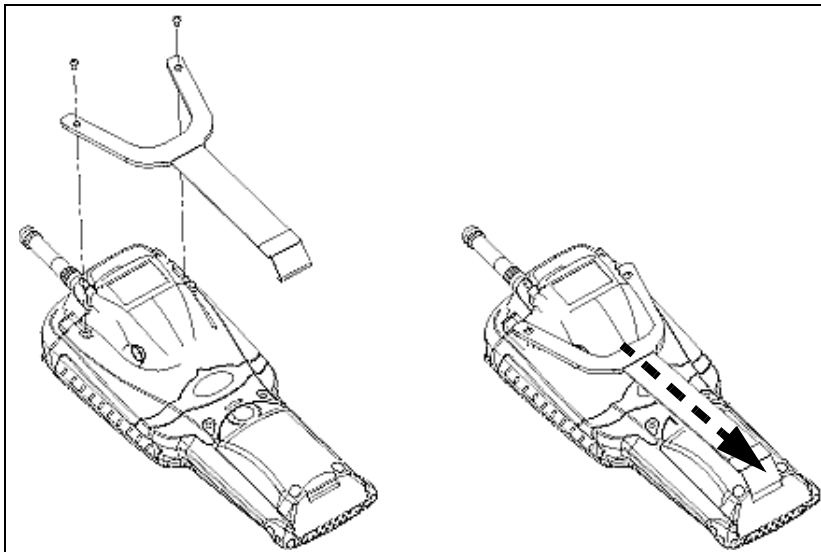


**Important:** *Do not use adhesives such as Loctite to secure screws on carrying accessories. These chemicals may damage the plastic casing.*

### 2.1.5.1 Attaching The Handstrap

Two Phillips head screws are provided with the handstrap.

- Attach the strap to the two threaded inserts located at the back of the 7530 G2 near the top of the unit.
- Stretch the handstrap toward the base of the 7530 G2, and hook the bottom of the handstrap into the slot near the base of the battery pack.



## 2.1.5.2 Attaching The Pistol Grip



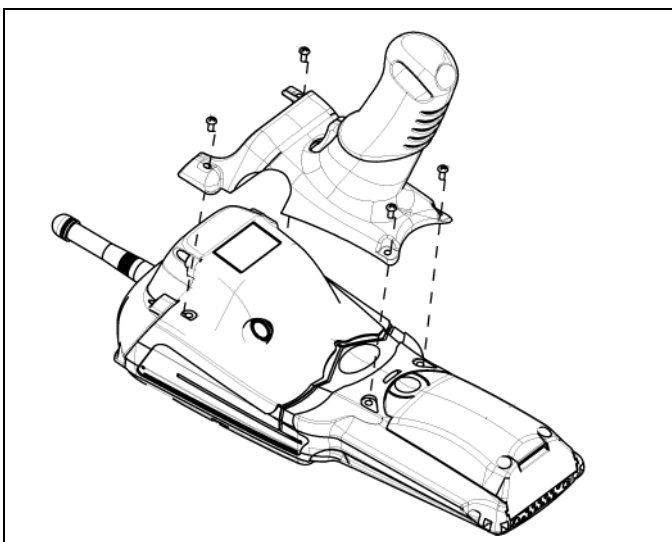
**Note:** A Phillips head screwdriver is required.

The pistol grip is attached to the back of the 7530 G2 using the four threaded inserts in the upper part of the 7530 G2 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 hand-held are aligned with the holes in the pistol grip.



- Using a Phillips screwdriver, securely fasten the pistol grip to the back of the 7530 G2.

## 2.2 Calibrating The Touchscreen

Your 7530 G2 touchscreen will need to be calibrated. Refer to “Calibrating The Touchscreen” on page 41 for details.

## 2.3 Configuring An IEEE 802.11 Radio In The Unit

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



**Important:** *If the 7530 G2 is equipped with a radio that has never been configured, the radio settings dialog box opens automatically when the unit is powered on. In this case, skip to Step 4 on page 19.*



**Note:** *In most situations, the configuration of your 802.11 radio will require parameter setting and access keys from a network administrator. Network administrators should review the detailed security information in this section in order to effectively configure the 802.11 wireless network.*

To configure the 802.11 radio:

1. Press on [BLUE][0] to display the *Start Menu*.

Tap on **Settings>Network and Dial-up Connections**.

If you're using the keyboard, press [BLUE] [0] to display the *Start Menu*. Use the [DOWN] arrow key to highlight **Settings**. Press the [RIGHT] arrow key to display the sub-menu. Highlight *Network*, and press [ENTER].

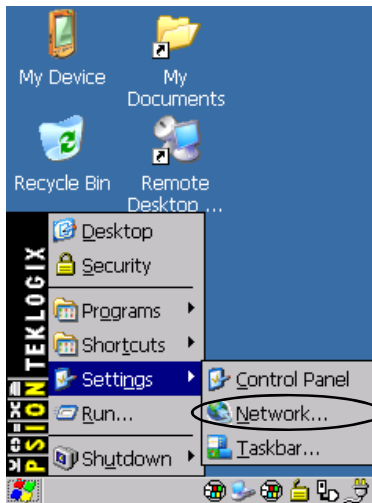


Figure 2.1 Network And Dial-Up Connections

## Configuring An IEEE 802.11 Radio In The Unit

2. Choose the radio icon to open the **802.11 Wireless LAN Settings** window – in the sample screen, this is labelled *PTXCF8385P N1*.

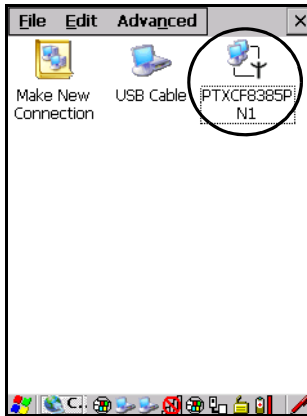


Figure 2.2 802.11 Wireless LAN Settings Window

3. Wireless Statistics Tab  
When you choose the **Wireless LAN** icon, an *802.11 Wireless LAN Settings* window (*PTXCF8385P N1* in the sample below) is displayed.

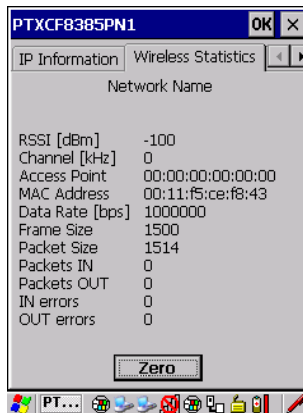


Figure 2.3 Wireless Statistics

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

- Display the next tab in this window – *Wireless Information*.

#### 4. Wireless Information Tab

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



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

**Connect button** – To force connection to a specific, existing network, highlight the network to which you want your 7530 G2 to connect, and tap on the **Connect** button.

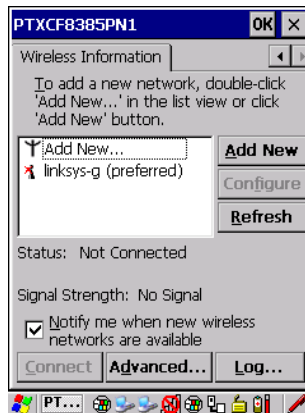


Figure 2.4 Wireless Information Tab

This tab lists available networks – any access points that are broadcasting an SSID, and it lists preferred networks – networks that you have configured. Since access points are generally secure, they will most likely not be listed here. By default, 7530 G2 attempts to connect to preferred networks. This behaviour can be changed by enabling *Automatically connect to non-preferred networks* in the *Advanced* dialog box (page 25).

- To add a new configuration, tap on the **Add New** button. A blank *Wireless Properties* dialog box is displayed.

## 5. Wireless Properties

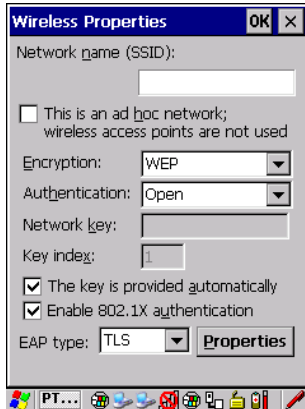


Figure 2.5 Wireless Properties Dialog Box

### Network name (SSID):

- Type the appropriate SSID (Service Set Identifier) in the *Network name (SSID)* text box at the top of this dialog box.

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



**Important:** *Keep in mind that the 7530 G2 will only communicate with access points that are configured with the same SSID.*

### Ad Hoc And Infrastructure:

If you are using an *Infrastructure* network – one in which 7530 G2s must pass data through an access point – leave the checkbox next to *This is an ad hoc network* blank.

If you are using an *Ad Hoc* network – a network in which 7530 G2s pass data directly to other 7530 G2s without an access point – add a checkmark in the checkbox next to *This is an ad hoc network* to enable *Ad Hoc*.

### Encryption

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





**Note:** *WEP cannot be disabled if you are using WPA or WPA-PSK authentication.*

*TKIP* (Temporal Key Integrity Protocol) is an encryption protocol included as part of the IEEE 802.11 standard for wireless LANs. Designed to enhance WEP, TKIP uses the original WEP encryption but ‘wraps’ additional code at the beginning and end to encapsulate and modify it, encrypting each data packet with a unique encryption key.

### **Authentication**

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

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

Under *WPA and WPA-PSK* authentication, the use of 802.1x authentication is required. For wireless networks *without* a Remote Authentication Dial-In User Service (RADIUS) infrastructure, WPA supports the use of a pre-shared key. For wireless networks *with* a RADIUS infrastructure, Extensible Authentication Protocol (EAP) and RADIUS is supported.

### **Network Key:**

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

- To assign a Network key, highlight **The key is provided automatically**, and uncheck the checkbox to disable this option.

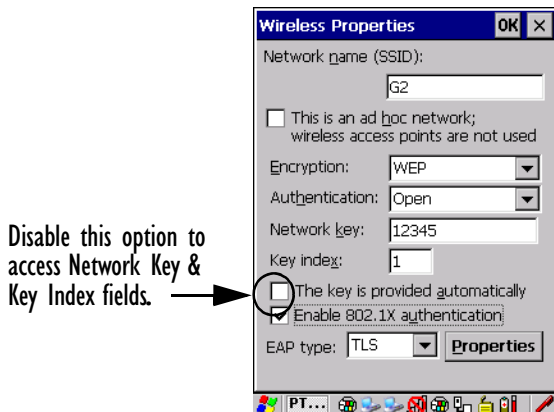


Figure 2.6 Accessing Network Key And Key Index

**Key Index:**

This field is used to identify the WEP key.

- Enter a value from **1** to **4**.

**Enable 802.1x authentication:**

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

- To activate *802.1X*, highlight **802.1x authentication**, and check the checkbox.

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

This dropdown menu lists the EAP types available on your system. The items in this dropdown menu will vary depending on your network setup. Keep in mind also that some authentication protocols require that you select a *Certificate*. By selecting the *Properties* button, you will be able to select a Certificate. “Certificate Assignment” on page 113 provides a website that outlines how to create certificates for your network.

6. Saving and exiting the radio setup.

Once you've completed the configuration, press [ENTER], or tap on **OK**.

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

### 2.3.1 Assigning An IP Address

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

- In the *PTXCF8385P N1 Settings* window, display the **IP Information** tab.

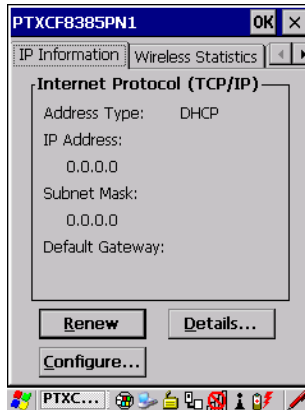


Figure 2.7 IP Information



**Note:** Tapping the **Renew** button forces the 7530 G2 to renew or find a new IP address. This is useful if, for example, you are out of communication range for a longer period of time and your 7530 G2 is dropped from the network.

To define a static IP address:

- Tap on the **Configure** button.

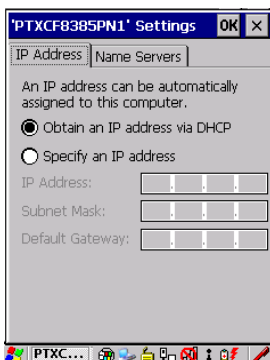


Figure 2.8 Defining An IP Address

- Tap the stylus on the radio button next to **Specify an IP address** to select it.
- Type an *IP*, *Subnet Mask* and *Default Gateway* address in the appropriate fields. Press [ENTER] to save your information.

## 2.3.2 Name Servers Tab



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

- In the *PTXCF8385P N1 Settings* window, display the **IP Information** tab.
- In the *IP Information* tab, tap on the **Configure** button.
- Tap on the **Name Servers** tab to display it.

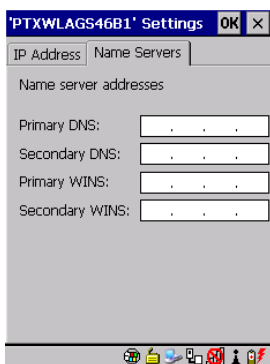


Figure 2.9 Name Servers Tab

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 *###.###.###.###*.

## 2.3.3 Advanced Features

To display the *Advanced Wireless Settings* dialog box:

- Tap on the **Advanced** button in the *Wireless Information* tab. (see Figure 2.4 on page 19).

This window lists the available preferred networks.

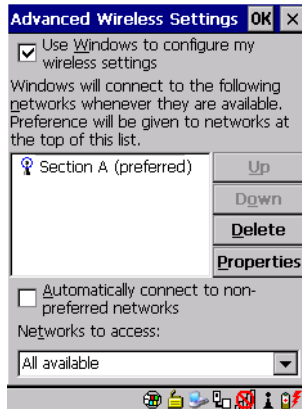


Figure 2.10 Advanced Settings

### 2.3.3.1 Rearranging Preferred Networks

The 7530 G2 attempts to connect with the networks listed in this dialog 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:

- Tap in the *Networks List*, and 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, tap on the **Up** or **Down** button.

### 2.3.3.2 Deleting A Preferred Network

To delete a network from this list:

- In the *networks* list, highlight the **network** that you want to remove.
- Tap on the **Delete** button.

### 2.3.3.3 Changing Network Properties

To change the properties of an existing preferred network:

- Highlight the **network** that you want to modify.
- Tap on the **Properties** button.
- Make any necessary changes in the *Wireless Properties* dialog box, and press [ENTER] to save the changes.

## 2.4 Checking The Scanner



**Note:** *Details about operating and troubleshooting scanners, Imagers and RFID readers are provided under the heading “Internal Scanners” on page 48.*

If your 7530 G2 is equipped with an internal scanner, you can test it to ensure that it is operating properly. Point the scanner window at a bar code that your scanner was designed to decode—for example, a 1D UPC bar code or 2D bar code. Press the SCAN button or pistol trigger, and check for a valid decode on the hand-held’s screen.

Performance is improved if you disable all unneeded bar codes in the *Bar Codes* screen. Review “Scanner Settings” on page 143 for details about bar codes.

## 2.5 Using Microsoft ActiveSync

ActiveSync – Microsoft PC connectivity software – can be used to connect the hand-held to PCs running this software.



**Note:** *Keep in mind that you’ll need to run the USB Setup program to configure your workstation before connecting the 7530 G2 via USB. For information about the USB application, refer to Appendix C: USB Setup Application.*

By connecting the 7530 G2 to a PC with a cable and running ActiveSync on the PC, you can:

- View 7530 G2 files from Windows Explorer.
- Drag and drop files between the 7530 G2 and the PC in the same way that you would between PC drives.
- Back up 7530 G2 files to the PC, then restore them from the PC to the hand-held again, if needed, and so on.

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>

## 2.6 Resetting The Hand-Held

### Warm Reset

To execute a warm reset:

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

A warm reset closes open applications; any unsaved data are lost. Installed programs and saved data are preserved.



*Note:* You do not need to reset your 7530 G2 after configuring the radio.

### Cold Reset

There are two options when executing a cold reset: reset to BootLoader or reset directly to Windows CE operating system.

#### **To execute a cold reset and access the BooSt menu:**

- Press and hold down the left [BLUE] key, the [ENTER] key and the [SCAN] key simultaneously for a minimum of six seconds.

After a cold reset, the BooSt menu appears.

- If you want to load the Windows CE operating system, type **1**.
- If you want a clean start, press **!** (that is, the [SHIFT] key and **1**). All data and settings are lost. Files and data stored in flash are preserved.

Once the OS loads, any executables and cab files in the startup folders are run. The cab files are deleted by the cab file installer unless they are marked read-only.





# GETTING TO KNOW YOUR 7530 G2 **3**

3.1 Features Of The 7530 G2 . . . . .	31
3.2 The Battery . . . . .	32
3.2.1 Battery Safety . . . . .	32
3.2.2 Removing And Installing The Battery Pack . . . . .	32
3.2.3 Battery Chargers . . . . .	32
3.3 The Keyboard . . . . .	33
3.3.1 Modifier Keys . . . . .	34
3.3.1.1 Activating Modifier Keys . . . . .	34
3.3.1.2 Locking Modifier Keys . . . . .	34
3.3.2 The Keys . . . . .	34
3.3.3 Function And Macro Keys . . . . .	36
3.3.3.1 Function Keys . . . . .	36
3.3.3.2 Macro Keys . . . . .	37
3.3.4 Alphanumeric Keyboard – 63-Key . . . . .	38
3.3.5 Numeric Keyboard – 37-Key . . . . .	38
3.3.6 The Keypad Backlight . . . . .	40
3.4 The Display . . . . .	41
3.4.1 Adjusting The Display Backlight . . . . .	41
3.4.2 Adjusting The Contrast . . . . .	41
3.4.3 Calibrating The Touchscreen . . . . .	41
3.5 7530 G2 Indicators . . . . .	43
3.5.1 LEDs . . . . .	43
3.5.1.1 Charge LED . . . . .	43
3.5.1.2 Radio Traffic LED . . . . .	44
3.5.1.3 Scan LED . . . . .	44
3.5.1.4 User Application LED . . . . .	44
3.5.2 Onscreen Indicators . . . . .	45
3.5.3 Audio Indicators . . . . .	47
3.5.3.1 Adjusting The Beeper Volume . . . . .	48
3.6 Internal Scanners . . . . .	48
3.6.1 Scanning Techniques . . . . .	49
3.6.2 Scan LED Indicators . . . . .	50
3.6.3 Troubleshooting . . . . .	50

3.6.4	Operating One Dimensional (1D) Internal Laser Scanners . . . . .	50
3.6.5	Operating Internal PDF Laser Scanners . . . . .	51
3.6.6	Operating Internal Two Dimensional (2D) Imager Scanners . . . . .	51
3.7	Connecting & Disconnecting Tethered Peripherals . . . . .	52
3.8	Monitoring The Battery And Maximizing Run Time . . . . .	53
3.8.1	Storing Batteries. . . . .	54
3.9	Monitoring The Network Connection . . . . .	55
3.10	Uploading Data In A Docking Station . . . . .	55
3.11	General Maintenance . . . . .	56
3.11.1	Caring For The Touchscreen. . . . .	56
3.11.2	Cleaning The 7530 G2. . . . .	56

## 3.1 Features Of The 7530 G2

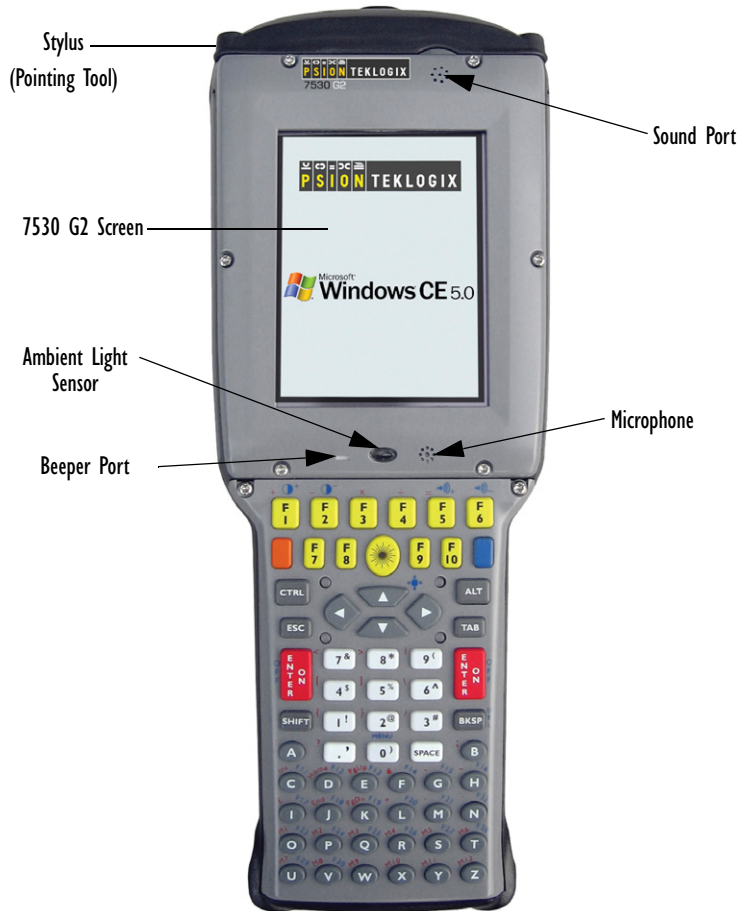


Figure 3.1 Front Of 7530 G2

## 3.2 The Battery

The hand-held operates with a Lithium-Ion battery pack. Preparing the unit for operation requires that a battery pack be charged and installed in the 7530 G2.

### 3.2.1 Battery Safety



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

### 3.2.2 Removing And Installing The Battery Pack



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

#### Removing The Battery Pack

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

#### Installing The Battery Pack

To install the battery pack:

- Slide the battery pack with the contoured plastic facing you into the 7530 G2. Click the battery into place.
- If your computer is equipped with a handstrap, insert the hook at the end of the handstrap into the slot at the base of the battery.

### 3.2.3 Battery Chargers



**Important:** *FOR DETAILED INFORMATION about chargers and docking stations, refer to Chapter 6: Peripheral Devices & Accessories beginning on page 213. For battery safety, refer to “Lithium-Ion Battery Safety Precautions” on page XII.*

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

- 6-Unit Gang Charger (Model #HU3006) – charges up to six Lithium-Ion batteries at one time.
- Portable Docking Module (Model #HU4001 or HU1005 and HU3220) – charges the 7530 G2 battery (with the battery installed in the unit).
- Combo Charger (Model #HU3002) – a desktop charger that charges the 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 hand-helds inserted in the docking station while transferring data through an Ethernet connection.
- Powered Cradle (Model # CV1010 and CV1030) – can charge the 7530 G2 with the battery installed in the hand-held.

It can take from 1.5 to 4 hours to charge a battery. The unit'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 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 44 for details.

## 3.3 The Keyboard

The 7530 G2 offers two types of keyboard layouts – a 63-key and a 37-key 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.

## Modifier Keys

### 3.3.1 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 63-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.

#### 3.3.1.1 Activating Modifier Keys

When a modifier key is not locked ‘on’, it is displayed in *lowercase* letters in the taskbar at the bottom of the hand-held screen. For example, if the [CTRL] key is pressed, *ctrl* key is displayed at the bottom of the unit screen in lowercase letters. When the next key is pressed, the modifier key becomes inactive and is cleared from the taskbar.



#### 3.3.1.2 Locking Modifier Keys

**Note:** *The locking function of the modifier keys can be set up so that pressing one of these keys **once** will lock the key ‘on’. They can also be set up so that they must be pressed **twice** to be locked ‘on’. Refer to “Keyboard One Shot Modes” on page 93 for details.*

When a modifier key is ‘locked’ on, it is displayed in *uppercase* letters in the taskbar. For example, if the [BLUE] key is locked on – it is displayed as **BLUE KEY** in the taskbar at the bottom of the screen.

The locked modifier key will remain active until it is pressed again to unlock or turn it off. Once a modifier key is unlocked, the uppercase representation in the taskbar is cleared.

### 3.3.2 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, dialog box or activity and return to the previous one.

## The [SPACE] Key

Pressing this key inserts a blank space between characters. In a Windows dialog 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 can be remapped for another use.

## 3.3.3 Function And Macro Keys

In addition to the standard keyboard functions (see “The Keyboard” on page 33), the 7530 G2 supports function keys and macro keys.

### 3.3.3.1 Function Keys

#### 63-Key Keyboard Function Keys

The 63-key keyboard is equipped with thirty function keys. Function keys [F1] to [F10] are located in the top two rows of the keyboard and are directly accessible – a key combination is not required. Function keys [F11] to [F30] are colour coded in blue print above the alpha keys and are accessed using a key combination – [BLUE] followed by the appropriate alpha key.

To access function keys [F11] to [F30]:

- Press the [BLUE] key followed by the alpha key to which the function key you want to use is mapped. For example:  
To access function key [F11], press [BLUE] [C].  
To access function key [F12], press [BLUE] [D], and so on.

#### 37-Key Keyboard Function Keys

The 37-key keyboard is equipped with twenty function keys. Function keys [F1] to [F4] are located across the top of the keyboard and function keys [F5] to [F10] are located at the bottom of the keyboard.

Additional function keys – [F11] to [F20] – are colour coded in orange print above function keys [F1] to [F10].

To access function keys [F11] to [F20]:

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





### 3.3.3.2 Macro Keys

**Important:** Refer to “*Keyboard Macro Keys*” on page 94 for details about creating macros.

7530 G2 hand-helds are equipped with a series of macro keys that can be programmed to replace frequently used keystrokes, along with the function of executable keys like the [ENTER] key, the [BKSP] key, any function key and arrow key, and so on.

#### 63-Key Keyboard Macro Keys

63-key (alphanumeric) keyboards have twelve macro keys – [M1] to [M12]. These keys are colour coded in orange print above alpha keys [O] to [Z].

To access a macro key:

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

#### 37-Key Keyboard Macro Keys

37-key (numeric) keyboards are equipped with six macro keys – [M1] to [M6]. Macro keys [M1] to [M2] are directly accessible in the bottom row of the keyboard – a key combination is not required.

Macro keys [M3] and [M4] are colour coded in orange print above macro keys [M1] and [M2].

- To access [M3], press the [ORANGE] key followed by [M1]
- To access [M4], press [ORANGE] [M2].

Macro keys [M5] to [M6] are colour coded in blue print above macro keys [M1] and [M2].

- To access [M5], press the [BLUE] key followed by [M1].
- To access [M6], press [BLUE] [M2].

### 3.3.4 Alphanumeric Keyboard – 63-Key

On 63-key, alphanumeric keyboards, all alphabetic and numeric keys are directly accessible from the keyboard; a key combination is not required.

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 macro keys, 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 (for detailed information, see the *TekTerm Software User Manual, PN 8000073*). Refer to “Function And Macro Keys” on page 36 for details about accessing function keys [F25] to [F30].

### 3.3.5 Numeric Keyboard – 37-Key

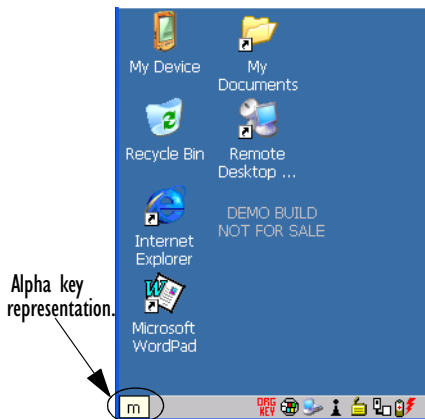
On 37-key 7530 G2s, all alpha characters are printed on the unit plastic in *orange* typeface above the numeric keys. To access an alpha character, you must first press the [ORANGE] key and then press the numeric key above which the alpha character you want to type is printed.

Because the alpha keys on these keyboards 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:** *As you press alpha keys, each is displayed in the left-hand corner of the taskbar to make it easier to determine which letter is currently active.*



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':

- Lock the [ORANGE] key on, and press [2] **twice**.
- Press the [ORANGE] key again to unlock it.

To choose the letter 'c':

- Lock the [ORANGE] key on.
- Press [2] **three** times.
- Press the [ORANGE] key again to unlock it.

## 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 7530 G2 to display the alpha character you've chosen and await the next selection from the same key.



**Note:** Remember that as you choose alpha keys, each is displayed in the left-hand corner of the taskbar to make it easier to determine which letter is currently chosen.

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':

- Lock the [ORANGE] key 'on', and then press the numeric key, [2].
- Press the 'Accept' key [⇒] (zero key) to indicate that the letter 'a' should be accepted and that another letter from the same key will be chosen.

## The Keypad Backlight

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 locked 'on', and press the next numeric key that supports the alpha character you require, **or**
- If you **do not** want to choose any additional alpha characters, unlock the [ORANGE] 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 [2] to type the letter 'a'.
- Press [3] to type 'd', and press [4] to type the letter 'g'.
- To end alpha selection, unlock the [ORANGE] key.

### 3.3.6 The Keypad Backlight



**Note:** *This option may be restricted to supervisory use only.*

The intensity of the keypad backlight and the conditions under which this backlight is activated can be tailored in the *Keyboard Properties* dialog box in the *Control Panel*.



**Note:** *Refer to "Keyboard Backlight" on page 92 for details about this option.*

## 3.4 The Display

7530 G2s 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.

### 3.4.1 Adjusting The Display Backlight

The behaviour of the display backlight can be specified in the *Display Properties* dialog box in the *Control Panel*.





**Note:** Refer to “*Display Backlight*” on page 88 for details about the *Display Properties* dialog box.

### 3.4.2 Adjusting The Contrast



**Note:** In addition to the manual adjustments described in this section, the display contrast can also be adjusted using the *Control Panel*. Refer to “*Display Contrast*” on page 87 for details about this dialog 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:

- Lock the [BLUE] key 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 unlock or turn it ‘off’.



**Note:** Contrast settings are optimized for the maximum readability. However, if the display jitters or flickers, consider adjusting the contrast at power up.

### 3.4.3 Calibrating The Touchscreen

If your 7530 G2 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* dialog box in the *Control Panel* to recalibrate the screen.

## Calibrating The Touchscreen

- In the *Control Panel*, tap on the **Stylus** icon to display the *Stylus Properties* window.

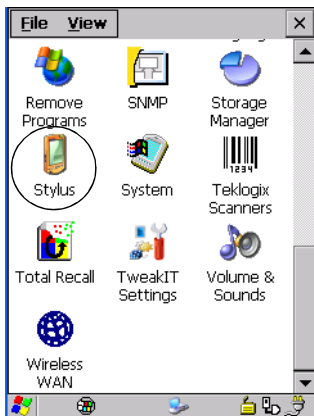


Figure 3.2 Stylus Icon

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



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

## 3.5 7530 G2 Indicators

7530 G2s use LEDs (Light Emitting Diode), onscreen messages and audio tones as indicators.

### 3.5.1 LEDs

Hand-helds are 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 3.3 Keyboard LEDs

#### 3.5.1.1 Charge LED

The lower-right LED is reserved for internal charger/power status. This indicator is active even when the hand-held 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.

**Radio Traffic LED**

Function	Charge LED Behaviour
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.*

**Table 3.1 Charge LEDs**

\* *If the charge fails, refer to the charger troubleshooting sections in 'Chapter 6: Peripheral Devices & Accessories' beginning on page 213 for helpful details.*

**3.5.1.2 Radio Traffic LED**

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



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

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

**Table 3.2 Transmit and Receive LEDs****3.5.1.3 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****3.5.1.4 User Application LED**

This indicator is available for user-loaded custom Windows CE applications. Your supervisor can describe how this LED behaves with your application. Neither Windows CE nor Open Tekterm V2.0 use this LED.



## 3.5.2 Onscreen Indicators

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

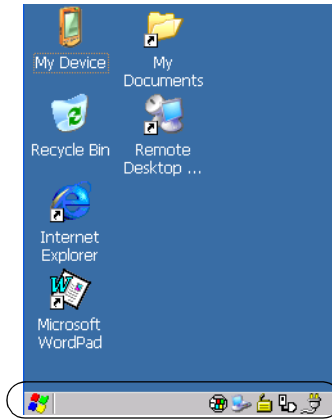


Figure 3.4 Taskbar

The taskbar changes dynamically, and only those icons that are applicable are displayed. For example, if a radio is not installed in your 7530 G2, 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 when pressed, are displayed in the taskbar to indicate that they are active. If a modifier key is locked ‘on’, it is displayed in uppercase characters. For example, if the [BLUE] key is locked on, it is displayed as BLUE KEY in the taskbar. A locked modifier key remains active until it is pressed again to unlock or turn it off.

If a modifier key has been pressed but is *not* locked on, it is displayed in the taskbar in lowercase characters – for example, blue key. It will remain active only until the next key is pressed at which point, the modifier key is turned off.



**Note:** *The locking function of the modifier keys can be set up so that pressing one of these keys **once** will lock the key ‘on’. They can also be set up so that they must be pressed **twice** to be locked ‘on’. Refer to “Keyboard One Shot Modes” on page 93 for details.*

## Onscreen Indicators



### Battery Gauge

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

When the battery level is low – approximately 15 minutes from empty – a warning window pops up. When the battery power is completely depleted, a final warning window indicates that the 7530 G2 will be powered down.

If the 7530 G2 is using external AC power, an AC icon is displayed in the taskbar.



Full



75%



50%



25%



Empty



AC Connection



### Battery Charge

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



### 802.11 Radio Signal Quality

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



Good  
Reception



Weak  
Reception

No Radio  
Link



### Narrow Band Radio Signal Quality

Increasing radio signal quality is represented by vertical bars within this icon.



Good  
Reception



Weak  
Reception

No Radio  
Link



## Tethered Devices

When a peripheral is attached to the tether port and activated, an associated icon appears in the taskbar.



Scanner



USB Device



RFID



Serial Device



## Docking Device

When a hand-held 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)



## Bluetooth Radio



This icon represents the Bluetooth radio installed in your unit.



## Security Level

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

### 3.5.3 Audio Indicators

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



## Adjusting The Beeper Volume

### 3.5.3.1 Adjusting The Beeper Volume

On 63-key keyboards, the volume function keys are accessed by pressing [BLUE] [F5] and [F6].

On 37-key keyboards, the volume function keys are accessed by pressing [BLUE] [F3] and [F4].

To adjust the beeper volume:

- Lock the [BLUE] key 'on' and then, press the *increase volume* function key  or the *decrease volume*  function key until the volume meets your requirements.
- Remember to unlock the [BLUE] key when you've completed the volume adjustment.

## 3.6 Internal Scanners



**Important:** For detailed scanner specifications and decode zone tables, refer to “Internal Scanner Specifications” beginning on page 240.

7530 G2s support a wide range of scanner options to address a variety of user application requirements. The scanner installed in your unit can be configured using the *Scanner Settings* dialog box in the *Control Panel* (see page 143) and the *Manage Triggers* application (see page 109). External, *non-decoded* scanners are also configured through the *Control Panel*.

However, external *decoded* scanners must be configured by scanning special configuration bar codes. In these cases, the scanner manufacturer provides programming manuals for configuration purposes.

- For Symbol decoded scanners, refer to the *LS3408* programming guide.
- For PowerScan (PSC) decoded scanners, refer to the *Powerscan Programming Guide (PSC)*.

Scanner types include:

- **Advanced Long Range:** reads very large 1D bar codes (60 mil+) at very long distances (up to 14m).
- **Long Range:** reads large 1D bar codes (55 mil) at long distances (up to 3m).
- **High Performance:** reads 1D linear bar codes (5 - 55 mil) at medium distances (up to 1m).
- **Extended Range:** reads regular 1D bar codes (5 - 55mil) at short to medium distances (1m), as well as large 1D bar codes (e.g. 55 mil) at long distances.

- RFID: The RD7950 UHF RFID Reader is an EPC-compliant RFID reader which can be integrated with laser bar code scanning or imaging (*for future release*).
- Fuzzy Logic: reads damaged or low contrast regular 1D bar codes (5 - 55mil) at medium distances (up to 1m).
- PDF Raster Laser: reads 2D PDF bar codes or regular 1D bar codes at short to medium distances.
- 2D Imager: reads regular 1D and all 2D bar codes at short to medium distances.
- 1D Imager: reads regular 1D and PDF417 bar codes at short to medium distances.

It is critical that you review the warnings listed under “Warning to Users” beginning on page XI (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 50 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.

### 3.6.1 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 2D 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.
- When using imaging scanners, do not move the scanner while decoding the bar code. Movement blurs the image.
- Hold the scanner farther away for larger bar codes.
- Hold the scanner closer for bar codes with bars that are close together.

## 3.6.2 Scan LED Indicators

The 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.

## 3.6.3 Troubleshooting

If the scanner is not working, investigate the following:

- Is the unit on?
- Check that the bar code symbology being scanned is enabled for the hand-held 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 hand-held.
- Is the laser beam scanning across the bar code?
- Once the scan beam has stopped, check the scanner window for dirt or fogging.

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

- Turn the hand-held 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 146 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.

### 3.6.5 Operating Internal PDF Laser Scanners

This scanner decodes PDF417 two-dimensional bar codes.

- Turn the hand-held 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.

### 3.6.6 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 hand-held 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 will 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 hand-held.



**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 pho-*

## Connecting & Disconnecting Tethered Peripherals

*tographers. 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.*

*Most imagers take several 'snap shots' of the bar code in order to decode it. It is normal for the LEDs to flash two or three times. Hold the unit steady between flashes to improve decode performance.*

- Turn the hand-held 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. Hold the scan trigger or button until a successful or failed scan result is obtained.

Illumination LEDs flashes (typically several times) and a picture of the bar code(s) is taken.

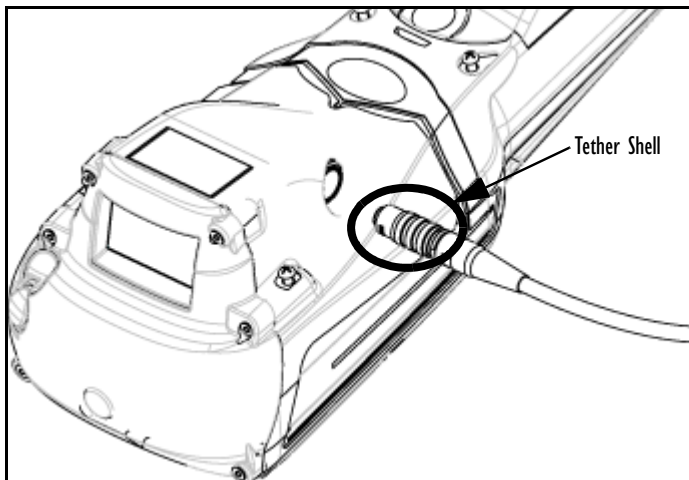
### 3.7 Connecting & Disconnecting Tethered Peripherals

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 unit 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 unit:

- 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.





To remove the peripheral:

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



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

## 3.8 Monitoring The Battery And Maximizing Run Time

Under normal operating conditions, fully charged batteries last for 9 hours. As Lithium-Ion batteries age, their capacity decreases gradually, and they are generally considered depleted after approximately 2 years of use (less than 60% of original capacity remaining). Keep in mind however that heavy usage or operating the 7530 G2 at temperature extremes will shorten the battery life.

Lithium-Ion batteries do not require conditioning cycles and the 7530 G2 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.
- Depending on the ambient light at your site, consider turning off the keypad backlight.

## Storing Batteries

- 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 hand-held 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 dialog 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 (operated in the hand held until the low battery warning appears), and then charged again before use. This recalibrates the gas gauge and allows the internal electronics to determine the actual capacity of the battery.

### 3.8.1 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.

## 3.9 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.

- Tap on the **Radio** icon in the taskbar to display the *Wireless Statistics* dialog box.

To access the radio signal icon using the keyboard:

- Press [BLUE] [0] to display the *Start Menu*.
- Highlight **Shortcuts** and then choose **System Tray** from the sub-menu.
- Use the [LEFT] and [RIGHT] arrow keys to highlight the **radio signal** icon in the taskbar.
- Press [ENTER] to display the *Wireless Statistics* dialog 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.*

## 3.10 Uploading Data In A Docking Station

The Combo Docking and Quad Docking peripherals allow your hand-held to link to an Ethernet network. They are typically used to upload transaction data to a server computer when a radio link is not available. When a 7530 G2 is properly inserted in a docking station, a dock icon is displayed in the taskbar at the bottom of the unit screen. The hand-held also detects the presence of the Ethernet network. Review the documentation provided with the user application installed in your 7530 G2 before performing data uploads.

## 3.11 General Maintenance

### 3.11.1 Caring For The Touchscreen

The touchscreen is covered with 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, ketchup
- sodium hydroxide,
- concentrated caustic solutions,
- benzyl alcohol, and
- concentrated 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.

### 3.11.2 Cleaning The 7530 G2



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

- Use **only** mild detergent or soapy water to clean the hand-held unit.
- Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The 7530 G2 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

4.1 Navigating In Windows CE And Applications . . . . .	59
4.1.1 Navigating Using A Touchscreen And Stylus . . . . .	59
4.1.2 Navigating Using The Keyboard . . . . .	59
4.2 Working With Files, Folders And Programs . . . . .	60
4.3 The Startup Desktop . . . . .	61
4.3.1 The Desktop Icons . . . . .	62
4.3.2 The Taskbar . . . . .	62
4.3.2.1 Using The Taskbar . . . . .	63
4.3.2.2 Customizing The Taskbar . . . . .	63
4.4 The Start Menu . . . . .	65
4.4.1 The Desktop . . . . .	66
4.4.2 Security Settings . . . . .	66
4.4.2.1 Assigning The Supervisor Security Level . . . . .	66
4.4.2.2 Changing A Password . . . . .	67
4.4.2.3 Configuring Security . . . . .	67
4.4.3 Programs . . . . .	68
4.4.4 Shortcuts . . . . .	69
4.4.5 Settings . . . . .	71
4.4.6 Run . . . . .	72
4.4.7 Shutdown . . . . .	72
4.5 Using A Dialog Box . . . . .	73



## 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.



**Note:** *The security level must be set to ‘Supervisor’ in order to access many of the items discussed in this section.*

### 4.1.1 Navigating Using A Touchscreen And Stylus



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

A touchscreen is standard for all 7530 G2s. Each unit is equipped with a *stylus* – a pointing tool that looks like a pen – stored in a slot at the top of the unit. The stylus is used to select objects on the touchscreen.



**Note:** *To prevent damage to the touchscreen, use only the stylus (pen) supplied with your 7530 G2.*

To choose an icon, 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 the touchscreen on your is disabled, you’ll need to use the keyboard to choose icons and navigate dialog boxes, display the desktop, and so on.



**Note:** *Keep in mind that if your 7530 G2 has already been fully configured and your application is automatically launched at startup, you will 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

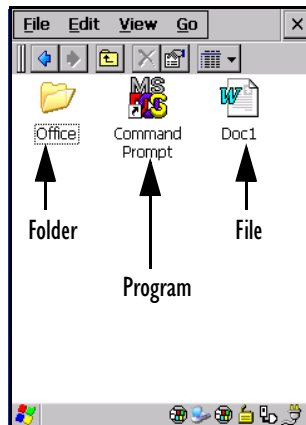
Open file, folder or icon	[ENTER]
Exit & Save	[ENTER]
Close/Exit & Do Not Save	[ESC]
Navigate Dialog Boxes	[TAB] To move cursor up [SHIFT] [TAB] To display the contents of the next 'tab' in a dialog box [CTRL] [TAB]
Select Radio Button/Press Button	[SPACE]
Go to Start Menu	[BLUE][0]

**Table 4.1 Keyboard Navigation**

Unlike a desktop computer, the 7530 G2 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” for additional details about keyboard navigation.

## 4.2 Working With Files, Folders And Programs



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

On a keyboard:

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

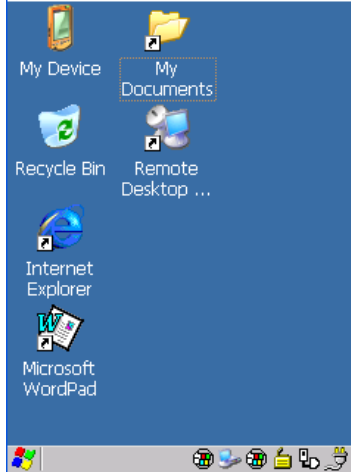


## 4.3 The Startup Desktop

When the 7530 G2 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.*



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

On the keyboard:

- 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.*

## 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 Device

Choosing this icon displays the contents of your 7530 G2 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 60.

### Recycle Bin

The Recycle Bin temporarily stores items that were deleted, allowing you to either permanently delete or restore these items.

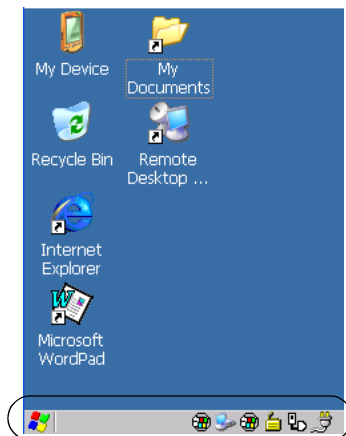
### Internet Explorer

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

### Remote Desktop Connection

This option allows your 7530 G2 to communicate with a remote desktop PC. "Remote Desktop Connection" on page 81 provides a website with step-by-step instructions.

## 4.3.2 The Taskbar



The 7530 G2 is equipped with a taskbar at the bottom of the screen. It displays icons through which you can view the status of various elements of your unit such as

battery capacity and radio signal quality. 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 7530 G2.

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 lock the [CTRL] key “on”, it is displayed as CTRL KEY in the taskbar.

### 4.3.2.1 Using The Taskbar

Using the icons in the taskbar, you can either display the *Control Panel* dialog box associated with an icon, or you can view a tooltip. A *tooltip* provides the status of each icon.

- Tap and hold the stylus on an icon to display the icon’s tooltip. Double-tap on the icon to open the *Control Panel* dialog box associated with the icon.

On the keyboard:

- Press [BLUE] [0] to display the *Start Menu*.
- Choose **Shortcuts** from the *Start Menu*, and then press the [RIGHT] arrow key to display the sub-menu.
- Choose **System Tray** in the sub-menu.
- Use the arrow keys to highlight the icon in the taskbar about which you’d like more information. As each icon is highlighted, a tooltip is displayed.
- To display the associated *Control Panel* dialog box, press [ENTER].

### 4.3.2.2 Customizing The Taskbar

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

- In the *Start Menu*, tap on **Settings>Taskbar**.

If you’re using the keyboard:

- Press [BLUE] [0] to display the *Start Menu*.
- Highlight the **Settings** option, highlight **Taskbar** in the sub-menu, and press [ENTER].

The *Taskbar and Start Menu* dialog box is displayed.



Figure 4.1 Taskbar And Start Menu Settings

### Taskbar General Tab

- Tap on the items you want to display in the taskbar. The checkmark indicates items that will be displayed.

If you're using the keyboard:

- Highlight the options you want to activate, and press the [SPACE] key to select them.

### Taskbar Advanced Tab



- Tap on the **Clear** button to empty the *Documents* folder.
- To display *Control Panel* applets in menu form rather than in a window, tap in the checkbox next to *Expand Control Panel*.

## Taskbar Security Tab



If you check *Disable hot keys*, the *Application from Start menu* field becomes enabled. Use this field to enter the name of the application you want to run when the user presses the *Menu* hot key – [BLUE] [0].

If you have disabled hot keys, hidden the *Start Menu* and have no application configured, the *Menu* hot key brings up the *Security* dialog box.

## 4.4 The Start Menu

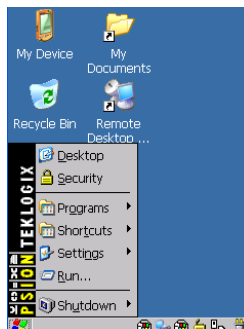


**Note:** *Some of the Start Menu items may be disabled based on the 7530 G2's current security settings.*

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).
- Tap on the item in the menu with which you want to work.



If you're using a keyboard:

- 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 *Security* dialog box, type the letter **s**.

## 4.4.1 The Desktop

Choosing the *Desktop* option from the *Start Menu* displays the 7530 G2 desktop.

## 4.4.2 Security Settings

Choosing the *Security* option from the *Start Menu* displays a dialog box in which you can define the access level for the 7530 G2 – Supervisor or User.

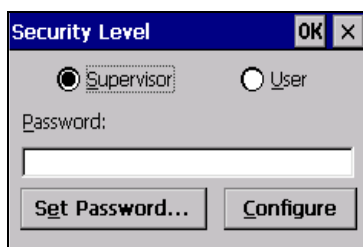


Figure 4.2 Security Levels

### 4.4.2.1 Assigning The Supervisor Security Level

The security level is represented by an icon in the shape of a lock in the taskbar. The security levels define the options accessible to the operator in the *Start Menu* and the *taskbar*. By default, the security level is set to *User*, restricting access to only the most basic *Start Menu* items.

To allow access to all the *Start Menu* and *taskbar* options:

- In the *Security Level* dialog box, tap on the radio button next to *Supervisor*.
- In the *Password* field, type the **Supervisor level** password.
- Tap on **OK** – you can now access all menu items in the *Start Menu* along with the icons in the taskbar.

### 4.4.2.2 Changing A Password



**Note:** *Keep in mind that this is the same password as that assigned through the Password control panel applet.*

- To assign a password, choose a **security level**, and enter the **existing password** in the *Password* field.
- Tap on the **Set Password** button.

A dialog box labelled *Password Properties* is displayed.

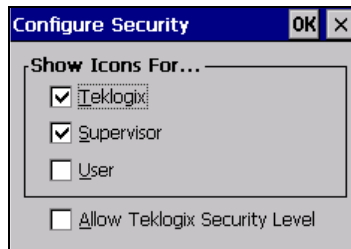
- Type the new password in the *Password:* text box
- In the *Confirm Password:* text box, retype the new password.

### 4.4.2.3 Configuring Security

In the *Security Level* dialog box (see Figure 4.2 on page 66):

- Tap on the **Configure** button.

This dialog box also 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.



**Note:** *It is recommended that you enable 'Allow Teklogix Security Level' so that authorized Psion Teklogix service personnel can access your unit should it require maintenance.*

## 4.4.3 Programs

- Tap on **Programs** to display a sub-menu of options.

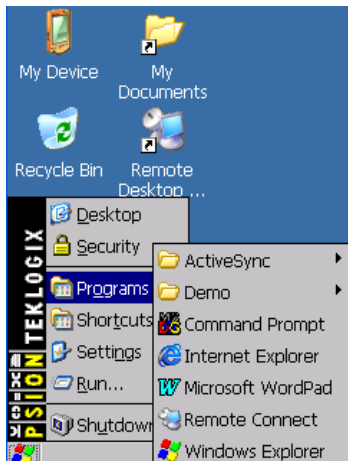


Figure 4.3 Program Sub-Menu

This sub-menu allows you to choose *ActiveSync* and *Command Prompt*, and you can access the *Internet Explorer*, installed applications (e.g., Open Tekterm V2.0), *Remote Desktop Connection* or *Windows Explorer*.

### ActiveSync®

ActiveSync is used to connect your PC to another device.

### Demo

This folder contains the *Demo Imager*, *Demo Scanner*, *Demo Signature* and *Demo Sound* applications. *Demo Imager* is used for simple image-capturing purposes and for displaying bar code data and bar code statistics on the same screen with image data and information. *Demo Scanner* can be used to test how the hand-held reads and writes RFID tags. *Demo Signature* allows you to capture a signature written on the screen with your stylus and save it to a file. *Demo Sound* allows you to record sound.

### 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 7530 G2 is equipped with Microsoft *Internet Explorer* for Windows CE. You can access the *Internet Options* icon through the *Start Menu* under *Settings*>*Control Panel* or by double-tapping on the desktop icon *My Device* and then, double-tapping on the *Control Panel* icon.

## Windows Explorer

The *Windows Explorer* installed on your 7530 G2 is consistent with all Windows CE devices. You can access this option from the *Start Menu* under *Programs*, *Windows Explorer*.

## Remote Desktop Connection

*Remote Desktop Connection* is a 7530 G2 application used to connect to a Windows Terminal Server so that you can run a “session” on the Server machine using the 7530 G2 (Windows CE device). “Remote Desktop Connection” on page 81 provides a website with details about this option.

### 4.4.4 Shortcuts



Figure 4.4 Shortcuts Sub-Menu

## The System Tray

If your touchscreen is disabled, you can use the *System Tray* option to access the icons in the taskbar at the bottom of the screen. The taskbar displays indicators such as a radio signal icon and the security level. These indicators are attached to dialog boxes that provide additional information.

## Shortcuts

- Press [BLUE] [0] to display the *Start Menu*.
- Using the arrow keys, highlight **Shortcut>System Tray**.

When *System Tray* is chosen, the taskbar icons become accessible.

- Use the arrow keys to highlight an icon. As each icon is highlighted, a *tooltip* – a description of the status of the icon – is displayed.
- Press [ENTER] to display the *Control Panel* dialog box associated with the icon.

## Cycle Tasks

When *Cycle Tasks* is selected (and the *Task Manager* is not open), you can cycle through active applications.

To cycle through your active applications:

- Tap on **Shortcuts>Cycle Tasks**, or  
Press [ALT] [TAB].

## The Task Manager

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

- Tap on **Shortcut>Task Manager**, or  
Press [ALT] [ESC].



## 4.4.5 Settings

The **Settings** sub-menu includes the following settings: *Control Panel*, *Network and Dial-up Connections* and *Taskbar and Start Menu*.

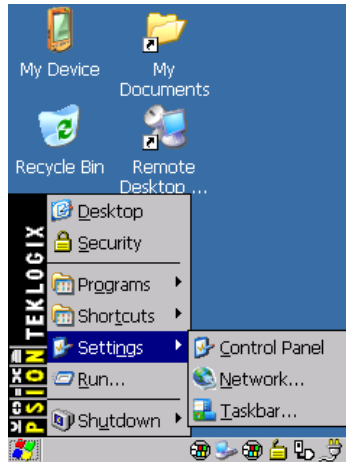


Figure 4.5 Settings Sub-Menu

### Control Panel

The *Control Panel* contains applets used to configure hardware, the operating system and the shell. If your 7530 G2 is running with the Psion Teklogix Tekterm application or another application, additional configuration applets may appear in the *Control Panel*.

### Network And Dial-Up Connections

The *Network and Dial-up Connections* window allows you to configure the 7530 G2 radio or execute an existing configuration. Refer to “Configuring An IEEE 802.11 Radio In The Unit” on page 17 for radio setup details.

### Taskbar And Start Menu

The *Taskbar and Start Menu* option displays a dialog box in which you can customize the taskbar, choosing which options will be displayed. Refer to “Customizing The Taskbar” on page 63 for additional details about this option.

## 4.4.6 Run

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

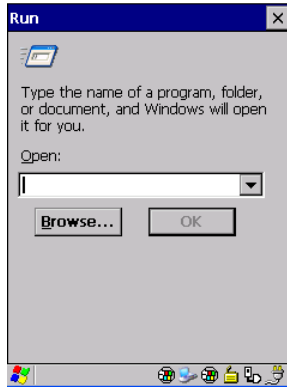


Figure 4.6 Run Option

## 4.4.7 Shutdown

The *Shutdown* menu includes the following options: *Suspend*, *Warm Reset* and *Cold Reset*.

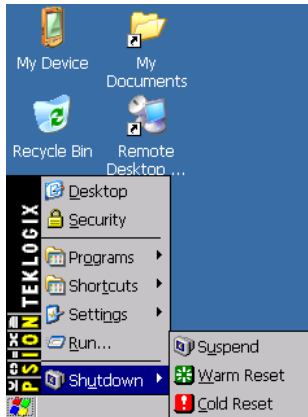


Figure 4.7 Shutdown Sub-Menu



**Note:** *This menu varies slightly depending on the security level chosen. When the 7530 G2 is set to **User level**, the Shutdown option is replaced by **Suspend**. A sub-menu is not available.*

## Suspend

The *Suspend* option suspends the 7530 G2 immediately – this is equivalent to turning the hand-held off.

## Warm Reset

The *Warm Reset* option resets the 7530 G2, leaving all saved files and (registry) settings intact. Any unsaved data is lost.

## Cold Reset

The *Cold Reset* option resets the 7530 G2. Any files not stored in permanent memory are lost; however, the registry settings are saved.

## 4.5 Using A Dialog Box

A dialog box (like the samples in Figure 4.8) appears when you need to make selections and enter further information.

You can move between dialog items by tapping on them with your stylus (provided your unit is equipped with a touchscreen), or by pressing the arrow keys and the [TAB] key. ([SHIFT] [TAB] moves the cursor backwards.)

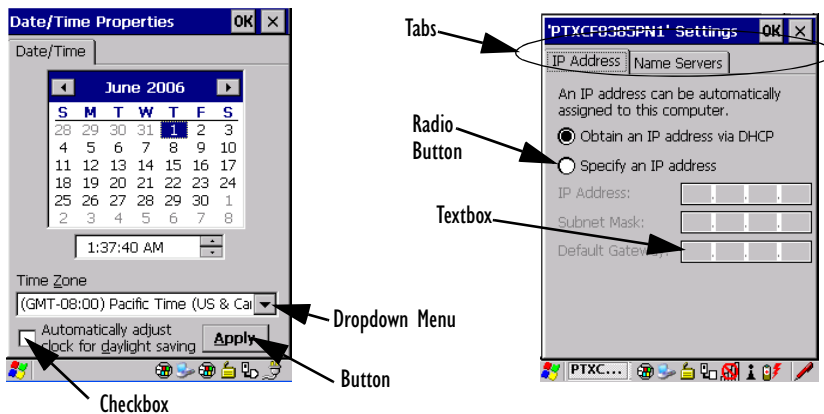


Figure 4.8 Dialog Boxes



**Note:** If your 7530 G2 touchscreen is enabled, you can use the stylus to tap on an element in a dialog box to select or deselect it, display dropdown menu items, save your selections, and so on. If your touchscreen is disabled, follow the directions that follow in this section.

## Using A Dialog Box

Dialog boxes contain one or more of the following elements:

**Tab:** A tab separates different elements of a dialog box. Press the [TAB] key until a tab in the dialog 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 4.8 on page 73 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 dialog 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 dialog box item that is displayed in grey text indicates that it is not currently available.*

5.1 Remote Desktop Connection . . . . .	81
5.2 The TekTerm Application . . . . .	81
5.3 Pocket PC Compatibility . . . . .	81
5.4 The Control Panel . . . . .	82
5.5 Control Panel Icons . . . . .	83
5.6 Basic Setup . . . . .	87
5.6.1 Display Properties . . . . .	87
5.6.1.1 Display Contrast . . . . .	87
5.6.1.2 Display Backlight . . . . .	88
5.6.1.3 Display Appearance . . . . .	90
5.6.2 Keyboard Properties . . . . .	90
5.6.2.1 Key Repeat . . . . .	91
5.6.2.3 Keyboard One Shot Modes . . . . .	93
5.6.2.4 Keyboard Macro Keys . . . . .	94
5.6.2.5 Unicode Mapping . . . . .	96
5.6.2.6 Scancode Remapping . . . . .	98
5.6.3 Volume And Sound Properties . . . . .	100
5.6.3.1 Volume Adjustments . . . . .	101
5.6.3.2 Sound . . . . .	101
5.6.4 Power Management Properties . . . . .	102
5.6.4.1 Battery Capacity . . . . .	102
5.6.4.2 Power Saving Schemes . . . . .	103
5.6.4.3 Suspend Threshold . . . . .	104
5.6.4.4 Calibrate . . . . .	105
5.6.4.5 Advanced Power Properties . . . . .	105
5.6.4.6 Devices . . . . .	106
5.6.5 Stylus Properties . . . . .	107
5.6.5.1 Setting Double-Tap Sensitivity . . . . .	107
5.6.5.2 Touchscreen Calibration . . . . .	108
5.6.5.3 Disabling The Touchscreen . . . . .	108
5.6.6 Manage Triggers . . . . .	109
5.6.6.1 Trigger Mappings . . . . .	110
5.6.6.2 Add And Edit Trigger Mapping . . . . .	111

5.6.7 Certificate Assignment . . . . .	113
5.7 Bluetooth Setup . . . . .	114
5.7.1 The Devices Tab. . . . .	115
5.7.2 The Servers Tab . . . . .	118
5.7.3 Outgoing Tab . . . . .	118
5.7.4 Active Conn. Tab . . . . .	119
5.7.5 The Properties Tab . . . . .	120
5.7.6 Bluetooth GPRS Connection . . . . .	121
5.8 Total Recall . . . . .	126
5.8.1 Creating A Backup Profile . . . . .	126
5.8.2 Restoring A Profile . . . . .	130
5.9 IPv6 Support. . . . .	131
5.10 Narrow Band Radio Setup . . . . .	132
5.10.1 Info Tab . . . . .	132
5.10.2 Channel Tab . . . . .	135
5.10.3 Protocol Tab . . . . .	138
5.10.4 Power Tab . . . . .	141
5.10.5 Radio Tab . . . . .	142
5.11 Scanner Settings . . . . .	143
5.11.1 Bar Codes . . . . .	144
5.11.1.1 The Scanner . . . . .	144
5.11.2 Non-Decoded Scanners . . . . .	145
5.11.2.1 Non-Decoded Options . . . . .	146
5.11.2.2 Code 39 . . . . .	147
5.11.2.3 Code 128 . . . . .	149
5.11.2.4 EAN 13 . . . . .	150
5.11.2.5 EAN 8 . . . . .	151
5.11.2.6 UPC A. . . . .	152
5.11.2.7 UPC E. . . . .	152
5.11.2.8 Codabar . . . . .	153
5.11.2.9 Code 93 . . . . .	153
5.11.2.10 Code 11 . . . . .	154
5.11.2.11 Interleaved 2 of 5 . . . . .	154
5.11.2.12 MSI Plessey . . . . .	155
5.11.2.13 Discrete 2 of 5 . . . . .	155
5.11.2.14 IATA 2 of 5 . . . . .	156
5.11.3 Decoded (Internal) Scanners. . . . .	156
5.11.3.1 Decoded (Internal) Options . . . . .	157



5.11.3.2	Decoded (Internal) Advanced Options . . . . .	157
5.11.3.3	Decoded (Internal) 2D Scanning Options (SE2223 only) . . . . .	159
5.11.3.4	Decoded (Internal) Data Options . . . . .	160
5.11.3.5	Code 39 . . . . .	161
5.11.3.6	Code 128 . . . . .	163
5.11.3.7	EAN 13 . . . . .	164
5.11.3.8	EAN 8 . . . . .	164
5.11.3.9	UPC A . . . . .	164
5.11.3.10	UPC E . . . . .	165
5.11.3.11	UPC/EAN Shared Settings . . . . .	166
5.11.3.12	Codabar . . . . .	167
5.11.3.13	Code 93 . . . . .	167
5.11.3.14	Interleaved 2 of 5 . . . . .	168
5.11.3.15	MSI Plessey . . . . .	169
5.11.3.16	Discrete 2 of 5 . . . . .	170
5.11.3.17	2D PDF-417 (SE2223 only) . . . . .	170
5.11.3.18	2D Micro PDF-417 (SE2223 only) . . . . .	171
5.11.3.19	RSS Code (Reduced Space Symbology) . . . . .	171
5.11.3.20	Composite (SE2223 only) . . . . .	172
5.11.4	Decoded (Intermec ISCP) . . . . .	173
5.11.4.1	Decoded (Intermec) Options . . . . .	173
5.11.4.2	Decoded (Intermec) Advanced Options . . . . .	173
5.11.4.3	Code 39 . . . . .	174
5.11.4.4	Code 128 . . . . .	175
5.11.4.5	EAN 13 . . . . .	177
5.11.4.6	EAN 8 . . . . .	178
5.11.4.7	UPC A . . . . .	178
5.11.4.8	UPC E . . . . .	178
5.11.4.9	UPC/EAN Shared Settings . . . . .	179
5.11.4.10	Codabar . . . . .	180
5.11.4.11	Code 93 . . . . .	181
5.11.4.12	Code 11 . . . . .	181
5.11.4.13	Interleaved 2 of 5 . . . . .	182
5.11.4.14	Matrix 2 of 5 . . . . .	183
5.11.4.15	MSI Plessey . . . . .	183
5.11.4.16	Discrete 2 of 5 . . . . .	184
5.11.4.17	2D PDF-417 . . . . .	185
5.11.4.18	2D Micro PDF-417 . . . . .	185

5.11.4.19	2D Codablock . . . . .	186
5.11.4.20	Telepen. . . . .	186
5.11.5	Imager . . . . .	187
5.11.5.1	Imager Options . . . . .	187
5.11.5.2	Imager Advanced Options . . . . .	189
5.11.5.3	Code 39 . . . . .	191
5.11.5.4	Code 128 . . . . .	191
5.11.5.5	UPC/EAN . . . . .	192
5.11.5.6	Codabar . . . . .	192
5.11.5.7	Code 93 . . . . .	192
5.11.5.8	Interleaved 2 of 5 . . . . .	192
5.11.5.9	RSS Code (Reduced Space Symbology) . . . . .	193
5.11.5.10	Postal: Australian . . . . .	193
5.11.5.11	Postal: Japanese . . . . .	193
5.11.5.12	Postal: Korean . . . . .	193
5.11.5.13	Postal: PlaNET . . . . .	193
5.11.5.14	Postal: PostNET . . . . .	194
5.11.5.15	Postal: Royal. . . . .	194
5.11.5.16	2D DataMatrix. . . . .	194
5.11.5.17	2D Maxicode . . . . .	194
5.11.5.18	2D PDF-417 . . . . .	194
5.11.5.19	2D Micro PDF-417 . . . . .	195
5.11.5.20	2D QR Code. . . . .	195
5.11.5.21	2D Aztec. . . . .	195
5.11.5.22	Composite . . . . .	195
5.11.6	Options Tab . . . . .	196
5.11.7	Translations . . . . .	198
5.11.8	Ports . . . . .	199
5.11.8.1	Tether Port (COM1). . . . .	200
5.11.8.2	Console Port (COM3). . . . .	201
5.11.8.3	Port Replicator Tether (COM6). . . . .	202
5.11.8.4	Port Replicator Port A (COM5). . . . .	203
5.12	SNMP (Simple Network Management Protocol) Setup . . . . .	204
5.12.1	Contact Tab . . . . .	205
5.12.1.1	Contact . . . . .	205
5.12.1.2	Location. . . . .	205
5.12.2	Communities Tab . . . . .	206
5.12.2.1	Adding A Community . . . . .	206

5.12.2.2	Modifying A Community Setting . . . . .	.207
5.12.2.3	Removing An Existing Community . . . . .	.207
5.12.3	Trap Destination Tab . . . . .	.208
5.12.3.1	Enabling Authentication TRAPS. . . . .	.208
5.12.3.2	Adding A Destination . . . . .	.208
5.12.3.3	Changing A Destination . . . . .	.209
5.12.3.4	Removing A Trap Destination . . . . .	.209
5.12.4	Permitted Hosts Tab . . . . .	.210
5.12.4.1	Adding A Host . . . . .	.210
5.12.4.2	Changing A Host . . . . .	.211



## 5.1 Remote Desktop Connection

*Remote Desktop Connection* is a 7530 G2 application used to connect to a Windows Terminal Server so that you can run a “session” on the Server machine, using the 7530 G2 (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>

Contact Psion Teklogix personnel if you need help accessing this site. Refer to Appendix A: “Support Services And Worldwide Offices” at the back of this manual for contact information.

## 5.2 The TekTerm Application

TekTerm is a powerful emulation application ideally suited for real time data transaction applications associated with mainframes and servers. The 7530 G2 includes unique features that support TekTerm—a Psion Teklogix application that has the ability to maintain multiple simultaneous sessions with a variety of host computers. For detailed information, refer to the *TekTerm Software User Manual, P/N 8000073*.

## 5.3 Pocket PC Compatibility

The 7530 G2 supports the AYGShell API set that allows Pocket PC-compatible applications to run on the hand-held. Windows CE includes application programming interface (API) compatibility support for the Microsoft Windows Powered Pocket PC 2002 shell in units running Windows CE.

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-based devices:

[http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dncenet/html/WINCENET\\_CEPC\\_App.asp](http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dncenet/html/WINCENET_CEPC_App.asp)

## 5.4 The Control Panel

The Windows CE *Control Panel* provides a group of icons through which you can set a variety of system-wide properties.



**Note:** *If you are uncertain how to move around a dialog box and make selections, review “Using A Dialog Box” on page 73.*

When the 7530 G2 boots up, the startup desktop (shell) is displayed, and any applications stored in the Startup folder start up immediately.

To access the *Control Panel*:

- Tap on the **Start** button in the taskbar to display the *Start Menu*.
- Tap on **Setting>Control Panel**.

If you're using the keyboard:

- Press [BLUE] [0] to display the *Start Menu*.
- Highlight **Settings** in *Start Menu*, and press the [RIGHT] arrow key to highlight *Control Panel*.
- Press the [ENTER] key.

The *Control Panel* folder contains icons used in the setup of your 7530 G2.

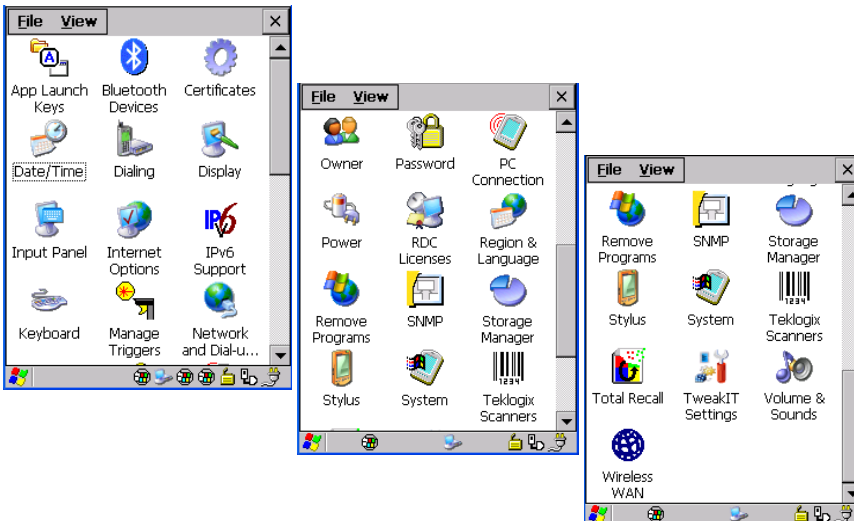


Figure 5.1 Control Panel

## 5.5 Control Panel Icons

The *Control Panel* provides a group of icons that allow you to customize and adjust settings on your 7530 G2.



### App Launch Keys

Allows you to map keys to applications so that you can then launch those applications from a single key-press.



### Bluetooth

Provides options for Bluetooth radio setup. It also provides the capability to use a Bluetooth-enabled cellular phone as a data modem to exchange information with other Bluetooth devices and provide network access.



### 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 113 directs you to the appropriate setup information.



### Date/Time

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



### 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 dialog box.



### Display

Allows you to change the appearance (window colour scheme) of the 7530 G2 desktop.

## Control Panel Icons



### Input Panel

Input Panel

Provides the framework for a Soft Input Panel (SIP) should you need to design your own SIP.



### Internet Options

Internet Options

Provides options to configure your Internet browser. You can determine items such as the default and search page that the browser applies when connecting to the Internet, the cache size, the Internet connection options, and the security level that is applied when browsing.



### IPv6 Support

IPv6 Support

Refers to a new Internet Protocol specification (version 6) that has been published to use 128-bit IP addresses (replacing version 4).



### 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.



### Manage Triggers

Manage Triggers

Allows multiple-scanner trigger management, including the ability to configure each of the trigger buttons. You can configure the trigger ID for each trigger button for both single- and double-click, and the double-click time.



### Narrow Band Radio

Narrow Band Radio

This icon is displayed only if a Narrow Band radio is installed in the 7530. It provides access to the Narrow Band setup screens.



### Network And Dial-up Connections

Network and Dial-u...

Displays a network window from which the 7530 G2 802.11 radio can be configured and an existing configuration can be executed. Refer to “Configuring An IEEE 802.11 Radio In The Unit” on page 17 for details.





## 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 66 for details.



## PC Connection

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.



## Power

Power

Displays battery pack power status. (Alternately, battery status can be accessed through the taskbar.) Additional tabs allow you to determine suspend states, to activate card slots and to enable the built-in, Bluetooth radio. (Refer to “Power Management Properties” on page 102 for details.)



## RDC Licenses

RDC  
Licenses

The Terminal Services license server stores all license tokens that have been installed for a group of terminal servers and tracks licenses issued. The *Remote Desktop Licenses* (RDC) application displays license ‘tokens’ for devices that connect to a Terminal Server.



## Region & Language

Region &  
Language

Allows you to specify the local language that is to be displayed on the hand-held screen along with the format of numbers, currency, time and date for your region.

## Control Panel Icons



Remove Programs

### 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.



SNMP

### SNMP

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



Storage Manager

### Storage Manager

Allows the user to view information about the storage devices that are present, such as SD-MMC flash cards.



Stylus

### Stylus

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

In the *Calibration* tab, you can recalibrate your touchscreen by tapping on the Recalibrate button and following the directions on the screen.



System

### System

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



Teklogix Scanners

### Teklogix Scanners

Provides scanner parameters and the bar code symbologies that the 7530 G2 scanner will successfully read.



Total Recall

### Total Recall

Provides access to a backup and restore utility to maintain applications and settings over cold reboots.



TweakIT Settings

### TweakIT Settings

Allows you to change Advanced System Settings (interface, network, and servers), User System Settings (display font size), and provides the Registry Editor.



## Volume & Sound

Allows you to adjust the volume of the sound emitted to indicate events like warnings, key clicks and screen taps.



## Wireless WAN

Provides access to technology like GSM/GPRS and CDMA which allows wide area networking capability such as internet browsing via GSM/GPRS.

# 5.6 Basic Setup

## 5.6.1 Display Properties

- In the *Control Panel*, choose the **Display** icon.

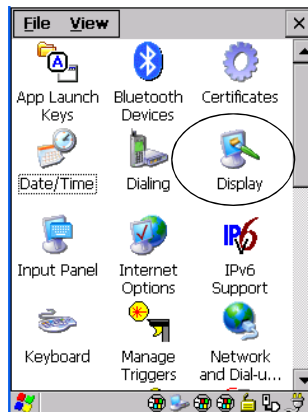
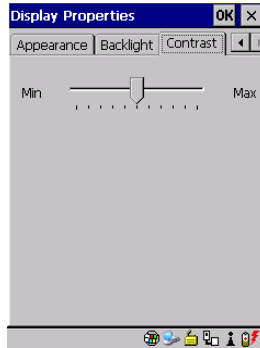


Figure 5.2 Choosing The Display Icon

### 5.6.1.1 Display Contrast

The *Contrast* tab allows you to adjust the 7530 G2 display contrast to suit the environment in which you are using the hand-held. The contrast control can also be used to reduce display flickering that can occur with colour displays in certain lighting conditions

- In the *Display Properties* dialog box, tap on the **Contrast** tab.



- Slide the bar in the *Contrast* tab to the *left* to decrease or darken the display contrast.
- Slide the bar to the *right* to increase or *lighten* the display contrast.

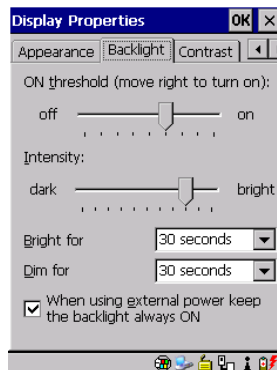
### 5.6.1.2 Display Backlight

The *Display Properties* dialog box in the *Control Panel* allows you to specify the intensity of the backlight along with how long the backlight remains on when the 7530 G2 is not active.



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

- In the *Display Properties* dialog box, tap on the **Backlight** tab.



**Note:** *Backlight changes take effect immediately. You do not need to reset the unit.*



**Important:** *To maximize battery run time, keep the display backlight brightness and active durations as low as possible.*

## ON Threshold

The 7530 G2 is equipped with an ambient light sensor. This sliding bar allows you to determine how dark the ambient light needs to be before the backlight turns on.

## Intensity

This parameter is used to adjust the light intensity of the 7530 G2 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 after the last user action (keypress or scan trigger).

## Dim For

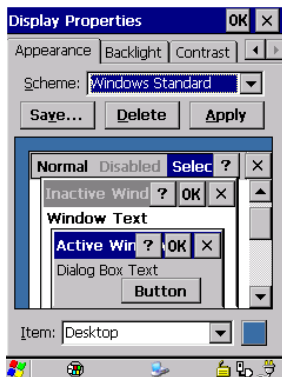
The value chosen from this dropdown menu determines the duration of time that the backlight stays on at half the configured intensity (dimmed backlight) after expiration of the *Bright For* delay and as long as no user action takes place (such as a keypress or scan trigger). At the expiration of the *Dim For* duration, the display backlight shuts off.

## External Power Checkbox

When you select the checkbox next to *When using external power keep the backlight always ON*, the backlight remains ON at the configured intensity when the 7530 G2 is operating with external power (not battery power). If the 7530 G2 is drawing power from its battery, this option is ignored and the other parameters defined in *Display Properties* dialog box take affect.

### 5.6.1.3 Display Appearance

- In the *Display Properties* dialog box, open the **Appearance** tab.



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

### 5.6.2 Keyboard Properties

This icon displays the *Keyboard Properties* dialog 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 dialog box also allows you to define macro keys and remap the keyboard.

- In the *Control Panel*, tap on the **Keyboard** icon.

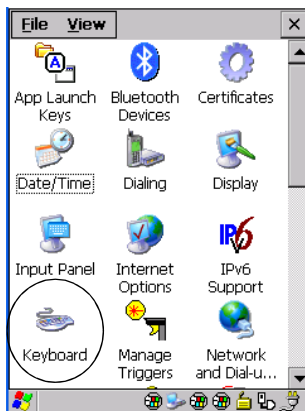
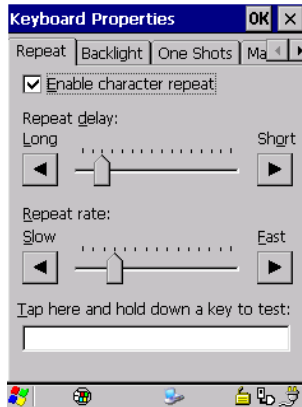


Figure 5.3 Choosing The Keyboard Icon

## 5.6.2.1 Key Repeat

- In the *Keyboard Properties* dialog box, open the **Repeat** tab.



### Repeat Delay

The position of the slider determines how long a key must be held down before it begins to autorepeat.

### Repeat Rate

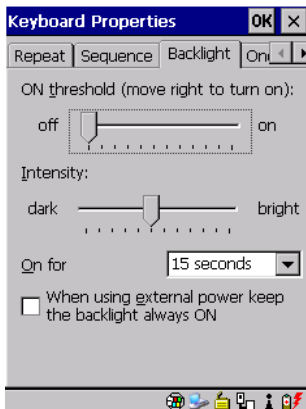
The value assigned for the *Repeat Rate* parameter determines how quickly the key you press repeats and is measured in characters per second (cps). Sliding the bar to the left slows the repeat rate, and sliding the bar to the right increases the repeat rate.



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

## 5.6.2.2 Keyboard Backlight

- In the *Keyboard Properties* dialog box, open the **Backlight** tab.



### ON Threshold

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

### Intensity

This parameter is used to adjust the light intensity of the 7530 G2 keyboard backlight. Sliding the bar to the left darkens the keyboard backlight intensity, and sliding it to the right lightens the intensity.



**Note:** *The keypad backlight maximum brightness will decrease over time as it ages. Use mid-range intensity settings when possible to extend the backlight life span. When the backlight starts to dim, use this parameter to make it brighter.*

### ON For

The value chosen from this dropdown menu determines the duration of time that the keyboard backlight stays on after the last user action (keypress or scan trigger).



### 5.6.2.3 Keyboard One Shot Modes

- In the *Keyboard Properties* dialog box, tap on the **One Shots** tab.

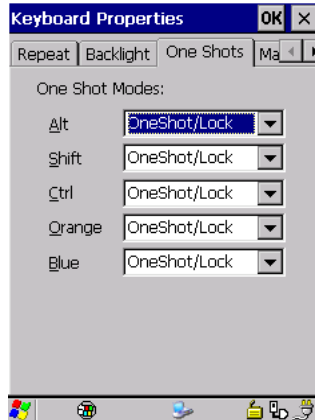


Figure 5.4 Keyboard One Shot Properties

The options in this tab allow you to determine how modifier keys on your 7530 G2 behave. For each modifier key—[ALT], [SHIFT], [CTRL], [ORANGE] and [BLUE]—you have the following options in the drop-down menu: Lock, OneShot, and OneShot/Lock.



**Note:** *The taskbar helps you determine whether or not these keys are locked on. For example, if the [ORANGE] key is locked ‘on’, the taskbar at the bottom of the screen displays it in **uppercase** characters, **ORANGE KEY**. If this key is displayed in **lowercase** characters in the taskbar, you’ll know that the orange key is **not** locked. It will become inactive following a key press.*



**Important:** *Once you’ve assigned a One Shot mode to a modifier key, you need to tap on the OK button at the top of the tab to activate your selection.*

#### Lock

If you choose *Lock* from the drop-down menu, pressing a modifier key **once** locks it ‘on’ until you press the modifier key a second time to unlock or turn it off.

#### OneShot

If you choose *OneShot*, the modifier key remains active only until the next key is pressed.

## OneShot/Lock

*OneShot/Lock* allows you to combine these functions. When you choose this option and you *press the modifier key once*, it remains active only until the next key is pressed.

If you *press the modifier key twice*, it is locked ‘on’, remaining active until the modifier key is pressed a third time to turn it ‘off’.

### 5.6.2.4 Keyboard Macro Keys

- In the *Keyboard Properties* dialog box, open the **Macros** tab.

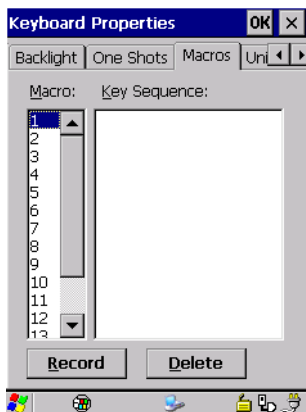


Figure 5.5 Macro Dialog Box

A macro has 200 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 63-key keyboard. On a 37-key keyboard, you can program a maximum of 6 macro keys.

- In the *Macro* menu, highlight a macro key number – for example, macro 1 to assign a macro to macro key [M1]. Tap on the **Record** button.

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



- 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], *or*  
Tap on **Stop Recording**.

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, 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.

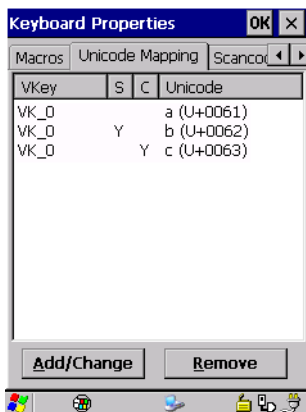
## Deleting A Macro

To delete a macro:

- In the *Macros* tab, highlight the **macro number** you want to delete.
- Tap on the **Delete** button.

### 5.6.2.5 Unicode Mapping

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



**Figure 5.6 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 hexadecimal rather than decimal values.

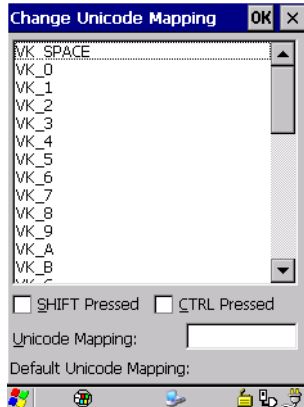
All user-defined Unicode mappings are listed in the *Unicode Mapping* tab in order of virtual key value, and then by order of the shift state. If a Unicode mapping is not listed, the Unicode mapping is mapped to the default Unicode value.

## Adding And Changing Unicode Values



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

- Tap on the **Add/Change** button.



- Highlight a value in the Unicode mapping list – in the sample screen above, a value will be assigned to virtual key 0 (VK 0).
- 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 choose the **Remove** button.

### 5.6.2.6 Scancode Remapping

A scancode is a number that is associated with a physical key on a keyboard. Every key has a unique scancode that is mapped to a virtual key, a function or a macro. *Scancode Remapping* allows you to change the functionality of any key on the keyboard. A key can be remapped to send a virtual key (e.g. VK\_F represents the ‘F’ key; VK\_RETURN represents the [ENTER/ON] key, etc.), perform a function (e.g. turn the scanner on, change volume/contrast, etc.) or run a macro.

There are three different tables of scancode mappings: the *Normal* table, the *Blue* table and the *Orange* table. The *Normal* table defines unmodified key presses; the *Blue* table defines key presses that occur when the [BLUE] modifier is on; the *Orange* table defines key presses that occur when the [ORANGE] modifier is on. The default mappings of these scancodes can be overwritten for each of these three tables using the *Scancode Remapping* tab accessed from the *Keyboard Properties* dialog box.

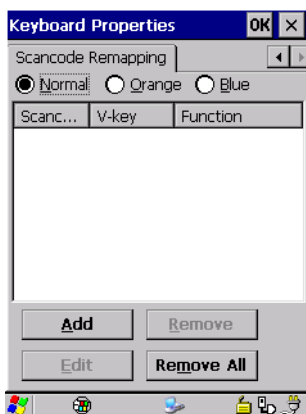


Figure 5.7 Scancode Remapping

The first column in the *Scancode Remapping* tab displays the scancodes in hexadecimal. If the scancode is remapped to a virtual key, that virtual key is displayed in the next column labelled ‘V-Key’. A virtual key that is ‘Shifted’ or ‘Unshifted’ is displayed in the third column labelled ‘Function’.

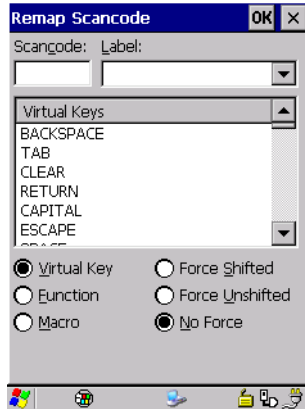
If the scancode is remapped to a function or a macro, the first and second columns remain blank while the third column contains the function name or macro key number (e.g., Macro 2).

## Adding A Remap

To add a new remapping:

- Tap on the **Add** button at the bottom of the dialog box.

The *Remap Scancode* dialog box is displayed.



- Type the scan code in hexadecimal in the field labelled *Scancode*



**Note:** *The Label field displays the default function of the scancode you are remapping.*

### Virtual Key, Function And Macro

The radio buttons at the bottom of the dialog box allow you to define to what the scan code will be remapped: *Virtual Key*, *Function* or *Macro*.

When *Virtual Key* is selected, you can choose to force [SHIFT] to be *on* or *off* when the virtual key is sent. If *No Force* is selected, the shift state is dependent on whether the shift state is on or off at the time the virtual key is sent.

When *Function* is selected, a list of valid functions appears in the dialog box.

When *Macro* is selected, the macro keys available on your unit are listed in the dialog box.

- Choose **Virtual Key**, **Function** or **Macro**.
- Choose a function from the *Function* list in the dialog box, and tap on **OK**.

## Editing A Scancode Remap

To edit a scancode:

- In the *Scancode Remapping* tab, tap the stylus on the remap you want to edit.
- Tap on the **Edit** button, and make the appropriate changes.
- Tap on **OK** to save your changes.

## Removing A Remap

To delete a remap:

- In the *Scancode Remapping* tab, highlight the scancode you want to delete, and tap on the **Remove** button.
- Tap on **OK**.

## 5.6.3 Volume And Sound Properties



**Note:** *Additional sounds can be generated by the application installed in your 7530 G2.*

- In the *Control Panel*, tap on the **Volume & Sounds** icon.

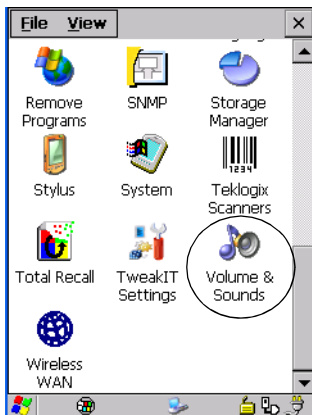
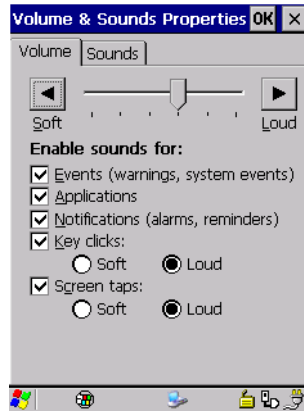


Figure 5.8 Choosing The Volume Icon

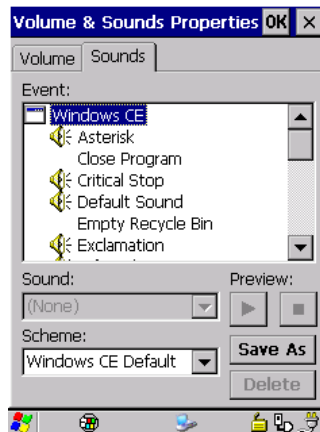


### 5.6.3.1 Volume Adjustments



- Slide the volume button to the left to lower the beeper volume or to the right to increase the beeper volume.
- Under the heading *Enable sounds for*, enable the conditions under which you want the 7530 G2 to emit a beep.

### 5.6.3.2 Sound



The 7530 G2 hand-held computer is equipped with a sound port. This dialog box allows you to determine the sound file that will be emitted from this port.

## 5.6.4 Power Management Properties

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

- In the *Control Panel*, tap on the **Power** icon.

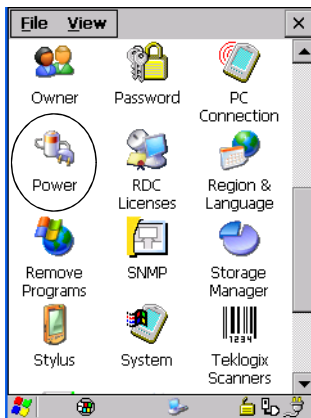
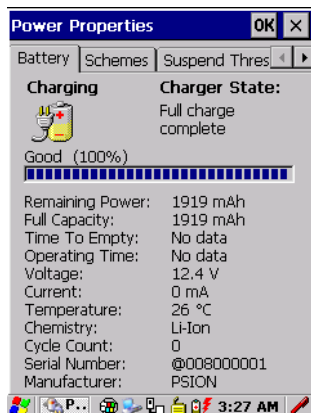


Figure 5.9 Choosing The Power Icon

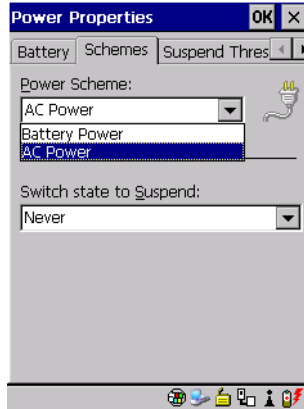
### 5.6.4.1 Battery Capacity

- In the *Power Properties* dialog box, open the **Battery** tab to view battery details.



## 5.6.4.2 Power Saving Schemes

- In the *Power Properties* dialog box, open the **Schemes** tab.



### Power Scheme

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



### Switch State To Suspend

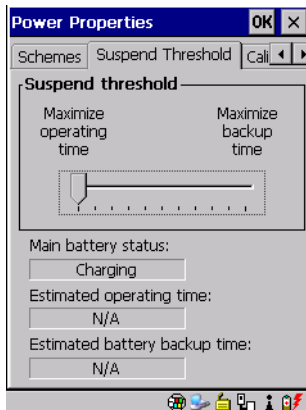
**Important:** *Psion Teklogix recommends setting the Suspend value to 10 minutes. Setting 'Switch State To Suspend' to 'Never' will adversely affect the battery run time.*

*To further reduce power consumption, carefully consider the duration of time that the display backlight is 'on' (see "Display Backlight" on page 88).*

When the 7530 G2 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 value chosen in the *Suspend Timeout* dropdown menu determines when the unit will go to suspend state (appear to be off).

When the time in the *Suspend Timeout* field elapses without any activity, the unit enters *Suspend* state. In *Suspend* state, the 7530 G2 CPU enters a sleep state, and the radio is shut off. The state of the device (RAM contents) is preserved. Pressing [ENTER] wakes the system from suspend state. When the 7530 G2 is in suspend state, the network connection is broken immediately; you must re-establish the network connection.

### 5.6.4.3 Suspend Threshold



The *Suspend Threshold* adjustment tells the system when to shut down when the battery drains. If you choose *Maximum Operating Time*, the unit will run until the battery is completely empty; the RAM is only backed up for a short period of time. If you choose *Maximum Backup Time*, the hand-held shuts off with more energy left in the battery so RAM can be backed up for a longer period of time.



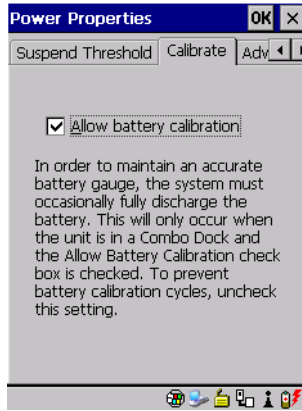
**Important:** *Selecting Maximum backup time will reserve approximately 20% of the battery capacity for memory backup. Once the battery drains the system, RAM memory is lost and the unit must cold boot.*

*In most real-time transaction environments this is not a problem (it only takes a few seconds to cold boot). Batch transaction environments, where data is not saved to a non-volatile memory (such as an SD FLASH card), may need to pay particular attention to this parameter. Psion Teklogix does not recommend the storage of any valuable data in system RAM.*

*The 7530 G2 normal Windows CE environment does not store any critical data in RAM (such as the registry or file system).*

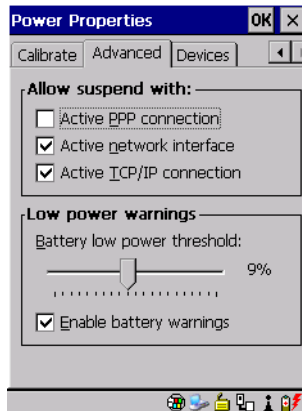
*If the user's application does not save data to RAM, Psion Teklogix recommends keeping the Suspend Threshold setting as low as possible to maximize battery run time.*

### 5.6.4.4 Calibrate



Tapping in the checkbox next to *Allow Battery Calibration* allows the battery to be recalibrated only when necessary if the unit is inserted in a Combo Docking station.

### 5.6.4.5 Advanced Power Properties



#### Allow Suspend With

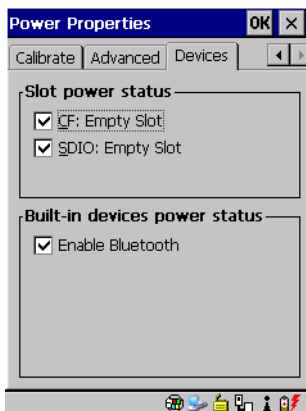
This tab allows you to specify whether or not your unit will enter suspend state while is operating with an active PPP connection, network interface or active TCP/IP connection.

## Low Power Warning

The sliding scale under this section of the tab allows you to specify the remaining battery capacity at which a warning message is displayed on the 7530 G2 screen – 0% to 20%.

### 5.6.4.6 Devices

This tab enables or disables power to individual CF, PC Card and SDIO slots in the unit.



#### Slot Power Status

This tab allows you to enable or disable power to the individual CF, PC Card and SDIO slots in your unit.

#### Built-In Devices Power Status

A checkmark next to *Enable Bluetooth* activates the unit's built-in, Bluetooth radio.

## 5.6.5 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*, tap on the **Stylus** icon.

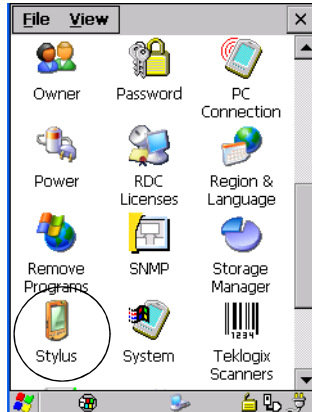
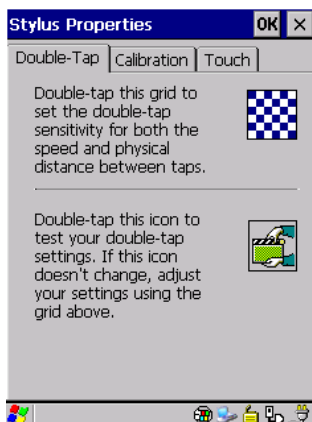


Figure 5.10 Stylus Icon

### 5.6.5.1 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.



## 5.6.5.2 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.

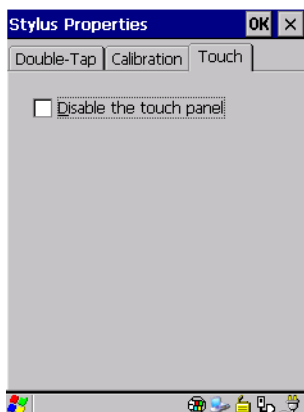
- Tap on the **Calibration** tab, and then on the **Recalibrate** button.



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

## 5.6.5.3 Disabling The Touchscreen

This tab allows you to disable the touchscreen.



- To disable the touchscreen, tap in the checkbox next to *Disable the touch panel*.



## 5.6.6 Manage Triggers

The *Manage Triggers* icon allows you to configure how bar code scanners and other devices such as RFID readers are triggered. You can configure the trigger ID for each trigger button for both single- and double-click, and the double-click time.

- In the *Control Panel*, tap on the **Manage Triggers** icon.

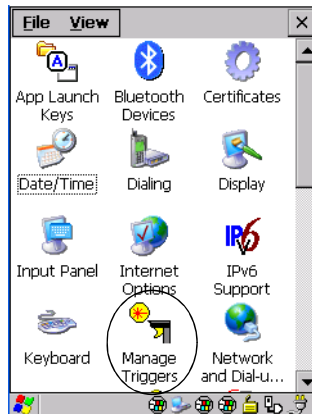
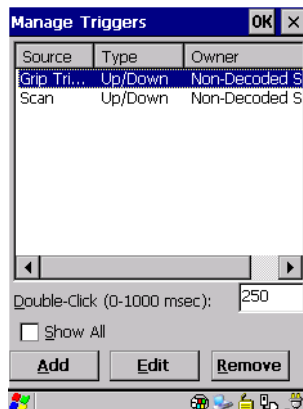


Figure 5.11 Choosing The Manage Trigger Icon

In the *Manage Triggers* screen you'll see a list of trigger mappings.



### 5.6.6.1 Trigger Mappings

A trigger mapping is an association between a particular key on the keyboard and a driver or application, the “owner(s)” of the trigger source. When the specified key is pressed, the owner (for example, a decoded scanner) is sent a message.



**Important:** *It is not possible to have two or more identical mappings—for example [F1] cannot be mapped to the Non-Decoded Scanner twice—even if the trigger type is different.*

*A keyboard key that is used as a trigger source will no longer generate key data or perform its normal function. For example, if the space button is used as a trigger source, it will not be able to send space characters to applications.*

#### Double-Click

When a key is pressed and released, then pressed again within the configured time (between 0 to 1000 milliseconds), a double-click occurs. See also “Trigger Type” on page 112.

#### Show All

By default, the trigger mapping list only shows active mappings. Mappings for drivers or applications that are not currently active are not normally displayed. By checking this checkbox, all mappings, both active and inactive, are displayed.

#### Add

Tapping this button brings up the *Add* mapping dialog (see below), so that you can add new trigger mappings.

#### Edit

Tapping this button brings up the *Edit* mapping dialog, so that you can edit existing trigger mappings.

#### Remove

Tapping this button removes an existing mapping.

#### OK

The *OK* button in the top right of the *Manage Triggers* screen saves all changes made. If the cancel button **X** is tapped instead, or the **[ESC]** key is pressed, all changes made will be discarded.

### 5.6.6.2 Add And Edit Trigger Mapping

- Tap on the **Add** button to add a new trigger map, or on the **Edit** button to edit an existing trigger map.

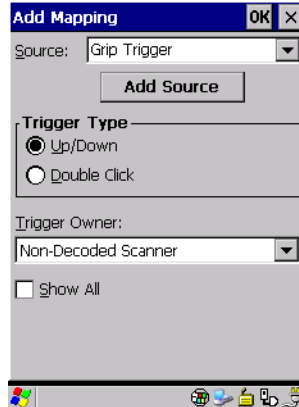


Figure 5.12 Add Trigger Mapping Menus

#### Source

This dropdown list allows you to specify the source of the trigger events, such as a keyboard key [F1], the grip trigger, etc., for the *Trigger Owner* selected.



**Notes:** *It is possible to map the same source to different owners—for example, [F1] can be mapped to both the Imager and Non-Decoded Scanner. If so, both devices/operations will occur simultaneously. This is not recommended in most cases, especially with devices such as Imagers or RFID Readers.*

*It is also possible to map different sources to the same owner—for example, [F2] and [F3] can both be mapped to the RFID File System.*

## Add Source

Only existing trigger sources are shown in the *Source* combo-box. To add a new source to this list, tap on the **Add Source** button. A dialog box pops up, allowing you to select the keyboard key to use as a trigger source.

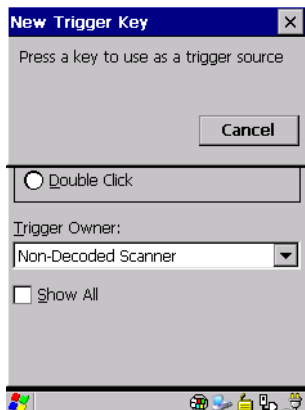


Figure 5.13 Add Source Dialog

## Trigger Type

You can enable either an **Up/Down** or **Double Click** response to a trigger press. Normally, when a trigger (keyboard key, etc.) is pressed and released, a “trigger down” event is sent to the “owner”—that is, the application receiving the trigger press information—followed by a “trigger up”. If *Double Click* is chosen in this menu, when the trigger is pressed, released, and then pressed again, a “double-click” event will occur. If a mapping with the type *Up/down* has also been configured for the same source, it will only receive the first set of trigger events.

## Trigger Owner

This identifies the driver or application receiving the trigger presses.

## Show All

By default, inactive owners are not shown. By checking this checkbox, all owners, both active and inactive, are displayed.

## 5.6.7 Certificate Assignment

- In the *Control Panel*, tap on the **Certificate** icon.

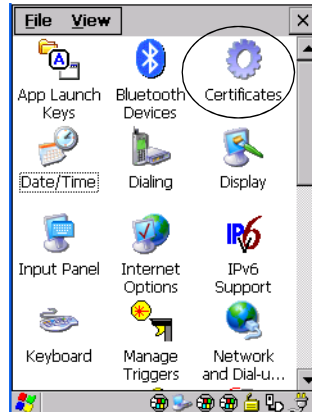


Figure 5.14 Certificates Icon

This dialog box is used in conjunction with 802.1x authentication to enhance 7530 G2 security.



For a detailed description about *Certificate* setup for both the server and client-side devices (7530 G2s), refer to the following website:

[www.microsoft.com/windows2000/techinfo/planning/walkthroughs/default.asp](http://www.microsoft.com/windows2000/techinfo/planning/walkthroughs/default.asp) - "Security Services"



**Note:** When importing certificates, the 7530 G2 only recognizes .cer files.

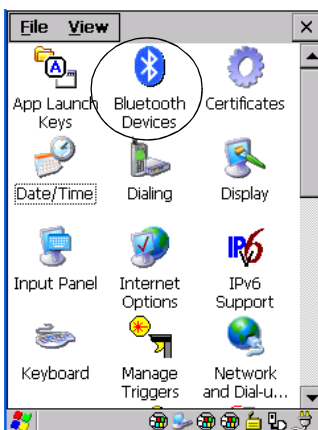
## 5.7 Bluetooth Setup

Bluetooth is a global standard for wireless connectivity for digital devices and is intended for Personal Area Networks (PAN). The technology is based on a short-range radio link that operates in the ISM band at 2.4 GHz. When two Bluetooth-equipped devices come within a 5 meter range of each other, they can establish a connection. Because Bluetooth utilizes a radio-based link, it does not require a line-of-sight connection in order to communicate.



**Note:** *The Bluetooth radio uses an internal antenna.*

- In the *Control Panel*, tap on the **Bluetooth Devices** icon to display the *Bluetooth Control* dialog box.



**Figure 5.15 Bluetooth Icon**

The *Bluetooth Control* dialog box is used to display the other Bluetooth devices with which you can communicate.

## 5.7.1 The Devices Tab



**Note:** If you intend to configure Bluetooth communication with specific devices (e.g., a scanner or printer), turn on the devices and bring them within 5 metres of the hand-held before proceeding with the discovery process described below.



### Scan

- Tap on the **Scan** button to list available devices.



Wait for the 7530 G2 to complete its scan (approximately 20 seconds). When scanning starts, the *Scan* button will change to *Stop* – if necessary, you can tap on this button to stop the process. Once scanning is complete, all discovered devices will be displayed in the list box, with *Name*, *Address*, *Active* status, and *PIN* information.



**Note:** *During the scanning process, addresses are located first, followed by names. Only the names of devices that are within the Bluetooth radio coverage range will be retrieved.*

The *Active* column indicates whether any service is activated for that device. When a service is activated, the device is displayed in the list even when it is not detected during the scan.

The *PIN* column indicates whether you have a PIN (password) set for the device.

At this point you can either query for services or set the PIN for each device. Once you highlight a device in the list box, both the *Services* and *Set PIN* buttons become available.

## Services

A discovered device may display several service profiles that it can use to communicate, and you will want to activate the type you need. Supported profiles that can be activated include: DUN (Dial-Up Networking service), Printer (serial service), and LANPPP (LANAccessUsingPPP service). ASync (ActiveSync) is another available profile.

- To start the service scan, highlight a device in the *Devices* tab list, and then click on the **Services** button or double-click on the device entry.



**Note:** *If the remote device is out of reach or turned off, it can take a considerable amount of time for the Services dialog box to appear – it may appear to be frozen.*

Once the device's service profiles are displayed in the Services list box:

- Highlight the service to be activated.
- Press [SPACE] or right-click to display the Activation menu.

The Activation menu contains four options – Activate, Authenticate, Outgoing and Encrypt.

Once the service is successfully activated, the assigned port (if applicable) will appear in the *Port* column of the *Services* list box. You can choose to use *BSP* or *COM* as the port name. *BSP* is the latest Microsoft Bluetooth stack standard, but older applications assume serial ports are *COM*. When using *COM* as the port name, the Bluetooth manager will try to find and use a free port between *COM7* and *COM9*. When using *BSP* as the port name, *BSP2* to *BSP9* are available for use. The port is available as soon as it is activated.





**Note:** *The CH column shows the RFCOMM channel of the service if the service is RFCOMM-based. This information is not generally needed except for debugging purposes.*

To add a service to the *Outgoing* port, an active service must first be deactivated. Then you can choose the ‘Outgoing’ option from the Activation menu (highlight a service, right-click or press the [SPACE] bar to display the Activation menu).

The *Authentication* and *Encryption* options can be changed only before activation. To change these after activation, deactivate the service first, then change the options. Once a service is activated, all the information regarding the service, including the RFCOMM channel number, is saved in the registry. (Some remote devices may change their RFCOMM channel numbers when they reboot, so your saved setting may not work when the remote device is rebooted. In that case, you must deactivate the service and reactivate it to detect the current RFCOMM channel.)

## Set PIN

PINs can be set for each device by pressing the *Set PIN* button in the *Devices* tab, or you can skip this step and try to connect to the device first.



**Important:** *The remote device must have authentication enabled, otherwise the PIN authentication will fail.*

- Highlight a device, click on the **Set Pin** button, and type the **PIN**.

You will receive a message, either that the PIN has been successfully validated or that it has been rejected.

If the PIN has been validated, an asterisk (\*) appears in the PIN column in the *Devices* list box, indicating that this device has a PIN set. Once a PIN is entered, it is saved in the registry.

To remove the PIN:

- Choose **Set PIN**, and press [ENTER].

If the 7530 G2 attempts to connect to a remote device that has Authentication enabled and does not have a required PIN set, an *Authentication Request* dialog box appears.

- Enter the **PIN**, and tap on **OK** to connect the devices.

## 5.7.2 The Servers Tab



The Bluetooth connection is initiated from your 7530 G2 to the remote device – therefore the 7530 G2 is called the ‘client’ and the remote is called the ‘server’. The *Servers* tab displays the server profiles that can be activated in your 7530 G2. There is currently one server profile available: Serial.

- Tap on the checkbox to activate the server, and it will display the associated port name beside the server name.

Once you activate a server profile, it is recommended that the 7530 G2 be rebooted before you try to bond from a server.



**Note:** You do not need to reboot if you are deactivating a server.

## 5.7.3 Outgoing Tab



*Outgoing Port* acts as a serial port that can be used to connect to a list of Bluetooth devices (one at a time), but you have the freedom to **switch on-the-fly**.

The *Outgoing Port* checkbox allows you to create the Outgoing port. When the port is created, the Outgoing tab lists the port name.

The Outgoing list dialog box displays a list of services marked as ‘Outgoing’. The \* column indicates the currently selected service. You can tap on *Unselect* to reset the current selection, or you can tap on *Select* to make a selection. The *Remove* button deletes the service from the outgoing list.

The Prompt menu determines the behaviour of the pop-up Selection menu. Choosing *Everytime* causes the Selection menu to be displayed each time an outgoing port is created. If you choose *Once*, the menu is displayed only when a partner service is not selected.

To display the *Selection* menu at any time:

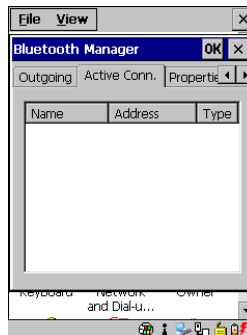
- Press [CTRL] [ALT] [F1], and switch the partner Bluetooth device.

If a connection to a partner device already exists, the connection is dropped and another connection to the newly selected device is created instantly without disrupting the application that has opened the outgoing port.



**Note:** To add a service to the **Outgoing** port, an active service must first be deactivated. Then you can choose the ‘Outgoing’ option from the Activation menu (highlight a service, right-click or press the [SPACE] bar to display the Activation menu).

## 5.7.4 Active Conn. Tab



The *Active Conn.* tab lists the *Name*, *Address*, and *Type* of the currently active connections. The table is periodically updated, but it can take a few seconds before it reflects the actual list of connections. The *Type* column of the table shows ‘ACL’ or ‘SCO’. The Connection list table shows the connections for scanning as well as the service connections.

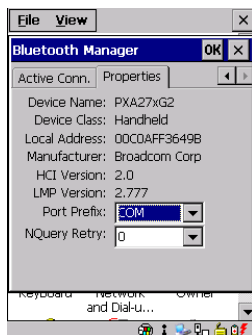


**Note:** You can change the device-name and description of your radio by clicking on the System icon in Control Panel, which will open the System Proper-

ties dialog box. Click on the Device Name tab to access the menu and change your settings. Then click on OK.

Although the name will have changed in the Properties menu in Bluetooth Controls, the radio only reads it on boot-up. For the changes to take effect, you must cold reset the 7530 G2 (see “Cold Reset” on page 27).

## 5.7.5 The Properties Tab



The *Properties* tab displays information about your 7530 G2, and provides some port options.

The *Device Name* field shows the device name of your 7530 G2. This name can be changed (see the *Note* on the previous page for details).

*Device Class* shows the Class of Device (e.g. desktop, hand-held), which is always set to *Handheld*.

*Local Bluetooth Address* shows the address of your 7530 G2 radio.

*Port Prefix* is used to set the port name to either *BSP* or *COM*. When the name is set to *BSP*, BSP2 to BSP9 are available for activated services (including the server).

When *COM* is chosen, COM7 to COM9 are available.

*NQuery Retry* (Name Query Retry) governs the number of times the hand-held will attempt to query the names of other Bluetooth devices if the first attempt fails. (When the 7530 G2 scans for other devices, it sometimes fails to scan names.)

## 5.7.6 Bluetooth GPRS Connection

1. To set up the internet parameters, tap on the **Network And Dial-up Connections** icon.

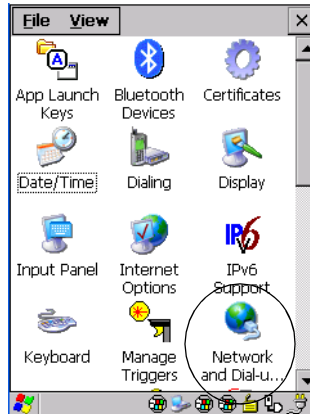


Figure 5.16 Network And Dial-up Connection Icon

2. Tap on the **Make New Connection** icon.

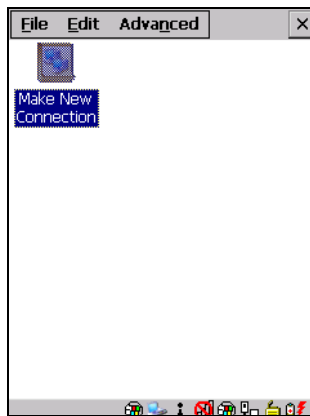


Figure 5.17 Creating A GPRS Connection

3. In the *Make New Connection* dialog box, tap on **Dial-Up Connection**. Enter a name for your GPRS network connection.

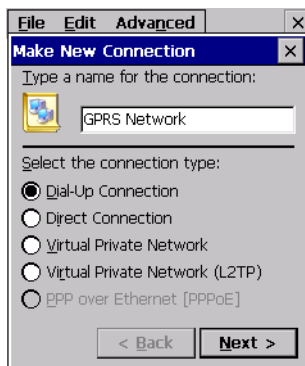


Figure 5.18 Setting Up The Connection

4. Tap on the **Next** button to display the *Modem* dialog box.

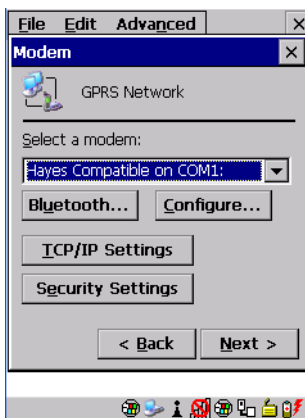


Figure 5.19 Setting Up The Modem

5. In the dropdown menu labelled *Select a modem*, choose the name of the modem with which you want to connect, and then tap on the **Configure** button to display the *Device Properties* dialog box.

The 7530 G2 communicates via Bluetooth to your Bluetooth-equipped cellular telephone and retrieves the parameters for the *Device Properties* dialog box. The 7530 G2 then disconnects.

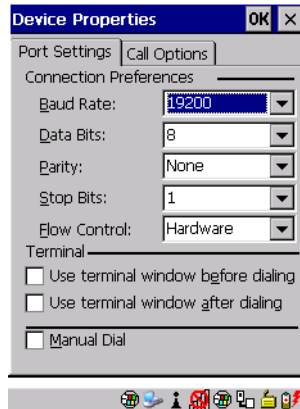


Figure 5.20 Port Settings

6. Under the *Call Options* tab, turn off **Cancel the call if not connected within**, and press [ENTER] to save your changes.

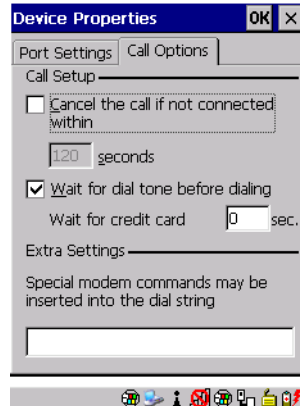


Figure 5.21 Call Options

7. In the *Modem* dialog box, tap on the **Next** button to display the *Phone Number* dialog box.

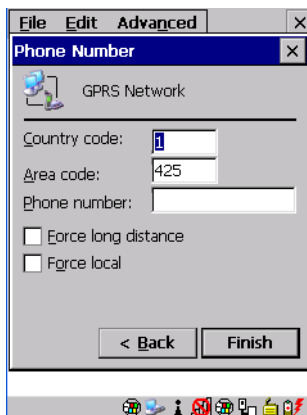


Figure 5.22 Setting The Phone Number

The phone number you enter is network carrier dependent. Once you've specified all the necessary information, choose the **Finish** button.

8. In the *Control Panel*, choose the **Dialing** icon.

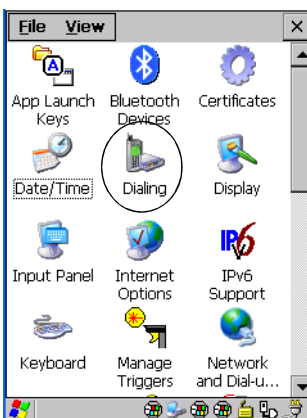


Figure 5.23 Dialing Icon



- The values in the *Dialing Properties* dialog box need to be edited according to your network carrier specifications.

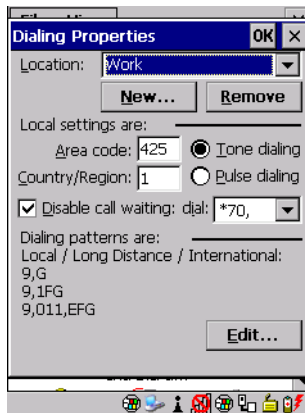


Figure 5.24 Setting Up Dialing Properties

Once you've edited this dialog box to reflect your network carrier requirements, press [ENTER] to save your changes.

- At this point, you'll need to return to the *Control Panel*, and choose the **Network and Dial-up Connections** icon.
- In the network connection window, the new network configuration – in this case – *GPRS Network* – is displayed. Tap on the **new** icon.

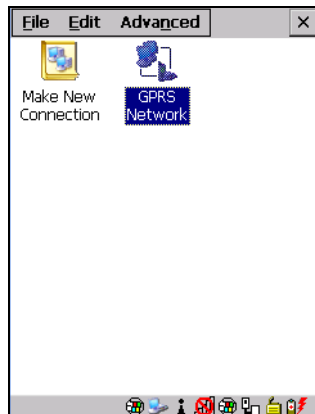


Figure 5.25 GPRS Network Connection

## Total Recall

An onscreen message will be displayed indicating the status of your connection – connected, disconnected, error messages, and so on.

- Tap on the **Hide** button to move this message to the background.

You can now access the internet.

## 5.8 Total Recall

*Total Recall* is a Psion Teklogix utility developed to maintain applications setting over cold boots. This utility is based on a backup and restore concept.

- In the *Control Panel*, tap on the **Total Recall** icon

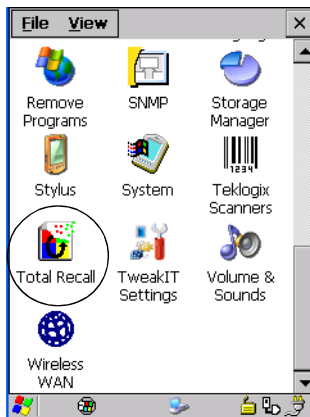
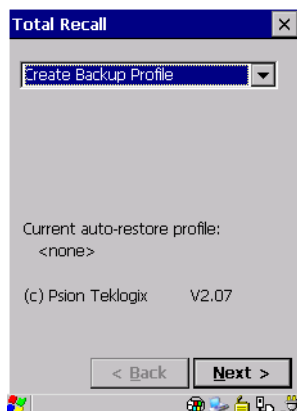


Figure 5.26 Total Recall Icon

### 5.8.1 Creating A Backup Profile



In the dropdown menu, you can choose from four options: Create Backup Profile, View Selected Profile, Restore Selected Profile and Delete Selected Profile. Keep in mind however that until a profile is created, the only available option is *Create Backup Profile*.

- Tap on the **Next** button to begin the process.




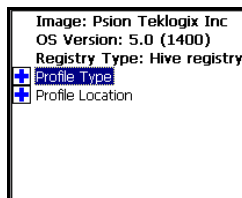
## Profile Information

This dialog box lists the possible storage destinations for the profile file.

- To begin, type a name for the profile in the field labelled *Profile Name*.

The image type – *OS Version* and *Registry Type* for the 7530 G2 is also listed here.

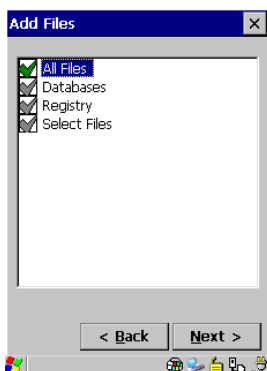
- Tap on this icon  to expand your settings for *AutoRestore Profile* and *Profile Location*.



- *For this device only* – creates a backup that is manually restored by the operator.
- *AutoRestore for this device only* – creates a profile that automatically restores itself following a cold boot.
- *AutoRestore for this and other devices* – creates a profile that automatically restores after resuming from a cold boot, but it will not contain the touchscreen calibration coordinates or the Wireless radio settings.

- *Profile Location* – allows the operator to specify where the profile is to be saved. The location for the profile is either *Flash Disk* or *SD-MMC Card*.
- Choose the **Next** button to display the next dialog box – *Add Files*.

## Add Files



By default, *All Files* is selected so that all installed or copied files, database entries, and the Registry will be saved. You can, however, limit the backup to databases, and/or the registry only. By tapping the checkbox next to these items, you can add or remove a check mark to enable or disable the option.

The *Select Files* option allows you to select predefined file types.

- Remove the check mark next to *All Files*. You'll notice the checkbox next to *Select Files* changes to +, indicating that additional options are available.
- Tap on this icon + next to *Select Files* to view your options.

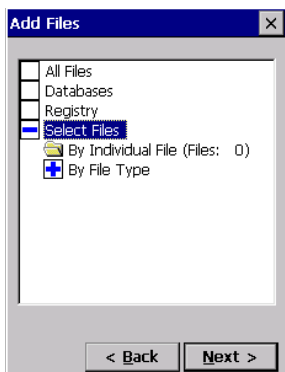


Figure 5.27 Selecting Files

Choosing *By Individual File* displays a pop-up menu where you can tailor the list of files you want to back up.

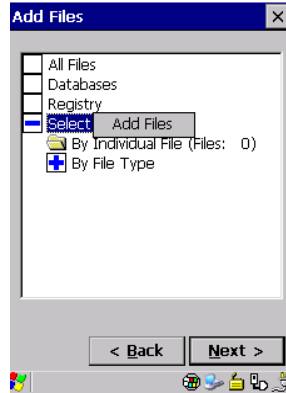


Figure 5.28 Adding Files

To *add a file* to your backup list:

- Tap on **Add Files**. Browse to and choose the files you want to add to your list.

Choosing *By File Type* allows you to select the file types that you want backed up.

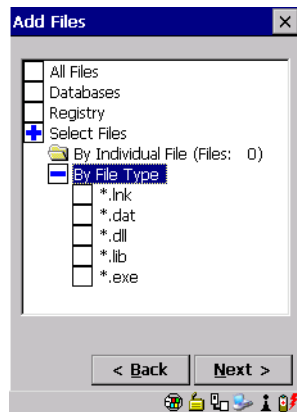
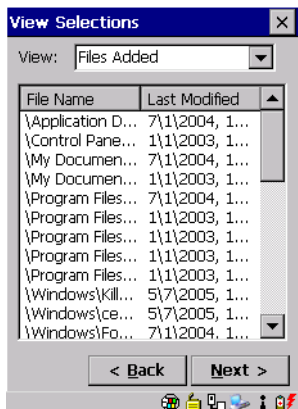


Figure 5.29 Adding Files By File Type

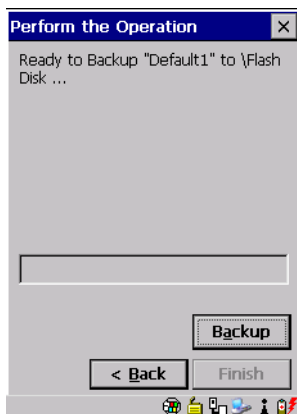
## View Selections

Depending on what you have selected for inclusion in your profile, you can view a list of the selected files, databases and/or registry.



- Choose the **Next** button to perform the operation.

## Performing The Backup



- Tap on the **Backup** button to start the process, and create a profile.

## 5.8.2 Restoring A Profile

To manually restore a profile:

- Tap on **Restore Selected Profile** from the dropdown menu, and choose the **Profile Name** displayed in the drop down box.



**Note:** You can also manually restore an auto restore profile located in flash or a storage device.

## 5.9 IPv6 Support

The *IPv6 Support* icon in the *Control Panel* allows you to activate IPv6 network support on your unit. This internet protocol specification (version 6) supports 128-bit IP addresses, replacing version 4.

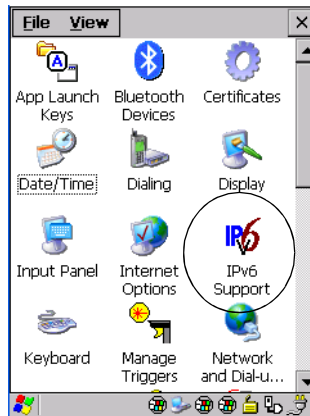
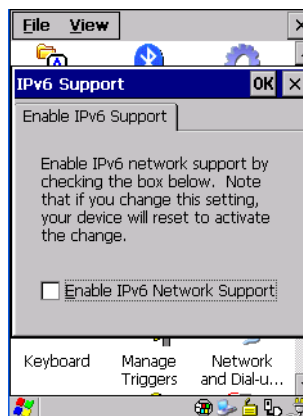


Figure 5.30 IPv6 Support Icon

- Choose the **IPv6 Support** icon to display the associated dialog box.



- Choose the checkbox next to *Enable IPv6 Network Support* to enable this internet protocol.



## 5.10 Narrow Band Radio Setup

Keep in mind that the Narrow Band icon is only visible in the 7530 G2 *Control Panel* when a Narrow Band radio is installed in the unit.

- In the *Control Panel*, tap on the **Narrow Band Radio** icon.

### 5.10.1 Info Tab

In the *Narrow Band Radio* dialog box, the *Info* tab displays information about the radio – it **cannot** be edited.



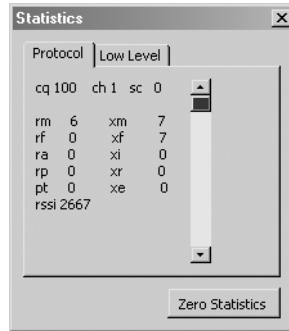
The *Power* information in this screen indicates the power of the radio installed in the unit – 0.5 or 1.0 W. The “Serial Number” is the identifier for the radio and is used by the protocol when the “Auto Radio Address” parameter is enabled. The “CIS Data” (Card Information Structure) is manufacturer information describing the PC Card installed in the 7530 G2. “DSP x.x / FPGA 0xNN” indicates the firmware revision of the radio’s DSP (x.x) and FPGA (0xNN) where x.x and NN represent actual revision numbers.

### Statistics Screen

- Tap on the **Statistics** button to display the *Protocol Statistics* screen.



These statistics are updated every second while the dialog box is displayed.



The following table provides a brief description of these statistics:

Statistic	Description
cq	Channel quality. See the description of the “Channel Switch Speed” parameter in the channel tab for more information on how “cq” affects channel switching (see “Channel Switch Speed” on page 136).
ch	Current channel
sc	Monitor state of RF Link: LOCKED=0, LOCKPENDING=1, LOWC-QWAIT=2, SCANNING=3, STARTUP=4, ABANDON=5
rm	Number of received messages, complete application messages
xm	Number of transmitted messages, complete application messages
rf	Number of received polls with attached message
xf	Number of transmitted frames
ra	Number of received radio link aborts
xi	Number of transmitted radio link initialization messages
rp	Number of received polls
xr	Number of transmitted retries
pt	Number of poll timeouts
xe	Number of transmitted errors
rssi	Received Signal Strength Indicator

Table 5.1 Protocol Statistics Descriptions

## Low Level Screen

- Tap on the **Low Level** tab to display the *Low Level* statistics screen.

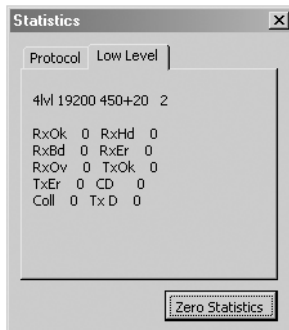


Table 5.2 defines the elements of the *Low Level* statistics screen.

Statistic	Description
RxOk	Message buffers discarded due to lack of available receive buffers
RxHd	Message headers successfully received
RxBd	Message bodies successfully received
RxEr	Message buffers received with detected errors
RxOv	Number of transmitted messages, complete application messages
TxOk	Message buffers successfully transmitted
TxEr	Message buffers which failed to transmit
CD	Number of carrier detect changes detected
Coll	Number of collisions detected
Tx D	Actual difference in time (in RTC ticks) between when the most recent transmit (with timestamp) was scheduled to start and when it actually started.
TxMD	Maximum "Tx D" value
Rx X	Number of extra characters received for last received message (due to delay in host reporting back actual body size)
RxMx	Maximum "Rx X" value
MChg	Number of completed mode changes

Table 5.2 Low Level Statistics Descriptions

## Default All Parameters

- Tap on the **Default all Parameters** button to return all registry parameters to default values.

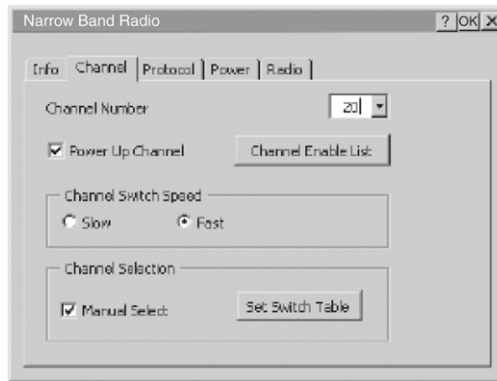
When this button is pressed, a screen appears asking if you're sure you want to return all parameters to their default values.

- Tap on the **Yes** button to return values to their default settings.



**Note:** This button does **not** default the radio parameters set under the Radio tab.

## 5.10.2 Channel Tab



### Channel Number

This parameter determines the operating radio channel of the 7530 G2. The allowable range for this parameter is 1 to 20. The default value is 1.



**Note:** The Channel Number dropdown menu displays only the channels that have been enabled in the Channel Enable List.

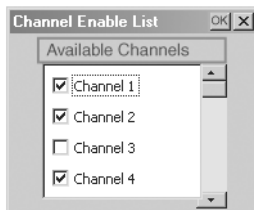
### Power Up Channel

When this parameter is enabled (checked), the 7530 G2 begins communicating on the channel specified in the *Channel Number* parameter when the unit is powered up. This setting may prevent the migration of 7530 G2s to the same channel due to uneven coverage in some sites.

If this parameter is disabled (unchecked), the unit will continue communicating on the same channel that it was on before it was powered off.

## Channel Enable List

- Tap on the **Channel Enable List** button to display a dialog box listing available channels.



This dialog box is completed by default with all channels that have frequencies configured. A checkmark indicates that a channel is enabled. An unchecked check box indicates that the channel is disabled. The maximum number of channels supported by the RA1001 Narrow Band radio is 20.

Enabling a channel allows the channel to be set to an operating channel (*Channel Number*) and makes it available for channel searching. For example, if *Channel 1* is the operating channel and all other channels are enabled, the 7530 G2 can roam through all 20 channels.

## Channel Switch Speed

This parameter changes the threshold the 7530 G2 uses to determine when communication quality with a base station is unacceptable. When this threshold is exceeded, the unit starts channel searching for a new base station.

Setting this parameter to “Slow” means a higher threshold – the 7530 G2 is more tolerant of poor communication quality. When the channel quality of the hand-held radio drops below 46%, the unit monitors the channel quality for 15 timeout periods before searching for a new channel. If *Channel Switch Speed* is set to “Fast”, the current channel is only monitored for up to 2 time-out periods before channel switching begins.



**Important:** *“Fast” switch speed is most effective where coverage areas are largely overlapping. If the coverage areas barely overlap, have dead spots, or if the 7530 G2 frequently operates on the fringe of coverage, this parameter should be set to “Slow”.*

## Channel Selection

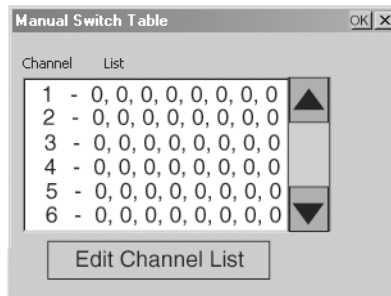
Enabling “Manual Select” allows you to set the channel search order the 7530 G2 will use if communication quality drops and channel switching is required. If this parameter is enabled, the 7530 G2 uses the channel switching lists specified in the *Manual Switch Table*. If this parameter is disabled (unchecked), the hand-held uses a standard algorithm to decide which channel it should switch to in the event of poor channel quality.



**Warning:** *It is not recommended that the “Manual Select” parameter be used without a clear understanding of how to order the channel sequences for optimum performance.*

## Manual Switch Table

- Tap on the **Set Switch Table** button to display the *Manual Switch Table* dialog box.



This feature is used rarely. It is used when the order of channel switching needs to be tightly controlled. The values in the “Channel” column are completed for you with the enabled channels when this dialog box is opened. For each corresponding enabled channel, the “List” column contains “0,0,0,0,0,0,0,0” values by default.

If communication quality falls below 46%, only the channels entered in the *Manual Switch Table* are considered for channel switching. The channel search is carried out in the order in which the channels were entered in the table.

To configure channel switching order for a particular channel:

- Highlight the channel you want to edit, and tap on the **Edit Channel List** button.

## Editing The Channel List

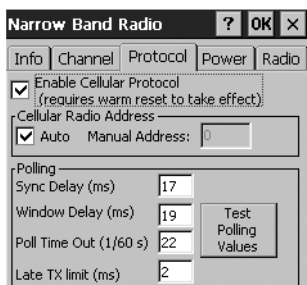


Only those channels that are enabled are displayed in the dropdown menus in the *Edit Channel List* dialog box. The allowable values range from 0 to 20.

- Tap on the arrow next to dropdown menu to scroll through the available channels. Highlight the value you want to assign.
- Once you've assigned the switching order, tap on the **OK** button to close the dialog box.

The channel list is added to the selected channel in the *Manual Switch Table* dialog box.

### 5.10.3 Protocol Tab



#### Enable Cellular Protocol

The value assigned to this parameter must be identical to the value assigned to the corresponding parameter in the Psion Teklogix Network Controller, Wireless Gateway or Base Station. A warm reset of the 7530 G2 is required before this parameter can take effect.

If *Enable Cellular Protocol* is disabled (unchecked), the options in the *Cellular Radio Address* frame are displayed in grey text indicating that they cannot be accessed.

## Cellular Radio Address

### Auto Radio Address

If *Auto* radio address is enabled, the 7530 G2 requests an automatically assigned radio address. *Manual* radio address is displayed in grey text indicating that it cannot be accessed.

### Manual Radio Address

The value entered in the *Manual Radio Address* parameter is used to identify the 7530 G2 over the radio link. A unique value from 1 to 3840 must be assigned for each unit.



**Note:** *This parameter is set to '0' (an out-of-range value) by default to block radio communication when the unit is initially powered up. This prevents several new hand-helds from attempting to communicate with the same default terminal number at initial power up. Once the default value is changed, it cannot be set back to '0'.*

## Polling

The default values for the *Polling* parameters are dependent on the value assigned to the *Modulation / Baud Rate* parameter in the *Radio* tab.

Modulation / Baud Rate	Sync Delay	Window Delay	Poll Timeout
4 Level / 19200	17	20	20
4 Level / 9600	17	23	25
2 Level / 9600	17	19	22
2 Level / 4800	25	23	37

Table 5.3 Polling Parameters

### Sync Delay



**Warning:** *This parameter should not be changed from its factory setting without a clear understanding of radio protocol timing.*

The “Sync Delay” parameter specifies the delay between the base station transmission and the first response window, measured in milliseconds. The value assigned to this parameter must be compatible with other hand-helds and base stations in the system. The allowable range for this parameter is between 1 and 40.



## Window Delay

**Important:** *The value assigned to this parameter should not be changed from the factory setting without a clear understanding of the timing of the radio protocol.*

This parameter specifies the amount of time (in milliseconds) the 7530 G2 should add to each response window in order to accommodate the receive/transmit switching characteristics of the radio. The value assigned must be compatible with other units and base stations in the system. The default setting of 19 is based on the requirements of a 2 level modulation narrow band radio, operating at 9600 baud.

## Poll Timeout

This parameter (in units of 16.6 ms) sets the time-out value used for automatic channel switching. “Poll Timeout” is the time during which the 7530 G2 should detect at least one poll from a base station. As each “Poll Timeout” passes without a successful poll from the base station, the 7530 G2 channel quality decreases. If the channel quality falls to below 46%, the unit begins searching for a new channel.

A value from 1 to 200 can be assigned to this parameter.

## Late TX Limit

The value entered for this parameter (measured in milliseconds) sets the maximum allowable deviation time from the start of a response window during which an 7530 G2 can make a transmission. After this threshold, the transmission will not be attempted and the 7530 G2 will try again at the next opportunity. For example, suppose this parameter is set to 5. From the beginning of the response window, the 7530 G2 can be up to 5 milliseconds late sending a transmission. Beyond this threshold, the transmission is not attempted. The hand-held waits for the next opportunity.

The allowable range for this parameter is from 1 and 10 – the default value is 2.

## Test Polling Values

- Tap on the **Test Polling Values** button to test the polling values indicated in this dialog box without committing them to memory.

To commit the new polling values to memory:

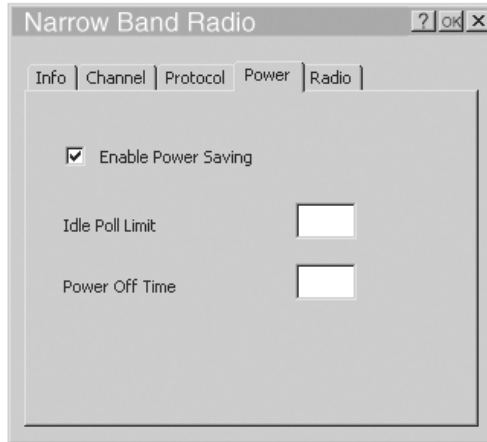
- Tap on the **OK** button – the dialog box is closed and the new values are saved.

To discard the new values, and retain the existing values:

- Tap on the **X** button at the top of the dialog box.



## 5.10.4 Power Tab



### Enable Power Saving

When this parameter is checked, power saving is enabled.

### Idle Poll Limit



**Note:** The “Idle Poll Limit” parameter is only used when “Enable Power Saving” is enabled.

This parameter determines how many transmit opportunities – base station polls with available response windows – must be consecutively skipped before the 7530 G2 places the radio into power-down mode for power saving. The allowable range for this parameter is from 1 to 200. The default value is 10.

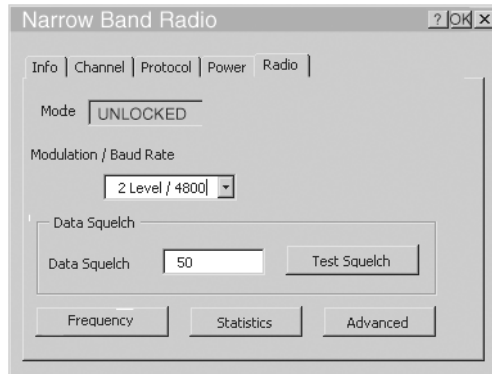
Lower values cause the hand-held to enter power saving mode quickly, extending battery life but reducing 7530 G2 responsiveness. Higher values increase responsiveness but decrease battery life.

### Power Off Time

This parameter determines the amount of time (in seconds) the 7530 G2 radio stays in power-down mode when a power down period has been initiated. “Power Off Time” is only used when the “Enable Power Saving” parameter is enabled.

The allowable range for this parameter is 1 to 60.

## 5.10.5 Radio Tab



### Modulation/Baud Rate

The options listed in the “Modulation / Baud Rate” dropdown menu are: 2 Level/4800, 2 Level/9600, 4 Level/9600 and 4 Level/19200. The value assigned to this parameter must be identical to the corresponding parameter in the Psion Teklogix Base Station. This parameter is stored in the radio’s non-volatile memory. The default value for “Modulation/Baud Rate” is 2 Level/9600

### Data Squelch

“Data Squelch” controls the radio receiver, cutting it off when the signal is too weak for reception of anything but noise. Receive Signal Strength Indicator values below the “Data Squelch” threshold prevent further processing of the receive signal while higher values allow further processing. The allowable range is 0 to 100 with a default value of 0.

In noisy environments, this value can be increased to reject noise. In environments with less noise, this value can be decreased to allow the received signal and increase range. This parameter is stored in the radio’s non-volatile memory.

### Test Squelch

- Tap on the **Test Squelch** button to prompt the radio to use the “Data Squelch” value without committing it to the radio’s non-volatile memory – in other words, to ‘test’ the value assigned to the “Data Squelch” parameter.

To commit the new “Data Squelch” value to the radio’s non-volatile memory:

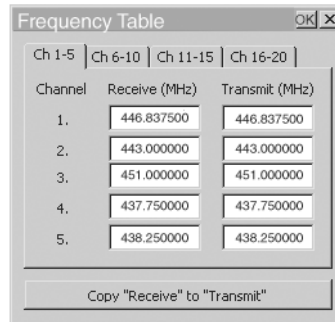
- Tap on the **OK** button – the dialog box is closed and the new value is saved.

To discard the new value, and keep the old “Data Squelch” value:

- Tap on the **X** button at the top of the dialog box. The old value is sent to the protocol driver.

## Frequency Table

- Tap on the **Frequency** button to display the *Frequency Table* dialog box.



- Tap on the **Copy “Receive” to “Transmit”** button to copy the contents of the “Receive” fields into the corresponding “Transmit” fields.

When you tap on this button, a warning box is displayed asking *Copy all the Rx frequencies to the Tx frequencies?*

- Tap on the **Yes** button to go ahead or **No** to stop the copy process.

## Statistics

- Tap this button to display communication statistics.

Refer to “Statistics Screen” beginning on page 132 for details about this screen.

## Advanced

This button launches the “Radio Test Application”.

# 5.11 Scanner Settings

The *Teklogix Scanners* icon in the *Control Panel* provides dialog boxes in which you can tailor bar code options and choose the bar codes your scanner will recognize. The parameters are preset with the default settings of the decoded scanner installed in the unit.

If you wish to recover the factory defaults after making changes, the defaults can be applied to a selected parameter, sub-tree of parameters, or all scanner parameters.

Using the stylus, touching and holding on a symbology will pop up a menu to default the sub-tree, or all settings. Touching and holding on an individual setting will pop up a menu to default that setting, or all settings.

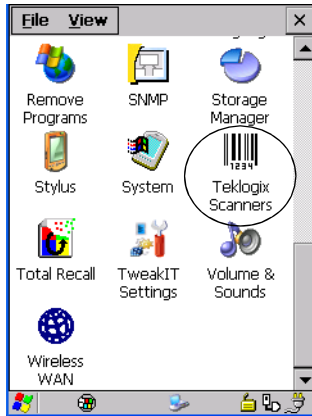


Figure 5.31 Teklogix Scanner Icon

## 5.11.1 Bar Codes

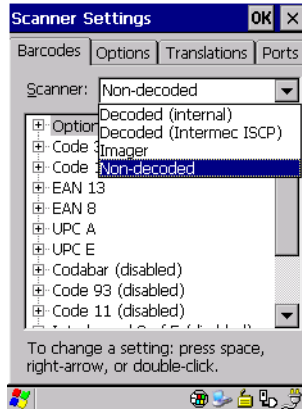


Figure 5.32 Scanner Properties

### 5.11.1.1 The Scanner

The dropdown menu to the right of the *Scanner* option allows you to choose from one of the following scanner types used with your hand-held: Non-decoded, Decoded (internal), Decoded (Intermec ISCP) and Imager.



**Note:** Your 7530 G2 is configured at the factory for internal scanner types. The type of scanner installed can be determined through the System icon in the Control Panel, under the System Properties tab.



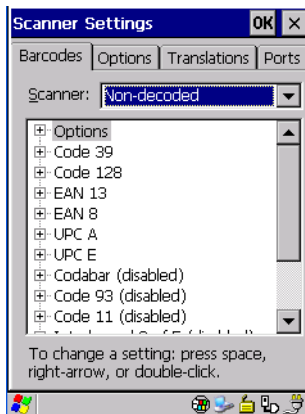
**Important:** To improve the decode speed and performance, enable (set to 'on') only those codes that are required by the application.

Keep in mind that some bar code types are only available when an internal imaging scanner is installed. All internal scanners can be configured using these dialog boxes. External, *non-decoded* scanners are also configured through the *Scanner Properties* dialog box.

However, external *decoded* scanners must be configured by scanning special configuration bar codes. In these cases, the scanner manufacturer provides programming manuals for configuration purposes.

- For Symbol decoded scanners, refer to the *LS3408* programming guide.
- For PowerScan<sup>®</sup> (PSC) decoded scanners, refer to the *Powerscan Programming Guide (PSC)*.

## 5.11.2 Non-Decoded Scanners



- Tap on the **Scanner** dropdown menu, and choose **Non-decoded**.

All the available bar code symbologies for this type of scanner can be selected in this tab.

A ‘plus’ sign (+) to the left of the menu item indicates that a sub-menu of parameters is attached.

- Tap the stylus on the + sign to display the sub-menu.
- To change a parameter value, double-tap on the parameter. If you need to type a value, a dialog box is displayed in which you can type a new value. If you need to change a *yes* or *no* value, double-tapping on the parameter toggles between *yes* and *no*.

If you’re using the keyboard:

- 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.

### 5.11.2.1 Non-Decoded Options

- Tap the stylus on the + sign next to *Options* to display these parameters.

#### 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. When you double-tap on this parameter, a dialog box is displayed in which you can enter a value from 0 to 3000. A value of 0 (zero) disables the target dot.

#### Short Code

When enabled, this parameter allows scanning of short 12 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 hand-held 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, prior to a bar code being 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.

### 5.11.2.2 Code 39

#### Enabled

Set this parameter to *on* to enable “Code 39” or *off* to disable it.

#### Full Ascii

If this parameter is enabled, 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, the check digit is included with the decoded bar code data.

#### AIAG Strip

If this parameter is enabled, 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 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, all label data without an AIAG identifier character is accepted. If the “Err Accept” parameter is disabled and the “AIAG Strip” parameter is enabled, the label data is not accepted.

## Mod Checks

This parameter allows you to choose the check digit calculated: MOD 43 Check, MOD 10 Check or None.

- Double-tap on **Mod Checks** to display your options.
- Tap on a check digit to highlight it, and tap on **OK**.

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 dialog box attached to this parameter. The ASCII/Unicode key value of the keypress is displayed.

Pressing the [ESC] key in this dialog 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 hand-held 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 dialog box attached to this parameter. The ASCII/Unicode key value of the keypress is displayed.

Pressing the [ESC] key in this dialog 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.

## 5.11.2.3 Code 128

### Enabled

Set this parameter to *on* to enable “Code 128” or *off* to disable it.

### Include Sym

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



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

### Variations

When using Code 128, you can choose the bar code variation the scanner will recognize. The options available are Standard, UCC 128 and EAN/UCC 128.

- Double-tap on **Variations** to display a dialog box listing your options.
- Tap on a variation to highlight it, and then tap on **OK**.

### Standard

Enable *Standard* if “Code 128” is desired.

### UCC 128

*UCC 128* is a variation of “Code 128”.

### EAN/UCC 128

To successfully scan this type of bar code, “EAN/UCC 128” must be enabled. “EAN/UCC” bar codes include group separators and start codes.



*Note:* If you choose *None*, a check is not executed.

### Field Size/Chars

Refer to the description beginning on page 148 for details.

## 5.11.2.4 EAN 13

### Enabled

Set this parameter to *on* to enable “EAN 13” or *off* to disable it.

### Enable Bookland EAN

Setting this parameter to ON allows your scanner to recognize Bookland EAN bar codes.

### Include Country

If this parameter is enabled, the country code is included with the decoded bar code data.

### Include Check

If this parameter is enabled, the check digit is included with the decoded bar code data.

### Addendum



**Important:** *Before “Addendum” can take effect, the “Short Code” parameter (see page 146) must be enabled.*

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

- Double-tap on **Addendum** to display a dialog box listing your options.
- Highlight an item, and tap on **OK**.

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



**Note:** *Setting ‘Addendum’ to Optional reduces performance. Optional should only be selected if at least some of the bar codes being read have addendums.*

## Prefix/Suffix

### Prefix Char

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

Pressing the [ESC] key in this dialog box resets the data to zero.

### Suffix Char

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

Pressing the [ESC] key in this dialog box resets the data to zero.

### Strip Leading

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



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

### Strip Trailing

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

## 5.11.2.5 EAN 8

### Enabled

Set this parameter to *on* to enable “EAN 8” or *off* to disable it.

### Include Check

If this parameter is enabled, the check digit is included with the decoded bar code data.



## Addendum

**Important:** *Before “Addendum” can take effect, the “Short Code” parameter (see page 146) must be enabled.*

Refer to “Addendum” on page 150.

## Prefix/Suffix

See “Prefix/Suffix” beginning on page 151.

### 5.11.2.6 UPC A

#### Enabled

Set this parameter to *on* to enable “UPC A”.

#### Include Number Sys

If this parameter is enabled, the number system digit is included with the decoded bar code data.

#### Include Check

If this parameter is enabled, the check digit will be included with the decoded bar code data.

## Addendum



**Important:** *Before “Addendum” can take effect, the “Short Code” parameter (see page 146) must be enabled.*

Refer to “Addendum” on page 150.

## Prefix/Suffix

Refer to page 151 for details.

### 5.11.2.7 UPC E

#### Convert to UPC-A

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

## Include Number Sys

If this parameter is enabled, the number system digit is included with the decoded bar code data.

## Include Check

When enabled, the check digit is included with the decoded bar code data.

## Addendum



**Important:** *Before “Addendum” can take effect, the “Short Code” parameter (see page 146) must be enabled.*

Refer to “Addendum” on page 150.

## Prefix/Suffix

Refer to page 151 for details.

## 5.11.2.8 Codabar

### Enabled

Set this parameter to *on* to enable “Codabar” or *off* to disable it.

### Strip Start/Stop Chars

Codabar uses the characters A, B, C, and D as start and stop characters. Thus, the first and last digits of a Codabar message must be A, B, C, or D, and the body of the message should not contain these characters. Setting this parameter to **ON** strips the start and stop characters from this bar code.

### Field Size/Chars

Refer to the description beginning on page 148 for details.

## 5.11.2.9 Code 93

### Enabled

Set this parameter to *on* to enable “Code 93”.

### Field Size/Chars

Refer to the description beginning on page 148 for details.

### 5.11.2.10 Code 11

#### Enabled

Set this parameter to *on* to enable “Code 11”.

#### Include Check

If “Include Check” is enabled, the check digit is included with the decoded bar code data.

#### Check Digits

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

- Double-tap on this parameter to display a dialog box listing your options.
- Highlight the check digit you want to use, and tap on **OK**.

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

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

#### Field Size/Chars

Refer to the description beginning on page 148 for details.

### 5.11.2.11 Interleaved 2 of 5

#### Enabled

Set this parameter to *on* to enable “Interleaved 2 of 5”.

#### Mod 10 Check

If this parameter is enabled, the “Mod 10” check digit is calculated. This calculation is the same as the Code 39 Mod 10 check digit.

#### ITF Check

If this parameter is enabled, the ITF-14/16 Mod10 check digit is calculated.

#### Include Check

If this parameter is enabled, the check digit is included with the decoded bar code data.

## Field Size/Chars

Refer to the description beginning on page 148 for details.

### 5.11.2.12 MSI Plessey

#### Enabled

Set this parameter to *on* to enable “MSI Plessey”.

#### One Check Digit

If this parameter is enabled, it is assumed that the last digit is a check digit.

#### Include Check

If this parameter is enabled, the check digit is included with the decoded bar code data.

## Field Size/Chars

Refer to the description beginning on page 148 for details.

### 5.11.2.13 Discrete 2 of 5

#### Enabled

Set this parameter to *on* to enable “Discrete 2 of 5”.

#### Mod 10 Check

If this parameter is enabled, the Mod 10 check digit is calculated. This calculation is the same as the Code 39 Mod 10 check digit.

#### ITF Check

If this parameter is enabled, the ITF-14/16 Mod10 check digit is calculated.

#### Include Check

If this parameter is enabled, the check digit is included with the decoded bar code data.

## Field Size/Chars

Refer to the description beginning on page 148 for details.

### 5.11.2.14 IATA 2 of 5

#### Enabled

Set this parameter to *on* to enable “IATA 2 of 5”.

#### Mod 10 Check

If this parameter is enabled, the Mod 10 check digit is calculated.

#### ITF Check

If this parameter is enabled, the ITF-14/16 Mod10 check digit is calculated.

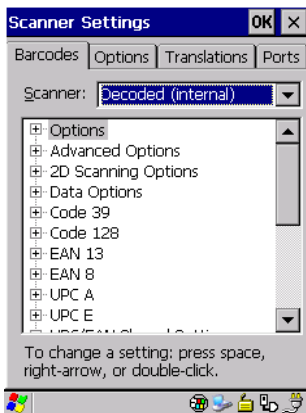
#### Include Check

If this parameter is enabled, the check digit is included with the decoded bar code data.

#### Field Size/Chars

Refer to the description beginning on page 148 for details.

## 5.11.3 Decoded (Internal) Scanners



- Tap on the **Scanner** dropdown menu, and choose **Decoded (internal)**.



### 5.11.3.1 Decoded (Internal) Options

#### **Dot Time (msec) (*SE2223 only*)**

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. When you double-tap on this parameter, a dialog box is displayed in which you can enter a value of 0 msec, 200 msec or 400 msec. A value of 0 (zero) disables the target dot.

#### **Aim Duration (*SE1224, SE1524, SE1223 only*)**

This parameter determines the total time the aiming pattern appears before the scanner laser begins sweeping. When you double-tap on this parameter, a dialog box is displayed in which you can enter a value from 0 to 30 (0 to 3 sec.). A value of 0 (zero) disables the aiming-dot.

#### **Laser On Time**

The value assigned to this parameter determines how long the laser will remain on when the scan button or trigger is pressed.

Double-tapping on this parameter displays a dialog box in which you can enter a value between 5 and 99, each number representing 0.1 seconds.

### 5.11.3.2 Decoded (Internal) Advanced Options

#### **Continuous Scan Mode**

Setting this parameter to ‘on’ keeps the laser on and continuously decoding as long as the scanner button is pressed and held down.

#### **Minimum Cancel Time**

The value assigned to this parameter determines the time delay before the scanner is turned off, once the scanner trigger or button is released. This gives the scanner a minimum amount of time to complete its current decode before the scan is cancelled when the user quickly triggers on/off.

## Low Power Timeout

To extend laser life, you can select the length of time the scanner remains active following a successful decode. The scanner wakes from low power mode when a bar code is scanned – a successful decode restores normal blinking.

When you double-tap on this parameter, a dialog box is displayed in which you can choose a value of 30 sec, 1 min, 2 min or 3 min.



**Note:** *This parameter is only used if the Trigger Mode has been set to Continuous On and the 7530 G2 is mounted in a fixed position; otherwise, 'Low Power Timeout' is not used.*

## Parameter Scanning

Setting this parameter to *on* enables decoding of parameter bar codes.

## Linear Security Level

This parameter allows you to select the security level appropriate for your bar code quality. There are four levels of decode security for linear code types (e.g., Code 39, Interleaved 2 of 5). Higher security levels should be selected for decreasing levels of bar code quality. As security levels increase, the scanner's decode speed decreases.

Double-tapping on this parameter displays a dialog box in which you can enter a value from 1 to 4.

“Linear security level 1” specifies that the following code types must be successfully read twice before being decoded:

Code Type	Length
Codabar	All
MSI Plessey	4 or less
D 5 of 5	8 or less
I 2 of 5	8 or less

“Linear security level 2” specifies that all types of codes must be successfully read twice before being decoded.

“Linear security level 3” specifies that code types other than the following must be successfully read twice before being decoded. The following codes must be read three times:

Code Type	Length
MSI Plessey	4 or less
D 2 of 5	8 or less
I 2 of 5	8 or less

“Linear security level 4” requires that all code types be successfully read three times before being decoded.

## Bi-Direction Redundancy



*Note: This parameter is only valid if a “Linear Security Level” is enabled.*

When this parameter is enabled, a bar code must be successfully scanned in both directions (forward and reverse) before being decoded.

### 5.11.3.3 Decoded (Internal) 2D Scanning Options (*SE2223 only*)

#### Scanning Mode

When you double-tap on this parameter, a dialog box is displayed in which you can choose one of the following scanning modes: Smart Raster, Always Raster, Programmable Raster, Slab Pattern, Cyclone Pattern or Semi-Omni Pattern.

#### Raster Height And Raster Expand Rate

These parameter determine the laser pattern’s height and rate of expansion.



*Note: These parameters are only used when either Programmable Raster or Always Raster is assigned to the “2D Scanning Mode” parameter. “2D Raster Height” and “2D Raster Expand Rate” are intended for very specific applications and are usually not required for normal scanning purposes.*

Double-tapping on this parameter displays a dialog box in which you can enter a value from 1 to 15.

### 5.11.3.4 Decoded (Internal) Data Options

#### Transmit Code ID Char

A code ID character identifies the scanned bar code type. In addition to any single character prefix already selected, the code ID character is inserted between the prefix and the decoded symbol.

When you double-tap on this parameter, a dialog box is displayed in which you can choose a transmit code: None, AIM or Symbol.

#### Scan Data Format

This parameter allows you to change the scan data transmission format.

Double-tapping on “Scan Data Format” displays the following options from which you can choose a data format: data (as-is), data [S1], data [S2], data [S1][S2], [P] data, [P] data [S1], [P] data [S2] and [P] data [S1][S2].

#### Prefix [P], Suffix [S1] And Suffix [S2]

A prefix and/or one or two suffixes may be appended to scan data for use in data editing.

When you double-tap on these parameters, a dialog box is displayed in which you can enter a value from 0 to 255.

#### Delete Char Set ECIs (*SE2223 only*)

Setting this parameter to *on* enables the scanner to delete any escape sequences representing Character Set ECIs – Extended Channel Interpretations (also known as GLIs) from its buffer before transmission.

When this parameter is enabled, the scanner transmits data from PDF417 and MicroPDF417 bar codes containing Character Set ECIs, even when the ECI Protocol is disabled.

#### ECI Decoder (*SE2223 only*)

Setting this parameter to *on* enables the scanner to interpret any Extended Channel Interpretations (ECIs) supported by the scanner. This parameter has no effect on symbols that were not encoded using ECIs.

If this parameter is set to *off* and a symbol that was encoded using an ECI escape is scanned, the scanner transmits the ECI escape followed by the uninterpreted data.

### 5.11.3.5 Code 39

#### Enable

Setting this parameter to *on* enables “Code 39”.

#### Enable Trioptic Code 39



**Note:** “Trioptic Code 39” and “Full ASCII” should **not** be enabled simultaneously. The scanner does not automatically discriminate between these two symbologies.

Trioptic Code 39 symbols always contain six characters. Setting this parameter to *on* allows this type of symbology to be recognized.

#### Convert To Code 32



**Note:** “Code 39” must be enabled in order for this parameter to function.

Setting this parameter to *on* allows the scanner to convert the bar code from “Code 39” to “Code 32”.

#### Code 32 Prefix



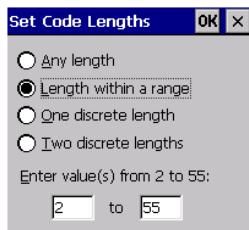
**Note:** “Convert to Code 32” must be enabled in order for this parameter to function.

When this parameter is enabled, the prefix character “A” is added to all “Code 32” bar codes.

#### Set Length L1 And Set Length L2

Lengths for “Code 39” can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be decoded by your scanner.



Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 1 to 55.

## Check Digit Verification

When this parameter is enabled, the integrity of a “Code 39” symbol is checked to ensure that it complies with specified algorithms.



**Note:** *Only those “Code 39” symbols that include a Mod 43 check digit are decoded when this parameter is enabled.*

## Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must to enabled.

## Full ASCII

If this parameter is enabled, 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.

## Decode Performance (*SE2223 only*)

If this parameter is enabled, one of three decode levels can be chosen in the “Decode Performance Level” parameter.

## Decode Perf. Level (*SE2223 only*)

This parameter provides three levels of decode performance or “aggressiveness” for Code 39 symbols. Increasing the performance level reduces the amount of required bar code orientation—this is useful when scanning very long and/or truncated bar codes. Keep in mind that increased levels reduce decode security.

When you double-tap on this parameter, a dialog box is displayed in which you can enter a decode performance level of between **1** and **3**.



*Note:* Keep in mind that this parameter limits scanning to one fixed length.

### Field Size/Chars

Refer to page 148 for details.

## 5.11.3.6 Code 128

### Enabled

Set this parameter to *on* to enable “Code 128”.

### Enable UCC/EAN-128

EAN/UCC bar codes include group separators and start codes. To successfully scan this type of bar code, “EAN/UCC 128” must be enabled.

### Enable ISBT 128

To successfully scan this type of bar code, this option must be set to *on*.

### Decode Performance (*SE2223 only*)

If this parameter is set to *on*, one of three decode levels assigned to the “Decode Performance Level” parameter can be selected.

### Decode Perf. Level (*SE2223 only*)

This parameter provides three levels of decode performance or “aggressiveness” for Code 128 symbols. Increasing the performance level reduces the amount of required bar code orientation—this is useful when scanning very long and/or truncated bar codes. Keep in mind that increased levels reduce decode security.

When you double-tap on this parameter, a dialog box is displayed in which you can enter a decode performance level of between **1** and **3**.



*Note:* Keep in mind that this parameter limits scanning to one fixed length.

### Field Size/Chars

Refer to page 148 for details.

### 5.11.3.7 EAN 13

#### Enabled

Set this parameter to *on* to enable “EAN 13”.

#### Prefix/Suffix

See “Prefix/Suffix” beginning on page 151.

### 5.11.3.8 EAN 8

#### Enabled

Set this parameter to *on* to enable “EAN 8”.

#### EAN-8 Zero Extend

When this parameter is enabled, five leading zeros are added to decoded EAN-8 symbols, making them compatible in format to EAN-13 symbols. Disabling this parameter returns EAN-8 symbols to their normal format.

#### Prefix/Suffix

See “Prefix/Suffix” beginning on page 151.

### 5.11.3.9 UPC A

#### Enabled

Set this parameter to *on* to enable “UPC A”.

#### UPC-A, Check Digit

If you enable this parameter, the check digit is included with the decoded bar code data.

#### UPC-A, Preamble

When you double-tap on this parameter, a dialog box is displayed where you can choose one of three options for lead-in characters for UPC-A symbols transmitted to the host device: *System Char* – system character transmitted with the data, *Country code and System Char* – both the country code (“0” for USA) and system character are transmitted with the data or *None* – no preamble is transmitted. The lead-in characters are considered part of the symbol.



## Prefix/Suffix

See “Prefix/Suffix” beginning on page 151.

### 5.11.3.10 UPC E

#### Enabled UPC-E

Set this parameter to *on* to allow “UPC E” bar code scans.

#### Enabled UPC-E1

Set this parameter to *on* to allow “UPC-E1” (zero suppressed) bar code scans.

#### UPC-E And UPC-E1 Check Digit

If you enable one or both of these parameters, a check digit is included with the decoded bar code data.

#### UPC-E And UPC-E1 Preamble

When you double-tap on one of these parameters, a dialog box is displayed where you can choose one of three options for lead-in characters for UPC-E and UPC-E1 symbols transmitted to the host device: *System Char* – system character transmitted with the data, *Country code and System Char* – both the country code (“0” for USA) and system character are transmitted with the data or *None* – no preamble is transmitted. The lead-in characters are considered part of the symbol.

#### Conv. UPC-E To UPC-A

This parameter converts UPC-E (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).

#### Conv. UPC-E1 To UPC-A

This parameter converts UPC-E1 (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).

## Prefix/Suffix

See “Prefix/Suffix” beginning on page 151.

### 5.11.3.11 UPC/EAN Shared Settings

The parameters you set here are a shared across all available UPC and EAN bar codes.

#### Enable Bookland EAN

Setting this parameter to *on* allows your scanner to recognize Bookland EAN bar codes.

#### Supplementals

'Supplementals' are additionally appended characters (2 or 5).

Double-tapping this parameter displays a list of options. If *Ignore* is chosen, UPC/EAN is decoded and the supplemental characters are ignored. If *Decode* is chosen, UPC/EAN symbols are decoded *with* supplementals. *Autodiscriminate* works in conjunction with the Supp. Redundancy parameter.

#### Supp. Redundancy

With "Autodiscriminate" selected in the "Supplementals" parameter, "Supp. Redundancy" adjusts the number of times a symbol without supplementals is decoded before transmission.

When you double-tap on this parameter, a dialog is displayed in which you can enter a value between 2 and 20. A value of 5 or above is recommended when *Autodiscriminate* is selected and you are decoding a mix of UPC/EAN symbols with and without supplementals.

#### Security Level

This parameter controls the tolerance for decoding edge-to-edge UPC/EAN bar codes. Double-tapping on this parameter displays a dialog box in which you can choose a level from 0 to 3. Lower values have a lower tolerance for misreads, but they also increase the time it takes to decode the bar code.

#### Linear Decode (*SE2223 only*)

"Linear Decode" applies to code types containing two adjacent blocks (e.g., UPC-A, EAN-8, EAN-13). When enabled (set to *on*), a bar code is transmitted only when both the left and right blocks are successfully decoded within one laser scan. This option should be enabled when bar codes are in proximity to each other.

## 2D UPC Half Block Stitching (*SE2223 only*)

Setting this parameter to *on* enables “UPC Half Block Stitching” for the SE 3223 omnidirectional engine only.

### 5.11.3.12 Codabar

#### Enabled

Set this parameter to *on* to enable “Codabar”.

#### Set Length L1 And Set Length L2

Lengths for “Codabar” can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be recognized by your scanner.

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 5 to 55.

#### CLSI Editing

When enabled, this parameter strips the start and stop characters and inserts a space after the first, fifth, and tenth characters of a 14-character Codabar symbol.



**Note:** *Symbol length does not include start and stop characters.*

#### NOTIS Editing

When enabled, this parameter strips the start and stop characters from decoded Codabar symbol.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.3.13 Code 93

#### Enabled

Set this parameter to *on* to enable “Code 93”.

## Set Length L1 And Set Length L2

Lengths for “Code 93” can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be recognized by your scanner.

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 4 to 55.

## Field Size/Chars

Refer to page 148 for details.

### 5.11.3.14 Interleaved 2 of 5

#### Enabled

Set this parameter to *on* to enable “Interleaved 2 of 5”.

## Set Length L1 And Set Length L2

Lengths for “Interleaved 2 of 5” can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be recognized by your scanner.

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 4 to 14.

## Check Digit Verification

When enabled, this parameter checks the integrity of an I 2 of 5 symbol to ensure it complies with a specified algorithm – either USS (Uniform Symbology Specification) or OPCC (Optical Product Code Council).

## Transmit Check Digit

If this parameter is enabled, the check digit is included with the bar code data.

## Convert To EAN 13

If this parameter is enabled, an I 2 of 5 bar code is converted to EAN 13.

## Field Size/Chars

Refer to page 148 for details.

### 5.11.3.15 MSI Plessey

#### Enabled

Set this parameter to *on* to enable “MSI Plessey”.

#### Set Length L1 And Set Length L2

Lengths for “MSI Plessey” can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be recognized by your scanner.

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 6 to 55.

#### Check Digits

Double-tapping on this parameter displays a dialog box in which you can choose One or Two check digit(s).

If this parameter is set to *One*, it is assumed that the last digit is a check digit. If “Check Digits” is set to *Two*, it is assumed that the last two digits are check digits.



**Note:** *If Two check digits is selected, an MSI Plessey “Check Digit Algorithm” must also be selected. See page 9-88.*

#### Transmit Check Digit

If this parameter is enabled, the check digit is included with the bar code data.

## Check Digit Algorithm

When the Two MSI Plessey check digits option is selected, an additional verification is required to ensure integrity. Double-tapping on this parameter displays a dialog box in which you can choose the algorithm to be used: MOD 10/MOD 11 or MOD 10/MOD 10.

## Field Size/Chars

Refer to page 148 for details.

### 5.11.3.16 Discrete 2 of 5

#### Enabled

Set this parameter to *on* to enable “Discrete 2 of 5”.

#### Set Length L1 And Set Length L2

Lengths for “Discrete 2 of 5” can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be recognized by your scanner.

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 1 to 12.

## Field Size/Chars

Refer to page 148 for details.

### 5.11.3.17 2D PDF-417 (*SE2223 only*)

#### Enable

Setting this parameter to *on* enables PDF-417 two dimensional (2D) coding.

## Field Size/Chars

Refer to page 148 for details.

### 5.11.3.18 2D Micro PDF-417 (*SE2223 only*)

#### Enable

Setting this parameter to *on* enables “2D Micro PDF-417” bar code scanning. Micro PDF-417 is a multi-row symbology that is useful for applications requiring greater area efficiency but lower data capacity than PDF-417.

#### Code 128 Emulation

When this parameter is enabled, the scanner transmits data from certain Micro PDF-417 symbols as if it was encoded in Code 128 symbols.

If Code 128 Emulation is enabled, the following Micro PDF-417 symbols are transmitted with one of the following prefixes:

- ]C1 if the first codeword is 903-907, 912, 914, 915
- ]C2 if the first codeword is 908 or 909
- ]C0 if the first codeword is 910 or 911

If Code 128 Emulation is set to off, the Micro PDF-417 symbols are transmitted with one of the following prefixes:

- ]L3 if the first codeword is 903-907, 912, 914, 915
- ]L4 if the first codeword is 908 or 909
- ]L5 if the first codeword is 910 or 911

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.3.19 RSS Code (Reduced Space Symbology)

#### Enable

Setting this parameter to *on* enables “RSS Code” scanning capability.

#### Enable RSS-14 (*SE1224, SE2223 and SE1524 only*)

RSS-14 code can be either purely linear or split in half with one half stacked on top of the other half. Stacking the code reduces the bar code length, and providing the nominal height of the code is maintained, it can be omni-directionally scanned.

### **Enable RSS Limited (*SE1224, SE2223 and SE1524 only*)**

‘RSS-Limited’ is restricted, in that it can only encode 14 digit GTINs (global trade item number) that begin with either a 0 or a 1. It is not stackable and is not designed to be read omni-directionally.

### **Enable RSS Expanded (*SE1224, SE2223 and SE1524 only*)**

‘RSS Expanded’ uses the same application identifiers as UCC/EAN-128 codes but they can be split into sections and stacked several rows high, reducing the length of the symbol, while increasing the capacity of data that can be stored. ‘RSS Expanded’ code can be omni-directionally scanned.

### **Field Size/Chars**

Refer to page 148 for details.

### **5.11.3.20 Composite (*SE2223 only*)**



**Important:** *To successfully read this type of bar code, the two types of symbologies included in a composite bar code must be enabled.*

A composite symbol includes multi-row 2D components making it compatible with linear and area CCD scanners along with linear and rastering laser scanners.

The options available for this parameter represent multi-level components of a composite symbol.

### **Enable CC-C And Enable CC-AB**

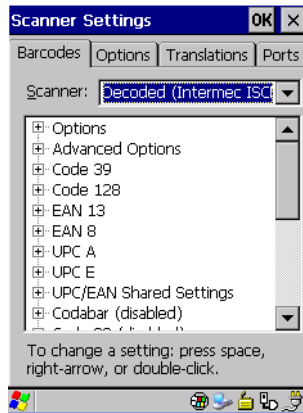
To activate these components, set the parameters to *on*.

### **Enable TLC-39**

This composite component integrates MicroPDF417 with the linear code. Setting this parameter to *on* enables this parameter.



## 5.11.4 Decoded (Intermec ISCP)



- Tap on the **Scanner** dropdown menu, and choose **Decoded (Intermec ISCP)**.

### 5.11.4.1 Decoded (Intermec) Options

#### Laser On Time

The value assigned to this parameter determines how long the imager will remain on when the scan button or trigger is pressed.

Double-tapping on this parameter displays a dialog box in which you can enter a value between 1 and 10 seconds.

### 5.11.4.2 Decoded (Intermec) Advanced Options

#### Continuous Scan Mode

Setting this parameter to *on* keeps the imager on and continuously decoding as long as the scanner button is pressed and held down.

#### Minimum Cancel Time

The value assigned to this parameter determines the time delay before the scanner is turned off, once the scanner trigger or button is released. This gives the scanner a minimum amount of time to complete its current decode before the scan is cancelled when the user quickly triggers on/off.

## Parameter Scanning

Setting this parameter to *on* enables decoding of parameter bar codes.

## Same Read Validate

The data is only transmitted after repeated reads give the same result. The value assigned at this parameter determines the number of reads required, from 0 to 10 times.

## Same Read Timeout

Prevents the same bar code from being read more than once. The value assigned determines after what time period the scanner will timeout, from 0 to 2550 msec.

## Diff Read Timeout

Prevents unwanted reading of other bar codes on the same label. The value assigned determines after what time period the scanner will timeout, from 0 to 2550 msec.

### 5.11.4.3 Code 39

#### Enable

Setting this parameter to *on* enables “Code 39”.

#### Full ASCII

If this parameter is enabled, 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.

#### Reading Range

Determines the reading distance from which a bar code can be successfully scanned. The default setting, *Extended*, allows for increased reading distance.

#### Start/Stop Transmit

Setting this parameter to *on* enables the transmission of start and stop characters, which are usually not transmitted. Code 39 can start and end with either a \* or a \$ character (see also next parameter *Accepted Start Char*).

## Accepted Start Char

This parameter allows the user the option of using one of the two start/stop characters or both (\$ char, \* char, \$ and \* char).

## Check Digit Verification

Uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted. The available options are: Disabled, MOD 43 Check, French CIP, or Italian CIP.



*Notes: French CIP (French pharmaceutical) is only used with bar codes containing 7 characters.*

*Italian CIP (Italian pharmaceutical) is also known as Code 32. It is transmitted as a standard Code 39 if checksum is not validated.*

## Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

## Minimum Length

Minimum lengths for the bar code can be set from **0** to **255**. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

## Field Size/Chars

Refer to page 148 for details.

## 5.11.4.4 Code 128

### Enabled

Setting this parameter to *on* enables “Code 128”.

### EAN 128

To successfully scan this type of bar code, **EAN 128** must be enabled. “EAN” bar codes include group separators and start codes.

## EAN 128 Identifier

‘EAN 128 Identifier’ allows the AIM ID " ]C1" for EAN 128 to be transmitted or removed. By default, this identifier is transmitted if EAN 128 is enabled.

## GTIN Compliant

GTIN (global trade item number) processing transmits EAN 128 as the 14-character EAN/UCC GTIN. To use GTIN processing, you must activate the EAN 128 symbology.



**Important:** *When EAN 128 and GTIN processing are both activated, it is not possible to read normal EAN 128 Codes.*

## FNC1 Conversion

‘FNC1 Conversion’ allows the embedded FNC1 character to be converted to another character for applications that cannot use the default <GS> Group Separator or hex (1d).

Double-tapping on this option displays a dialog box listing the allowable range – 0 to 255.

## Enable ISBT 128

To successfully scan this type of bar code (International Society of Blood Transfusion), this option must be set to *on*. If you enable this type of bar code, Code 128/EAN 128 is deactivated to avoid any confusion.

## ISBT Concat Transmit

The codes are not concatenated by default. You need to choose one of the options provided for this parameter to send concatenated code. Choosing *Only Concatenated Codes* transmits only concatenated codes—single codes will not be transmitted. Choosing *Concatenated or Single* transmits single codes or concatenated codes. If only one code of a pair is read, that code will be transmitted as a single code. If both codes in a pair are detected, they will be concatenated provided that *ISBT Concat Any Pair* (see below) is enabled.

## ISBT Concat Any Pair

Enabling this parameter causes all code pairs that can be, to be concatenated even if they do not comply with Section 4.1 of the “ISBT 128 Bar Code Symbology and Application Specification for Labeling of Whole Blood and Blood Components” (June 2000, Version 1.2.1).

## Reading Range

Determines the reading distance from which a bar code can be successfully scanned. The default setting **Extended**, allows for increased reading distance.

## Check Digit Verification

Uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted. The available options are: Disabled, or French CIP.



*Note:* French CIP (French pharmaceutical) is only used with bar codes containing 7 characters.

## Minimum Length

Minimum lengths for the bar code can be set from 0 to 255. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

## Field Size/Chars

Refer to page 148 for details.

## 5.11.4.5 EAN 13

### Enabled

Set this parameter to *on* to enable “EAN 13”.

### ISBN Conversion

When this parameter (International Standard Book Number) is enabled, the first 3 characters (‘978’) are ignored and the checksum (0.9, ‘X’) is calculated on the remaining characters.

### Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

### Prefix/Suffix

See “Prefix/Suffix” beginning on page 151.

### **5.11.4.6 EAN 8**

#### **Enabled**

Set this parameter to *on* to enable “EAN 8”.

#### **Transmit Check Digit**

If the check digit is to be transmitted with the data, this parameter must be enabled.

#### **Convert To EAN 13**

If this parameter is enabled, an EAN 8 bar code is converted to EAN 13.

#### **Prefix/Suffix**

See “Prefix/Suffix” beginning on page 151.

### **5.11.4.7 UPC A**

#### **Enabled**

Set this parameter to *on* to enable “UPC A” bar code scanning recognition.

#### **Transmit Check Digit**

If the check digit is to be transmitted with the data, this parameter must be enabled.

#### **Transmit Number System**

If this parameter is enabled, the number system digit is transmitted with the decoded bar code data.

#### **Convert To EAN 13**

If this parameter is enabled, a UPC A bar code is converted to EAN 13.

#### **Prefix/Suffix**

Refer to page 151 for details.

### **5.11.4.8 UPC E**

#### **Enabled**

Set this parameter to *on* to enable “UPC E”.

## Enable UPC-E1

Set this parameter to **ON** to allow “UPC-E1” (zero suppressed) bar code scans.

## Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

## Transmit Number System

If this parameter is enabled, the number system digit is transmitted with the decoded bar code data.

## Convert To UPC-A

This parameter converts UPC E (zero suppressed) decoded data to UPC A format before transmission. After conversion, data follows UPC A format and is affected by UPC A programming selections (e.g. Check Digit).

## Prefix/Suffix

Refer to page 151 for details.

### 5.11.4.9 UPC/EAN Shared Settings

The setting assigned to the “Addendum” parameter associated with this option is shared across all UPC and EAN bar codes.

#### Addendum

An addendum is a separate bar code, supplementary to the main bar code. This parameter provides two options: Not Required but Transmitted if Read or Required and Transmitted.

- Double-tap on **Addendum** to display a dialog box listing your options.
- Highlight an item, and tap on **OK**.

When *Addendum* is set to Not Required but Transmitted if Read, the scanner searches for an addendum and if one exists, appends it to the main bar code. When the parameter is set to Required and Transmitted, the scanner does not accept the main bar code without an addendum.

#### Addendum Add-on 2 And Addendum Add-on 5

Enabling these parameters sets the length of the addendum bar code to either 2 or 5 characters.

## Addendum Security

This parameter defines the security level for *Addendum Add-on 2* and *Addendum Add-on 5*. The higher the security level, the lower the decode rate, which can be set from 0 to 100.

## GTIN Compliant

GTIN (global trade item number) processing transmits EAN 128 as the 14-character EAN/UCC GTIN. To use GTIN processing, you must activate the EAN 128 symbology.



**Important:** *When EAN 128 and GTIN processing are both activated, it is not possible to read normal EAN 128 Codes.*

## Reading Range

Determines the reading distance from which a bar code can be successfully scanned. The default setting **Extended**, allows for increased reading distance.

## 5.11.4.10 Codabar

### Enabled

Set this parameter to *on* to enable “Codabar”.

### Start/Stop Transmit

Codabar can use the following sets of characters as start and stop characters:

a, b, c, d

A, B, C, D

a, b, c, d, /, t, n, \*, e

DC1, DC2, DC3, DC4

Thus, when a set is chosen, the first and last digits of a Codabar message must be one of those characters and the body of the message should not contain these characters. Setting this parameter to *Not Transmitted* strips the start and stop characters from this bar code.

## CLSI Library System

When enabled, spaces are inserted after characters 1, 5, 10 in the 14-character label (used in the USA by libraries using the CLSI system).



## Check Digit Verification

When enabled, this parameter checks the integrity of an I 2 of 5 symbol to ensure it complies with a specified algorithm: either USS (Uniform Symbology Specification) or OPCC (Optical Product Code Council).

## Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

## Set Length L1, Set Length L2, And Set Length L3

Lengths for “Codabar” can be set from 0 to 255. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on these parameters displays dialog boxes where you can define the code length that will be recognized by your scanner.

## Length Mode

You can choose to set L1 as Minimum Length or L1,L2,L3 as Fixed Length.

## Field Size/Char

Refer to page 148 for details.

### 5.11.4.11 Code 93

#### Enabled

Set this parameter to *on* to enable “Code 93”.

#### Minimum Length

Minimum lengths for the bar code can be set from 0 to 255. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

#### Field Size/Char

Refer to page 148 for details.

### 5.11.4.12 Code 11

#### Enabled

Set this parameter to *on* to enable “Code 11”.

## Check Digit Verification

Uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted. The available options are: One Check Digit or Two Check Digits.

## Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

## Minimum Length

Minimum lengths for the bar code can be set from 0 to 255. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

## Field Size/Chars

Refer to page 148 for details.

## 5.11.4.13 Interleaved 2 of 5

### Enabled

Set this parameter to *on* to enable “Interleaved 2 of 5”.

### Reading Range

Determines the reading distance from which a bar code can be successfully scanned. The default setting **Extended**, allows for increased reading distance.

## Check Digit Verification

Uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted. The available options are: Disabled, MOD 10 Check, or French CIP.



**Note:** *French CIP (French pharmaceutical) is only used with bar codes containing 7 characters.*

## Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

## Set Length L1, Set Length L2, And Set Length L3

Lengths for “Codabar” can be set from 0 to 255. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on these parameters displays dialog boxes where you can define the code length that will be recognized by your scanner.

## Length Mode

You can chose to set L1 as Minimum Length or L1,L2,L3 as Fixed Length.

## Field Size/Chars

Refer to page 148 for details.

### 5.11.4.14 Matrix 2 of 5

#### Enabled

Set this parameter to **ON** to enable “Matrix 2 of 5”.

#### Minimum Length

Minimum lengths for the bar code can be set from **0** to **255**. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.4.15 MSI Plessey

#### Enabled

Set this parameter to *on* to enable “MSI Plessey”.

#### Enable Plessey

Set this parameter to *on* to enable the “Plessey” bar code.

#### Check Digit Verification

Uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted. The available options are: MOD 10 Check, or Double MOD 10 Check.

## Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

## Plessy Transmit Check Digit

If the check digit is to be transmitted with the Plessy data, this parameter must be enabled.

## Minimum Length

Minimum lengths for the bar code can be set from 0 to 255. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

## Plessy Minimum Length

Minimum lengths for the Plessy bar code can be set from 0 to 255. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

## Field Size/Char

Refer to page 148 for details.

## 5.11.4.16 Discrete 2 of 5

### Enabled

Set this parameter to *on* to enable “Discrete 2 of 5”.

### Standard 2 of 5 Format

You can choose as the standard format either Identicon (6 start/stop bars) or Computer Identics (4 start/stop bars).

### Check Digit Verification

Uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted. The available options are: Disabled, or MOD 10 Check.

## Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

## Set Length L1, Set Length L2, And Set Length L3

Lengths for “Codabar” can be set from 0 to 255. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on these parameters displays dialog boxes where you can define the code length that will be recognized by your scanner.

### Length Mode

You can chose to set L1 as Minimum Length or L1,L2,L3 as Fixed Length.

### Field Size/Chars

Refer to page 148 for details.

## 5.11.4.17 2D PDF-417

### Enabled

Set this parameter to *on* to enable “2D PDF-417”.

### Field Size/Chars

Refer to page 148 for details.

## 5.11.4.18 2D Micro PDF-417

### Enabled

Set this parameter to **ON** to enable “2D Micro PDF-417”.

### Code 128 Emulation

When this parameter is enabled, the scanner transmits data from certain Micro PDF-417 symbols as if it was encoded in Code 128 symbols.

If Code 128 Emulation is enabled, the following Micro PDF-417 symbols are transmitted with one of the following prefixes:

- ]C1 if the first codeword is 903-907, 912, 914, 915
- ]C2 if the first codeword is 908 or 909
- ]C0 if the first codeword is 910 or 911

If Code 128 Emulation is set to **OFF**, the Micro PDF-417 symbols are transmitted with one of the following prefixes:

- ]L3 if the first codeword is 903-907, 912, 914, 915

- ⓵L4 if the first codeword is 908 or 909
- ⓵L5 if the first codeword is 910 or 911

### 5.11.4.19 2D Codablock

#### Enable Codablock A

Set this parameter to *on* to enable Codablock type A.

#### Enable Codablock F

Set this parameter to *on* to enable Codablock type F.

#### Enable RSS-14

RSS-14 code can be either purely linear or split in half with one half stacked on top of the other half. Stacking the code reduces the bar code length, and providing the nominal height of the code is maintained, it can be omni-directionally scanned.

#### Enable RSS Limited

‘RSS-Limited’ is restricted, in that it can only encode 14 digit GTINs (global trade item number) that begin with either a 0 or a 1. It is not stackable and is not designed to be read omni-directionally.

#### Enable RSS Expanded

‘RSS Expanded’ uses the same application identifiers as UCC/EAN-128 codes but they can be split into sections and stacked several rows high, reducing the length of the symbol, while increasing the capacity of data that can be stored. ‘RSS Expanded’ code can be omni-directionally scanned.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.4.20 Telepen

#### Enabled

Set this parameter to **ON** to enable ‘Telepen’.

#### Format

Set the bar code character type to either **ASCII** or **Numeric**.

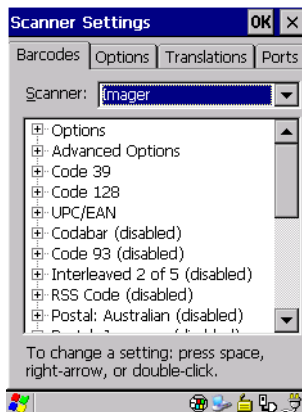
## Minimum Length

Minimum lengths for the bar code can be set from **0** to **255**. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

## Field Size/Chars

Refer to page 148 for details.

## 5.11.5 Imager



- Tap on the **Scanner** dropdown menu, and choose **Imager**.

### 5.11.5.1 Imager Options

#### TekImager Enabled

Setting this option to *on* enables the imager installed in your hand-held.

#### Continuous Scan Mode

Setting this parameter to *on* keeps image capture active and continuously decoding as long as the scanner button is pressed and held down.

#### Center Bar Code Only



**Note:** *This parameter must be disabled when reading Composite bar codes.*

When more than one bar code is visible in a single snap shot, this parameter allows you to specify that only the centre image within the imager framing marker be read. When this parameter is set to *on*, the target dot is pointed at the centre image and only that image is returned.

## Max Number Barcodes

Specifies the maximum number of bar codes the imager attempts to decode in an image. A maximum of 6 bar codes can be decoded at one time.

## Barcodes Must Decode

Specifies the minimum number of bar codes that the imager must decode in order to report success.



**Note:** *This number must be less than the number of bar codes assigned to Max Number Barcodes. The driver validates and reassigns the value if necessary.*

## Window Width

This parameter determines the width of the captured image in pixels.



**Note:** *The driver will validate and reassign the value assigned to this parameter, if necessary; the driver will also use the Window Width value to horizontally center the image in the field of view.*

## Window Height

This parameter determines the height of the captured image in pixels.



**Note:** *The driver will validate and reassign the value assigned to this parameter, if necessary; the driver will also use Window Height value to vertically center the image in the field of view.*

## Dot Time (msec)

The value selected for “Dot Time (msec)” determines (in milliseconds) how long the targeting dot remains on before the scanner begins capturing images. When you double-tap on this parameter, a dialog box is displayed in which you can enter a value of between 0 and 3000. A value of 0 disables the target dot.



### 5.11.5.2 Imager Advanced Options



**Important:** *Do not adjust the advanced options without first consulting Psion Teklogix technical support.*

#### Default Dev. On Reboot

The value assigned to this parameter determines whether or not the driver will restore the factory defaults to the imager device on the next reboot—that is, a cold boot or warm boot.



**Note:** *The driver will default the imager device on a clean-cold-boot, regardless of the value of this parameter.*

#### Min Scan Duration

This parameter defines the minimum amount of time in seconds that the imager will scan when the trigger is pressed and held down without successful decode.



**Note:** *The actual scan duration when the trigger is pressed relies on the value assigned to Captures Per HW Trigger, below.*

#### Captures Per HW Trigger

The value assigned to this parameter determines the number of captures the imager device will take while the imager's internal hardware trigger is held down.



**Note:** *This parameter, together with Min Scan Duration, determines the actual scan duration. When the scan trigger is pressed and held down, the driver starts a timer based on the value of Min Scan Duration and also sends a command to emulate the hardware trigger. When completed, if the time has not yet expired, it will send another command to the imager device, forcing the imager to flash again using the value assigned to Captures Per HW Trigger.*

#### Auto Exposure



**Important:** *This parameter value should only be changed by qualified Psion Teklogix personnel. It should be left at the default value – ‘on’.*

Setting this parameter to *on* allows the imager to make automatic gain, integration and illumination adjustments based on ambient light before capturing the bar code. If the adjustment is insufficient, further adjustments are made automatically before another image is captured.

## Fast Converge



**Note:** “Auto Exposure” must be set to ‘on’ in order for this parameter to function.

*Keep in mind that while this parameter can improve imager performance, “Fast Converge” increases battery power consumption.*

Setting this parameter to *on* speeds the “Auto Exposure” process. It allows the imager to rapidly snap a number of bar code capture attempts while finding ideal values for gain, integration and illumination.

## Max Gain, Max Integration And Max Illumination



**Important:** *These parameter values should only be changed by qualified Psion Teklogix personnel.*

These parameters represent internal values used by the 2D imager. The “Auto Exposure” parameter automatically adjusts the “Max Gain”, “Max Integration” and “Max Illumination” parameters to produce the best bar code read. Keep in mind that “Auto Exposure” must be set to *on* in order for these parameter values to be automatically adjusted.

Double-tapping on any of these parameters displays an associated dialog box in which an allowable range is displayed: Max Gain – 357 to 7920, Max Integration – 0 to 65535, Max Illumination – 0 to 7.

## Decoder Timeout

The decoder is a set of algorithms that examine the image and attempt to find the bar codes, and then turn the pixels into data that the computer can use—this process takes time. ‘Decoder Timeout’ limits the amount of time the decoder will spend attempting to decode an image, and forces it to stop and grab a new image, which will probably be easier to decode.



**Note:** *When decoding multiple bar codes in one image, the value assigned to ‘Decoder Timeout’ should be increased to 200ms/extra bar code after the first.*

## Adaptive Windowing

Adaptive Windowing is an advanced technique used to speed up bar code recognition in certain applications. The ‘Adaptive Windowing’ parameter automatically reduces the size of the window to the user-programmed window size when it successfully decodes (which reduces decode time the next time it is used), but increases it to the full size window (1280x1024 for SX5303) on a failed decode.



**Note:** *This feature assumes that you have reached an understanding about how the device operates in your application, and that, after a learning period, operators will get used to using the imager in one particular way. It also assumes that a trained operator will usually only have near miss scenarios.*

## Constant Illumination

Constant Illumination is used to reduce the intrusiveness of the device’s illumination on the observer. Instead of the illumination turning on and off every time the device attempts a decode (2-4 times per second), the illumination stays on from the time the trigger is pulled until a decode is successful. This feature is useful in low light environments, since it will also reduce the distraction that the illumination can have on nearby coworkers.

### 5.11.5.3 Code 39

#### Enabled

Set this parameter to *on* to enable “Code 39”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.4 Code 128

#### Enabled

Set this parameter to *on* to enable “Code 128”.

#### Field Size/Chars

Refer to page 148 for details.

### **5.11.5.5 UPC/EAN**

This parameter allows you to enable the following UPC (Universal Product Code) and EAN (European Article Numbering) bar codes: UPC-A, UPC-E, UPC-E1, UPC-8, EAN-13, Bookland EAN-13 and Bookland EAN.

#### **Enabled**

Set this parameter to *on* to enable “UPC/EAN” bar codes.

#### **Addendum**

Refer to “Addendum” on page 150.

#### **Prefix/Suffix**

Refer to page 151 for details.

### **5.11.5.6 Codabar**

#### **Enabled**

Set this parameter to *on* to enable “Codabar”.

#### **Field Size/Char**

Refer to page 148 for details.

### **5.11.5.7 Code 93**

#### **Enabled**

Set this parameter to *on* to enable “Code 93”.

#### **Field Size/Char**

Refer to page 148 for details.

### **5.11.5.8 Interleaved 2 of 5**

#### **Enabled**

Set this parameter to *on* to enable “Interleaved 2 of 5”.

#### **Field Size/Chars**

Refer to page 148 for details.

### 5.11.5.9 RSS Code (Reduced Space Symbology)

#### Enable

Setting this parameter to *on* enables “RSS Code” scanning capability.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.10 Postal: Australian

#### Enabled

Set this parameter to *on* to enable “Postal: Australian”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.11 Postal: Japanese

#### Enabled

Set this parameter to *on* to enable “Postal: Japanese”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.12 Postal: Korean

#### Enabled

Set this parameter to *on* to enable “Postal: Korean”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.13 Postal: PlaNET

#### Enabled

Set this parameter to *on* to enable “Postal: PlaNET”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.14 Postal: PostNET

#### Enabled

Set this parameter to *on* to enable “Postal: PostNET”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.15 Postal: Royal

#### Enabled

Set this parameter to *on* to enable “Postal: Royal”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.16 2D DataMatrix

#### Enabled

Set this parameter to *on* to enable “2D DataMatrix”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.17 2D Maxicode

#### Enabled

Set this parameter to *on* to enable “2D Maxicode”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.18 2D PDF-417

#### Enabled

Set this parameter to *on* to enable “2D PDF-417”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.19 2D Micro PDF-417

#### Enabled

Set this parameter to *on* to enable “2D Micro PDF-417”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.20 2D QR Code

#### Enabled

Set this parameter to *on* to enable “2D QR Code”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.21 2D Aztec

#### Enabled

Set this parameter to *on* to enable “2D Aztec”.

#### Field Size/Chars

Refer to page 148 for details.

### 5.11.5.22 Composite

A composite symbol includes multi-row 2D components making it compatible with linear and area CCD scanners along with linear and rastering laser scanners.

#### Enabled

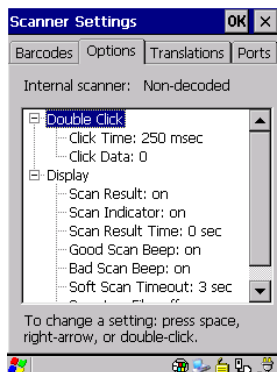
Set this parameter to *on* to enable “Composite” bar code scanner.



**Important:** *To successfully read this type of bar code, the two types of symbologies included in the composite must be enabled. In addition, “Center Bar Code Only” must be disabled.*

## 5.11.6 Options Tab

This tab allows you to tailor the double-click parameters and the display options associated with your scanner.



### 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 7530 G2 following a double-click. A dialog 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 dialog box resets the data to zero.



## Display Parameters

### Scan Result

When this parameter is enabled, 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, 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. When you choose this option, a dialog box appears where you can enter a value.



**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.*

### Good Scan Beep And Bad Scan Beep

These parameters determine whether or not the 7530 G2 emits an audible scanner ‘beep’ when a good (successful) scan or a bad (unsuccessful) scan is performed. Set these parameters to either *on* to enable the beeper or *off* to disable it.

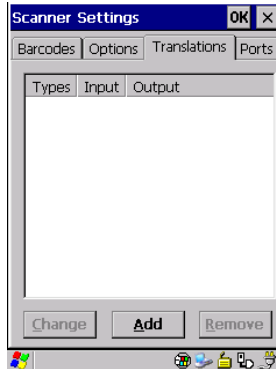
### Soft Scan Timeout

This parameter is used by the SDK “Scan” function (soft-scan: starting a scan session via the SDK function, instead of a physical user trigger press). The value assigned to this parameter determines the soft-scan timeout from 1 to 10 sec. (default is 3 sec.).

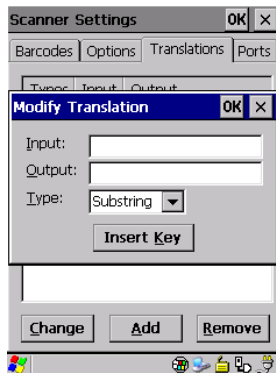
### Scan Log File

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 ‘Scan Log File’ is enabled, there is a slight performance impact when performing multiple scans since the log file is written to persistent storage.

## 5.11.7 Translations



- In the *Translation* tab, tap on the **Add** button.



### Input

This value is compared with the decoded bar code reading. If there is a match, the “Output” string replaces the data read from the bar code.

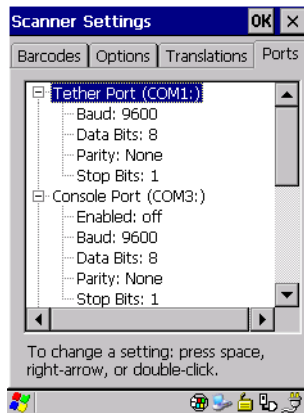
### Output

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

## Type

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

## 5.11.8 Ports



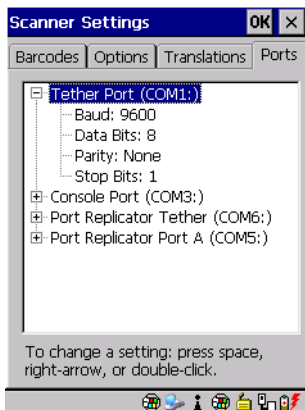
While you cannot configure the scanner, you can configure *communications* with a serial decoded scanner using the options in this tab.

Use these settings to ensure that the communication ports on the 7530 G2 match the settings of the serial devices to which they are connected. If the settings do not match exactly, the devices may not function. Note that some devices can auto-detect serial port settings (such as baud rate), and in this case the 7530 G2 will dictate the settings. Baud rates often have a direct impact on performance – they should be set as high as possible while still ensuring reliable communication.

### 5.11.8.1 Tether Port (COM1)

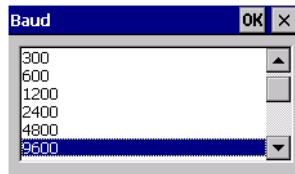


**Note:** *RS232 serial communications is one of the modes available on the tether port, located on the side of the 7530 G2*



#### Baud

Double-tapping on this parameter displays a pop-up window in which you can choose an appropriate baud rate.

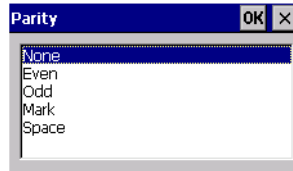


#### Data Bits

This parameter determines the number of bits data bits included in each asynchronous data byte. Most devices use 8 bit data bytes. Double-tapping on this option displays a pop-up window in which you can choose either 7 or 8 data bits.

## Parity

This parameter determines the type of parity checking used on the data going through the tether port. Double-tapping on this option displays a pop-up window in which you can choose the appropriate Parity.



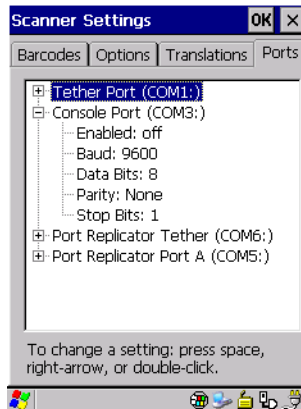
## Stop Bits

This parameter specifies the number of stop bits – 1, 1.5 or 2 – used for asynchronous communication.

### 5.11.8.2 Console Port (COM3)



**Note:** *The console port is accessed via the docking connector on the bottom of the 7530 G2. Only the Portable Docking Module (PDM) provides access to the console port through a DE-9 interface.*



## Enabled

This parameter must be set to *on* in order for the 7530 G2 to recognize the device connected to the console port.

## Baud

Refer to page 200 for details.

## Data Bits

Refer to page 200 for details about this parameter.

## Parity

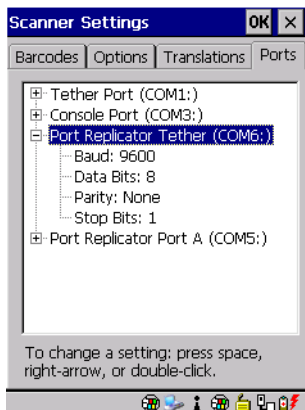
For details, refer to page 201.

## Stop Bits

Refer to page 201 for details about “Stop Bits”.

### 5.11.8.3 Port Replicator Tether (COM6)

The port replicator tether is a duplicate tether port located on the port replicator module of 7530 G2 cradles.



## Baud

Refer to page 200 for details.

## Data Bits

Refer to page 200 for details about this parameter.

## Parity

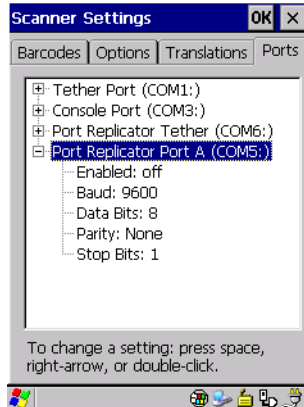
For details, refer to page 201.

## Stop Bits

Refer to page 201 for details about “Stop Bits”.

### 5.11.8.4 Port Replicator Port A (COM5)

Port replicator Port A is the standard RS232 DE-9 DTE port on the 7530 G2 port replicator module available on certain cradle types.



#### Enabled

This parameter must be set to *on* in order for the 7530 G2 to recognize the device connected to the port replicator RS232 DE-9 port (port A).

#### Baud

Refer to page 200 for details.

#### Data Bits

Refer to page 200 for details about this parameter.

#### Parity

For details, refer to page 201.

#### Stop Bits

Refer to page 201 for details about "Stop Bits".

## 5.12 SNMP (Simple Network Management Protocol) Setup

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

SNMP uses Management Information Bases (MIBs) that define the variables an SNMP Network Management Station can access. Each product has a defined set of MIBs that determine how SNMP operates, the type of access allowed and so on.

All Psion Teklogix products support the TEKLOGIX-GENERIC-MIB – a MIB that defines some common features across Psion Teklogix products. All devices also support MIB-II, a management information base that defines the common features of TCP/IP networks. The SNMP Agent software embedded in the 7530 G2 product supports SNMPv1 (RFC 1157).

- In the *Control Panel*, tap on the **SNMP** icon.

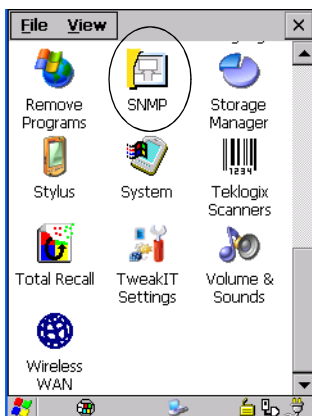
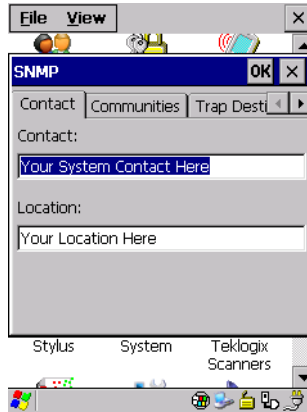


Figure 5.33 SNMP Icon



## 5.12.1 Contact Tab



### 5.12.1.1 Contact

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

### 5.12.1.2 Location

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

## 5.12.2 Communities Tab



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

### Enable SNMP

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

### 5.12.2.1 Adding A Community

- Tap on the **Add** button to add a new ‘community’.



## Name

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

## Rights

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

### 5.12.2.2 Modifying A Community Setting

To modify an existing community:

- Highlight the community you want to alter.
- Tap on the **Change** button.



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

- Edit the **Name** and/or **Rights**, and press [ENTER] to save your changes.

### 5.12.2.3 Removing An Existing Community

To remove an item:

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

A *Delete Confirmation* screen is displayed.

- To remove a community, tap on the **Yes** button, *or* If you decide not to remove the community, tap on **No**.

## 5.12.3 Trap Destination Tab

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



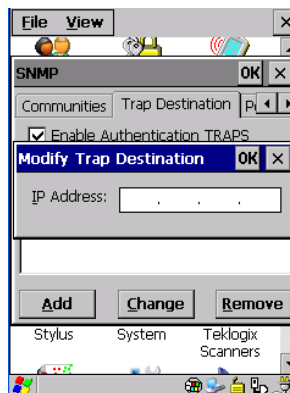
### 5.12.3.1 Enabling Authentication TRAPS

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

### 5.12.3.2 Adding A Destination

To add a new destination:

- Tap on the **Add** button.



- Type a destination in the text box provided, and press [ENTER].

### 5.12.3.3 Changing A Destination

To change an existing trap destination:

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

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



- Make the changes to the destination, and press [ENTER] to save the changes.

### 5.12.3.4 Removing A Trap Destination

To remove a trap destination:

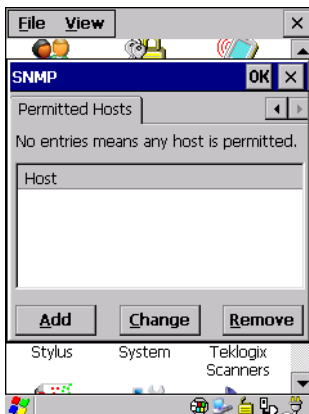
- In the *Trap Destination* tab, highlight the destination you want to delete.
- Tap on the **Remove** button.

A *Delete Confirmation* screen is displayed.

- To remove a destination, tap on the **Yes** button, *or* If you decide not to remove the destination, tap on **No**.

## 5.12.4 Permitted Hosts Tab

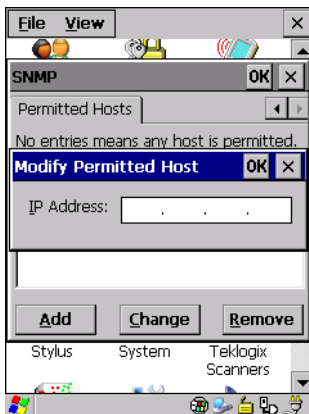
For security reasons, the Network Administrator may want to restrict SNMP-node access to a known sub-set of SNMP Managers. This tab lists the IP addresses of all the SNMP Managers which are allowed to monitor and manage this device. If no entries are listed, the device will accept SNMP queries from any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



### 5.12.4.1 Adding A Host

To add a new host:

- Tap on the **Add** button.



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

### 5.12.4.2 Changing A Host

To change an existing host IP address:

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

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

- Make the necessary changes, and press [ENTER].





# PERIPHERAL DEVICES & ACCESSORIES

# 6

6.1	External Bar Code Readers . . . . .	215
6.1.1	PowerScan™ Standard, LR and XLR Bar Code Scanners . . . . .	215
6.1.2	Entering Data With The Bar Code Reader . . . . .	215
6.2	RD7950 Integrated UHF RFID Reader . . . . .	215
6.3	Batteries . . . . .	215
6.4	Battery Charging . . . . .	216
6.5	Gang Charger . . . . .	216
6.5.1	Installation . . . . .	216
6.5.2	Operator Controls . . . . .	217
6.5.3	Charge Indicators . . . . .	217
6.5.4	Charging Batteries . . . . .	217
6.5.5	Troubleshooting . . . . .	218
6.5.5.1	Excessive Charge Duration . . . . .	218
6.5.5.2	Indicator Flashing Red . . . . .	218
6.5.5.3	Power LED Does Not Light Up . . . . .	219
6.5.5.4	Indicator Does Not Light When Battery Installed . . . . .	219
6.6	Combo Charger . . . . .	219
6.6.1	Installation . . . . .	219
6.6.2	Operator Controls . . . . .	220
6.6.3	Using the Combo Charger With The 7530 G2 . . . . .	220
6.6.4	Charging The Spare Battery . . . . .	220
6.6.5	Charge Indicators . . . . .	221
6.6.6	Troubleshooting . . . . .	221
6.7	Combo Dock . . . . .	222
6.7.1	Installation . . . . .	222
6.7.2	Using The Combo Dock . . . . .	222
6.7.3	Network Access . . . . .	222
6.7.4	Troubleshooting . . . . .	222
6.8	Quad Dock . . . . .	223
6.8.1	Installation . . . . .	223
6.8.2	Indicators And Controls . . . . .	223
6.8.3	Using The Quad Dock . . . . .	224

6.8.4	Network Access . . . . .	224
6.8.4.1	Network Addressing . . . . .	224
6.8.5	Battery Charging . . . . .	224
6.8.6	Troubleshooting . . . . .	224
6.8.6.1	Network Link Unsuccessful . . . . .	225
6.8.6.2	7530 G2 LED Does Not Light When Docked . . . . .	225
6.9	Portable Docking Module (PDM) . . . . .	225
6.10	Bluetooth Peripherals . . . . .	228
6.11	The 7530 G2 Picker Cradle . . . . .	228
6.11.1	Picker Cradle Mounting Recommendations . . . . .	229
6.11.1.1	Mounting Template . . . . .	229
6.11.2	Wiring Guidelines . . . . .	230
6.11.3	Using The Picker Cradle . . . . .	230
6.11.4	Maintaining The Picker Cradle . . . . .	230
6.11.5	Powered Cradle Installation In High Voltage Vehicles . . . . .	231
6.11.6	Powered Cradle Installation . . . . .	231
6.11.6.1	Wiring Vehicle Power To The Cradle . . . . .	232
6.11.7	The Port Replicator . . . . .	233
6.12	Tether Adaptor Cables . . . . .	234

## 6.1 External Bar Code Readers

### 6.1.1 PowerScan™ Standard, LR and XLR Bar Code Scanners

The 7530 G2 supports Psion Teklogix' PowerScan™ industrial bar code scanner with standard, long range and extra long range options.

To connect this scanner to the 7530 G2, attach the device to the tether port at the upper-right side of the 7530 G2. Review your “PowerScan Programing Guide (PSC)” before you begin.

### 6.1.2 Entering Data With The Bar Code Reader



*Note:* For helpful scanning tips, refer to “Scanning Techniques” on page 49.

When a label is scanned successfully, the 7530 G2 will beep if configured appropriately and the scan LED will flash. Occasionally, the bar code labels are poorly printed or damaged and cannot be read properly. In this case, use the keyboard to enter data from the label.

## 6.2 RD7950 Integrated UHF RFID Reader



*Note:* This RFID reader is scheduled for future release.

The RD7950 UHF RFID Reader is an EPC-compliant RFID reader available for Psion Teklogix rugged hand-held computing devices. Multimedia data capture capabilities are delivered by combining RFID with existing technologies such as laser bar code scanning or imaging.

## 6.3 Batteries



*Note:* Battery specifications are detailed beginning on page 247.

7530 G2s operate with Lithium-Ion batteries – either a 1900 mAh battery pack or a high capacity, 2400 mAh battery.



***Important:*** It is critical that the battery safety information described on page XII near the beginning of this manual be reviewed carefully and that all warnings be strictly followed.

## 6.4 Battery Charging



**Note:** *Initially, new batteries that have been fully charged may indicate slightly less than 100% charge. No special conditioning is required. The full capacity of the battery will reach 100% after 5 cycles through the charger.*

It can take from 1.5 to 4 hours to charge a battery. The 7530 G2's intelligent charging system protects the battery from over-charging by terminating the charge process when the battery is at maximum capacity.



**Important:** *To preserve battery integrity, the charger will proceed with a charge only when the battery temperature falls between 5° C and 39° C (41° F to 102° F). If the battery is too hot or cold, the battery status LED flashes yellow and the charge is suspended.*

## 6.5 Gang Charger

The gang charger is designed to charge up to six 7530 G2 Lithium-Ion batteries at one time. Your charger is shipped with the appropriate IEC mains power cord. If the supplied power cord is incorrect for your country, contact Psion Teklogix for assistance (see Appendix A: Support Services And Worldwide Offices).



**Note:** *The gang charger is shipped with a user manual. It is critical that this manual be reviewed for additional information and updates.*

### 6.5.1 Installation

The gang charger can be wall mounted using the wall mount kit, Model # HU3106, or it can be operated on a flat surface. Install the charger in an area that is free from excessive dirt, dust and contaminants. The ambient temperature must be in the range 5° C to 39° C (41° F to 102° F). The charger will not charge batteries outside of this temperature range. For maximum performance, it is recommended that the charger be operated at room temperature – a temperature range between 18° C to 25° C (64° F to 77° F).

The charger can consume up to 2A @ 120VAC or 1A @ 240VAC. Check to ensure the mains circuit supplying the charger is adequate for this loading (especially if several chargers are being powered from the same circuit).

After unpacking the unit:

- Visually check the charger for damage.
- Install the IEC power cord and apply power.

A green indicator in the lower-right lights to indicate power is present. All charge indicators flash momentarily at powerup to indicate that the charger is ready for operation.

If you choose to wall mount the charger, follow the instructions packaged with the mounting bracket kit. Be sure to locate the charger in an area where there is no risk of injury to persons walking in the vicinity.

## 6.5.2 Operator Controls

The gang charger does not have operator controls or a power switch.

## 6.5.3 Charge Indicators

Each battery charge slot is equipped with a tri-coloured LED to indicate the charge status of the battery. When 7530 G2 batteries are inserted in the charger, the colour and behaviour of the LEDs associated with the charge wells in use indicate the status of the charge.







LED Behaviour	Icon	Charge Status
Off		No battery detected in the slot.
Solid green		Battery is fully charged.
Flashing green		Battery is charged to 75% capacity.
Solid yellow		Charge in progress.
Flashing yellow		Battery temperature out of charge range between 5° C to 39° C (41° F to 102° F). This icon indicates that the charger is waiting to charge. Charging is attempted every five minutes until the battery is within the appropriate temperature range.
Solid red		Battery rejected (at insertion) or unable to complete charge on battery
Flashing red		Charging circuit problem. Refer to “Troubleshooting” on page 218.

Table 6.1 Gang Charger Indicators

## 6.5.4 Charging Batteries

- Install the battery with the battery contacts facing the charger. Slide the battery between the guide rails until it lightly latches in place.

## Troubleshooting

The LED directly below the slot in which a battery is inserted lights up immediately. A solid yellow LED indicates that the battery is being charged. If the battery temperature is outside 5° C to 39° C (41° F to 102° F), the LED flashes yellow until the temperature is acceptable. A fully discharged battery will normally take between 1.5 and 4 hours to charge. When the battery charge reaches 75%, the indicator flashes green. At full capacity, it turns solid green.

When the battery is fully charged, the charger stops applying power; the battery cannot be overcharged if left in the charger slot. The 75% charge indicator is handy if you need a quick recharge – it often occurs after less than an hour.

### 6.5.5 Troubleshooting

#### 6.5.5.1 Excessive Charge Duration

The charger is equipped with a recalibration function – a function that fully discharges and then fully recharges the battery. This process is necessary to recalibrate the battery capacity gauge internal to the battery. The charger attempts recalibration when:

- the battery capacity is at less than 30%, and
- the battery has undergone more than 40 partial charge cycles since the last full discharge.

A complete battery discharge takes between 1.5 and 4 hours to complete. When in discharge mode, the LED indicator flashes yellow. The recalibration function extends the charge time by up to 2 hours.

#### 6.5.5.2 Indicator Flashing Red

If the indicator flashes red:

- Remove all batteries and disconnect the mains power cable.
- Wait at least 20 seconds, and then plug the cable in again.

If any of the charge slot LEDs continue to flash red, the charger is defective and requires service. If all indicators are flashing red, there is a power supply problem and the charger requires service.

### 6.5.5.3 Power LED Does Not Light Up

- Remove all batteries, and unplug the charger.
- Connect another device to the mains outlet to ensure there is power.
- Remove the IEC mains power cable from the charger, and check it for damage.
- Reconnect the mains cable in the charger and mains outlet.

If the power LED still does not light up:

- Unplug the mains cable, and check the fuse at the rear of the charger.

If the fuse appears to be intact, the charger requires service.

### 6.5.5.4 Indicator Does Not Light When Battery Installed

- Remove the battery, and clean the contacts on the battery and the charge slot.
- Reinstall the battery, and check that it is fully seated in the slot.
- Inspect the charge slot contacts for damage (are they bent, flattened, twisted or broken).
- Try inserting a battery that you know to be working in the charger slot.
- Reconnect the mains power cable, and check that the slot indicator flashes at powerup.

## 6.6 Combo Charger

The 7530 G2 combo charger is a desktop charger designed to charge the 7530 G2 internal battery along with a spare battery pack. The combo charger provides sufficient power to operate and fast charge the 7530 G2 internal battery, while recharging the spare battery pack.



**Note:** *The combo charger is shipped with a user manual. It is critical that this manual be reviewed for additional information and updates.*

### 6.6.1 Installation

Keep the combo charger away from excessive dirt, dust and contaminants. The combo charger will not charge batteries outside an ambient temperature range of 5° C to 39° C (41° F to 102° F). It is recommended that this charger be operated at room temperature – between 18° C and 25° C (64° F to 77° F) for maximum performance.

## Operator Controls

After unpacking the unit:


- Visually inspect the charger for possible damage.
- Install the IEC power cord and apply power.

A green LED in the lower-right corner of the front panel lights to indicate that power is present. The charge LED flashes momentarily at powerup. The charger is now ready for operation.

### 6.6.2 Operator Controls

The combo charger has no operator controls or power switch.

### 6.6.3 Using the Combo Charger With The 7530 G2

- Gently slide the 7530 G2 into the cradle portion of the combo charger until lightly latched. An icon is displayed indicating that the 7530 G2 is properly installed in the combo charger –  .

The battery charge LED on the 7530 G2 lights up indicating that the unit has external power and battery charging may begin. It is safe to leave the 7530 G2 in the combo charger cradle while it is not in use – the battery will not be overcharged.

### 6.6.4 Charging The Spare Battery

- Install the battery with the latch facing towards the rear of the charger – slide it between the guide rails until it lightly latches in place.

The LED for the slot lights up immediately. A solid yellow LED indicates the battery is being charged. A flashing yellow LED indicates that the battery temperature is outside the acceptable charge range – between 5° C and 39° C (41° F to 102° F).

A fully discharged battery normally takes between 1.5 and 4 hours to charge. When the battery capacity reaches 75%, the LED flashes green. When the battery is at full capacity, the indicator turns solid green.

The combo charger stops applying power to the battery when it is fully charged – there is no risk of overcharge if the battery remains in the charge slot. The 75% charge indicator is handy if you need a quick recharge – a quick charge often takes less than one hour.



## 6.6.5 Charge Indicators

The spare battery charge slot has an associated tri-colour LED indicator on the lower-right area of the front panel.

LED Behaviour	Charge Status
Off	No battery detected in the slot.
Solid green	Battery is fully charged.
Flashing green	Battery is charged to 75% capacity.
Solid yellow	Charge in progress.
Flashing yellow	Battery temperature outside the charge range of between 5° C to 39° C (41° F to 102° F). Charging is attempted every five minutes until the battery is within the appropriate temperature range.
Solid red	Battery rejected (at insertion) or unable to complete charge on battery.
Flashing red	Charging circuit problem. Refer to “Troubleshooting” on page 218 for details.

**Table 6.2 Combo Charger Indicators**

The combo charger supplies DC power to enable the 7530 G2 internal fast charger. Charge status is displayed on the 7530 G2 charge LED – the lower-right LED. Refer to “Charge LED” on page 43 for details.

Normally, it takes from 1.5 to 4.0 hours to fully charge the 7530 G2 internal battery.



**Note:** *Battery charging continues whether the 7530 G2 is switched on or off.*

## 6.6.6 Troubleshooting

The gang charger troubleshooting section also applies to the combo charger. Refer to “Troubleshooting” on page 218, for helpful tips.

## 6.7 Combo Dock

The combo dock is identical to the combo charger with one exception – the combo dock is equipped with a 10/100 BaseT Ethernet interface. The charging information in “Combo Charger” beginning on page 219 also applies to the combo dock.

### 6.7.1 Installation


Refer to the “Installation” guidelines for the combo charger beginning on page 219.

- Attach a CAT5 RJ45 network patch cable (shipped with the combo dock) between your network and the RJ45 jack on the rear of the dock.

A green LED is illuminated next to the RJ45 connector when a valid network link is established.

A user application needs to be loaded onto each 7530 G2 that utilizes the combo dock for communication. With the network connected and this application loaded, the combo dock is ready for use.

### 6.7.2 Using The Combo Dock

- Gently slide the 7530 G2 into the cradle portion of the combo dock until lightly latched. The 7530 G2 detects combo dock and displays the appropriate icon – .

The battery charge LED (lower-right LED) on the 7530 G2 lights up to show it has external power and may start charging the battery.

Interaction with the 7530 G2 while in the combo dock is a function of the user application software used to communicate with the host network.

### 6.7.3 Network Access

The combo dock includes a dedicated USB to Ethernet converter. This USB converter appears as a USB slave to the 7530 G2 USB host controller. The 7530 G2 automatically detects insertion into a combo dock and loads the appropriate drivers to communicate with the USB/Ethernet converter.

See “Network Addressing” on page 224 for details about network addressing issues with the combo dock.

### 6.7.4 Troubleshooting

Troubleshooting issues for the combo dock are identical to those of the quad dock. Refer to “Troubleshooting” on page 224 for helpful tips.

## 6.8 Quad Dock



**Note:** *The quad dock is shipped with a user manual. It is critical that this manual be reviewed for additional information and updates.*

The Quad Dock permits each of four docked 7530 G2 hand-helds to communicate with a 10/100 BaseT Ethernet network at greater than 2Mbps. It also provides sufficient power to operate and fast charge the batteries in the 7530 G2s.

### 6.8.1 Installation

The quad dock should be located away from excessive dirt, dust and contaminants. The ambient temperature must fall between 5° C to 39° C (41° F to 102° F). The 7530 G2 internal charger will not charge batteries outside of this temperature range. For maximum performance, it is recommended that the quad dock be operated at room temperature – from 18° C to 25° C (64° F to 77° F).

The quad dock can consume up to 3A @ 120VAC or 1.5A @ 240VAC. Ensure that the mains circuit supplying the unit is adequate, especially if several docks are being powered from the same circuit.

After unpacking the unit:

- Visually inspect the unit for any damage.
- Install the IEC power cord and apply power.

A green indicator in the lower-right corner of the front panel lights up to indicate that power is present.

- Attach a CAT5 RJ45 network patch cable (supplied) between your network and the RJ45 jack on the rear of the dock.

A green LED is illuminated next to the RJ45 connector when a valid network link is established.


A user application must be loaded onto each 7530 G2 that utilizes the quad dock for communication. When the network is connected and this application is loaded, the quad dock is ready for use.

### 6.8.2 Indicators And Controls

The quad dock has no user controls. It is equipped with a power indicator LED and RJ45 link and traffic indicator LEDs. When a valid network link is established, a green LED is illuminated next to the RJ45 connector.

## 6.8.3 Using The Quad Dock

- Gently slide the 7530 G2 into the cradle portion of the quad dock until lightly latched.

The 7530 G2 detects that it is in a quad dock and displays the appropriate icon in the taskbar – . The battery charge LED on the 7530 G2 lights up to show it has external power and may start charging the battery.

Interaction with the 7530 G2 while in the quad dock is a function of the user application software used to communicate with the host network.

## 6.8.4 Network Access

The quad dock includes a four port 10/100 Ethernet hub. Each of the four downstream ports are connected to dedicated USB-to-Ethernet converters. These USB converters appear as USB slaves to the 7530 G2 USB host controller. The 7530 G2 automatically detects insertion into a quad dock and loads the appropriate drivers to communicate with the USB/Ethernet converters.

### 6.8.4.1 Network Addressing

Although the USB converters have fixed Ethernet MAC addresses, there is generally no correlation between these addresses and a specific 7530 G2 hand-held. The host application uses standard TCP/IP protocol to name, locate and communicate with a specific 7530 G2 on the network.

If a link is established between a hand-held and a host, the application on the host and on the 7530 G2 must have a recovery mechanism in the event that the hand-held is removed from the dock and the link is interrupted.

## 6.8.5 Battery Charging

The quad dock supplies DC power to enable the 7530 G2 internal fast charger. Charge status is displayed on the hand-held charge LED (see “Charge LED” on page 43). Battery charging continues whether the unit is switched on or off.

Normally, it takes between 1.5 and 4 hours to fully charge the 7530 G2 internal battery.

## 6.8.6 Troubleshooting

The indicators, applications and drivers required to use and monitor the docking station are installed on the 7530 G2 – no indicators or applications are present on the docking station itself.

### 6.8.6.1 Network Link Unsuccessful

If a network link fails, the 7530 G2 application alerts the operator that the link was unsuccessful.

### 6.8.6.2 7530 G2 LED Does Not Light When Docked

- Check that the quad dock has power – is the Power LED on the quad dock illuminated?
- Try inserting the 7530 G2 in another slot in the quad dock.
- Check for dirt or contamination on the docking contacts at the bottom of the 7530 G2. Wipe the contacts with a damp cloth if necessary.
- Check the pogo pins inside the dock cradle for dirt. Gently wipe with a damp cloth if they appear to be dirty or discoloured.
- Check that the pogo pins are not bent or damaged.
- Remove and reinsert the 7530 G2 in the cradle, and check that the latch is holding the unit in place (the pogo pins must be compressed for proper contact).
- Make certain that the battery installed in the 7530 G2 is not defective.

## 6.9 Portable Docking Module (PDM)



**Warning:** *The mains power cord for the DC adapter shall comply with national safety regulations of the country where the equipment is to be sold.*

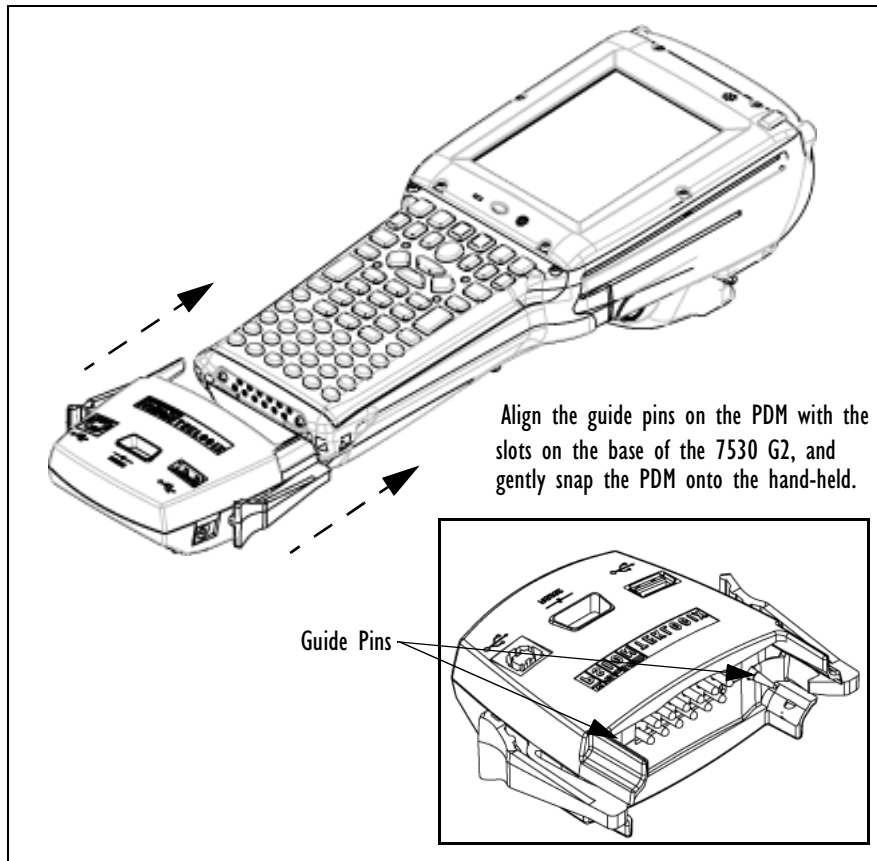
The Portable Docking Module (PDM) clips onto the base of the 7530 G2 and is most often used to charge the 7530 G2 battery when a desktop charger is not convenient. The PDM also offers additional communication ports, making it useful for upgrading software in the 7530 G2 from a USB-equipped laptop computer. Figure 6.2 on page 227 illustrates the connectors on the PDM.

- Align the pins on the PDM with the connectors on the base of the 7530 G2.
- Gently snap the PDM into place on the base of the unit. Figure 6.1 on page 226 provides a visual representation of how to secure the PDM.

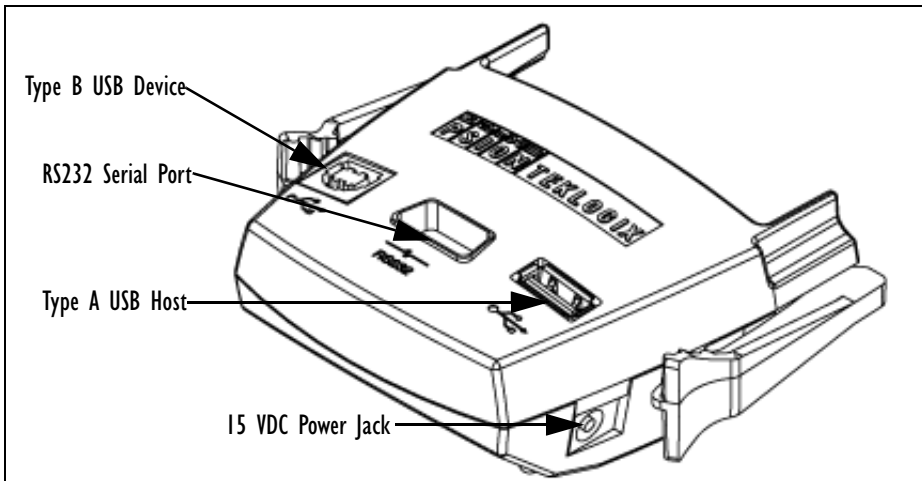


**Note:** *The latching mechanism on the PDM is designed for quick installation and release. It is not meant for heavy duty use.*

*Psion Teklogix recommends using a powered cradle or combo charger in harsh environments.*



**Figure 6.1 Attaching The PDM To The Base Of The 7530 G2**



**Figure 6.2 PDM Ports And Connectors**

The interfaces available on the PDM are as follows:

- DC power jack (15VDC @ 2.5A)
- Type A USB host port (for connection to USB devices such as a mouse, keyboard, printer, etc.)
- Type B USB device port (for connection to a USB host such as a PC)
- RS232D DE9 serial port (for connection to a PC COM port or a serial device such as a printer)

The standard Psion Teklogix PDM kit (PN HU4001) includes the necessary DC power supply, USB cables and RS232D 9-pin cable.

Use only the recommended adaptor with the PDM – it includes transient suppressors that protect your 7530 G2 from damage.

The PDM contains reverse polarity and over voltage protection. If the DC power jack is wired backwards or exceeds 20VDC, the PDM shuts down to protect the 7530 G2, the PDM and the power supply from damage. Psion Teklogix does not recommend substituting the DC power supply provided with your PDM.

The DC power supplied by the PDM is sufficient to operate the 7530 G2 and fast charge its internal battery at the same time. The 7530 G2 can run from a PDM without a battery installed.

## 6.10 Bluetooth Peripherals

If the 7530 G2 is equipped with a Bluetooth radio, it is possible to communicate with a variety of Bluetooth peripherals, including GSM/GPRS handsets, scanners, printers, and so on. The range of the Bluetooth radio in the 7530 G2 is limited to approximately 10 meters (32 feet). The Bluetooth antenna is located behind the scanner ‘bulge’ on the back of the hand-held.

Psion Teklogix provides built-in support for the Bluetooth peripherals listed below.

Psion Teklogix provides built-in support for:

- Bluetooth-equipped cell phone.
- Serial Port Profile (SPP).
- Dial-up Networking Profile (DUN).
- File Transfer Profile (FTP).
- Human Interface Device (HID).
- LAN Access Profile (LAP).
- Object Push Profile (OPP).

Keep in mind that Bluetooth and IEEE 802.11g radios both operate in the 2.4GHz band. Although the 7530 G2 includes features to minimize interference, performance of the system will not be optimal if you use both radios simultaneously. Typically, when both radios operate in the 7530 G2 at the same time, they cannot transmit simultaneously – this has a negative impact on overall system throughput. To minimize the impact on the backbone 802.11 network, Psion Teklogix recommends using Bluetooth peripherals that have low transaction rates (such as printers and scanners).

Bluetooth peripherals are configured by choosing the *Bluetooth* icon in the *Control Panel*. Refer to “Bluetooth Setup” on page 114 for information about setting up your Bluetooth devices for communication. In addition, review the manual shipped with your Bluetooth device to determine the method used to associate with the 7530 G2 host.

## 6.11 The 7530 G2 Picker Cradle

The 7530 G2 picker cradle is a highly ruggedized, single station dock. Although it provides quick insertion and removal, the cradle holds the 7530 G2 securely even when operated in high vibration environments (such as vehicles not equipped with suspensions).



The 7530 G2 base picker cradle can be outfitted with two options – a power module and a port replicator. Psion Teklogix also supplies a range of standard mounts for the hand-held picker cradles, and the 7530 G2 picker cradle is compatible with all of them.

### 6.11.1 Picker Cradle Mounting Recommendations



**Warning:** *Before mounting a picker cradle in a vehicle, there are a number of operator safety issues that require careful attention. An improperly mounted cradle may result in one or more of the following: operator injury, operator visibility obstruction, operator distraction and/or poor ease of egress for the operator. Psion Teklogix strongly recommends that you seek professional mounting advice from the vehicle manufacturer.*

*Cable routing within a vehicle cab also requires careful consideration, especially for separately tethered scanners and other devices with loose cables. If you are unable to obtain suitable advice, contact Psion Teklogix for assistance (see Appendix A: Support Services And Worldwide Offices). Note also that for better protection, the equipment should be mounted inside the vehicle roll cage.*

Pedestal mounts are recommended for all fixed mount locations because they offer optimal operator access. In addition, for safety reasons, only pedestal mounts with fully locking joints should be used in vehicles. Always adjust the pedestal for the optimum viewing angle, and securely tighten the hex and wing screws.

The most effective way to mount the picker cradle is to use the four #8-32 threaded inserts on the rear of the unit. Bolts must not extend more than 10mm (3/8") into the cradle.

To accommodate the service loop of the connector cable, leave a 4" clearance at the bottom of the cradle. Leave a 7" (minimum) clearance at the top of the cradle to allow easy removal of the hand-held. Also remember to leave at least a 3" clearance at the sides of the cradle to allow activation of the release knobs. Refer to the detailed assembly instructions that are packaged with the cradle when selecting a mounting location.

#### 6.11.1.1 Mounting Template

The picker cradle is shipped with detailed mounting instructions including a drill template.

## 6.11.2 Wiring Guidelines

Before installing the cables between the cradle and other devices, consider the following:

- Ensure that drilling holes will not damage the vehicle or its wiring.
- Protect cable runs from pinching, overheating and physical damage.
- Use grommets to protect cables that pass through metal.
- Use plastic straps and tie-downs to secure cables and connectors in their desired location, away from areas where they may get snagged or pulled.
- Keep cables away from heat sources, grease, battery acid and other potential hazards.
- Keep cables away from control pedals and other moving parts that may damage the cables or interfere with the operation of the vehicle.

## 6.11.3 Using The Picker Cradle

If your 7530 G2 is equipped with a shoulder strap or cover, these accessories need to be removed before installing the unit in a picker cradle. There is no need to remove handstraps, pistol grips or tethered devices from the unit.

- Slide the 7530 G2 into the cradle, and press firmly downward until it locks into place. On a vehicle, it's a good idea to pull up on the 7530 G2 to be certain that it is secure.
- To remove the 7530 G2, press firmly on one of the knobs on either side of the cradle until it releases. You do not need to press both knobs.

## 6.11.4 Maintaining The Picker Cradle

Two latches in the cradle hold the 7530 G2 firmly in place. Although these latches are designed for at least 80,000 cycles, they will wear over time and will no longer lock the 7530 G2 securely in the cradle. For replacement parts and instructions contact Psion Teklogix (see Appendix A: Support Services And Worldwide Offices). Partial disassembly is required.

## 6.11.5 Powered Cradle Installation In High Voltage Vehicles



**Warning:** *Voltages exceeding 60VDC are considered hazardous. For powered cradle installations on vehicles with batteries above this voltage, ensure the powered cradle power connector is mounted in a dry location on the vehicle, or that the connector is insulated with an appropriate waterproof material after installation. The connector must also be installed out of the vehicle operator's reach. Exposing an accessible power connector to water or other liquids could create a hazardous situation resulting in serious injury or death.*

Installation of powered cradles in vehicles that operate above 60VDC require special consideration.

Due to the hazardous voltages present on these vehicles, it is necessary to ensure that the powered cradle power supply cable connector is not accessible to the vehicle operator, and does not get exposed to water or other liquids. This can be accomplished in one of the following ways:

- Ensure the power connector is installed in a dry location on the vehicle, away from the vehicle operator's reach (perhaps under a vehicle dash or in a sealed housing).
- Cover the power connector with a waterproof heat shrink material.
- Wrap the connector securely with a waterproof electrical tape in an area out of the vehicle operators reach.

All other installation requirements outlined in this document should also be followed for High Voltage vehicles to insure safe installation and operation of the powered cradle.

## 6.11.6 Powered Cradle Installation

The powered cradle option is designed to allow the 7530 G2 to be powered by a vehicle battery. The battery installed in the 7530 G2 is also recharged by the vehicle battery. This option accepts DC power sources over the range 12V to 80V.

The 7530 G2 picker cradle can be ordered with the powered cradle option installed, or it can be retrofitted later at an authorized Psion Teklogix service depot. Service offices are listed in Appendix A: Support Services And Worldwide Offices.

The 7530 G2 charging LED (see "Charge LED" on page 43) indicates that external power is available, and it also indicates the charging status of the internal battery.

## Wiring Vehicle Power To The Cradle



**Warning:** *Applying a voltage above 90VDC or reversing polarity may result in permanent damage to the cradle power option and will void the product warranty.*



**Warning:** *TO AVOID ELECTRIC SHOCK when the powered cradle option is installed, always ensure that the rear panel ground lug on the picker cradle is connected to the vehicle chassis. Failure to do this could result in serious injury or death.*

The metal chassis of the picker cradle must be connected directly to the chassis of the vehicle. A safety ground lug (clearly labelled on the rear of the cradle chassis) is provided for this purpose. The grounding strap must connect from the ground stud on the picker cradle to a solid, reliable contact point on the main portion of the vehicle chassis. It must *not* be connected to battery negative or a terminal block. This grounding strap ensures that if there is a fault in the vehicle wiring or in the picker cradle power module, the picker cradle cannot be at a hazardous voltage with respect to the vehicle chassis.

Connection between the picker cradle ground lug and the vehicle chassis should be done with a 16 gauge ground strap (ground wire). Connect the ground strap to the picker cradle utilizing the ground lug hardware supplied with the picker cradle and a #10 heavy duty wire crimp ring terminal. Torque the ground lug hardware to 23.0 +/- 2.0 in-lbs. Connect the other end of the ground strap to a solid, reliable point on the main portion of the vehicle chassis, ensuring a solid electrical connection.

As with other vehicle cables, the routing of the ground strap should be carefully considered to ensure it does not pose a hazard to the operator or the safe operation of the vehicle. If necessary, secure the ground strap with cable ties or some other mechanical means to prevent loops or loose lengths of wire that could catch on stationary items when the vehicle is in motion.

### 6.11.6.1 Wiring Vehicle Power To The Cradle

A 1.8 meter (6 foot) extension power cable (PN 13985-302) is supplied with your power cradle. This cable should be wired to a filtered, fused (maximum 10A) accessory supply on the vehicle. The power cradle draws no more than 8A (less if the accessory supply is greater than 12V). Any additional wiring, connectors or disconnects used should be rated for at least 10A.

The red lead of the power cable attaches to the positive vehicle supply. The black lead connects to the negative supply – this should be connected to a proper terminal block and not to the vehicle body. The power cradle is fully isolated and can be used with both negative and positive chassis vehicles.

You may have the option of connecting power before or after the ‘key’ switch. It is preferable to wire the power cradle *after* the key switch – that is, it cannot be turned on without the key on. However, if the operator switches the key off repeatedly for long periods during a shift, it may make more sense to wire the cradle *before* the switch.

Keep in mind that the 7530 G2 will continue to operate with or without vehicle power as long as its battery has sufficient charge.

If an unfused power source must be used, a fuse assembly (PN 19440) must be added to the extension power cable (the fuse and instructions are supplied with the cable). Use only a 10A slow blow UL approved fuse in the fuse assembly.

### 6.11.7 The Port Replicator

The port replicator is an optional accessory that allows tethered devices (e.g., scanners) as well as mounted peripherals (e.g., bar code printers or weigh scales) to be attached to the picker cradle. The replicator can be used with or without the cradle power option.

The functionality of the 7530 G2 tether port is duplicated on the port replicator. In addition to the tether port, the replicator is equipped with a standard 9 pin RS232D serial interface. This interface is typically used for fixed peripherals such as printers. Your serial device likely includes a suitable cable connector for this port.



**Note:** *The 7530 G2 picker cradle can be ordered with the port replicator option installed, or it can be retrofitted later by an authorized Psion Teklogix service depot. Service offices are listed in Appendix A: Support Services And Worldwide Offices.*

## 6.12 Tether Adaptor Cables

The following standard tether cables are available for the external scanners:

- CA1010 JB5 to DE9 RS232 Serial Cable: Straight through wiring.
- CA1015 JB5 to DE9 RS232 Serial Cable: Null modem (signal lines are crossed-over).
- CA1020 JB5 to Type B USB: Connects to USB devices with Type B receptacles.

For the pinout diagrams for 7530 G2 USB cables PN CA1020 and PN CA1010, refer to Appendix B: “Port Pinouts”, page B-3

Special intermediate cabling assemblies are available to allow older devices or unique peripherals to be connected to the JB5 tether port. These cabling assemblies permit scanner cables to be re-terminated in an intermediate in-line connector (called LTW), which then interfaces to one of a number of standard adaptor cables with JB5 terminations.

These kits include assembly instructions and include the mating connector.

- 1002162 Cable Adaptor LTW - JB5 Scan Decoded.
- 1002163 Cable Adaptor LTW - JB5 Scan Undecoded.
- 1002164 Cable Adaptor LTW - JB5 Scan RS-232.
- 1002165 Cable Adaptor LTW - JB5 Scan RFID.
- 1002166 Cable Adaptor LTW - JB5 Scan USB.

Contact Psion Teklogix support services (see Appendix A: “Support Services And Worldwide Offices”) for assistance in the creation of these cable assemblies if you wish to take advantage of this capability.

# SPECIFICATIONS

# 7

7.1	7530 G2 Hand-Held Computer Specifications . . . . .	.237
7.2	Radio Specifications . . . . .	.239
7.3	Internal Scanner Port . . . . .	.240
7.4	RFID Applications . . . . .	.240
7.5	External Scanners . . . . .	.240
7.6	Internal Scanner Specifications . . . . .	.240
7.6.1	SE 1200 High Performance & Long Range Specs . . . . .	.241
7.6.2	SE 1200 Advanced Long Range & SE 2223PDF Specs . . . . .	.241
7.6.2.1	Decode Zones – SE 1200HP, LR AND ALR . . . . .	.242
7.6.3	SE 1224HP Scanner Specifications. . . . .	.243
7.6.3.1	Decode Zone – SE 1224HP . . . . .	.244
7.6.4	SE 1524ER – Extended Range Scanner Specifications . . . . .	.244
7.6.4.1	Decode Zones – SE 1524ER. . . . .	.245
7.6.5	EV15 Imager Specifications . . . . .	.245
7.6.5.1	Decode Zone– EV15. . . . .	.246
7.6.6	SX5303 Imager Specifications . . . . .	.247
7.6.6.1	Decode Zone – SX5303 . . . . .	.247
7.7	1900 mAh Lithium-Ion Battery Pack . . . . .	.247
7.8	2400 mAh Lithium-Ion Battery Pack . . . . .	.248







**Note:** *Performance specifications are nominal and subject to change without notice.*

## 7.1 7530 G2 Hand-Held Computer Specifications

### Size

- 270mmL x 100mmW x 85mmD (10.6"L x 3.9"W x 3.3"D)
- Keypad grip area: 77mmW x 43mmD (3"W x 1.7"D)

### Weight

- 950g (30.5oz - Troy)
- Includes std. battery, std radio & std. internal scanner
- Pistol grip add 125g (4oz - Troy)

### Operating System

- Microsoft Windows CE 5.0

### Processor And Memory

- 520 MHz XScale PXA 270 processor
- 32KB instruction/32KB data cache
- On-board RAM: 128MB SDRAM
- On-board RAM: 64MB FLASH

### Power

- Up to 12 hours usage Lithium Ion standard battery (reduced in freezer applications)
- Optional high capacity battery – up to 17 hours (reduced in freezer applications)
- Quick swap packs
- Advanced Smart Battery with gas gauge
- Built-in fast charger (2 hour typical recharge)
- Adjustable battery allocation between system backup and runtime
- System backup during battery swap (15 minutes)
- 1 week real-time clock backup

## External Ports

Tether port with:

- one RS232 serial port
- decoded/undecoded scanner, printer
- USB host port, power out

Docking station port with:

- one RS232 serial port including diagnostics
- USB device port
- USB host port
- Power in/out

## Internal Expansion Slots

- One SDIO (MultiMediaCard) slot
- One Type II Comp[act Flash slot
- One Type III Extended PC Card slot

## Environmental

- Operating temp: -30°C to +60°C (-22°F to 140°F)
- Storage temp: -40°C to +60°C (-40°F to 140°F)
- Humidity: 5% - 95% RH non-condensing
- Rain/Dust: IEC 529, classification IP67
- Drop Rating: 6' (2m) multiple drops plus 5' (1.5m) drop to polished concrete, 26 times
- Cradle shock: 30g in each axis
- Cradle vibration: 1.5g RMS PSD (4 - 500 Hz) (random)
- Frost-free scan window option

## Approvals

- RoHS compliant (EU Directive 2002/95/EC)
- Safety: UL 1950, CSA C22.2 No950, LVD EN60950
- EMC: FCC Part 15 Class B, EMC Directive Class B
- Laser: IEC 60825-1 2001 Class 2 (EN60825-1),

*\*Note this product will carry the CE Mark*

## 7.2 Radio Specifications

### 802.11g Direct Sequence Spread Spectrum And Orthogonal Frequency Division Multiplexing (OFDM) (Model Number RA2040)

Form Factor	Compact Flash
Antenna Port	Single U.FL jack, no diversity
Transmit Power	32mW max (+15dBm), all versions
Frequency Range	2.400 - 2.4835GHz, all versions
Channels	1 to 11 for USA, Canada 1-13 for EU countries
RX Sensitivity	(8% FER, 1024 bytes packet) = -89dBm @ 1Mbps, -87dBm @ 11Mbps, -83dBm @ 6Mbps, -72dBm @ 54Mbps
Data Rates	6, 9, 12, 18, 24, 36, 48 & 54Mbps

### RA1001A - Narrow Band Radio

#### Psion Teklogix Proprietary Narrowband Modulation (2/4 level FSK)

Type III PC Card Form Factor	
Transmit Power	1W or 0.5W
Frequency Range	403-422MHz, 419-435MHz, 435-451MHz, 450-470MHz, 464-480MHz, 480-496MHz, 496-512MHz
Rx Sensitivity	< -110dBm @ 19.2kbps (4 level FSK)
Data Rates	4800bps, 9600bps, 19.2kbps

### Bluetooth Radio

Embedded (USB interface)	
Bluetooth Version	1.2 compliant (features Adaptive Frequency Hopping for better co-existence with 802.11 radio)
Chip Antenna	2dBi peak
Transmit Power	-3dBm (0.5mW) minimum, +4dBm (2.5mW) max
Frequency Range	2.400 - 2.4835GHz
RX Sensitivity (BER<=0.1%)	-80dBm max
Data Rate	732.2kbps and 57.6kbps asymmetric, 433.9kbps symmetric

## 7.3 Internal Scanner Port

### Compatibility

1D Imager:	EV15
2D Imager:	SX5303
1D Lasers:	SE 1200HP 1D non-decoded, standard range SE 1200LR 1D non-decoded, long range SE 1200ALR 1D non-decoded, advanced long range SE1224 1D decoded with fuzzy logic processing SE 1524ER decoded with fuzzy logic processing, extended range
2D Laser:	SE 2223 PDF decoded raster

## 7.4 RFID Applications

- RD7950 Integrated UHF RFID Reader (*future release*)
- Psion Teklogix RFID File System
- Multi-protocol support

## 7.5 External Scanners

Supported Types	Decoded and Non-Decoded 5V only.
Interface	Via tether port.

## 7.6 Internal Scanner Specifications

This section lists specifications for the following internal scanners:

- SE 1200 High Performance and Long Range (page 241).
- SE 1200 Advanced Long Range and SE 2223PDF (page 241).
- SE 1224 High Performance (page 243).
- SE 1524 Extended Range (page 244).
- EV15 (page 245).
- SX5303 2D Imager Scanner (page 247).

## 7.6.1 SE 1200 High Performance & Long Range Specs

Parameter	SE 1200HP	SE 1200LR
Light Source	Visible Laser Diode 650 nm.	Visible Laser Diode 650 nm.
Scan Rate	35 ( $\pm$ 5) scans/sec (bidirectional)	35 ( $\pm$ 5) scans/sec (bidirectional)
Scan Angle	42° $\pm$ 2°	23° $\pm$ 2°
Scan Patterns	Linear	Linear
Minimum Print Contrast	Minimum 20% absolute dark/light reflectance measured at 650 nm.	Minimum 40% absolute dark/light reflectance measured at 650 nm.
Symbologies	UPC/EAN, Code 128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI UCC/EAN 128.	UPC/EAN, Code 128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI, UCC/EAN 128.
Programmable Parameters	Laser On Time, Aim Duration, Symbology types/lengths, Data formatting.	Laser On Time, Aim Duration, Symbology types/lengths, Data formatting.
Ambient Light:	Artificial: 450 ft. candles (4844 Lux). Sunlight: 10000 ft. candles (107,640 Lux).	Artificial: 450 ft. candles (4844 Lux). Sunlight: 8000 ft. candles (86,112 Lux).

## 7.6.2 SE 1200 Advanced Long Range & SE 2223PDF Specs

Parameter	SE 1200ALR	SE 2223 PDF
Light Source	Visible Laser Diode 650 nm.	Visible Laser Diode 650 nm.
Scan Rate	35 ( $\pm$ 5) scans/sec (bi-directional)	590 scan/sec. 22 frames/sec.
Scan Angle	13° $\pm$ 2°	Horizontal: 34°, Vertical: 12.5°
Scan Patterns	Linear	Linear and Smart Raster
Minimum Print Contrast	Minimum 40% absolute dark/light reflectance measured at 650 nm.	Minimum 40% absolute dark/light reflectance measured at 650 nm. 35% absolute dark/light reflectance differential (PDF). 25% absolute dark/light reflectance differential (1-D).

**Decode Zones – SE 1200HP, LR AND ALR**

Parameter	SE 1200ALR	SE 2223 PDF
Symbologies	UPC/EAN, Code 128, UCC/EAN 128, RSS, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI.	PDF417, Micro PDF, UPC/EAN, Code 39, Interleaved 2 of 5, Code 128, Codabar, MSI Plessey, RSS and Composite codes.
Programmable Parameters	Laser On Time, Aim Duration, Symbology types/lengths, Data formatting.	Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bidirectional Redundancy, Symbology types/lengths, Data formatting, Pattern Controls.
Ambient Light:	Artificial: 450 ft. candles (4844 Lux). Sunlight: 4000 ft. candles (43,056 Lux).	Artificial: 450 ft. candles (4844 Lux). Sunlight: 8000 ft. candles (86112 Lux).

**7.6.2.1 Decode Zones – SE 1200HP, LR AND ALR**

Bar Code	Read Distance					
	High Performance		Long Range		Advanced Long Range	
	Min	Max	Min	Max	Min	Max
5 mil	3.0"	4.5"				
7.5 mil	3.0"	8.5"				
10 mil	2.5"	12.5"	13.0"	17.5"		
15 mil	2.5"	18.5"	8.5"	33.5"	20.0"	50.0"
20 mil	2.5"	20.5"	9.5"	38.5"	30.0"	60.0"
40 mil	3.0"	29.5"	9.5"	79.5"	30.0"	98.0"
55 mil	3.5"	35.5"	9.5"	89.5"	27.0"	115.0"

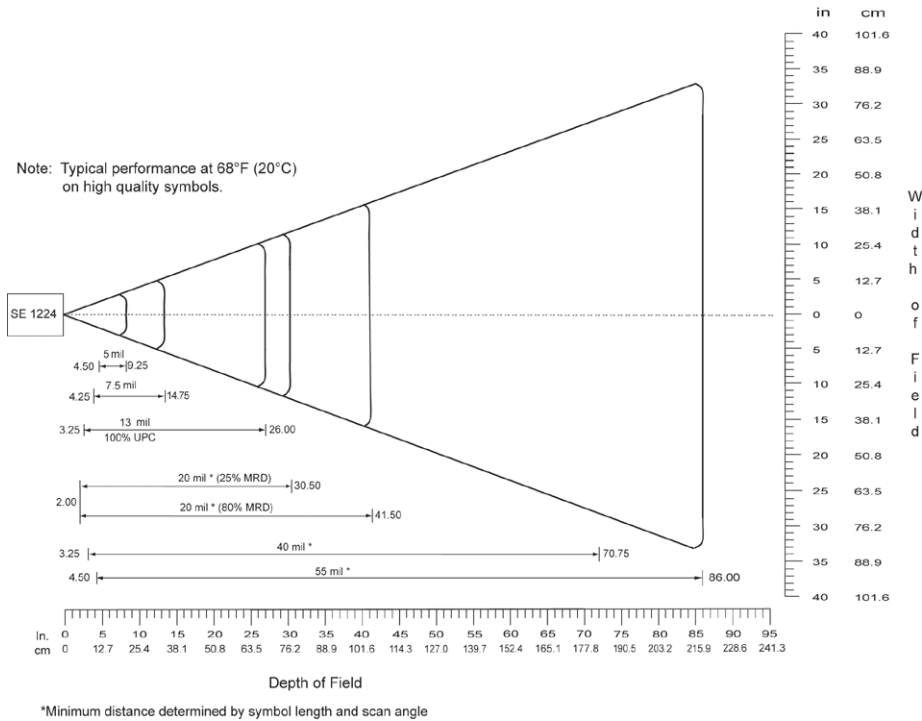
### 7.6.2.2 Decode Zones – SE 2223PDF

Bar Code	Raster Laser Scanner Read Distance	
PDF Bar Codes	SE2223	
	Min	Max
6.5 mil	2.5"	6.5"
10 mil	2.5"	9.5"
15 mil	2.5"	15.5"

### 7.6.3 SE 1224HP Scanner Specifications

Parameter	SE 1224HP
Light Source	Visible Laser Diode 650 nm.
Scan Rate	35 ( $\pm$ 5) scans/sec (bi-directional)
Scan Angle	42° (typical), 30° (narrow)
Scan Patterns	Linear
Minimum Print Contrast	Minimum 25% absolute dark/light reflectance measured at 650 nm.
Symbologies	UPC/EAN, Code 128, UCC/EAN 128, RSS, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI.
Programmable Parameters	Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bi-directional Redundancy, Symbology types/lengths, Data formatting.
Ambient Light:	Artificial: 450 ft. candles (4844 Lux). Sunlight: 8000 ft. candles (86112 Lux).

### 7.6.3.1 Decode Zone – SE 1224HP



### 7.6.4 SE 1524ER – Extended Range Scanner Specifications

Parameter	SE 1524ER
Light Source	Visible Laser Diode 650 nm.
Scan Rate	35 (±5) scans/sec (bi-directional).
Scan Angle	13.5° ±0.7°
Scan Patterns	Linear
Minimum Print Contrast	Minimum 25% absolute dark/light reflectance measured at 650 nm.
Symbologies	UPC/EAN, Code 128, UCC.EAN128, RSS, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI.
Programmable Parameters	Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bi-directional Redundancy, Symbology types/lengths, Data formatting.
Ambient Light:	Artificial: 450 ft. candles (4,844 Lux). Sunlight: 4,000 ft. candles (86,112 Lux).



### 7.6.4.1 Decode Zones – SE 1524ER

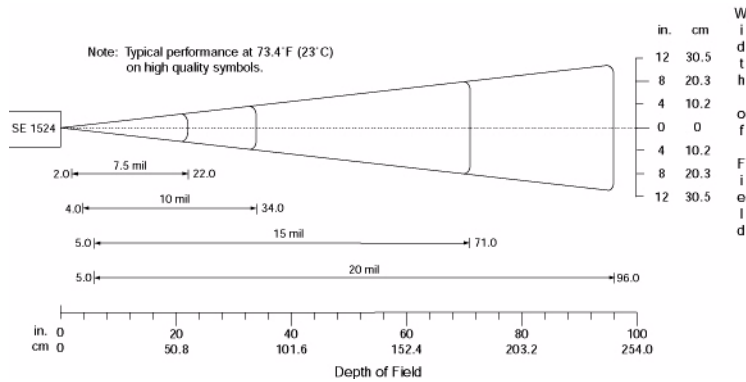
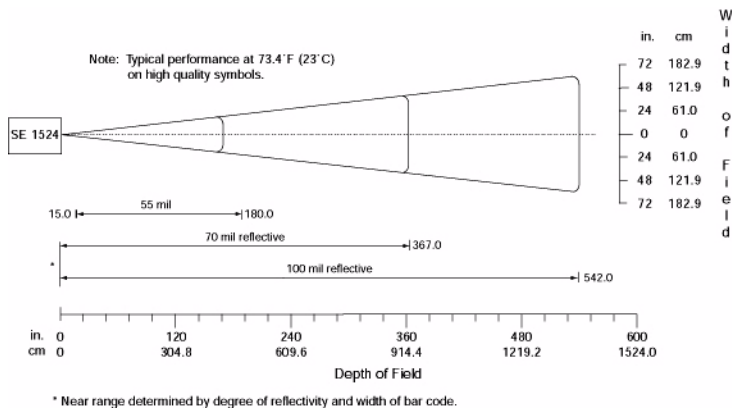


Figure 7.1 I524ER Decode Zone A (short-range, small codes)



\* Near range determined by degree of reflectivity and width of bar code.

Figure 7.2 I524ER Decode Zone B (long-range, large codes)

### 7.6.5 EVI5 Imager Specifications

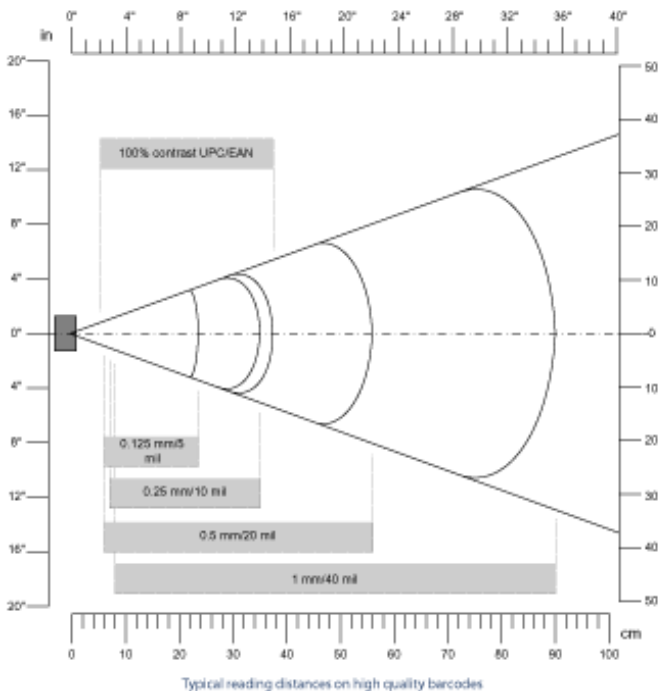
Parameter	EVI5
Light Source	617nm Highly Visible LED
Scan Angle	40°
Minimum Print Contrast	Minimum 25%
Min x. Dimension	0.1 mm (4 mils)

**Decode Zone— EV15**

Parameter	EV15
Reading Distance	Up to 90cm (35 in)
Symbologies	UPC (E&A), EAN, RSS, Code 39, Code 128, UCC/EAN 128, ISBN, ISBT, Interleaved, Matrix, Industrial and Standard 2 of 5, Codabar, Code 93/93i, Code 11, MSI, Plessey, Telepen, PDF417, Micro PDF417
Ambient Light	Works in any lighting conditions, from 0 to 100,000 lux
Shock	2000G, 0.7ms, half sinus, 3 axes
Vibration	50G r.m.s.

**7.6.5.1 Decode Zone— EV15**

EV15 Reading Distances



## 7.6.6 SX5303 Imager Specifications

Parameter	SX5303
Optics	1.3 megapixel (1280 x 1024)
Field of View at 6 inches	10.3 in. x 8.2 in.
Pitch Angle	±45°
Skew Angle	±45°
Ambient Light	200 Lux to full sunlight.
Minimum Contrast	10%
Targeting	Center locating 623 nm LED.
Decode Symbolologies Supported	<b>Linear:</b> Code 39; UPC/EAN; I2of5; Code 128; Codabar; RSS <b>PDF417:</b> PDF417, microPDF417; Composite; image capture and signature capture. <b>Data Matrix:</b> Data Matrix; QR Code; Maxicode; Aztec Code; Planet; Postnet; Royal Mail 4SCC; 4 State postal codes from Australia, Canada, Japan; Korean Post 3of5.

### 7.6.6.1 Decode Zone — SX5303

Code	Mil Size	Min. Range (inches)	Max. Range (inches)
Data Matrix	10 mil	3.25 in.	5.0 in.
Data Matrix	12.5 mil	2.75 in.	5.5 in.
Data Matrix	15.8 mil	2.5 in.	5.75 in.
PDF417	10 mil	2.5 in.	6.0 in.
PDF417	15 mil	2.75 in.	7.25 in.
QR	15 mil	2.25 in.	5.75 in.
Code 39	5 mil	3.25 in.	5.0 in.
Code 39	10 mil	2.25 in.	6.5 in.
Code 39	15.8 mil	2.25 in.	7.0 in.
Code 128	10 mil	2.25 in.	6.5 in.
Typical performance @ 300 lux			

## 7.7 1900 mAh Lithium-Ion Battery Pack

Technology  
 Capacity

Lithium-Ion (Li-Ion)  
 1900mAh nominal at 300mA discharge 20°C to 8.25V  
 1400mAh nominal at 300mA discharge at -20°C to 8.25V

## 2400 mAh Lithium-Ion Battery Pack

Charge Temperature	5°C to 39°C (41°F to 102°F)
Discharge Temperature	-30°C to 60°C (-22°F to 140°C)
Storage Temperature	-30°C to 60°C (-22°F to 140°C) Storage at elevated temperatures <b>not</b> recommended
Charge Cycles	Minimum 300 cycles with no degradation below 70% of nominal capacity
Voltage	11.1V nominal (8.25V mn. to 12.6V max.)
Cell Configuration	1P3S (3 series connected cells)
Cell Type	Prismatic
Max. Charge Voltage	12.6V +/- 0.09V
Charge Time	1.5 hr

## 7.8 2400 mAh Lithium-Ion Battery Pack

Technology	Lithium-Ion (Li-Ion)
Capacity	2400mAh nominal at 300mA discharge 20°C to 8.25V 2000mAh nominal at 300mA discharge at -20°C to 8.25V
Charge Temperature	5°C to 39°C (41°F to 102°F)
Discharge Temperature	-30°C to 60°C (-22°F to 140°C)
Storage Temperature	-30° C to 60° C (-22° F to 140° C) Storage at elevated temperatures <b>not</b> recommended
Charge Cycles	Minimum 300 cycles with no degradation below 70% of nominal capacity
Voltage	11.1V nominal (8.25V mn. to 12.6V max.)
Cell Configuration	1P3S (3 series connected cells)
Cell Type	Cylindrical
Max. Charge Voltage	12.6V +/- 0.09V
Fast Charge Time	2.5 hr

## SUPPORT SERVICES AND WORLDWIDE OFFICES

Psion Teklogix provides a complete range of product support services to its customers worldwide. These services include technical support and product repairs.

### A.1 Technical Support

**For technical support in North America:**

Call Toll free: +1 800 387 8898 Option 3 *or*

Direct Dial: +1 905 813 9900 Ext. 1999 Option 3

**For technical support in EMEA** (Europe, Middle East and Africa), please contact the local office listed in the website below:

<http://www.psionteklogix.com/EMEAsupport>

**For technical support in Asia**, contact the local office listed in the website below:

<http://www.psionteklogix.com>

Technical Support for Mobile Computing Products is provided via email through the Psion Teklogix customer and partner extranets. To reach the website, go to [www.psionteklogix.com](http://www.psionteklogix.com), and click on the appropriate Teknet link on the home page. Then click on the “Login” button or the “Register” button, depending on whether you have previously registered for Teknet. Once you have logged in, search for the “Support Request Form”.

### A.2 Product Repairs

**For repair service in North America:**

Call Toll free: +1 800 387 8898 Option 2 *or*

Direct Dial: +1 905 813 9900 Ext. 1999 Option 2

**For repair service in EMEA** (Europe, Middle East and Africa), please contact the local office listed in the website below:

<http://www.psionteklogix.com/EMEAsupport>

**For repair service in Asia**, contact the local office listed in the website below:

<http://www.psionteklogix.com>

## A.3 Worldwide Offices

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### **CANADIAN SERVICE CENTRE**

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Web: www.pSIONteklogix.com

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Cedex 3; France

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Fax: +33 4 42 90 88 88  
E-mail: tekeuro@psion.com

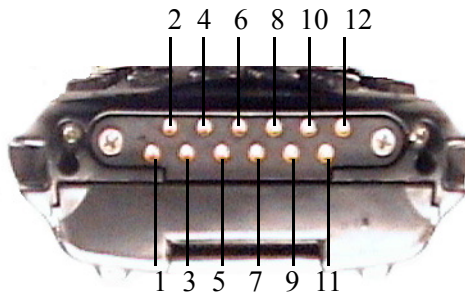
# APPENDIX **B**

## PORT PINOUTS

### B.1 Tether Port Pinout

The tether port connector incorporates multiplexed undecoded scanner, decoded scanner, RS232 serial, and USB interfaces. In order for it to operate, a special wiring scheme is needed. If you have a need to create cables for the tether port, contact a Psion Teklogix representative and request document #1010032 “Instruction Tether Port Termination”. Attempting to interface to the tether connector without following this document may cause damage to the 7530 G2 or the tethered device.

### B.2 Docking Station Connector



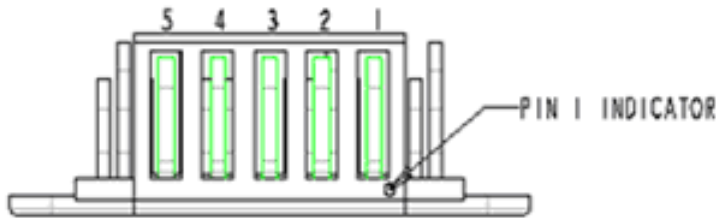
1. Ext 5V Switched. Used by external peripherals. 5VDC, 1A max.
2. RS232 Rx Data. Console receive pin.
3. RS232 Tx Data. Console transmit pin
4. DC Power In (13-18VDC @ 3A max). External power adapter positive input.
5. USB Host Minus. For connecting USB devices.
6. USB Host Plus. For connecting USB devices.
7. DC Power In. Same as pin 4.

## Battery Contacts

8. Docking Station Id. Identifies device attached to the docking station connector. The external device applies a specific resistance between this pin and ground as identification.
9. Ground.
10. USB Device Minus. Connects to other USB host such as a PC.
11. USB Device Plus. Connects to other USB host such as a PC.
12. Ground

### B.3 Battery Contacts

These contacts represent right to left numbering with the docking port pointing toward you, and the battery contacts facing upward.



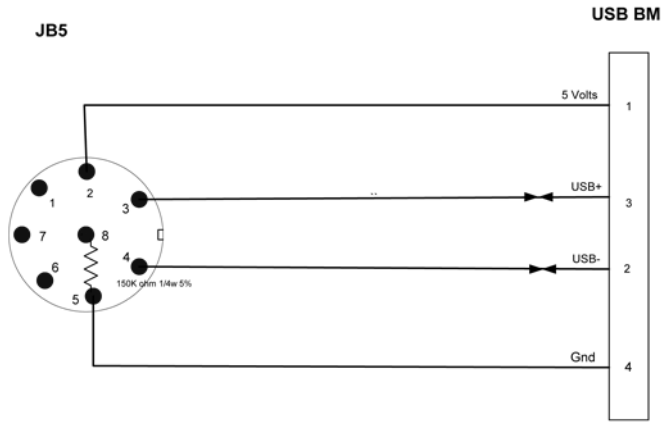
Battery Contacts		
Pin #	Signal	Description
1	POS	Positive Battery
2	CLK	SMBUS Clock
3	BAT_D	Presence/Cell Count
4	DATA	SMBUS Data
5	NEG	Negative Battery



## B.4 JB5 To USB Type B Cable - PN CA1020

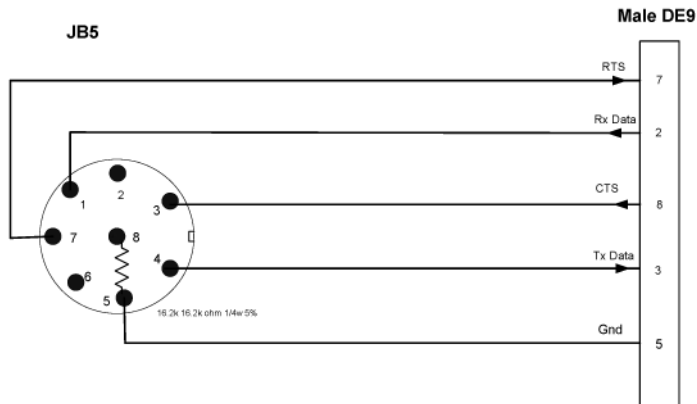
### USB CABLE ASSY

(Mates with USB devices that incorporate Type B receptacles)



## B.5 JB5 To RS-232 Serial Cable - PN CA1010

### Cable JB5/DE9 Straight Through





## USB SETUP APPLICATION

### C.1 USB Setup

The USB Setup application is used to update a Windows PC so that it can connect to a Psion Teklogix 7530 G2 using the USB port on the Portable Docking Module (PDM) connector. To download the USB Setup application, go to:

*[www.pSIONteklogix.com/downloads](http://www.pSIONteklogix.com/downloads)*

This will take you to the Teknet home page.

- Login with your Teknet Username and Password. (If you're not already a member of Teknet, you can register for free at this home page so that you can access the USB Setup application.)

Once you've entered your name and password, the Download page is displayed.

- Scroll down to the *Utilities* heading, and then under *USB Setup*, tap on **Download**. If you need further assistance, please contact Psion Teklogix support (1-800-387-8898).

#### System Requirements

- Windows 2000 or XP
- ActiveSync 3.5 or later

The install program:

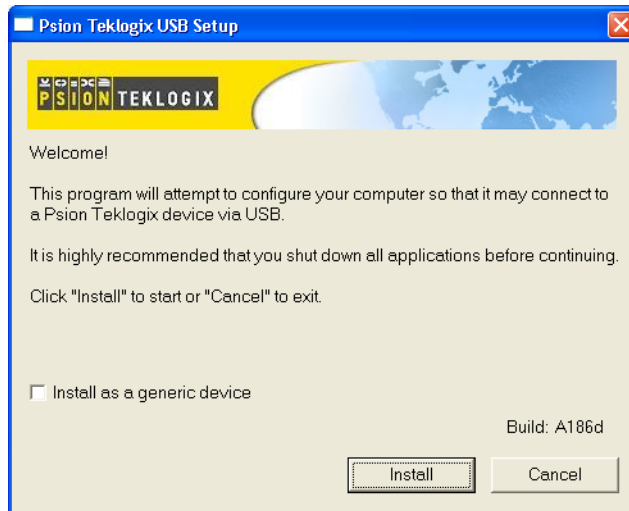
- updates copies of the device installation scripts `usbstor.inf` and `wceusbsh.inf` with Psion Teklogix-specific information, *and*
- sets up a USB connection between the PC and the 7530 G2.

## C.I.1 Launching The Application

Before running the USB Setup application:

1. Unplug the 7530 G2 from your PC, and exit all running applications.
2. Double-click on the USB Setup executable in the directory you copied it to.

### Welcome Dialog Box

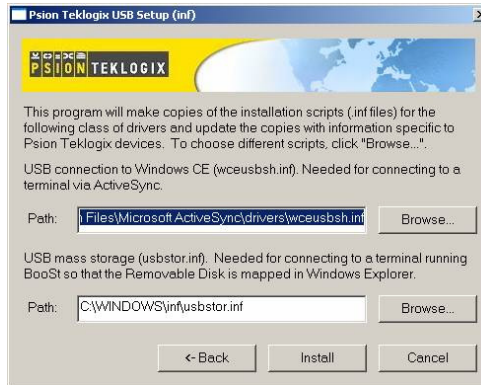


If you check the “Install as a generic device” checkbox, the Hardware Manager on your PC will not prompt you to install every new device you connect to your PC. A generic configuration will be used for the Psion Teklogix devices.

3. Tap on the **Install** button to configure your PC or the **Cancel** button to exit the USB Setup program.

The program checks that ActiveSync is installed and that it is a supported version – 3.5 or later. If the version installed on your PC is not supported, you’ll need to exit the USB Setup application, and install a later version of ActiveSync. ActiveSync can be downloaded from Microsoft at: <http://www.microsoft.com/downloads>.

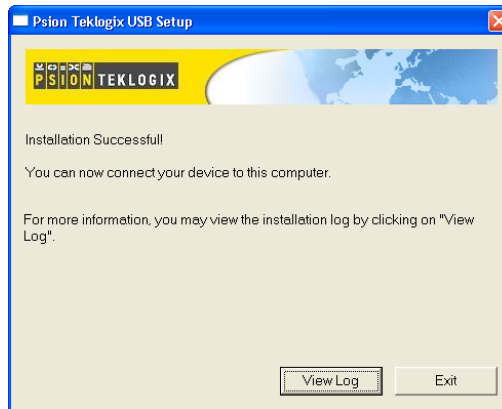
In some cases, you may see an additional dialog:



Usually, this dialog is shown when more than one version of ActiveSync is installed. You can either select the correct inf file for the USB Setup program to work with, or you can cancel the installation, and uninstall the extra copies of ActiveSync.

## C.1.2 Installation Complete Dialog Box

This dialog box indicates the success or failure of the installation.



4. Tap on **Exit** to exit the application.

If you need to view the log file, tap on **View Log**.

Once the USB Setup program is exited, you can connect the 7530 G2 to your PC using a PDM connector and a USB cable, and turn the unit on. If the USB Setup process was successful, the “Found new hardware” wizard may start. If this occurs, choose the recommended defaults. ActiveSync will detect your 7530 G2.



# INDEX

## A

**Accepted Start Char** 175

accessories

- bar code readers, connecting 215
- handstrap 15
- picker cradle 228
- pistol grip 16

Active Conn Tab 119

ActiveSync

- ASync profile 116

**Adaptive Windowing** 191

adaptor cables, tether 234

**Addendum** 150, 152, 153, 179, 192

**Addendum Add-on 2** 179

**Addendum Add-on 5** 179

**Addendum Security** 180

Ad Hoc network 20

Advanced (wireless connection) 25

Advanced button (Radio tab) 143

AIAG

- AIAG Strip** 147

**AIAG Strip** 147

ALT Key 35

ANSI

- transmitting data 148, 151

appearance (display colour scheme) 90

appending to bar codes

- characters 148, 151, 196

approvals

- 7530 (including scanner) 238

arrow keys

- moving the cursor 35

ASCII

- Full Ascii** 147, 174

audio indicators

- adjusting volume 48
- description of beep conditions 47
- volume adjustment using the BLUE key 48

**Authentication**, Bluetooth Controls 117

authentication, network (Shared Mode) 21

**Auto Exposure (Imager)** 189

**Auto Radio Address** (Cellular Radio) 139

**Auto Radio Address** (Cellular Radio Address) 139

## B

backlight

- display 88
- intensity 41
- keyboard 40

backup profile, creating (Total Recall) 126

backup profile, restoring (Total Recall) 130

**Bad Scan Beep** 197

bar code

- appending to 148, 151, 196
- connecting bar code reader 215
- parameters 144–195
- prefix character 148, 151
- stripping characters 148, 149, 151
- suffix character 151
- symbolologies
  - Codabar 153, 167, 180, 192
  - Code 11 154, 181
  - Code 128 149, 163, 191
  - Code 39 147, 191
  - Code 93 153, 167, 181, 192
  - Discrete 2 of 5 155, 170, 184
  - EAN 13 150, 164, 177
  - EAN 8 151, 164, 178
  - IATA 2 of 5 156
  - Interleaved 2 of 5 154, 168, 182, 192
  - Matrix 2 of 5 183
  - MSI Plessey 155, 169, 183
  - UPC A 152, 164, 178
  - UPC E 152, 165, 178
- trailing characters 151

bar code reader

- external (specs) 240
- external scanner, operation of 215

**Barcodes Must Decode** 188

batteries

## Index

- advanced power properties 105
- calibrate power 105
- capacity dialog box 102
- charge, time required 215
- chargers 32
- charging 13
- cycles 215
- devices (card slot power) 106
- gauge 46
- installing 32
- installing in 7530 G2 14
- power saving scheme dialog box 103
- removing 32
- run time, maximizing 53
- safety precautions *XII*
- specifications, 7530 1900mAh 247
- specifications, 7530 2400mAh 248
- suspend threshold 104
- battery charger
  - safety instructions *XIV–XV*
- battery pack 215
- battery safety *XII–XV*
- battery *See also* batteries 215
- Baud** 200, 201, 202, 203
- Baud Rate/Modulation 142
- beeper
  - adjusting volume 48
  - description of beep conditions 47
  - volume adjustment using the BLUE key 48
- Bi-Direction Redundancy** 159
- BKSP (DEL Key) 35
- Bluetooth, enabling 106
- Bluetooth radio
  - changing device name 120
  - device service profiles 116
  - ISM band 114
  - PINs for devices 117
  - radio configuration 114–126
- Bluetooth setup 114
  - GPRS setup 121
  - peripherals 228
- Bright For** (backlight) 89
- BSP**, Bluetooth Controls 120
- C**
  - cable diagrams *C-1*
  - cables, tether adaptor 234
  - calibrating (touchscreen) 41, 108
  - Captures Per HW Trigger** 189
  - card slot power 106
  - Cellular Radio Address** 139
  - Center Bar Code Only (Imager)** 187
  - CH**, Bluetooth Controls 117
  - changing password (Start Menu security) 67
  - Channel Enable List** 136
  - Channel List, editing 138
  - Channel Number** 135
  - Channel Selection** 137
  - Channel Switch Speed** 136
  - Channel Tab (Narrow Band radio) 135
  - characters
    - appending to bar codes 148, 151
    - prefix 148, 151
    - stripping 148, 149, 151
    - suffix 151
    - trailing 151
  - charger
    - descriptions of 33
    - safety instructions *XIV–XV*
  - charging (battery) 13
  - Check Digit** 154
  - check digit 150, 153, 154, 155, 169
  - Check Digit, One** 155, 169
  - Check Digit Algorithm** 170
  - Check Digits (MSI Plessey)** 169
  - Check Digit Verification** 162, 175, 177, 182, 183, 184
  - Check Digit Verification (Codabar)** 181
  - Check Digit Verification (I 2 of 5)** 168
  - Click Data** (appending data) 196
  - Click Data** (scanner double-click) 196
  - Click Time** 196
  - CLSI Editing** 167
  - CLSI Library System** 180
  - Codabar 153, 167, 180, 192
  - Codabar** 167
  - Code 11 154, 181
  - Code 128 149, 191
  - Code 128** 163, 175
  - Code 128 Emulation** 171, 185
  - Code 32, Convert To** 161
  - Code 32 Prefix** 161
  - Code 39 147
  - Code 39** 161, 174
  - Code 93 153, 167, 181, 192
  - Code 93** 167
  - cold reset 27
  - Cold Reset (Shutdown menu) 73



- COM, Bluetooth Controls 120
  - Command Prompt 68
  - Communities** 206
  - Composite** 172, 195
  - configuring IEEE 802.11 radio 17
  - connection list table, Bluetooth Controls 119
  - Console Port settings 201
    - Baud** 201, 202, 203
    - Data Bits** 202, 203
    - Parity** 202, 203
    - Stop Bits** 202, 203
  - Constant Illumination** 191
  - Contact** 205
  - Continuous Scan Mode** 157, 173, 187
  - contrast, adjusting 41
  - contrast, adjusting display 41
  - control panel
    - accessing 82
    - basic setup 87
    - Display Properties 87
    - icons 83
    - keyboard properties 90
    - power management properties 102
    - stylus properties 107
  - Conv. UPC-E To UPC-A** 165
  - Conv. UPC-E1 To UPC-A** 165
  - Convert To Code 32** 161
  - Convert To EAN 13** 169, 178
  - Convert To UPC -A** 179
  - Convert to UPC-A** 152
  - cradle *See also* Picker cradle 228
  - CTRL Key 35
  - cycle tasks 70
- D**
- data
    - entering
      - with a bar code reader 215
  - Data Bits** 200, 202, 203
  - Data Squelch** 142
  - decoded (internal) scanner parameters 156
  - decoded Intermec (ISCP) parameters 173
  - Decode Performance** 162, 163
  - Decode Performance Level** 162, 163
  - Decoder Timeout** 190
  - decode zones 242, 244, 245, 246
  - Default All Parameters** 135
  - Default Dev. On Reboot** 189
  - DEL (BKSP) Key 35
- Delete Char Set ECIs** 160
  - Demo
    - Imager 68
    - Scanner 68
    - Signature 68
  - desktop connection, remote 81
  - Device Name**, changing 120
  - dialog box, using 73
  - Diff Read Timeout** 174
  - digit
    - check digit 150, 153, 154, 155, 169
  - Dim For** (backlight) 89
  - Discrete 2 of 5 155, 170, 184
  - Discrete 2 of 5** 170
  - display
    - appearance (colour scheme) 90
    - backlight 88
    - backlight, adjusting 41
    - contrast (control panel) 87
    - contrast, adjusting 41
    - Display Properties 87
  - display contrast, adjusting 41
  - Display Properties 87
  - docking device icons 47
  - docking station
    - uploading data using 55
  - Dot Time** 146, 157, 188
  - double-click
    - appending characters to a decoded bar code 196
  - Double-Click**, Manage Triggers menu 110
  - Double-Tap (stylus settings) 107
  - DSSS, 802.11g radio 239
  - DUN service, Bluetooth 116
  - Duration 157
- E**
- EAN/UCC 128** 149, 163
  - EAN 128** 175
  - EAN 128 Identifier** 176
  - EAN 13 150, 164, 177
  - EAN 13, Convert To** 169
  - EAN 8 151, 164, 178
  - EAN-8 Zero Extend** 164
  - EAP (Extensible Authentication Protocol) 22
  - ECI Decoder** 160
  - Enable Bookland (UPC-EAN)** 166
  - Enable Bookland EAN** 150
  - Enable CC-AB** 172

## Index

**Enable CC-C** 172  
**Enable Cellular Protocol** 138  
**Enable Plessy** 183  
**Enable Power Saving** 141  
**Enable RSS Expanded** 172, 186  
**Enable RSS Limited** 172, 186  
**Enable RSS-14** 171, 186  
**Enable SNMP** 206  
**Enable TLC-39** 172  
**Encryption, Bluetooth Controls** 117  
**Error Accept** 147  
ESC Key 35  
EV15 Intermec 245  
EV15 1D imager scanner specs 245  
Extensible Authentication Protocol (EAP)  
22

## F

**Fast Converge (Imager)** 190  
features  
7530 7  
fields  
**Field Size** 148  
size 148  
**FNC1 Conversion** 176  
Frequency Table (Radio tab) 143  
**Full ASCII** 162  
**Full Ascii** 147, 174  
Function Keys 36  
37-key keyboard 36  
63-key keyboard 36

## G

**Good Scan Beep** 197  
GPRS (bluetooth) 121  
**GTIN Compliant** 176, 180

## H

handstrap, installing 15

## I

IATA 2 of 5 156  
**Idle Poll Limit** 141  
IEEE radio, configuring 17  
imager  
EV15 imager scanner specs 245  
SX5303 2D imager specs 247  
imager (2D), operating 51  
Imager parameters 187  
**Include Check** 150, 151, 153, 155, 156

**Include Check** (Discrete 2 of 5  
symbology) 155  
**Include Check** (Interleaved 2 of 5  
symbology) 154  
**Include Chk** 147, 152, 154  
**Include Country** 150  
**Include Number Sys** 152, 153  
**Include Sym** (Code 128) 149  
indicators  
battery gauge 46  
docking devices 47  
LED functions 43  
modifier keys 45  
narrow band radio signal quality 46  
onscreen 45  
scanner message 51, 52  
security level 47  
task bar 62  
tethered device 47  
802.11radio signal quality 46  
Info Tab (Narrow Band radio) 132  
Infrastructure network 20  
input  
bar code reader 215  
**Input** (translate) 198  
Input Panel (control panel) 84  
installation  
handstrap 15  
pistol grip 16  
**Intensity** (7035 backlighting) 89, 92  
Interleaved 2 of 5 154, 168, 182, 192  
Intermec EV15 specs 245  
Internal PDF scanner, operating 51  
Internal scanner (1D), operating 50  
Internet Explorer 68  
IP address, assigning 23  
**ISBN Conversion** 177  
**ISBT Concat Any Pair** 176  
**ISBT Concat Transmit** 176  
**ISBT 128** 163, 176  
ISM band, Bluetooth radio 114  
**ITF Check** (Discrete 2 of 5 symbology)  
155  
**ITF Check** (IATA 2 of 5 symbology) 156  
**ITF Check** (I 2 of 5 symbology) 154

## K

keyboard  
key repeat 90, 92  
one shot mode 93

- 36-key keyboard 38
- 63-key 38
- keyboard backlight 40
- keyboard keys 33
  - ALT 35
  - arrow keys 35
  - BKSP 35
  - CTRL 35
  - DEL 35
  - ESC 35
  - function keys, accessing 36
  - macro keys 37, 94
  - modifiers 34
  - navigating using the keyboard 59
  - one shot mode 93
  - SCAN 35
  - SHIFT 34
  - SPACE 35
  - TAB 35
- Keyboard Properties 90, 92
  - backlight 92
  - one shot mode 93
- Key Index, assigning 22
- Key Repeat tab 91
- keys
  - alpha keys, 36-key keyboard 38

## L

- LANAccessUsingPPP service, Bluetooth 116

- Laser On Time** 157, 173

- Late TX Limit** (Polling) 140

- LED

- charge 43
- functions 43
- receive 44
- scan 44
- transmit 44

- Length Mode** 181, 183, 185

- Linear Decode** 166

- Linear Security Level** 158

- Lithium-Ion batteries

- installing 32
- removing 32

- Location** 205

- Low Level screen (Narrow Nand radio) 134

- Low Power Timeout** 158

## M

- Macro keys

- accessing 37
- executing a macro 95
- Macros menu, accessing 94
- recording and saving 94
- 37-key keyboard 37
- 63-key keyboard 37

- maintenance 56

- Manage Triggers 109

- Manual Radio Address** (Cellular Radio Address) 139

- Manual Switch Table** 137

- Matrix 2 of 5 183

- Max Gain (Imager)** 190

- Max Illumination (Imager)** 190

- Max Integration (Imager)** 190

- Max Number Barcodes** 188

- messages

- scanner warning message 197

- Minimum Cancel Time** 157, 173

- Minimum Length** 175, 177, 181, 182, 183, 184, 187

- Min Scan Duration** 189

- modifier keys 34

- locking 34

- One Shot Mode** 93

- unlocking 34

- Modulation/Baud Rate** 142

- Mod 10 Check** 148, 156

- Mod 10 Check** (Discrete 2 of 5 symbology) 155

- Mod 10 Check** (I 2 of 5 symbology) 154

- Mod 43 Check** 148

- MSI Plessey 155, 169, 183

## N

- Name** 207

- name servers, assigning 24

- Narrow Band radio 132

- Channel tab 135

- Info tab 132

- Low Level screen 134

- Power tab 141

- Protocol tab 138

- Radio tab 142

- statistics screen 132

- narrow band radio

- signal quality 46

- network

- Ad Hoc 20

- connection, monitoring 55

## Index

- infrastructure 20
- network authentication (Shared Mode) 21
- Network Key, assigning 21
- non-decoded scanners parameters 145
- NOTIS Editing** 167

## O

- OFDM, 802.11g radio 239
- One Check Digit** 155, 169
- One Shot Mode** 93
- ON Threshold** 89, 92
- Output** (translate) 198

## P

- Parameter Scanning** 158, 174, 175, 176, 177, 180, 181, 182, 183, 184, 187
- Parity** 201, 202, 203
- PDF internal scanner, operating 51
- picker cradle 228
  - installing cable 230
  - powered 10-55 VDC 228
  - powered 12 VDC 228
  - unpowered 228
- picker cradle *See also* Picker Cradle 228
- PIN**, Bluetooth Controls 116
- pinouts C-1
- PINs, Bluetooth devices 117
- pistol grip, installing 16
- Plessy Transmit Check Digit** 184
- pocket PC compatibility 81
- Polling** 139
- polling values, testing 140
- Poll Timeout** (Polling) 140
- port pinouts C-1
- Port Prefix**, Bluetooth Controls 120
- Port Replicator Port A 203
- Port Replicator Tether 202
- ports
  - internal scanner 240
- ports, scanner 199
- Postal**
  - PlaNET 193
  - PostNET 194
  - Royal 194
- Power Management Properties 102
  - advanced power 105
  - battery capacity 102
  - calibrate power 105
  - devices (card slot power) 106
  - scheme, power saving 103

- threshold, power shutdown 104

- Power Off Time** 141

- Power Scheme** 103

- Power Tab (Narrow Band radio) 141

- Power Up Channel** 135

- preferred networks 25

- Prefix** 160

- Prefix Char** 148, 151

- Printer (serial service), Bluetooth 116

- profile, creating backup 126

- profile, restoring backup 130

- Programs

- Command Prompt 68

- Internet Explorer 68

- Remote Desktop Connection 68

- Windows Explorer 68

- Protocol Tab (Narrow Band radio) 138

- punctuation marks, accessing (SHIFT Key) 34

## R

- radio

- adding new network connection 19

- advanced settings of 25

- Bluetooth 114-126

- Configure button 19

- configuring 17

- adding a new network connection 19

- Ad Hoc 20

- authentication, network 21

- Configure button 19

- Connect button 19

- EAP (Extensible Authentication Protocol) 22

- Infrastructure 20

- Key Index 22

- Key Index, assigning 22

- network authentication 21

- Network Key 21

- Network Key, assigning 21

- wireless information 19

- wireless properties 20

- 802.1X authentication 22

- Connect button 19

- IP address, assigning 23

- name servers 24

- Narrow Band 132

- preferred networks, arranging 25

- specifications 239

- wireless connection, setting up 17
  - 802.11g Direct Sequence SS 239
  - 802.11signal quality 46
- radio specifications 239
- Radio Tab (Narrow Band radio) 142
- Raster Expand Rate (2D)** 159
- Raster Height (2D)** 159
- Reading Range** 174, 177, 180, 182
- recalibrating (touchscreen) 41, 108
- receive LED 44
- Remote Desktop Connection 68
- remote desktop connection 81
- Repeat Delay** (between key repeats) 91
- Repeat Rate** (of key repeats) 91
- Repeat tab (key repeat settings) 91
- resetting the 7530 G2 27
  - cold reset 27
  - warm reset 27
- RFID
  - applications 240
- Rights** 207
- RSS Code** 171, 193
- Run (Start Menu) 72

## S

- safety instructions
  - battery charger XIV–XV
- Same Read Timeout** 174
- Same Read Validate** 174
- Scan Data Format** 160
- Scan Indicator** 197
- SCAN Key 35
- Scan Log File** 197
- scanning
  - appending characters 148, 151, 196
  - check digit 155, 169
  - decoded (internal) parameters 156
  - decoded Intermec (ISCP) parameters 173
  - decode zones 242, 244, 245, 246
  - Imager parameters 187
  - non-decoded parameters 145
  - PDF internal scanner, operating 51
  - ports 199
  - removing characters 149
  - symbolologies 144
  - techniques 49
  - troubleshooting tips 50
  - 1D internal scanner, operating 50
  - 2D Internal imager, operating 51
- Scanning Mode (2D)** 159
- Scan Result** 197
- Scan Result Time** 197
- screen
  - stylus, using to navigate 59
  - touch pen, using 59
  - Windows CE, navigating 59
- Security** (scan) 147
- Security Level** 166
- security level icon 47
- Security Settings 66
  - changing password 67
  - level 66
  - Supervisor 66
  - Teklogix 66
  - User 66
- Servers**, Bluetooth Controls 118
- Services**, Bluetooth Controls 116
- Set Length L1** 161
- Set Length L2** 161
- Set PIN**, Bluetooth Controls 117
- Settings
  - Control Panel 71
  - Network and Dial-up connections 71
  - Run 71
  - Taskbar and Start Menu 71
- SE 1200 Advanced LR specs 241
- SE 1200 HP specs 241
- SE 1200 LR specs 241
- SE 1524 ER specs 244
- SE 2223 PDF specs 241
- Shared Mode (network authentication) 21
- SHIFT Key 34
- Short Code** 146
- Shutdown
  - Cold Reset 73
  - Suspend 73
  - Warm Reset 73
- Shutdown (Start Menu) 72
- signal quality, narrow band 46
- signal quality, 802.11 46
- Simple Network Management (SNMP)**
  - See SNMP 204
- SIP (Soft Input Panel) 84
- size
  - of fields 148
  - Size/Chars** (bar code scanning) 148
- Sled See picker cradle. 228
- slot power status, built-in device, enabling 106

## Index

**SNMP** (Simple Network Management Protocol) 204  
**Communities** 206  
**Contact** 205  
**Enable SNMP** 206  
**Location** 205  
**Name** 207  
**Rights** 207  
Soft Input Panel (SIP) 84  
**Soft Scan Timeout** 197  
SPACE Key 35  
specifications  
    battery,7530 1900mAh 247  
    battery,7530 2400mAh 248  
    for 7530 237  
    scanner, internal 240  
**Standard** (Code 128) 149  
**Start/Stop Transmit** 174, 180  
Start Menu 65  
    cycle tasks 70  
    desktop 66  
    programs 68  
    Run 72  
    Security 66  
    Settings 71  
    Shutdown 72  
    system tray 69  
    task manager 70  
Statistics button (Radio tab) 143  
Statistics screen (Narrow Band radio) 132  
**Stop Bits** 201, 202, 203  
**Strip Leading** 148, 151  
**Strip Start/Stop Chars** 153  
**Strip Trailing** 149, 151  
stylus (touch pen) 59  
Stylus Properties 107  
    Double-tap (stylus sensitivity) 107  
**Suffix** 160  
**Suffix Char** 148, 151  
Supervisor security level 66  
**Supp. Redundancy (Code 128)** 166  
**Supplementals (UPC-EAN)** 166  
Suspend (Shutdown menu) 73  
**Suspend State** 103  
SX5303 2D imager specs 247  
symbolologies  
    IATA 2 of 5 156  
symbolologies, bar code 144  
**Sync Delay** (Polling) 139  
system tray 69

**T**  
TAB Key 35  
taskbar  
    onscreen indicators  
        battery gauge 46  
        docking devices 47  
        modifier keys 45  
        narrow band radio signal quality 46  
        security level 47  
        tethered device 47  
        802.11 radio signal quality 46  
    using 62  
task manager 70  
**TekImager Enabled** 187  
Teklogix security level 66  
TekTerm application 81  
**Telepen** 186  
Test Polling Values 140  
Test Squelch (Radio tab) 142  
tether adaptor cables 234  
tethered device  
    connecting and disconnecting 52  
    taskbar icons 47  
Tether Port scanner settings 200  
Tether Port settings  
    **Baud** 200  
    **Data Bits** 200  
    **Parity** 201  
    **Stop Bits** 201  
threshold, setting (backlight) 89, 92  
Total Recall  
    backup profile, creating 126  
    backup profile, restoring 130  
touch pen, using 59  
touchscreen  
    recalibration 41, 108  
    stylus 59  
    touch pen 59  
**Transmit Check Digit** 175, 177, 178,  
    179, 181, 182, 184  
**Transmit Check Digit (I 2 of 5)** 168  
**Transmit Check Digit (MSI Plessey)** 169  
**Transmit Code 1D Char** 160  
transmit LED 44  
**Transmit Number System** 178, 179  
trigger mappings 110  
triggers, configuring 109  
**Trigger Type**, Manage Triggers menu 112  
**Trioptic Code 39**, **Enable** 161

troubleshooting tips (scanning) 50

## U

**UCC 128**(Code 128) 149  
 UPC A 152, 164, 178  
**UPC-A Check Digit** 164  
**UPC-A Preamble** 164  
 UPC E 152, 165, 178  
**UPC-EAN** 166, 192  
**UPC-EAN Shared Settings** 179  
**UPC-E Check Digit** 165  
**UPC-E Preamble** 165  
**UPC-E1 Check Digit** 165  
**UPC-E1 Preamble** 165  
**UPC Half Block Stitching, 2D** 167  
 USB Setup Application *D-1*  
   launching *D-2*  
 User security level 66

## V

**Variations** (Code 128) 149  
**Verify** 146

## W

warm reset 27  
 Warm Reset (Shutdown menu) 73  
**Window Delay** (Polling) 140  
**Window Height** 188  
 Windows® Start Menu *See* Start Menu 65  
 Windows CE  
   dialog box 73  
   files, folders, & programs, working  
   with 60  
 Windows CE, navigating in 59  
 Windows Explorer 68  
**Window Width** 188  
 wireless connection setup 17  
 Wireless Information Tab 19  
 Wireless Properties tab 20  
 WPA authentication 21  
 WPA-PSK authentication 21

1D Internal scanner, operating 50  
**2D Aztec** 195  
**2D Codablock** 186  
**2D DataMatrix** 194  
 2D imager scanner, operating 51  
**2D Maxicode** 194

**2D Micro PDF-417** 171, 185, 195  
**2D PDF-417** 170, 185, 194  
**2D QR Code** 195  
**2D Raster Expand Rate** 159  
**2D UPC Half Block Stitching** 167  
 36-key keyboard  
   alpha keys, accessing 38  
   uppercase letters, creating 39  
 63-key keyboard 38  
 7530  
   approvals 238  
   specifications 237  
 802.1X authentication, enabling 22  
 802.11 radio, configuring 17





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