Return-To-Factory Warranty

Psion Teklogix provides a return to factory warranty on this product for a period of twelve (12) months in accordance with the statement of Warranty and Product Support provided at:

http://www.psion.com/warranty

The warranty on Psion Teklogix manufactured equipment does not extend to any product that has been tampered with, altered, or repaired by any person other than an employee of an authorized Psion service organization. See Psion terms and conditions of sale for full details.

Psion warranties take effect on the date of shipment.

Important: Psion Teklogix warranties take effect on the date of shipment.

Service

Psion Teklogix provides a complete range of product support services to its customers. For detailed information, please refer to Appendix A: “Support Services And Worldwide Offices”. This section also provides information about accessing support services through the Psion web site.


This Product, and its accessories, comply with the requirements of the Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC. If your end-of-life Psion Teklogix product or accessory carries a label as shown here, please contact your local country representative for details on how to arrange recycling.

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The European Union has mandated that high environmental standards be met in the design and manufacture of electronic and electrical products sold in Europe, to reduce hazardous substances from entering the environment. The “Restriction on Hazardous
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# Table of Contents

Program License Agreements ........................................... 1  
Approval And Safety Summary .......................................... VII

### Chapter 1: Introduction

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

### Chapter 2: Basic Checkout

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
## Contents

**Chapter 3: Getting To Know Your 7530 G2**

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

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

Psion Teklogix 7530 G2 Hand-Held Computer User Manual  iii
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
## Contents

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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<td>Canada L5N 7J9</td>
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<td>Erlanger, KY, 41018, USA</td>
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<td></td>
<td>Contact Person: Kyle Day</td>
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<tr>
<td></td>
<td>Telephone No.: (859) 372-4329</td>
</tr>
<tr>
<td>Equipment Type/Environment:</td>
<td>Computing Devices</td>
</tr>
<tr>
<td>Trade Name / Model No.:</td>
<td>7530 G2 Hand-Held Micro-computer with Portable Docking Module</td>
</tr>
<tr>
<td>Year of Manufacture:</td>
<td>2006</td>
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</table>

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

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

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

<table>
<thead>
<tr>
<th>Applicant</th>
<th>Legal Representative in U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Doyle</td>
<td>Kyle Day</td>
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<td>Full Name</td>
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<tr>
<td>Vice President, Engineering</td>
<td>Vice President, Channel Sales</td>
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<td>Mississauga, Ontario, Canada</td>
<td>Erlanger, KY 41018, USA</td>
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<td>June 2006</td>
<td>June 2006</td>
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<td>Date</td>
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</tbody>
</table>
Approvals And Safety Summary

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).


Ό εξοπλισμός αυτός πληροί τις βασικές απαιτήσεις της κοινοτικής οδηγίας EU R&TTE 1999/5/ΕΚ. (Η δήλωση συμμόρφωσης διατίθεται στη διεύθυνση: 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).
Approvals And Safety Summary


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 handheld 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.

Country Roaming

This device incorporates the International Roaming feature (IEEE802.11d) which will ensure the product operates on the correct channels for the particular country of use.

Ad-Hoc Operation (2.4 GHz band)

Ad-Hoc operation is limited to Channels 1-11 (2412-2462 MHz).

Warning to Users


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.

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!
Explosiongefahr 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

**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.
Approvals And Safety Summary

• 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.
• 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 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.
1.2 Text Conventions

Note: Notes highlight additional helpful information.

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

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

1.3 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)
Chapter 1: Introduction

7530 G2 Features

- 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
Chapter 1: Introduction

7530 G2 Features

- 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
Chapter 1: Introduction

About The 7530 G2 Hand-Held Computer

- 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
1.4.2 Regulatory Labels

Figure 1.2 7530 G2 Ports

This label is affixed below the scanner window.

Figure 1.3 Laser Warning Label

Figure 1.4 LED Radiation Notice Label
# Basic Checkout

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
Chapter 2: Basic Checkout
Preparing The 7530 G2 For Operation

2.1 Preparing The 7530 G2 For Operation
Typically, 7530 G2 hand-holds are configured at the factory and arrive ready for use. Although these hand-holds 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.
Chapter 2: Basic Checkout

Attaching The Pistol Grip

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](image)

Psion Teklogix 7530 G2 Hand-Held Computer User Manual 17
2. Choose the radio icon to open the **802.11 Wireless LAN Settings** window – in the sample screen, this is labelled *PTXCF8385P NI*.

![Wireless LAN Settings](image)

**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 NI* in the sample below) is displayed.

![Wireless Statistics](image)

**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.

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

![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.
Configuring An IEEE 802.11 Radio In The Unit

**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.

**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](image)

**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.
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.

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.

![Advanced Wireless Settings](image)

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 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:

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

3.1 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
Chapter 3: Getting To Know Your 7530 G2

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
Chapter 3: Getting To Know Your 7530 G2
The Battery

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:
Chapter 3: Getting To Know Your 7530 G2

The Keyboard

• 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.
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 [F10] 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.
Chapter 3: Getting To Know Your 7530 G2

Numeric Keyboard – 37-Key

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

To choose the letter ‘a’:
• Press the [ORANGE] key, and press the numeric key [2].

To choose the letter ‘b’:
• Press the [ORANGE] key again to unlock it.

To choose the letter ‘c’:
• Lock the [ORANGE] key on.
• 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.
Chapter 3: Getting To Know Your 7530 G2

The Keypad Backlight

To type the letter ‘b’:
- 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].
- 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](image)

- 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-holds 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.

![Keyboard LEDs](image)

### 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.

<table>
<thead>
<tr>
<th>Function</th>
<th>Charge LED Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>External power not available.</td>
<td>LED off.</td>
</tr>
<tr>
<td>Fully charged to within 95% of charge capacity.</td>
<td>LED displays solid green colour.</td>
</tr>
<tr>
<td>Quick charge successfully completed to within 75% of charge capacity.</td>
<td>LED flashes slow green.</td>
</tr>
</tbody>
</table>
Chapter 3: Getting To Know Your 7530 G2

Radio Traffic LED

### 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.

---

<table>
<thead>
<tr>
<th>Function</th>
<th>Charge LED Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charge in progress*</td>
<td>LED displays solid yellow colour.</td>
</tr>
<tr>
<td>Cell temperature out of range for charge.</td>
<td>LED flashes yellow.</td>
</tr>
<tr>
<td>Unable to charge battery.</td>
<td>LED displays solid red colour.</td>
</tr>
<tr>
<td>Charge circuit failure.*</td>
<td>LED flashes fast red.*</td>
</tr>
</tbody>
</table>

#### 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.

---

<table>
<thead>
<tr>
<th>Function</th>
<th>Radio Traffic LED Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio Transmit</td>
<td>LED flashes yellow.</td>
</tr>
<tr>
<td>Radio Receive</td>
<td>LED flashes green.</td>
</tr>
</tbody>
</table>

#### 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.

---

<table>
<thead>
<tr>
<th>Function</th>
<th>Scan LED Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan in progress</td>
<td>LED displays solid red during scan.</td>
</tr>
<tr>
<td>Successful scan</td>
<td>LED displays solid green after decode. Off when scan ended.</td>
</tr>
<tr>
<td>Unsuccessful scan</td>
<td>LED flashes red.</td>
</tr>
</tbody>
</table>

#### 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.
Chapter 3: Getting To Know Your 7530 G2

Onscreen Indicators

3.5.2 Onscreen Indicators

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

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.

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.

Narrow Band Radio Signal Quality

Increasing radio signal quality is represented by vertical bars within this icon.
Chapter 3: Getting To Know Your 7530 G2

Audio Indicators

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

Docking Device
When a hand-held is inserted in a docking station, charger or cradle, an associated icon appears in the taskbar.

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 \( - \).
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 Programing 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.
Chapter 3: Getting To Know Your 7530 G2

Scanning Techniques

- **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.
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.

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.

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-
To graphers. 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.
Chapter 3: Getting To Know Your 7530 G2

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 preforming 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.
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
Chapter 4: Working With Windows CE

Navigating In Windows CE And Applications

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.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Key or Key Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch between active applications</td>
<td>[ALT] [TAB]</td>
</tr>
<tr>
<td>Open task manager</td>
<td>[ALT] [ESC]</td>
</tr>
<tr>
<td>Move the cursor</td>
<td>Arrow keys</td>
</tr>
</tbody>
</table>
Chapter 4: Working With Windows CE

Working With Files, Folders And Programs

<table>
<thead>
<tr>
<th>Operation</th>
<th>Key(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open file, folder or icon</td>
<td>[ENTER]</td>
</tr>
<tr>
<td>Exit &amp; Save</td>
<td>[ENTER]</td>
</tr>
<tr>
<td>Close/Exit &amp; Do Not Save</td>
<td>[ESC]</td>
</tr>
<tr>
<td>Navigate Dialog Boxes</td>
<td>[TAB]</td>
</tr>
<tr>
<td></td>
<td>To move cursor up [SHIFT] [TAB]</td>
</tr>
<tr>
<td></td>
<td>To display the contents of the next ‘tab’ in a dialog box [CTRL] [TAB]</td>
</tr>
<tr>
<td>Select Radio Button/Press Button</td>
<td>[SPACE]</td>
</tr>
<tr>
<td>Go to Start Menu</td>
<td>[BLUE][0]</td>
</tr>
</tbody>
</table>

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.
Chapter 4: Working With Windows CE

The Desktop 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
Chapter 4: Working With Windows CE

Using The Taskbar

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.

![Taskbar and Start Menu Settings](image)

**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*. 
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
Chapter 4: Working With Windows CE

The Desktop

• 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.

![Security Levels](Image)

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.

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.
Chapter 4: Working With Windows CE

Shortcuts

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

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.
Chapter 4: Working With Windows CE

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.

![Settings Sub-Menu](image.png)

**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.
Chapter 4: Working With Windows CE

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](image)

4.4.7 Shutdown

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

![Figure 4.7 Shutdown Sub-Menu](image)

**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.
Chapter 4: Working With Windows CE

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
     5.6.2.2 Keyboard One Shot Modes .............................. 93
     5.6.2.3 Keyboard Macro Keys ................................... 94
     5.6.2.4 Unicode Mapping ........................................ 96
     5.6.2.5 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
### Chapter 5: Configuration

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

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
### Chapter 5: Configuration

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.11.4.19</td>
<td>2D Codablock</td>
</tr>
<tr>
<td>5.11.4.20</td>
<td>Telepen</td>
</tr>
<tr>
<td>5.11.5</td>
<td>Imager</td>
</tr>
<tr>
<td>5.11.5.1</td>
<td>Imager Options</td>
</tr>
<tr>
<td>5.11.5.2</td>
<td>Imager Advanced Options</td>
</tr>
<tr>
<td>5.11.5.3</td>
<td>Code 39</td>
</tr>
<tr>
<td>5.11.5.4</td>
<td>Code 128</td>
</tr>
<tr>
<td>5.11.5.5</td>
<td>UPC/EAN</td>
</tr>
<tr>
<td>5.11.5.6</td>
<td>Codabar</td>
</tr>
<tr>
<td>5.11.5.7</td>
<td>Code 93</td>
</tr>
<tr>
<td>5.11.5.8</td>
<td>Interleaved 2 of 5</td>
</tr>
<tr>
<td>5.11.5.9</td>
<td>RSS Code (Reduced Space Symbology)</td>
</tr>
<tr>
<td>5.11.5.10</td>
<td>Postal: Australian</td>
</tr>
<tr>
<td>5.11.5.11</td>
<td>Postal: Japanese</td>
</tr>
<tr>
<td>5.11.5.12</td>
<td>Postal: Korean</td>
</tr>
<tr>
<td>5.11.5.13</td>
<td>Postal: PlaNET</td>
</tr>
<tr>
<td>5.11.5.14</td>
<td>Postal: PostNET</td>
</tr>
<tr>
<td>5.11.5.15</td>
<td>Postal: Royal</td>
</tr>
<tr>
<td>5.11.5.16</td>
<td>2D DataMatrix</td>
</tr>
<tr>
<td>5.11.5.17</td>
<td>2D Maxicode</td>
</tr>
<tr>
<td>5.11.5.18</td>
<td>2D PDF-417</td>
</tr>
<tr>
<td>5.11.5.19</td>
<td>2D Micro PDF-417</td>
</tr>
<tr>
<td>5.11.5.20</td>
<td>2D QR Code</td>
</tr>
<tr>
<td>5.11.5.21</td>
<td>2D Aztec</td>
</tr>
<tr>
<td>5.11.5.22</td>
<td>Composite</td>
</tr>
<tr>
<td>5.11.6</td>
<td>Options Tab</td>
</tr>
<tr>
<td>5.11.7</td>
<td>Translations</td>
</tr>
<tr>
<td>5.11.8</td>
<td>Ports</td>
</tr>
<tr>
<td>5.11.8.1</td>
<td>Tether Port (COM1)</td>
</tr>
<tr>
<td>5.11.8.2</td>
<td>Console Port (COM3)</td>
</tr>
<tr>
<td>5.11.8.3</td>
<td>Port Replicator Tether (COM6)</td>
</tr>
<tr>
<td>5.11.8.4</td>
<td>Port Replicator Port A (COM5)</td>
</tr>
<tr>
<td>5.12</td>
<td>SNMP (Simple Network Management Protocol) Setup</td>
</tr>
<tr>
<td>5.12.1</td>
<td>Contact Tab</td>
</tr>
<tr>
<td>5.12.1.1</td>
<td>Contact</td>
</tr>
<tr>
<td>5.12.1.2</td>
<td>Location</td>
</tr>
<tr>
<td>5.12.2</td>
<td>Communities Tab</td>
</tr>
<tr>
<td>5.12.2.1</td>
<td>Adding A Community</td>
</tr>
</tbody>
</table>
Chapter 5: Configuration

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:


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:

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](image)
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.
### Chapter 5: Configuration

#### Control Panel Icons

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

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

- **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**
  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**
  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**
  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.
Chapter 5: Configuration
Control Panel Icons

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

Password
Allows you to assign a password to restrict access to elements of the unit. Once assigned, password access cannot be circumvented so it is important that you write down your password and keep it in a safe place. Refer to “Security Settings” on page 66 for details.

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
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
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
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.
Chapter 5: Configuration

Control Panel Icons

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

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

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

- **Teklogix Scanners**
  Provides scanner parameters and the bar code symbologies that the 7530 G2 scanner will successfully read.

- **Total Recall**
  Provides access to a backup and restore utility to maintain applications and settings over cold reboots.

- **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.

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.
Chapter 5: Configuration

Display Properties

- 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.
Chapter 5: Configuration
Display Properties

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.
Chapter 5: Configuration

Keyboard Properties

5.6.1.3 Display Appearance

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

![Display Properties dialog box]

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.

![Control Panel with Keyboard highlighted]

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.

![Keyboard One Shot Properties](image)

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](image)

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](image)

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.
Chapter 5: Configuration

Keyboard Properties

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.
Chapter 5: Configuration

Keyboard Properties

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](image)

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**.
Chapter 5: Configuration

Volume And Sound Properties

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](image-url)
Chapter 5: Configuration
Volume And Sound Properties

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](image)

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.
Chapter 5: Configuration

Power Management Properties

**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.

![Image of Power Properties tab]

**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.

![Stylus Icon](image)

**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.

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.

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.
Chapter 5: Configuration
Manage Triggers

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.

![Add Source Dialog](image)

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.

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:


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.

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.
**Chapter 5: Configuration**

**The Devices Tab**

**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 LANPP (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.
Chapter 5: Configuration

Active Conn. Tab

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.

2. Tap on the Make New Connection icon.
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](image)

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

![Figure 5.19 Setting Up The Modem](image)

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.
Chapter 5: Configuration

Bluetooth GPRS Connection

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.

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

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](image)
Chapter 5: Configuration

Bluetooth GPRS Connection

9. 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](image)

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

10. At this point, you’ll need to return to the **Control Panel**, and choose the **Network and Dial-up Connections** icon.

11. 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](image)
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](image)

### 5.8.1 Creating A Backup Profile

![Figure 5.26 Total Recall Icon](image)
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.
Creating A Backup Profile

- **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, indicating that additional options are available.
- Tap on this icon next to *Select Files* to view your options.
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](image)

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](image)
Chapter 5: Configuration

Restoring A Profile

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.

- 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.
Chapter 5: Configuration

Narrow Band Radio Setup

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.

![Narrow Band Radio Info Tab](image)

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.
Chapter 5: Configuration

Info Tab

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

The following table provides a brief description of these statistics:

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cq</td>
<td>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).</td>
</tr>
<tr>
<td>ch</td>
<td>Current channel</td>
</tr>
<tr>
<td>sc</td>
<td>Monitor state of RF Link: LOCKED=0, LOCKPENDING=1, LOWC-QWAIT=2, SCANNING=3, STARTUP=4, ABANDON=5</td>
</tr>
<tr>
<td>rm</td>
<td>Number of received messages, complete application messages</td>
</tr>
<tr>
<td>xm</td>
<td>Number of transmitted messages, complete application messages</td>
</tr>
<tr>
<td>rf</td>
<td>Number of received polls with attached message</td>
</tr>
<tr>
<td>xf</td>
<td>Number of transmitted frames</td>
</tr>
<tr>
<td>ra</td>
<td>Number of received radio link aborts</td>
</tr>
<tr>
<td>xi</td>
<td>Number of transmitted radio link initialization messages</td>
</tr>
<tr>
<td>rp</td>
<td>Number of received polls</td>
</tr>
<tr>
<td>xr</td>
<td>Number of transmitted retries</td>
</tr>
<tr>
<td>pt</td>
<td>Number of poll timeouts</td>
</tr>
<tr>
<td>xe</td>
<td>Number of transmitted errors</td>
</tr>
<tr>
<td>rssi</td>
<td>Received Signal Strength Indicator</td>
</tr>
</tbody>
</table>

Table 5.1 Protocol Statistics Descriptions
Chapter 5: Configuration

Info Tab

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.

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

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.
Chapter 5: Configuration

Channel Tab

Channel Enable List

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

![Channel Enable List dialog box]

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.

![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” 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.
Chapter 5: Configuration

Protocol Tab

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.
Chapter 5: Configuration
Protocol Tab

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-holds 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.

<table>
<thead>
<tr>
<th>Modulation / Baud Rate</th>
<th>Sync Delay</th>
<th>Window Delay</th>
<th>Poll Timeout</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Level / 19200</td>
<td>17</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>4 Level / 9600</td>
<td>17</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>2 Level / 9600</td>
<td>17</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>2 Level / 4800</td>
<td>25</td>
<td>23</td>
<td>37</td>
</tr>
</tbody>
</table>

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-holds and base stations in the system. The allowable range for this parameter is between 1 and 40.
Chapter 5: Configuration
Protocol Tab

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.

  ![Frequency Table](image)

  - 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

TheTeklogix 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.
Chapter 5: Configuration

Bar Codes

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.

5.11.1 Bar Codes

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® (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.
Chapter 5: Configuration

Non-Decoded Scanners

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”.
Chapter 5: Configuration
Non-Decoded Scanners

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.
Chapter 5: Configuration

Non-Decoded Scanners

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.
Chapter 5: Configuration

Non-Decoded Scanners

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.
Chapter 5: Configuration

Non-Decoded Scanners

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.
Chapter 5: Configuration
Non-Decoded Scanners

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.
Chapter 5: Configuration

Decoded (Internal) Scanners

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:

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codabar</td>
<td>All</td>
</tr>
<tr>
<td>MSI Plessey</td>
<td>4 or less</td>
</tr>
<tr>
<td>D 5 of 5</td>
<td>8 or less</td>
</tr>
<tr>
<td>I 2 of 5</td>
<td>8 or less</td>
</tr>
</tbody>
</table>

“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:

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSI Plessey</td>
<td>4 or less</td>
</tr>
<tr>
<td>D 2 of 5</td>
<td>8 or less</td>
</tr>
<tr>
<td>I 2 of 5</td>
<td>8 or less</td>
</tr>
</tbody>
</table>

“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 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.
Chapter 5: Configuration
Decoded (Internal) Scanners

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:

- JC1  if the first codeword is 903-907, 912, 914, 915
- JC2  if the first codeword is 908 or 909
- JC0  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:

- JL3  if the first codeword is 903-907, 912, 914, 915
- JL4  if the first codeword is 908 or 909
- JL5  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).
Chapter 5: Configuration

*Decoded (Intermec ISCP)*

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**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.

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### 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.
Chapter 5: Configuration
Decoded (Intermec ISCP)

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).
Chapter 5: Configuration
Decoded (Intermec ISCP)

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 \textit{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 \textit{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 \textit{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.
Chapter 5: Configuration
Decoded (Intermec ISCP)

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”.
Chapter 5: Configuration
Decoded (Intermec ISCP)

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.
Chapter 5: Configuration
Decoded (Intermec ISCP)

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 Plessy
Set this parameter to on to enable the “Plessy” 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.
Chapter 5: Configuration
Decoded (Intermec ISCP)

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.
Chapter 5: Configuration

Decoded (Intermec ISCP)

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:

- JC1 if the first codeword is 903-907, 912, 914, 915
- JC2 if the first codeword is 908 or 909
- JC0 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:

- JL3 if the first codeword is 903-907, 912, 914, 915
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 snapshot, 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.
Chapter 5: Configuration

Imager

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.
Chapter 5: Configuration

Imager

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.
IMAGER

Chapter 5: Configuration

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.
Chapter 5: Configuration

Imager

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.
Chapter 5: Configuration

Translations

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.).
Chapter 5: Configuration

5.11.8 Ports

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).

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.
Chapter 5: Configuration

Ports

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.
Chapter 5: Configuration

Ports

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”.

Chapter 5: Configuration
Ports

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.

![SNMP Icon](image)
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.
Chapter 5: Configuration

Communities Tab

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’. 
Chapter 5: Configuration
Communities Tab

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.
Chapter 5: Configuration

Trap Destination Tab

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.

  ![Add button](image)

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

  ![Input field](image)
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

6.1 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
Chapter 6: Peripheral Devices & Accessories

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
Chapter 6: Peripheral Devices & Accessories

External Bar Code Readers

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 Programming 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.
Chapter 6: Peripheral Devices & Accessories

Battery Charging

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.

<table>
<thead>
<tr>
<th>LED Behaviour</th>
<th>Icon</th>
<th>Charge Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td></td>
<td>No battery detected in the slot.</td>
</tr>
<tr>
<td>Solid green</td>
<td>![Green LED]</td>
<td>Battery is fully charged.</td>
</tr>
<tr>
<td>Flashing green</td>
<td>![Flashing Green LED]</td>
<td>Battery is charged to 75% capacity.</td>
</tr>
<tr>
<td>Solid yellow</td>
<td>![Yellow LED]</td>
<td>Charge in progress.</td>
</tr>
<tr>
<td>Flashing yellow</td>
<td>![Flashing Yellow LED]</td>
<td>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.</td>
</tr>
<tr>
<td>Solid red</td>
<td>![Red LED]</td>
<td>Battery rejected (at insertion) or unable to complete charge on battery</td>
</tr>
</tbody>
</table>

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.
Chapter 6: Peripheral Devices & Accessories

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.
Chapter 6: Peripheral Devices & Accessories

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.

<table>
<thead>
<tr>
<th>LED Behaviour</th>
<th>Charge Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>No battery detected in the slot.</td>
</tr>
<tr>
<td>Solid green</td>
<td>Battery is fully charged.</td>
</tr>
<tr>
<td>Flashing green</td>
<td>Battery is charged to 75% capacity.</td>
</tr>
<tr>
<td>Solid yellow</td>
<td>Charge in progress.</td>
</tr>
<tr>
<td>Flashing yellow</td>
<td>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.</td>
</tr>
<tr>
<td>Solid red</td>
<td>Battery rejected (at insertion) or unable to complete charge on battery.</td>
</tr>
<tr>
<td>Flashing red</td>
<td>Charging circuit problem. Refer to “Troubleshooting” on page 218 for details.</td>
</tr>
</tbody>
</table>

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
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).
Chapter 6: Peripheral Devices & Accessories
Picker Cradle Mounting Recommendations

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.
Chapter 6: Peripheral Devices & Accessories

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

7.1 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
Chapter 7: Specifications

7530 G2 Hand-Held Computer Specifications

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

Note: Performance specifications are nominal and subject to change without notice.
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 Compact 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)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>Compact Flash</td>
</tr>
<tr>
<td>Antenna Port</td>
<td>Single U.FL jack, no diversity</td>
</tr>
<tr>
<td>Transmit Power</td>
<td>32mW max (+15dBm), all versions</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>2.400 - 2.4835GHz, all versions</td>
</tr>
<tr>
<td>Channels</td>
<td>1 to 11 for USA, Canada</td>
</tr>
<tr>
<td></td>
<td>1-13 for EU countries</td>
</tr>
<tr>
<td>RX Sensitivity</td>
<td>(8% FER, 1024 bytes packet) =</td>
</tr>
<tr>
<td></td>
<td>-89dBm @ 1Mbps, -87dBm @ 11Mbps,</td>
</tr>
<tr>
<td></td>
<td>-83dBm @ 6Mbps, -72dBm @ 54Mbps</td>
</tr>
<tr>
<td>Data Rates</td>
<td>6, 9, 12, 18, 24, 36, 48 &amp; 54Mbps</td>
</tr>
</tbody>
</table>

**RA1001A - Narrow Band Radio**

Psion Teklogix Proprietary Narrowband Modulation (2/4 level FSK)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmit Power</td>
<td>1W or 0.5W</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>403-422MHz, 419-435MHz, 435-451MHz,</td>
</tr>
<tr>
<td></td>
<td>450-470MHz, 464-480MHz,</td>
</tr>
<tr>
<td></td>
<td>480-496MHz, 496-512MHz</td>
</tr>
<tr>
<td>Rx Sensitivity</td>
<td>&lt;-110dBm @ 19.2kbps (4 level FSK)</td>
</tr>
<tr>
<td>Data Rates</td>
<td>4800bps, 9600bps, 19.2kbps</td>
</tr>
</tbody>
</table>

**Bluetooth Radio**

Embedded (USB interface)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bluetooth Version</td>
<td>1.2 compliant (features Adaptive Frequency Hopping for better co-existence with 802.11 radio)</td>
</tr>
<tr>
<td>Chip Antenna</td>
<td>2dBi peak</td>
</tr>
<tr>
<td>Transmit Power</td>
<td>-3dBm (0.5mW) minimum, +4dBm (2.5mW) max</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>2.400 - 2.4835GHz</td>
</tr>
<tr>
<td>RX Sensitivity</td>
<td>-80dBm max</td>
</tr>
<tr>
<td>(BER&lt;=0.1%)</td>
<td></td>
</tr>
<tr>
<td>Data Rate</td>
<td>732.2kbps and 57.6kbps asymmetric,</td>
</tr>
<tr>
<td></td>
<td>433.9kbps symmetric</td>
</tr>
</tbody>
</table>
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 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).
### 7.6.2 SE 1200 Advanced Long Range & SE 2223PDF Specs

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SE 1200ALR</th>
<th>SE 2223 PDF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan Rate</td>
<td>35 (± 5) scans/sec (bi-directional)</td>
<td>590 scans/sec, 22 frames/sec.</td>
</tr>
<tr>
<td>Scan Angle</td>
<td>13°± 2°</td>
<td>Horizontal: 34°, Vertical: 12.5°</td>
</tr>
<tr>
<td>Scan Patterns</td>
<td>Linear</td>
<td>Linear and Smart Raster</td>
</tr>
<tr>
<td>Minimum Print Contrast</td>
<td>Minimum 40% absolute dark/light reflectance measured at 650 nm.</td>
<td>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).</td>
</tr>
</tbody>
</table>
Chapter 7: Specifications
Decode Zones – SE 1200HP, LR AND ALR

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SE 1200ALR</th>
<th>SE 2223 PDF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programmable Parameters</td>
<td>Laser On Time, Aim Duration, Symbology types/lengths, Data formatting.</td>
<td>Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bidirectional Redundancy, Symbology types/lengths, Data formatting, Pattern Controls.</td>
</tr>
</tbody>
</table>

### 7.6.2.1 Decode Zones — SE 1200HP, LR AND ALR

<table>
<thead>
<tr>
<th>Bar Code</th>
<th>Read Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Performance</td>
</tr>
<tr>
<td></td>
<td>Min</td>
</tr>
<tr>
<td>5 mil</td>
<td>3.0&quot;</td>
</tr>
<tr>
<td>7.5 mil</td>
<td>3.0&quot;</td>
</tr>
<tr>
<td>10 mil</td>
<td>2.5&quot;</td>
</tr>
<tr>
<td>15 mil</td>
<td>2.5&quot;</td>
</tr>
<tr>
<td>20 mil</td>
<td>2.5&quot;</td>
</tr>
<tr>
<td>40 mil</td>
<td>3.0&quot;</td>
</tr>
<tr>
<td>55 mil</td>
<td>3.5&quot;</td>
</tr>
</tbody>
</table>
7.6.2.2 Decode Zones – SE 2223PDF

<table>
<thead>
<tr>
<th>Bar Code</th>
<th>Raster Laser Scanner Read Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDF Bar Codes</td>
<td>SE2223</td>
</tr>
<tr>
<td></td>
<td>Min</td>
</tr>
<tr>
<td>6.5 mil</td>
<td>2.5&quot;</td>
</tr>
<tr>
<td>10 mil</td>
<td>2.5&quot;</td>
</tr>
<tr>
<td>15 mil</td>
<td>2.5&quot;</td>
</tr>
</tbody>
</table>

7.6.3 SE 1224HP Scanner Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SE 1224HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Source</td>
<td>Visible Laser Diode 650 nm.</td>
</tr>
<tr>
<td>Scan Rate</td>
<td>35 (± 5) scans/sec (bi-directional)</td>
</tr>
<tr>
<td>Scan Angle</td>
<td>42º (typical), 30º (narrow)</td>
</tr>
<tr>
<td>Scan Patterns</td>
<td>Linear</td>
</tr>
<tr>
<td>Minimum Print Contrast</td>
<td>Minimum 25% absolute dark/light reflectance measured at 650 nm.</td>
</tr>
<tr>
<td>Programmable Parameters</td>
<td>Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bi-directional Redundancy, Symbology types/lengths, Data formatting.</td>
</tr>
</tbody>
</table>
7.6.3.1 Decode Zone – SE 1224HP

Note: Typical performance at 88°F (20°C) on high quality symbols.

7.6.4 SE 1524ER — Extended Range Scanner Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SE 1524ER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Source</td>
<td>Visible Laser Diode 650 nm.</td>
</tr>
<tr>
<td>Scan Rate</td>
<td>35 (±5) scans/sec (bi-directional).</td>
</tr>
<tr>
<td>Scan Angle</td>
<td>13.5° ±0.7°</td>
</tr>
<tr>
<td>Scan Patterns</td>
<td>Linear</td>
</tr>
<tr>
<td>Minimum Print Contrast</td>
<td>Minimum 25% absolute dark/light reflectance measured at 650 nm.</td>
</tr>
<tr>
<td>Symbologies</td>
<td>UPC/EAN, Code 128, UCC.EAN128, RSS, Code 39, Code 93, 2 of 5, Discrete 2 of 5, Codabar, MSI.</td>
</tr>
<tr>
<td>Programmable Parameters</td>
<td>Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bi-directional Redundancy, Symbology types/lengths, Data formatting.</td>
</tr>
<tr>
<td>Ambient Light:</td>
<td>Artificial: 450 ft. candles (4,844 Lux).</td>
</tr>
<tr>
<td></td>
<td>Sunlight: 4,000 ft. candles (86,112 Lux).</td>
</tr>
</tbody>
</table>
7.6.4.1 Decode Zones – SE 1524ER

![Decode Zone A Diagram](image1)

Figure 7.1 1524ER Decode Zone A (short-range, small codes)

![Decode Zone B Diagram](image2)

Figure 7.2 1524ER Decode Zone B (long-range, large codes)

7.6.5 EV15 Imager Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>EV15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Source</td>
<td>617nm Highly Visible LED</td>
</tr>
<tr>
<td>Scan Angle</td>
<td>40°</td>
</tr>
<tr>
<td>Minimum Print Contrast</td>
<td>Minimum 25%</td>
</tr>
<tr>
<td>Min x. Dimension</td>
<td>0.1 mm (4 mils)</td>
</tr>
</tbody>
</table>

Psion Teklogix 7530 G2 Hand-Held Computer User Manual 245
## Chapter 7: Specifications

### Decode Zone– EV15

<table>
<thead>
<tr>
<th>Parameter</th>
<th>EV15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Distance</td>
<td>Up to 90cm (35 in)</td>
</tr>
<tr>
<td>Ambient Light</td>
<td>Works in any lighting conditions, from 0 to 100,000 lux</td>
</tr>
<tr>
<td>Shock</td>
<td>2000G, 0.7ms, half sinus, 3 axes</td>
</tr>
<tr>
<td>Vibration</td>
<td>50G r.m.s.</td>
</tr>
</tbody>
</table>

### 7.6.5.1 Decode Zone– EV15

**EV15 Reading Distances**

![EV15 Reading Distances Diagram](image)

Typical reading distances on high quality barcodes

---

7.6.6 SX5303 Imager Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SX5303</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optics</td>
<td>1.3 megapixel (1280 x 1024)</td>
</tr>
<tr>
<td>Field of View at 6 inches</td>
<td>10.3 in. x 8.2 in.</td>
</tr>
<tr>
<td>Pitch Angle</td>
<td>±45°</td>
</tr>
<tr>
<td>Skew Angle</td>
<td>±45°</td>
</tr>
<tr>
<td>Ambient Light</td>
<td>200 Lux to full sunlight.</td>
</tr>
<tr>
<td>Minimum Contrast</td>
<td>10%</td>
</tr>
<tr>
<td>Targeting</td>
<td>Center locating 623 nm LED.</td>
</tr>
<tr>
<td>Decode Symbologies Supported</td>
<td>Linear: Code 39; UPC/EAN; I2of5; Code 128; Codabar; RSS PDF417: PDF417, microPDF417; Composite; image capture and signature capture. Data Matrix: Data Matrix; QR Code; Maxicode; Aztec Code; Planet; Postnet; Royal Mail 4SCC; 4 State postal codes from Australia, Canada, Japan; Korean Post 3of5.</td>
</tr>
</tbody>
</table>

### 7.6.6.1 Decode Zone — SX5303

<table>
<thead>
<tr>
<th>Code</th>
<th>Mil Size</th>
<th>Min. Range (inches)</th>
<th>Max. Range (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Matrix 10 mil</td>
<td>3.25 in.</td>
<td>5.0 in.</td>
<td></td>
</tr>
<tr>
<td>Data Matrix 12.5 mil</td>
<td>2.75 in.</td>
<td>5.5 in.</td>
<td></td>
</tr>
<tr>
<td>Data Matrix 15.8 mil</td>
<td>2.5 in.</td>
<td>5.75 in.</td>
<td></td>
</tr>
<tr>
<td>PDF417 10 mil</td>
<td>2.5 in.</td>
<td>6.0 in.</td>
<td></td>
</tr>
<tr>
<td>PDF417 15 mil</td>
<td>2.75 in.</td>
<td>7.25 in.</td>
<td></td>
</tr>
<tr>
<td>QR 15 mil</td>
<td>2.25 in.</td>
<td>5.75 in.</td>
<td></td>
</tr>
<tr>
<td>Code 39 5 mil</td>
<td>3.25 in.</td>
<td>5.0 in.</td>
<td></td>
</tr>
<tr>
<td>Code 39 10 mil</td>
<td>2.25 in.</td>
<td>6.5 in.</td>
<td></td>
</tr>
<tr>
<td>Code 39 15.8 mil</td>
<td>2.25 in.</td>
<td>7.0 in.</td>
<td></td>
</tr>
<tr>
<td>Code 128 10 mil</td>
<td>2.25 in.</td>
<td>6.5 in.</td>
<td></td>
</tr>
</tbody>
</table>

Typical performance @ 300 lux

7.7 1900 mAh Lithium-Ion Battery Pack

Technology: Lithium-Ion (Li-Ion)
Capacity: 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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Charge Temperature</strong></td>
<td>5°C to 39°C (41°F to 102°F)</td>
</tr>
<tr>
<td><strong>Discharge Temperature</strong></td>
<td>-30°C to 60°C (-22°F to 140°C)</td>
</tr>
<tr>
<td><strong>Storage Temperature</strong></td>
<td>-30°C to 60°C (-22°F to 140°C)</td>
</tr>
<tr>
<td><strong>Storage at elevated temperatures not recommended</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Charge Cycles</strong></td>
<td>Minimum 300 cycles with no degradation below 70% of nominal capacity</td>
</tr>
<tr>
<td><strong>Voltage</strong></td>
<td>11.1V nominal (8.25V mn. to 12.6V max.)</td>
</tr>
<tr>
<td><strong>Cell Configuration</strong></td>
<td>1P3S (3 series connected cells)</td>
</tr>
<tr>
<td><strong>Cell Type</strong></td>
<td>Prismatic</td>
</tr>
<tr>
<td><strong>Max. Charge Voltage</strong></td>
<td>12.6V +/- 0.09V</td>
</tr>
<tr>
<td><strong>Charge Time</strong></td>
<td>1.5 hr</td>
</tr>
</tbody>
</table>

**7.8 2400 mAh Lithium-Ion Battery Pack**

- **Technology**: Lithium-Ion (Li-Ion)
- **Capacity**: 2400mAh nominal at 300mA discharge 20°C to 8.25V
- **Capacity**: 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 not 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
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, 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
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Fax: +33 4 42 90 88 88
E-mail: tekeuro@psion.com
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.
Appendix B: Port Pinouts

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.


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.

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Signal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>POS</td>
<td>Positive Battery</td>
</tr>
<tr>
<td>2</td>
<td>CLK</td>
<td>SMBUS Clock</td>
</tr>
<tr>
<td>3</td>
<td>BAT_D</td>
<td>Presence/Cell Count</td>
</tr>
<tr>
<td>4</td>
<td>DATA</td>
<td>SMBUS Data</td>
</tr>
<tr>
<td>5</td>
<td>NEG</td>
<td>Negative Battery</td>
</tr>
</tbody>
</table>
Appendix B: Port Pinouts

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
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

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 wceusbs.inf with Psion Teklogix-specific information, and
- sets up a USB connection between the PC and the 7530 G2.
C.1.1 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:

![Installation Complete Dialog Box](image)

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
symbologies
  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
cycle, 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 ECI 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 Plessey 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
    802.11 radio 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
Index

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 (12 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
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
802.11 signal 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
symbologies 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
symbologies
  IATA 2 of 5 156
  symbologies, 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 (1 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
Index

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
6-key keyboard
   alpha keys, accessing  38
   uppercase letters, creating  39
7530
   approvals  238
   specifications  237
802.11 radio, configuring  17