Ikôn™ Rugged PDA
(Windows Mobile 6.1)
Classic & Professional)

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ISO 9001 Certified
Quality Management System

Psion Teklogix
This manual supports the following Ikôn models:

- 7505-BT
- 7505-BTSDCM
- 7505-BTMC75
- 7505-BTHC25
- 7505-BTSDCMHC25
- 7505-BTSDCMHC25

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1.1 **About This Manual**

This manual describes how to configure, operate and maintain the Ikôn Rugged PDA (Model Number 7505).

**Chapter 1: Introduction**

provides a basic overview of the Ikôn Rugged PDA.

**Chapter 2: Basic Checkout**

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

**Chapter 3: Get To Know The Ikôn**

describes the features and outlines how to charge and maintain the battery. This chapter also provides information about indicators, microSD and SIM card installation along with general Ikôn maintenance.

**Chapter 4: Working With Windows Mobile 6.1**

describes the Microsoft® Windows Mobile 6.1 Today screen and how to use it. This chapter also outlines basics like moving around a window, displaying menus, and so on.

**Chapter 5: Programs**

provides a description of the Windows Mobile 6.1 Programs options and how to use them.

**Chapter 6: Settings**

provides details about Windows Mobile 6.1 Settings options and how to use them.

**Chapter 7: Peripheral Devices & Accessories**

describes the peripherals and accessories available for your Ikôn.

**Chapter 8: Specifications**

details radio, Ikôn, scanner and battery specifications.

**Appendix A: Summit Client Utility (SCU)**

provides details about the Summit Client Utility (SCU) screens.

**Appendix B: Port Pinouts**

describes port pinouts.

**Appendix C: Teklogix Imagers Applet**

describes the Teklogix Imagers applet and outlines how to use it.
Chapter 1: Introduction

Text Conventions

Appendix D: Bar Codes Settings

describes the bar codes supported by the Decoded scanners and the Imager supported by Ikôn.

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 Ikôn Rugged PDA Features

Important: For all safety, regulatory and warranty information, refer to the ‘Ikôn Rugged PDA Regulatory & Warranty Guide’, PN 8000148.

The Ikôn is a ruggedized personal digital assistant that can be ordered with one of the following operating systems: Windows Mobile 6.1 Professional with a phone option or Windows Mobile 6.1 Classic. This Ikôn is intended for use in commercial and light industrial applications with a focus on real time wireless data transactions. All possible bar code input methodologies are supported by one of a variety of scanners available. Optimization for specific operational environments is supported with a wide range of peripheral options and carrying accessories.

Model
• Ikôn Rugged PDA – Model Number 7505

Processor
• XScale PXA270 624 MHz
• 256 MB Flash ROM, 128 MB RAM
Operating System
• Microsoft Windows Mobile 6.1 Professional
• Microsoft Windows Mobile 6.1 Classic

User Interface
• Colour Touchscreen Display 3.7 in. (9.398 cm)
  - Full VGA 480 x 640 resolution
  - Transflective, portrait mode TFT
  - Adjustable Backlight
• Touchscreen
  - Passive stylus or finger operation
  - Signature capture
• Keyboards
  - Full Alpha-Numeric
  - Numeric
  - Ergonomically enhanced for ambidextrous, one-hand operation
  - Backlit, high durability hard-capped keys

Wireless Communication
Optional expansion modules for:
• 802.11b/g (proprietary module) operating in the 2.4 GHz band:
  - Supports IEEE 802.11b data rates of 1,2,5.5 and 11 Mbps using Direct Sequence Spread Spectrum (DSSS)
  - Supports IEEE 802.11g data rates of 6,9,12,24,36,48 and 54 Mbps, using Orthogonal Frequency Division Multiplexing (OFDM) base band modulation
• GSM/GPRS EDGE (via expansion interface)
  - Quad-Band – 850/900/1800/1900
  - Voice and Data
  - GPRS Class B, Multi-Slot Class 12
  - EGPRS Class B, Multi-Slot Class 12
• UMTS
  - UMTS/HSDPA: Triple band, 850//1900/2100MHz
  - GSM/GPRS/EDGE: Quad band, 850/900/1800/1900MHz
Chapter 1: Introduction
The Ikôn Rugged PDA

- Bluetooth class 2, ver 2.0
  - support Enhanced Data Rate (EDR) for up to 3 Mbps data rate
  - support Advanced Frequency Hopping (AFH) for reduced interference with 802.11b/g radio

Note: 802.11b/g, GSM, and Bluetooth are available simultaneously.

1.3.1 The Ikôn Rugged PDA

Figure 1.1 Ikôn Rugged PDA - Qwerty And Numeric Versions
Note: The [Talk] and [End] phone keys printed on the Ikôn shown in the picture above are useful for units equipped with Windows Mobile 6.1 Professional that support the phone feature. Refer “Sending & Ending Phone Calls Using The Phone Keypad” on page 20 for details.
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2.1 Preparing The Ikôn For Operation

2.1.1 The Battery

The Ikôn is powered with a 5000 mAh Lithium-Ion battery pack, model number CH3000. Before charging the battery, it is critical that you review the battery safety guidelines in the “Ikôn Rugged PDA Warranty & Regulatory Guide”, PN 8000148.

⚠️ Important: If the Ikôn is switched on and you need to remove the battery, press and hold down the Power button until the ‘Shutdown’ screen is displayed. Choose ‘Shutdown’ and tap on OK before removing the battery.

Battery packs shipped from the factory are charged to approximately 40% and must be fully charged prior to use. Batteries can be charged using a variety of chargers and docking stations along with an Ikôn internal charger. When using the internal charger, a suitable power source is required. All chargers and docking stations are described in Chapter 7: “Peripheral Devices & Accessories”.

2.1.2 Installing The Battery

- To unlock the battery cover, turn the left-hand battery fastener to the left, and turn the right-hand battery fastener to the right.
- Remove the battery cover.
- Snap the charged battery into the Ikôn. Replace the battery cover, and lock the fasteners.

2.1.3 Switching The Ikôn Rugged PDA On

- Press and hold down the Power button for at least one second.
- When the centre LED flashes yellow, release the Power button.

The desktop Today screen is displayed.

Note: If the Ikôn was already in use and is in suspend state, pressing the Power button ‘wakes’ it from this state. The screen in which you were working prior to the suspend state is displayed.
Important: If your Ikôn fails to power up, consider the following troubleshooting options: the battery capacity may be too low (<100 mAh), it may be overheated (>60 °C), or the battery may have fallen below the configured suspend threshold.

If you provide AC power to the Ikôn and either the battery capacity is too low or is overheated, a yellow LED will flash and the unit will not switch on. To switch on the PDA, replace the overheated battery or, in the case of a depleted battery, wait for the capacity to reach an acceptable level.

However, if you provide AC power to an Ikôn with a battery that falls below the configured suspend threshold, the PDA will switch on.

2.1.4 Switching The Ikôn Rugged PDA Off

- Press and hold down the Power button.

A Shutdown screen like the one below is displayed. Each option switches off different elements of the Ikôn; an associated description outlines the results.

Choosing Shutdown switches all radios off before placing the Ikôn in suspend state. The blue radio LED will stop blinking indicating that all radios are off. As the dialog box indicates, choose this option when you need to swap the battery.

Choosing Suspend places the PDA into a power-saving suspend state. In this state, all radios remain on, but the display, keyboard backlight and processor are switched off. When the Ikôn is turned on from this state, operation resumes within a few seconds in the screen in which you were working prior to suspend.
If you choose **Standby**, the display is turned off, the keyboard is locked and the touchscreen is locked. The processor remains on so that any running applications will continue while the Ikôn is in a **Standby** state. In addition, the radios remain on. Keep in mind that because the processor continues to run, **Standby** mode consumes more power than **Suspend** mode.

Keep in mind that if you press and immediately release the **Power** button, a dialog box appears letting you know that the Ikôn is preparing to enter **suspend** state. Only by **pressing and holding down** the **Power** button can you choose between **Suspend** and **Shutdown** and **Standby**.

### 2.2 The Getting Started CD

The *Getting Started CD* shipped with your Ikôn runs automatically when inserted, displaying a start-up screen.
Chapter 2: Basic Checkout

Data Transfer Between The PC & The Ikôn

Tapping on Next in the start-up screen displays a screen listing your setup and installation options.

Tapping on one of these items provides the following options:

- **Setup and Installation** – allows you to install the Windows Mobile® Device Handbook and ActiveSync. When you tap on this option, only items that are not already present on your PC are installed. For example, if you’ve previously installed ActiveSync, it is automatically detected and is not reinstalled.

- **Windows Mobile® Device Handbook** – guides you through the steps required to access these options:
  - **Additional Windows Mobile Resources** – lists Windows Mobile web sites that provide additional, helpful information
  - **Free Ringtones, Downloads, Help and Other Benefits** – with registration at Microsoft, you can receive free ring tones, downloads, newsletters and information to help you use your PDA to full advantage.
  - **Set up E-mail** – provides step-by-step instructions to help you set up your e-mail account.

- **Additional Tools** – allows you to download a 60 day trial of Microsoft Office Outlook 2007.

2.3 Data Transfer Between The PC & The Ikôn

*Note: For details about connecting your Ikôn to a PC using a docking station, refer to “Operating The USB Dock” on page 256.*
Data transfer options vary slightly depending on the type of operating system installed in your PC. Microsoft® ActiveSync® is PC connectivity software that can be used to connect your Ikôn to a PC running this software. ActiveSync works only with the Windows XP SP2 operating system or earlier.

If the Windows Vista® operating system is installed in your PC, ActiveSync is not required to transfer data between your Ikôn and your PC.

By connecting the Ikôn to a PC with a cable, you can:

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

### 2.3.1 Using Microsoft® ActiveSync®

You can install active sync using the *Getting Started CD* provided with your Ikôn. Refer to “The Getting Started CD” on page 13 for details. You can also follow the step-by-step instructions provided at the following website:

http://www.microsoft.com/windowsmobile/activesync/activesync45.mspx

### 2.3.2 Using Windows Vista®

If you have Windows Vista, your Ikôn data transfers do not require ActiveSync. To transfer data between your PC and your rugged PDA:

- Tap on **Start>Computer** to display the drives. Your Ikôn will be visible here.
- Open drives, files and folders as you would on your PC.

### 2.4 Aligning (Calibrating) The Touchscreen

Refer to “Aligning (Calibrating) The Touchscreen” on page 45 for details.
Chapter 2: Basic Checkout

The Getting Started Centre

2.5 The Getting Started Centre

The Getting Started centre outlines how to perform basic tasks when initially setting up your Ikôn. You can access the Getting Started centre from the Today screen, or you can tap on Start>Programs, and then tap on the Getting Started icon.

Tapping on Getting Started displays a list of the basic setup option you may need to get your Ikôn ready for operation.

- To get instructions about an operation, tap on an option in the Getting Started list. Follow the instructions provided.
2.6 Setting Up An 802.11b/g Radio-Summit Client Utility

This section describes the steps required to set up the 802.11b/g Summit Radio using the Summit Client Utility (SCU).

To review details about the options within the SCU tabs – Main, Profile, Status, Diags and Global – review Appendix A: “Summit Client Utility (SCU)”.

2.6.1 Assigning The IP Address

Before launching the SCU, you need to configure the method by which the IP address will be obtained.

- Tap on Start>Settings>Connections tab>Wireless Manager icon.
- In the Wireless Manager dialog box, tap on the Settings button.
- Tap on the Network Adapters tab, and then tap on -Summit WLAN Adapter in the list.

The Summit WLAN Adapter dialog box is displayed. You have two options:

- Tap on Use server-assigned IP address to have an address assigned automatically, or
  If you want to use a particular IP address, tap on Use specific IP address, and type the preferred address.

  If you tap on the Name Servers tab, you can statically configure the DNS servers; however, if you use DHCP for IP address assignment, DNS is usually supplied by the same server that supplied the IP addresses.

2.6.2 Using The SCU To Connect To The WLAN

This section provides a quick set of steps to create a profile. Detailed information about each of the SCU tabs – Main, Profile, Status, Diags and Global – is provided under Appendix A: “Summit Client Utility (SCU)”. To launch the SCU so that your PDA can connect to a wireless LAN:
Chapter 2: Basic Checkout

Using The SCU To Connect To The WLAN

• Tap on Start>Programs, and then tap on the SCU icon.

• Tap on the Profile tab.

• Tap on New to define a new Profile.
• Type a unique name for your configuration using any alpha-numeric combination to uniquely identify this profile.
• Tap on OK to return to the Profile tab.

To configure the SSID for the network to which you want to associate:
• Type an SSID in the text box to the right of SSID. This field is limited to 32 characters.
• Tap on Commit to save your SSID setting.

**Important:** To learn more about the other options available in the radio attributes list, refer to “Profile Tab” on page A-2 in Appendix A: “Summit Client Utility (SCU)”.

To configure authentication and encryption, use the appropriate dropdown menus in the Profile dialog box, and enter credentials for IEEE 802.1X EAP types or WEP keys by tapping on the Credentials button just below the dropdown menus.

• Tap on the EAP type dropdown menu, and choose the appropriate type of authentication – LEAP, EAP-FAST, PEAP-MSCHAP, PEAP-GTC and EAP_TLS.

• Once you’ve chosen an EAP type, tap on the Credentials button, and type credentials for IEEE 802.1X EAP types.

**Important:** Refer to “SCU Security Capabilities” on page A-5 and Appendix A: “EAP Credentials” in Appendix A: “Summit Client Utility (SCU)” for details about security settings.

To configure encryption:

• Tap on the Encryption dropdown menu, and choose the appropriate type of encryption – Manual WEP, Auto WEP, WPA PSK, WPA TKIP, WPA2 PSK, WPA2 AES, CCKM TKIP, CKIP Manual or CKIP Auto.

If you choose Manual WEP, WPA PSK or WPA2 PSK:

• Tap on the WEP/PSK Keys button. For Manual WEP, choose up to four static WEP keys. For PSK, type an ASCII passphrase or hex PSK.

• Configure any other settings that are supplied by the network administrator for the SSID to which you will associate.

• Make certain that you tap on Commit following each change.

Once you’ve completed the configuration:

• Tap the Main tab. Tap on the Active Profile dropdown menu – your new profile will be listed in the dropdown menu.

When you tap on the profile you created, the 802.11b/g radio module attempts to connect to the network using the following steps:

1. Associate with SSID.
2. Authenticate to network.
3. If EAP authentication is being used, derive dynamic encryption keys.
Chapter 2: Basic Checkout

The Phone (Windows Mobile 6.1 Professional Only)

4. If DHCP is being used by the network, obtain an IP address.
   If the 802.11b/g is not connecting properly:
   • Tap on the Status tab.
   The Status dialog box lists the IP and MAC address, and indicates the current state of the
   radio, the signal strength, channel and so on.
   You can also use the Status screen for DHCP renewal and ICMP Echo Requests (Pings).

   Important: For details about the Status dialog box, refer to “Status Tab” on page A-8 in
   Appendix A: “Summit Client Utility (SCU)”.

2.7 The Phone (Windows Mobile 6.1 Professional Only)
Ikôns running Windows Mobile 6.1 Professional are equipped with phone capabilities.

Note: Remember that you can use the Help feature to find more details about phone
options. Help screens are context-sensitive – they provide guidance that is specific to
the dialog box you have opened. To further narrow your search, tap on the Search
softkey in the Help screen, and type the topic about which you require information.

2.7.1 The Phone Keypad
The phone keypad provides phone services like those you may find on your cellular phone.
You can use the phone keypad provided with your Ikôn to, for example, send and receive
phone calls, make conference calls, view your call history, set up speed dial numbers, etc.

2.7.1.1 Sending & Ending Phone Calls Using The Phone Keypad
To display the phone keypad:
   • Tap on Start menu>Phone.

Note: You can also press the [Talk] key on the Ikôn keyboard to display the phone keypad
providing it has been activated. The [Talk] key is labelled with a green telephone
receiver icon. Refer to “Sending & Ending Calls Using The Ikôn Keyboard” on
page 25 for details.
To dial a phone number:

- Use the phone keypad to enter the phone number, and tap on [Talk] to dial the phone number.

To end a phone call:

- Tap on [End] on the phone keypad.

Note: You can also tap on the [End] key on the physical keyboard of the Ikôn to end the call. The [End] key is labelled with a red phone receiver. Refer to “Sending & Ending Calls Using The Ikôn Keyboard” on page 25 for details.

2.7.1.2 Making A Conference Call

To set up a conference call between yourself and two or more other parties:

- In the phone keypad, type the first phone number. Tap on [Talk].
- While you are connected to the first number, tap on Menu>Hold.
- Type the second number. Tap on [Talk].
- Tap on Menu>Conference.
- To add another party, tap on Menu>Hold, type the number, and then tap Menu>Conference.
- Tap on [End] to disconnect all calls.

2.7.1.3 Receiving An Incoming Call

To answer an incoming call:

- Tap on the [Talk] button; it’s labelled with a green phone receiver.
2.7.1.4 Programming Speed Dial

The phone keypad provides a Speed Dial button for quick access to frequently used numbers.

- In the phone keypad, tap on the Speed Dial button to display the speed dial Phone dialog box.

This dialog box lists the phone numbers and the speed dial key to which the phone number has been assigned.

- Tap on the Speed Dial Number (to the left of the phone number you want to dial), or
  Tap on the Call softkey; the number is dialled for you.

Using The Phone Keypad To Program a Speed Dial

There are a number of ways to add a speed dial number. You can create a speed dial number using the Contacts list or by using the Speed Dial button on the phone keypad.

Adding A New Phone Number

- In the phone keypad, tap on the Speed Dial button.
- In the speed dial Phone dialog box, tap on Menu> New.
• In the list, choose a **contact** for a speed dial.

![Phone Keypad Screenshot](image)

• Tap on **Enter a name...**, and type a **contact name**, or tap on a name in the list.

![Speed Dial Screenshot](image)

A sequential speed dial key is automatically assigned in the *Location* field. You can tap on the arrows to the right of the *Location* field to change the auto assignment.
Using The Contact List To Program A Speed Dial

- Tap on the **Contact** softkey in the taskbar at the bottom of the *Today* screen.

- Tap on the **Contact** to which you want to assign a speed dial number.

- In the *Summary* screen, tap on **Menu>Add to Speed Dial**.
2.7.2 Sending & Ending Calls Using The Ikôn Keyboard
An Ikôn that supports the phone feature is equipped with a [Talk] and an [End] call key on the keyboard.

Using these phone keys, you can display the phone keypad and answer, send and terminate phone calls.

2.7.3 Managing Phone Settings
You can adjust phone settings such as the ring type and tone, choose phone services such as barring calls, and you can also determine network selections. There are a number of ways you can access phone settings.

- In the Navigation Bar, tap on the Phone Settings hotkey.
Managing Phone Settings

Chapter 2: Basic Checkout

2.7.3.1 Phone Tab

Ring Type And Ring Tone

Ring Type allows you to tailor the type of ring used for incoming calls. The Ring Tone drop-down menu allows you to determine the ring tone of incoming phone calls.

Keypad

This option allows you to determine the type of sound that keypad keys emit as you tap them. You can also turn off keypad sounds.

Note: If the phone keypad is opened, tap on Menu>Options to display the Phone Settings dialog box.
2.7.3.2 Security Tab

This option allows you to assign a PIN (Personal Identification Number) so that your PDA is protected from unauthorized use. Your SIM card manufacturer provides the default PIN which you can change in this field.

Changing A PIN

- Tap on the Change PIN button and use the phone keypad to enter your existing SIM card PIN. Tap on the [Enter] key in the phone keypad.
Important: If you enter an incorrect PIN, a message is displayed letting you know that you’ll need to reenter the correct value.

You have five chances to enter the correct PIN. If you exceed this number, the SIM will be disabled automatically. You will be asked to enter a PUK (Personal Unlocking Key). Your system administrator will be able to provide this information.

Once you’ve entered the correct PIN, a new screen appears asking that you enter you new PIN.

- Type your new PIN – a number consisting of between 4 and 8 digits in length. Tap on Enter.

A new message lets you know that you need to confirm your new PIN.
- Retype your new PIN. Tap on [Enter] when you’re finished.

Enabling PIN Security

To activate PIN security:
- Tap in the checkbox to the left of Require PIN when phone is used.

When security is enabled, you will be prompted to enter a PIN before you are allowed to use the phone.

Note: Whenever this option is enabled or disabled, you will be asked to enter your PIN.
2.7.3.3 Services Tab

The Services tab allows you to customize the behaviour of your phone. You can, for example, block all incoming calls, tailor to whom your caller ID will be transmitted, set up call forwarding and so on.

- Tap on the service you want to set up. Tap on Get Settings.

The service dialog boxes allow you to tailor your available services to meet your requirements. Remember that when a particular service dialog box you’ve chosen is displayed, you can always tap on Start>Help to get additional information.

Voice Mail Setup

If your service includes Voice Mail, a temporary passcode is automatically assigned. It is mailed to you as a text message.

- Tap on Start>Messaging to display your temporary passcode.

To activate your voice mail:

- From a land line, dial your wireless phone number.
- Allow the Ikôn to ring until it is automatically picked up by the voice mail service. At the greeting, type #.

You will be prompted to enter your temporary passcode. A tutorial will lead you through the voice mail setup. When you’ve assigned your personalized passcode, keep it in a secure place.
2.7.3.4 Network Tab

This dialog box identifies your current network, and allows you to view available networks and determine the order in which other preferred networks will be accessed if the current one is unavailable. You can also specify manual or automatic network changes, and you can add a network.

2.7.3.5 Data Tab

This screen is used to configure the connection to the ISP. You can select a network connection from the dropdown menu.

By default the connection uses CHAP (Challenge Handshake Authentication Protocol); however, if your ISP does not support CHAP, tapping in the box to the left of PAP only authentication for: directs the connection to use PAP (Password Authentication Protocol) instead.
Note: If your are not using PAP, the rugged PDA automatically defaults to CHAP.

2.7.3.6 Bands

By default, all frequency bands are enabled. Bands should not be disabled without knowledge about which bands are used by your network; an incorrect setting will prevent the WWAN modem from finding the network.

2.8 Resetting The Ikôn

When you reset your Ikôn, the registry settings and any installed programs stored on the flash file system and data are preserved whether you perform a cold or a warm reset. RAM memory is cleared and the RAM disk is reinitialized.

The difference between the two forms of reset is that after a cold reset, some hardware options are reset. For this reason, a cold reset should only be used in rare, critical situations.

2.8.1 Performing A Warm Reset

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

Note: You do not need to reset your Ikôn after configuring the radio.
2.8.2 Performing A Cold Reset

To perform a cold reset and launch the Windows Mobile 6.1 operating system:

- Press and hold down the [ENTER] key and the Power button simultaneously for a minimum of six seconds.
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3.1 Features Of The Ikôn Rugged PDA

- 3 LEDs (Light Emitting Diodes)
- Receiver
- Power Button
- Enter Button
- Vertical Scroll Button
- Microphone
- Audio Port
- Scan Button
- Volume Button
- Scanner/Imager
- Top
- Left Side
- Right Side
3.2 The Battery

The Ikôn operates with a 5000 mAh, Lithium-ion battery pack, model number CH3000. Preparing the Ikôn for operation requires that a battery pack be charged and installed in the Ikôn.
Chapter 3: Get To Know The Ikôn

Battery Safety

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 quick reference guide entitled ‘Ikôn Rugged PDA Regulatory & Warranty Guide’, PN 8000148.

3.2.2 Removing The Battery Pack

Important: Always shut down the Ikôn before removing the battery. To safely remove the battery, press and hold down the Power button. Choose “Shutdown” in the ‘Shutdown’ screen and tap on OK.

Keep in mind also that all Ikôns are equipped with internal super-capacitors that will save the current data for up to 5 minutes while the battery is swapped.

Refer to “Preparing The Ikôn For Operation” on page 11 for more details about removing and installing the battery.

3.2.3 Battery Swap Time

Assuming the default power saving parameters and battery reserve level have not been altered, battery swap time is approximately 5 minutes – you will not lose data if the battery is replaced within this time frame.

To protect data, the safest place to store data is on a microSD memory card or externally to the device on a USB memory stick or on a PC.

The Suspend Threshold feature allows you to determine the battery capacity at which the Ikôn will be shut down. If left at the default value, Maximum Operating Time, the Ikôn 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 Ikôn shuts off with more energy left in the battery so RAM can be backed up for a longer period of time.

(Refer to “Suspend Threshold And Estimated Battery Backup” on page 168 for details about reserving battery power for data backup purposes.)

3.2.4 Charging The Battery

Batteries shipped from the factory are charged to approximately 40% of capacity. They must be fully charged prior to use.
Chapter 3: Get To Know The Ikôn
Charging The Battery

Note: Do not leave a spare battery to charge for more than 72 hours. Charging for more than 72 hours may damage the battery or lead to charge capacity reduction.

Important: If the battery is overheated (>60° C) or if the battery capacity is very low (<100 mAh), the unit will not switch on when the Power button is pressed. Under the above conditions, when AC power is applied, the Ikôn will still refuse to power up; instead, a yellow LED will begin blinking and until the battery is replaced, or in the case of low battery capacity, the battery is charged to an acceptable level, the Ikôn will not switch on.

Keep in mind also that, along with the battery, the Ikôn is equipped with internal, super-capacitors that preserves data stored on the Ikôn for a short period of time while the battery is swapped.

3.2.4.1 Chargers And Docking Stations

Important: FOR DETAILED INFORMATION about chargers and docking stations, refer to Chapter 7: “Peripheral Devices & Accessories” beginning on page 241.

Lithium-Ion battery packs must be charged before use. These batteries can be charged with a variety of chargers and docking stations. These include:

- AC wall adaptor (Model No. PS1050 - G1) operates as an AC power source and when plugged in, also charges the battery installed in the Ikôn. (see page 262)
- Desktop Docking Station (Model No. CH4000) operates as both a charger and a docking station. Operating as a charger, both the battery installed in the Ikôn and a spare battery can be charged simultaneously. (see page 254)
- Quad Docking Station (Model No. CH4004) can charge the battery of up to four Ikôns inserted in the docking station. (see page 259)

Note: Refer to “Monitoring The Battery And Maximizing Run Time” on page 48 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 to 40°C (32°F to 104°F).
3.3 The Keyboards

3.3.1 Ikôn Keyboards

The following Ikôn keyboards are available:

- 28-key numeric keyboard with or without [Talk] and [End] phone keys
- 47-key QWERTY keyboard with [Talk] and [End] phone keys. This keyboard option is only available for Ikôn equips with the Windows Mobile 6.1 Professional operating system.

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.

Note: Almost all keys can be reprogrammed to suit your requirements.
Chapter 3: Get To Know The Ikôn

3.3.2 Locking The Keyboard

You can lock the keyboard to prevent accidental key presses. To set up the locking/unlocking key sequence:

- Tap on Start>Settings>Buttons. Tap on the right arrow icon in the bottom-right corner of the screen to scroll to the Lock Sequence tab.

Refer to “Lock Sequence” on page 132 for details about setting up this function.

3.3.3 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 an 47-key keyboard, a left bracket is printed in orange print above the [U] key. Pressing the [ORANGE] key, a modifier key, followed by the [U] key displays a left bracket rather than the letter U.

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.

Note: Keep in mind that the [ALT] and [CTRL] keys are only available on numeric keypads that are not equipped with phone keys. You can, however, access the [CTRL] key using the onscreen, soft keyboard.

3.3.3.1 Activating Modifier Keys & The Shift-State Indicator

When a modifier key is pressed, it is represented in the shift-state indicator icon in the softkey bar at the bottom of the screen, making it easier to determine whether or not a modifier key is active. If the shift-state indicator icon is not visible (you can only see the soft keyboard icon), you may need to take a few steps to display the shift-state indicator icon.

- Tap on Start>Settings followed by the Buttons icon.
- Tap on the One Shots tab at the bottom of the screen.
- Tap in the check box next to Show modifier key state to display the shift-state indicator icon.
3.3.3.2 Locking Modifier Keys

Note: The locking behaviour of the modifier keys can be changed so that, for example, pressing a modifier key once will lock the key ‘on’. Refer to “One Shots” on page 125 for details. Note too that by default, the [ORANGE] key is locked ‘on’ when pressed only once.

When a modifier key is locked ‘on’, it will remain active until it is pressed again to unlock or turn it off.

To help you identify when a modifier key is locked ‘on’, the key is represented in the shift-state indicator icon with a black frame around it.

Figure 3.5 Shift-State Indicator Icon - Locked Modifier Key

Once a modifier key is unlocked or turned off, it is no longer displayed in the shift-state indicator icon.

3.3.4 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. You can lock this key ‘on’ so that when you press an alpha
Chapter 3: Get To Know The Ikôn

The Keys

key, an upper case character is displayed. When you press a numeric key, the associated symbol on the numeric key is displayed on the screen.

If you press the [SHIFT] key twice, it is locked ‘on’ essentially acting as a [CAPS] key, displaying uppercase characters. In this state, if you type a numeric key, the number rather than the symbol above it is displayed. Press [SHIFT] again to turn the [CAPS] function off.

The Arrow Keys

The Arrow keys are located near the top of the keyboard. The arrow keys move the cursor around the screen–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 [ALT] And [CTRL] Keys

The [ALT] and [CTRL] keys modify the function of the next key pressed and are application dependent. Note that these keys are only available on numeric keypads that are not equipped with [Talk] and [End] phone keys; however, you can access the [CTRL] key using the on-screen, soft keyboard.

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] Keys

The Ikôn is equipped with two [SCAN] keys located just below the display and a [SCAN] button situated on the left side of the PDA. [SCAN] keys activate the scanner beam. For units that do not have internal scanners, these keys can be remapped to serve other functions.
The Function Keys-[F1] to [F10]
Function keys [F1] to [F10] perform special, custom-defined functions. These keys are accessed by pressing [BLUE] followed by numeric keys [1] to [10]. They can be used with the Windows Mobile 6.1 operating system or another application.

The Macro Keys
While macro keys are not physically stamped on the keyboard, up to 12 macro functions can be added using the Scancode Remapping function. Refer to “Scancode Remapping” on page 129 for details about mapping keys.

For details about creating a macro, refer to “Keyboard Macro Keys” on page 127.

3.3.5 The Numeric Keyboard – Accessing Alpha Keys
On numeric keypads, you’ll need to take a few extra steps to access the alphabetic characters.

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

**Important: The letters you choose appear in the softkey bar, providing a visual indicator of which letter will be displayed on the screen.**

To choose the letter a:
- Press the [ORANGE] key, and type the numeric key [2].

**Note:** To choose the second, third or fourth alpha character assigned to a numeric key, you may want to lock the [ORANGE] key ‘on’. By default, the [ORANGE] key is locked ‘on’ when pressed once. However, depending on how your Ikôn is set up in the ‘One Shots’ tab, you may find that you need to press the [ORANGE] key twice to lock it ‘on’. Refer to “One Shots” on page 125 for details.

To choose the second letter in the sequence—in this example, the letter b:
- Lock the [ORANGE] key ‘on’. A shift-state indicator icon in the softkey bar represents the orange key with a black frame around it to indicate that this key is locked ‘on’.
- Press numeric key [2] twice to display the letter b.

To choose the third letter in the sequence—in this example, the letter c:
- Lock the [ORANGE] key ‘on’.
Chapter 3: Get To Know The Ikôn

The Numeric Keyboard – Accessing Alpha Keys

• Press numeric key [2] **three times** to display the letter c.

*Note: Keep in mind that there is a time-out if you pause for one second between key presses when selecting the second, third or fourth letters on a key. For example, suppose you want to type the letter ‘c’ – you would need to press the [2] key three times. With the [ORANGE] key locked ‘on’, if you press [2] twice and then pause between key presses for 1 second, the letter ‘b’ will be selected automatically.

You can adjust the delay between alpha key presses using the ‘Sequence’ settings. Refer to “Sequence” on page 125 for details.*

### 3.3.5.2 Creating Uppercase Letters

To display capital letters, you need to first lock the [SHIFT] key ‘on’.

• Press the [SHIFT] key twice.

All alpha keys are displayed in uppercase until you press the [SHIFT] key again to ‘unlock’ (switch off) the function of this key.

### 3.3.5.3 Choosing Multiple Alpha Characters

• Lock the [ORANGE] key ‘on’.

Each time you press a numeric key from [2] through [9], an alpha character will be displayed on the screen. Remember that you can refer to the softkey bar for a visual indication of which alpha key will be displayed on the screen.

⚠️ **Important:** Once you have finished typing alpha characters, remember to turn off or unlock the [ORANGE] key. Check the shift-state indicator icon (refer to Figure 3.5 on page 41) to make certain that the key is turned off.
3.3.6 The Keypad Backlight
The intensity of the keypad backlight can be configured using the Backlight icon accessed by tapping on Start>Settings. Refer to “Backlight” on page 146 for details about this option.

3.4 The Display
Ikôns are equipped with display backlighting to improve character visibility in low light conditions. The backlight switches on when a key is pressed or the screen is tapped.

3.4.1 Setting The Backlight Intensity & Duration
To set the backlight intensity and the duration of time that the backlight will remain on, you’ll need to choose the Backlight icon.

- Tap on Start>Settings and then, tap on System tab>Backlight icon.
Refer to “Backlight” on page 146 for details.

3.4.2 Adjusting the Backlight Using The Keyboard
The display backlight can be adjusted using a keyboard key sequence. The key sequence varies depending on the type of keyboard:

- For alphanumerical keyboards, lock the [ORANGE] key ‘on’. Press [ESC] until a satisfactory brightness level is attained.
- For numeric keyboards, lock the [BLUE] key ‘on’. Press the asterisk key [*] until a satisfactory brightness level is attained.

⚠️ Important: Keep in mind that this sequence cycles the display backlight up to full brightness and once reached, begins to dim the backlight until the display fades to black – nothing is visible. At this point, you’ll need to continue pressing these keys until the display brightens up to a usable level.

3.4.3 Aligning (Calibrating) The Touchscreen
If your touchscreen has never been aligned (calibrated) or if you find that the stylus pointer is not accurate when you tap on an item, follow the steps below.
Chapter 3: Get To Know The ikôn
Aligning (Calibrating) The Touchscreen

• Tap on Start>Settings. Tap on the System tab to display the Screen icon.

[Image of Settings window]

• Tap on the Screen icon to display the Alignment tab.

[Image of Settings window with Screen selected]

• Tap on the Align Screen button, and follow the directions on the screen to align (calibrate) the screen.

Note: This window provides two additional tabs: ClearType and Text Size. Tapping on the ClearType tab allows you to enable the ClearType option to smooth screen font appearance. The Text Size tab allows you to increase or decrease the size of the font displayed on the screen.
3.4.4 Screen Orientation

In addition to screen calibration, the Screen icon allows you to determine how your screen will be oriented – portrait or landscape (right- or left-handed).

- Tap on Start>Settings>System tab.
- Tap on the Screen icon.
- In the General tab, tap on the orientation that best suits the way in which you use your Ikôn.

3.5 Ikôn Indicators

The Ikôn uses LEDs (Light Emitting Diodes), onscreen messages and audio tones to indicate the various conditions of the Ikôn, the batteries, the scans and so on.

3.5.1 LEDs

Three LEDs are located on the upper-left side of the Ikôn, just above the display. When you press the Power button, the LED flashes yellow to indicate that the Ikôn has been powered up. The LED table following outlines the behaviour of the LED while the Ikôn is docked in a charger.

Keep in mind that the application running on the Ikôn can dictate how the application LED operates. Review the documentation provided with your application to determine LED behaviour.

Table 3.1  Function Of Ikôn LEDs

<table>
<thead>
<tr>
<th>LED</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Charge LED (left-most LED)</td>
<td>Charge indicator. See the table below for descriptions of Charge LED behaviour.</td>
</tr>
<tr>
<td>Yellow Application LED (centre LED)</td>
<td>Application LED. This LEDs behaviour is application dependent.</td>
</tr>
<tr>
<td>Blue Radio Power LED (right-most LED)</td>
<td>Radio power indicator.</td>
</tr>
</tbody>
</table>
Chapter 3: Get To Know The Ikôn

Audio Indicators

If the Ikôn is attached to an external power supply, the charge LED (the left-most LED) reflects the battery charge status.

Table 3.2  Ikôn Charge LED Behaviour

<table>
<thead>
<tr>
<th>LED Behaviour</th>
<th>Charge Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Green</td>
<td>Charge complete</td>
</tr>
<tr>
<td>Slow Blinking Green (LED off longer than on)</td>
<td>Charge in progress. Battery charged to less than 80% capacity.</td>
</tr>
<tr>
<td>Long Blinking Green (LED on longer than off)</td>
<td>Battery charged to greater than 80% capacity.</td>
</tr>
<tr>
<td>Fast Blinking Green (LED switches on and off rapidly)</td>
<td>Charge failure. (Defective battery or battery outside temperature range (0°C to 50°C))</td>
</tr>
</tbody>
</table>

Note: When the Power button is pressed, the yellow LED will flash to let you know that the PDA is powered up. You can go ahead and release the Power button.

3.6 Audio Indicators

The audio speaker provides a variety of sounds 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. To specify how you want your Ikôn to respond under various conditions, refer to “Sounds” on page 143.

3.6.1 Adjusting Speaker Volume

The Volume button is located on the left side of the Ikôn, just below the Scan button. It is a rocker button; pressing the top half of the button increases volume while pressing the bottom half of the button decreases it.

3.7 Monitoring The Battery And Maximizing Run Time

Note: When the battery is at 50% capacity, a ‘low battery’ warning is displayed. When the battery is at about 10% capacity, a ‘very low battery’ notification bubble appears.

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 Ikôn at temperature extremes will shorten the battery life.
Lithium-Ion batteries do not require conditioning cycles and the Ikôn 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 a large drain on the battery. Try to keep its brightness as low as possible.
- The Ikôn is ‘event’ driven—that is, when it is not in use, the Ikôn 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 Ikôn to sleep as much as possible.
- The battery is a ‘smart battery’ with built-in intelligence.

Tapping on the Power icon under Start>Settings>System tab displays a dialog box that provides detailed information about the battery status of the battery installed in your Ikôn.

- When the Ikôn 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 Ikôn is left in suspend state for more than a week—for long-term storage, the battery should be removed.

### 3.7.1 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 at least 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’ Lithium-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.
Chapter 3: Get To Know The Ikôn

Uploading Data In A Docking Station

3.8 Uploading Data In A Docking Station

**Important:** Review the documentation provided with the user application installed in your Ikôn before performing data uploads.

The desktop docking station and quad docking station are typically used to upload transaction data to a server computer when a radio link is not available.

*Note:* Refer to “Chargers And Docking Stations” on page 252 for more details.

The desktop docking station can complete batch uploads to a Client USB connected PC or server. An optional 10/100baseT Ethernet module is also available.

Unlike the desktop docking station, the quad docking station supports only TCP/IP connections to a PC or server through a 10/100baseT Ethernet connection.

When an Ikôn is properly inserted in a docking station, a dock icon is displayed in the navigation bar at the top of the screen. The Ikôn also detects the presence of the Ethernet network.

3.9 Bluetooth Radio

*Note:* Integrated Bluetooth radios are standard on Ikôn units. Keep in mind also that Bluetooth is available simultaneously with WAN and 802.11g on a single Ikôn.

The Ikôn is equipped with an on-board Bluetooth radio. This type of radio enables short range data communication between devices. The Bluetooth also provides the capability to use a Bluetooth-enabled cellular phone as a data modem, exchanging information with other Bluetooth devices. Refer to “The Bluetooth GPRS Phone” on page 206 for setup details.

3.9.1 Pairing A Bluetooth Headset

*Note:* Headset pairing information is also available in the Getting Started Centre in the Today screen on your Ikôn.

Before pairing a headset or any other Bluetooth device with your Ikôn, make certain that the Bluetooth device power is enabled; it is enabled by default. If, for some reason, it has been disabled:
• Tap on Start>Settings>System tab and then, tap on the Power icon to display the Power dialog box.
• Tap on the Built-in Devices tab, and tap in the checkbox next to Enable Bluetooth.
• Next, tap on Start>Settings>Connections tab>Bluetooth icon.
• Tap on the Mode tab, and check Turn on Bluetooth. Tap OK.
• Turn your headset on and place it within a few feet of your Ikôn.
• If needed, set your headset to visible so that the Ikôn can detect it and establish a connection.

Most headsets are in pairing mode by default. If this is not the case, follow the headset manufacturer’s instructions to place the headset in pairing mode.
• Tap on Start>Settings>Connections tab>Bluetooth icon.
• In the Devices tab, tap Add new device. Wait for the Ikôn to scan for devices.
• Choose the headset device from the list and tap on Next.

If the headset has authentication enabled, the Ikôn then prompts you to provide a passcode.
• Type the passcode (or PIN – Personal Identification Number), and then tap on Next.

The Ikôn then displays a list of services. Choose the Hands Free service. (If you are attempting to pair another device, choose it from this list.)
• With Hands Free checked (enabled), tap Finish. The headset is now paired.

3.10 Inserting The microSD And SIM Card

There are two card holders available in the battery compartment of the Ikôn – the left-hand holder is provided for a microSD (micro Secure Digital) and the right-hand holder is for a SIM (Subscriber Identity Module) card.

The microSD cards provide additional non-volatile memory to your Ikôn. SIM cards provide access to the voice option, the Internet, and so on.

3.10.1 Inserting The Cards

• Switch off the Ikôn – press and hold down the Power button, and when the Shutdown screen is displayed, choose Shutdown and tap on OK.
• Remove the battery cover and the battery.
• Pull the SD door down as the arrow icon on the door indicates.
• Orient the microSD or SIM card according to the legend stamped into the plastic. the SD and SIM doors have guides or rails into which you can slide the card
• For microSD, slide the card into the guides in the microSD door on the left-hand slot.
• For SIM cards, slide the card in the right-hand slot.
• Slide the protective door back into place, and snap it shut.

3.11 The Camera
A built-in digital camera is available for the Ikôn. This option allows you to snap still photographs or create short video clips. The Pictures & Videos applet is used to access and configure the camera. For more details about the camera, refer to “Pictures & Videos” on page 101.

3.12 General Maintenance

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

The chemicals listed below must not come into contact with the touchscreen:
• sodium hydroxide,
• concentrated caustic solutions,
• benzyl alcohol, and
• concentrated acids.

If the touchscreen is used in harsh environments, consider applying a disposable screen protector (model number CH6110). These covers reduce the clarity of the display slightly but will dramatically extend the useful life of the touchscreen. When they become scratched and abraded, they are easily removed and replaced.

3.12.2 Cleaning The Ikôn

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

• Use only mild detergent or soapy water to clean the Ikôn unit.
• Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The plastic case 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 or touchscreen, use isopropyl alcohol.
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4.1 Navigating In Windows Mobile 6.1 And Applications

Graphic user interfaces like Windows Mobile 6.1 for portable devices or desktop Windows (2000, XP, etc.) utilize ‘point and click’ navigation. On the Ikôn, this is accomplished using a touchscreen and stylus rather than a mouse.

4.1.1 Navigating Using A Touchscreen And Stylus

Note: If the touchscreen is not registering your screen taps accurately, it may need recalibration. Refer to "Aligning (Calibrating) The Touchscreen" on page 45.

A touchscreen is a standard feature on all Ikôn. Each is equipped with a stylus—a pointing tool—stored in a slot at the bottom of the unit.
- Use the stylus to tap on the appropriate icon to open files and folders, launch applications and programs, make selections, and so on.

4.2 Windows Mobile 6.1 Desktop–Today Screen

Keep in mind that if your Ikôn is running Windows Mobile 6.1 Professional, the Today screen will offer Phone connectivity in the Navigation Bar at the top of the screen and a Phone softkey in the Softkey Bar at the bottom of the screen. Units running Windows Mobile 6.1 Classic provide a Calendar option in the Softkey Bar; phone options are not available with this version of Windows Mobile 6.1.
Chapter 4: Working With Windows Mobile 6.1

Windows Mobile 6.1 Navigation Bar

The Today screen displays all your important information—tasks, unread e-mails and upcoming appointments—all in one place. The Start menu provides access to everything else you’ll need.

4.2.1 Windows Mobile 6.1 Navigation Bar

The navigation bar along the top of the screen provides icons that, when tapped, open their associated programs. If you’re unit is equipped with Windows Mobile 6.1 Professional, you’ll see a Phone hotkey for quick access to phone settings.

![Windows Mobile 6.1 Classic Navigation Bar](image1)

![Windows Mobile 6.1 Professional Navigation Bar](image2)

Note: When a peripheral is attached to the docking/usb port of the Ikôn, an associated icon is displayed briefly in the navigation bar to indicate that the Ikôn has recognized the connection.

Start Button

Tapping on the Start button displays the Start menu.
Connectivity

The Connectivity hotkey provides a shortcut to the Connections tab in the Settings window. This tab provides access to Bluetooth, network, network card and internet connection setups.

Phone Settings

If your Ikôn is running Windows Mobile 6.1 Professional, it is equipped with a phone option. An Ikôn in which a SIM card and GSM radio are installed can access phone settings along with the Wireless Manager from this pop-up bubble. Any active connections are also listed here.
Chapter 4: Working With Windows Mobile 6.1

Windows Mobile 6.1 Navigation Bar

**Volume Control**

Tapping on this icon displays a sliding tab that allows you to adjust the speaker volume or turn the speaker on and off.

On units running *Windows Mobile 6.1 Professional*, two volume adjustments are provided—one for the speaker volume and the other for the phone dialer volume.

**Battery Capacity**

Tapping on the *Battery* hotkey displays the Battery tab allowing you to view the remaining battery capacity in the battery.
4.2.2 Today’s Date, Clock And Alarm

This option displays the current date. If you need to adjust the date or set an alarm:

- In the Today screen, tap on **today’s date**.
  
The Clock & Alarms screen is displayed.

- Tap on the dropdown menu arrows to set the GMT, time and date.
  
  An option to set the date and time for a visiting time zone is also available.

  To set an alarm:
  - Tap on the Alarms tab.

You can set a maximum of three alarms.

- Tap in the checkbox to enable an alarm.
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Ownership Information

- Tap the **day** on which you want the alarm to go off – **Sunday** through **Saturday**.
- Tap on the **time** to display the clock.

![Time Field](image)

- To set the time, in the **time** field below the clock, tap on the **hour** to highlight it, and type the hour at which you want the alarm to ring. To set the minutes, highlight the **minutes**, and type the appropriate minutes, or

  You can also assign the alarm activation time using the clock graphic. Position the stylus on the **hour hand** of the clock, and drag it to the correct hour. Do the same for the **minute hand**.

- Tap on **OK** to save your changes.

*Note: Tapping on the ‘More’ tab displays a dialog box in which you can choose to ‘Display the clock on the title bar in all programs’.*

4.2.3 Ownership Information

This option allows you to add your personal information to the Ikôn. Some of this information will be displayed in the desktop **Today** screen.
• Tap on **Owner**, listed in the *Today* screen as *Tap here to set owner information* to display a screen in which you can type information.

![Owner Information Screen](image)

• Type your **name**, **company name**, **address**, **telephone number** and **e-mail address**.

*Note: You can type information using the Ikôn keyboard, or you can tap on the soft keyboard icon in the bottom right corner of the softkey bar to display an onscreen keyboard.*

The *Ownership* screen has two additional tabs—*Notes* where you can add any pertinent, additional information and *Options* where you can specify whether you want the desktop to display your ‘identification’ information or your ‘note’ information.

4.2.4 **E-mail Notification**

If you have any e-mail, it will be indicated in the *Today* desktop screen. To view your e-mail, tap on the **E-mail notification** option represented by an icon in the shape of an envelope. Refer to “Messaging” on page 110 for details about setting up your Inbox.

4.2.5 **Task Notification**

*Tasks* lets you create lists of entries representing your responsibilities, upcoming projects, and so on. If you’ve assigned any tasks, this option lets you know how many active tasks you have.

*Note: You can synchronize the Task Notification option using ActiveSync so that any tasks are displayed on your Ikôn as well as your PC. Refer to “Synchronization” on page 85 for details.*

• Tap on the Tasks option to display a list of tasks.

Creating A Task
• Tap in the field labelled Tap here to add a new task. The text is replaced with a blinking cursor. If you prefer to type the task using the soft keyboard, tap on the soft keyboard icon in the softkey bar.
• Type your task description.
• Tap anywhere in the blank part of the screen, or press [ENTER] to add the task to your list.

Editing A Task
• Tap on a task in the task list to highlight it. Tap Edit in the softkey bar at the bottom of the screen to display a detailed task screen where you can define task characteristics.
Each of the nine items in this screen, when tapped, displays a dropdown menu where you can choose from a list of options.

- Once you’ve completed all the appropriate fields, tap on **OK** to save your changes.

*Note: You can also tap on the Notes tab to add additional information about the task you are defining.*

The task will be listed in the *Today* screen as an *Active Task*.

### Deleting A Task

- Press and hold the stylus on a task until a pop-up menu is displayed.
- Tap on **Delete Task**.

### Marking A Task As Completed

- In the *Tasks* list, tap the **checkbox** next to the items that are completed.

### Sorting Tasks

- In the *Tasks* list, tap on the **Menu** option in the lower-right corner of softkey bar, and tap on **Sort By**.

You can choose from *Status, Priority, Subject, Start Date* or *Due Date*. The tasks are arranged in the list according to the criterion you chose.

### Limiting The Tasks Displayed In The Task Screen

- Tap on **Menu** in the lower-right corner of softkey bar, and tap on **Filter**.
You can choose All Tasks, Recently Viewed, No Categories, Active Tasks, or Completed Tasks. The tasks are displayed on the screen according to the preference you chose.

4.2.6 Calendar Of Upcoming Appointments

This option is used to map out all your upcoming appointments, meetings and so on in the weeks, months and years ahead.

Note: You can synchronize the Calendar using ActiveSync so that any meetings, appointments and so on are displayed on your Ikôn Today screen as well as on your PC. Refer to “Synchronization” on page 85 for details.

- Tap on the Upcoming Appointments option in the Today screen, or tap on Start>Calendar to display the calendar.

If your unit is running Windows Mobile 6.1 Classic, you can tap on Calendar in the Softkey Bar.

The default calendar displays an Agenda of appointments for the week, divided into days. You can choose to leave the calendar as is, or you can tap on the Day softkey to reflect the Week, Month or Year.

4.2.6.1 Creating And Editing Appointments

- In the Calendar screen, tap on Menu in the softkey bar, and then tap on New Appointment.
In the Subject field, name the appointment.

Complete the remaining fields to reflect your appointment details.

Note: Refer to “Adding Reminders” on page 67 for details about reminders. Refer to “Using Categories” on page 68 for information about this option.

Tap on OK to save your changes and close the screen.

4.2.6.2 Adding Reminders

If you want to be reminded in advance of an appointment:

- In the Reminder field, choose Remind me from the dropdown menu.
- In the second Reminder field, tap on the number in the field to display a dropdown menu where you can define a numeric value of 1, 5, 10, 15, 30. Tap on minute(s) to display a dropdown menu from which you can choose the time unit for your reminder—minute(s), hour(s), day(s) or week(s).
- Tap OK to finish. You are returned to the view you were in before adding the reminder.
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Calendar Of Upcoming Appointments

- Tap the appointment in the Calendar screen to display it in a summary screen. The reminder is indicated by the small, bell icon.

4.2.6.3 Using Categories

Categories help you organize and track the different types of data you keep on your Ikôn. To assign an appointment to a category:

- Tap on an appointment in the Today screen. In the Calendar screen, tap on the appointment again.
- Tap the Categories field to display the Categories screen.
  - Tap in the checkbox next to the category to which you want to assign the appointment.
  - Tap OK. Your appointment is assigned to the category or categories you chose.
4.2.6.4 Deleting Appointments

- Tap and hold the stylus on the appointment you want to delete.
- Tap on Delete Appointment in the pop-up menu.

4.3 Start Menu

To display the Start menu:

- Tap on the Start button in the upper-left corner of the Navigation Bar.
- Tap on the Start menu item with which you want to work.

Note: Keep in mind that if your Ikôn is running Windows Mobile 6.1 Classic, the Phone option displayed in the sample screen above is not available; this option is only offered on units running Windows Mobile 6.1 Professional.

4.3.1 Customising The Start Menu

You can choose the items you want to appear in the Start menu – items you use most often.
4.4 Managing Files And Folders

Windows Mobile 6.1 files are stored in folders and sub-folders that are accessible with File Explorer. You can open, save, rename, copy and paste files in the same manner as you would on any desktop PC.
4.4.1 Creating A New Folder

- Tap on Start>Programs>File Explorer.
- Tap Menu>New Folder in the softkey bar at the bottom of the screen.
- Use the Ikön keyboard or the soft keyboard to assign a name to the folder.

4.4.2 Renaming A File

- Press and hold the stylus on the file you want to rename. A ring of dots is displayed followed by a pop-up menu.
- Tap Rename. The file name is highlighted. Type a new name.

4.4.3 Copying A File

- Press and hold the stylus on the file you want to copy. A ring of dots is displayed followed by a pop-up menu.
- Tap on Copy in the pop-up menu.
- Navigate to the location where you want to copy the file.
- Press and hold the stylus in a blank area of the screen—away from other icons—until a pop-up menu is displayed.
- Tap Paste to copy the file to the new location.
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4.4.4 Deleting A File

- Press and hold the stylus on the file or folder you want to delete until a pop-up menu is displayed.
- Tap Delete to remove the file.

4.5 Using Menus

In Windows Mobile 6.1 Classic and Professional, the menu is located in the softkey bar at the bottom of the screen.

To execute a command:

- Tap on Menu to display the commands associated with it, and then tap on the command you want to execute.

4.5.1 Pop-Up Menus

Pop-up menus are available in many screens and programs. They offer quick access to a group of useful commands in addition to those available in the menu bar. To display a pop-up menu:
• Gently press and hold the stylus on the screen. A ring of dots is displayed on the screen followed by a pop-up menu.

• Tap on the command you want to execute.

4.6 The Softkey Bar

The Ikôn is equipped with a softkey bar at the bottom of the screen. It displays softkeys that allow you to access menus and commands. It also displays the soft keyboard icon.

Softkeys

Tapping on a softkey displays information associated with the softkey—for example, in the sample screen above, the Menu softkey displays the commands associated with Word Mobile. The View softkey lets you to tailor how the Word document will be displayed.
The Soft Keyboard Icon
Tapping on the soft keyboard icon displays an onscreen keyboard you can use as an alternative to the Ikôn keyboard.

Shift-State Indicator Icon
The softkey bar can also display the shift-state indicator icon. This icon indicates active modifier keys—[SHIFT], [ALT], [CTRL], [ORANGE] and [BLUE].

- Tap on Start>Settings>Buttons>One Shots. Tap in the checkbox next to Show modifier key state, to replace the soft keyboard icon with the shift-state indicator icon.

When a modifier key is pressed, it is displayed in the shift-state indicator icon. In the example above, the [ORANGE] key was activated.

To distinguish a ‘locked’ modifier key—a key that has been locked ‘on’—from a modifier key that is only active until the next key is pressed, ‘locked’ keys are encircled in a black frame in the shift-state indicator icon. Refer to “Activating Modifier Keys & The Shift-State Indicator” on page 40 for details.

Note: You can still access the soft keyboard while the shift-state indicator icon is displayed. Tapping on this icon displays the soft keyboard. Tapping on the shift-state indicator icon again removes the soft keyboard.
4.7 Programs - Using Applications

- Tap **Start**>**Programs** to display the programs installed on your Ikôn.

**Figure 4.3 Program Screen Icons**

**Opening An Application**

- Tap on a **Program icon** to launch the associated program.

**Minimizing An Application**

- Tap on the X button in the upper-right corner of an application screen to minimize the application.

*Note: Although it looks like a Close button, this button does not close the application—it only minimizes it.*
Opening, Closing And Switching Applications

- Tap on Start>Settings. Tap on the System tab and then the Task Manager icon – the Task Manager screen is opened.

The Task Manager screen lists all running tasks (applications). This applet provides a number of options to manage your opened applications.

- **End Task:** To shut down an application, highlight the program in the list, and tap on the End Task softkey in the taskbar at the bottom of the screen.
- **End All Tasks:** To shut down all applications, tap on the Menu softkey, and choose End All Tasks.
- **Switch To:** To make an application listed in this screen active, highlight the application, and tap on Menu>Switch To.

For additional information about the Task Manager, refer to “Task Manager” on page 171.

4.8 Settings

- Tap Start>Settings to display the setting options for your Ikôn.
4.9 Help

Tapping on the Help option displays a screen of help topics that are content-specific; if for example, the Today screen is displayed and you tap on Start>Help, the help screen will provide topics about the Today screen. You can perform a help content search by tapping on the Contents or Search softkeys. Keep in mind that help is not always available.
4.10 Entering Text

Note: For additional information about tailoring text entry using the soft keyboard, the transcriber, the block recognizer and the letter recognizer, refer to “Input” on page 133.

You can enter text using either the soft keyboard or the Ikôn keyboard. You can also use the Transcriber to handwrite information directly on the touchscreen using your stylus.

- Open an existing document or create a new one—tap Start>Office Mobile>Word Mobile and tap on New in the softkey bar to create a new document.

If you’re using the Ikôn keyboard to enter text, there are no special steps. Just begin typing—the text, spaces, etc. will appear in the document.

4.10.1 Soft Keyboard

The soft keyboard is laid out just like the keypad on a PC keyboard. By tapping the stylus on letters and modifier keys like the [SHIFT] key, you can enter text in a document.

If the soft keyboard is not already displayed:

- Tap on the soft keyboard icon in the softkey bar.
- Tap on the keys in the soft keyboard to enter text in your document.

To switch to a numeric keyboard:

- Tap on the 123 key in the upper-left corner of the soft keyboard.
- Tap on this key again to return to the standard keyboard.
4.10.2 The Transcriber

To access the Transcriber, with your document opened:

• Tap on the arrow next to the keyboard icon, and choose Transcriber from the pop-up menu.
• Review the introductory screen. It provides some shortcut symbols you can draw on your screen to work with the Transcriber.
• When you’ve finished reading the introductory screen, tap OK.

The Transcriber menu and icon bars are displayed at the bottom of the document.

Figure 4.5 Transcriber Screen

• Use your stylus to write a few words anywhere on the screen.

After a few seconds, your words are recognized (or not) and are transcribed into typed text.

Note: Character recognition is more successful if you write using large letters.

Editing Text Within The Transcriber

With your document open, make certain that you are in transcriber mode—the Transcriber icon should be displayed in the lower-right corner of the softkey bar.

• Double-tap to select a word or triple-tap to select a paragraph, or

Draw a line through the text you want to select and wait a few seconds until the Transcriber highlights the text.

• Once the text is highlighted, write the new text that is to replace the highlighted information, or
Chapter 4: Working With Windows Mobile 6.1

Block Recognizer And Letter Recognizer

Press and hold the stylus on the selected text to display a pop-up menu. Choose Cut, Copy, Paste or Clear (delete).

Note: You can also use the softkey bar tools or the shortcuts listed in the introductory screen to help you edit a document within the Transcriber.

4.10.3 Block Recognizer And Letter Recognizer

While the Transcriber attempts to recognize natural handwriting and transcribe it, Block Recognizer and Letter Recognizer attempt to teach you how to conform your handwriting to what the Ikôn can recognize.

Block Recognizer

• Open a document, and tap on the arrow next to the input icon. Choose Block Recognizer.

There are two points to remember when using Block Recognizer. First, limit your writing to the Block Recognizer input panel—do not write in the body of the document. Second, write only uppercase letters with your stylus.

• Tap on the ? icon in the Recognizer Icon Bar to display the Character Recognizer screen. This screen provides a visual demonstration of how to enter letters that will be recognized. Tap on a character in the soft keyboard for a demonstration of how to form a recognizable letter.

• In the Block Recognizer panel, write letters to the left (abc) and numbers to the right (123) on the input panel. Remember to write using uppercase letters—they will be printed on the screen as lowercase unless you follow the step below to create an uppercase letter.
• To create an uppercase character, draw a line straight up the ‘abc’ panel.
• Use the Recognizer Icon Bar to move around the screen, add spaces, special characters, and so on.

**Letter Recognizer**

• Open a document, and tap on the arrow next to the input icon. Choose Letter Recognizer.

There are two points to remember when using Letter Recognizer. First, limit your writing to the Letter Recognizer Input Panel—do not write in the body of the document. Second, write only lowercase letters with your stylus.

• Tap on the ? icon in the Recognizer Icon Bar to display the Character Recognizer screen. This screen provides a visual demonstration of how to enter letters that will be recognized. Tap on a character in the soft keyboard for a demonstration of how to form a recognizable letter.
• To create an uppercase character, write a lowercase letter on the left side (ABC) of the input panel.
• To create a lowercase character, write a lowercase letter in the middle (abc) of the input panel.
• Write numbers on the right side (123) of the input panel.
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5.1 Programs

The Programs menu provides access to all the applications available on your Ikôn.

- Tap on Start>Programs to display this screen.

Tapping on an icon in this screen launches the associated applet.

Figure 5.1 Programs Tabs

5.2 Games

Your Ikôn is equipped with a few standard games–Bubble Breaker and Solitaire–should you feel the need to pass the time.

5.3 ActiveSync®

For PCs using the Microsoft Windows XP operating system, ActiveSync® – Microsoft PC connectivity software–can be used to connect the Ikôn to PCs running this software. By connecting the Ikôn to a PC through your desktop docking station and running ActiveSync on the PC, you can view Ikôn files, drag and drop files between the Ikôn and the PC, connect to the Internet, and so on.

ActiveSync can be installed from the Getting Started CD included with your Ikôn. Refer to “The Getting Started CD” on page 13 for details.

5.3.1 Synchronization

For details about synchronizing your PC with you Ikôn, visit the following Microsoft internet site:

http://www.microsoft.com/windowsmobile/activesync/default.mspx
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5.4 Calculator

Tapping on Start>Programs>Calculator displays a standard calculator.

- Use your stylus to tap the calculator buttons.

5.5 Demo Scanner

The Demo Scanner icon is used to test how the Ikôn reads and writes bar codes. The Demo Scanner dialog box contains buttons at the bottom of the dialog box that allow you to Scan, Reset or change bar code Setting.

5.6 Office Mobile

This icon contains the following abridged Microsoft programs: Excel Mobile, OneNote Mobile, PowerPoint Mobile and Word Mobile. Keep in mind that if Office Mobile is listed in your Start menu, this icon will not be displayed in the Programs window.

5.6.1 Excel Mobile

Excel Mobile is an abridged version of Microsoft Excel, an electronic spreadsheet program. If you’re familiar the Excel application on your PC, you’ll be able to navigate Excel Mobile. In addition to providing the tools to manipulate text and numeric values like statistics, percentages, using formulas that perform calculations, and so on, this program can also include graphics such as pie charts.

Excel Mobile allows you to copy Excel workbooks from your PC onto your Ikôn and update them while you’re away from your desk.

- Tap on Start>Programs>Office Mobile>Excel Mobile.

If Office Mobile is listed in your Start menu, tap on Start>Office Mobile and then tap on Excel Mobile.

- If a list of workbooks is displayed rather than a new sheet, you’ll need to create a new workbook. To create a workbook:

- In Excel Mobile, tap the Menu>File>New.
5.6.1.1 Workbook Components

- If the toolbar is not visible, tap on the **View>Toolbar**.

You can enter data, work with rows and columns and create formulas as you would when working with Excel on your PC.

**Using Excel Mobile Help**

If you need help using this application, you can review the instructions in the associated help files. To display Excel Mobile help files:

- Launch the *Excel Mobile* program.
- Tap on **Start>Help**, and review the instructions provided.

5.6.2 OneNote Mobile

You can use *OneNote Mobile* to take notes wherever you are and then synchronize your notes with a notebook section in the OneNote version on your PC. For example, you can:

- Snap pictures of business cards on your Ikôn and then bring them into *OneNote* on your PC.
- Create short text notes and voice recordings on your Ikôn to remind you about important meetings, ideas, etc. and synchronize them with your notes.
- Prepare information in *OneNote* on your PC and then transfer it to your Ikôn where it will be available to you wherever you and your Ikôn go.
Chapter 5: Programs

OneNote Mobile

Important: Remember that you must have Microsoft Office OneNote 2007 and the latest version of ActiveSync installed on your PC before you can set up a partnership between your Ikôn and your PC. ActiveSync can be installed from the Getting Started CD included with your Ikôn. Refer to “The Getting Started CD” on page 15 for details.

Setting Up A Partnership

• Start Office OneNote and ActiveSync on your PC
• Connect the Ikôn to your PC; you can use a USB cable or a Bluetooth connection.

When a connection is established between the Ikôn and your PC, ActiveSync displays a New Partnership screen.

• Choose Standard partnership, and tap on Next.
• To share information between OneNote Mobile and Office OneNote 2007 on your PC, tap Synchronize with this desktop computer, and then tap on Next.
• Tap on Finish to begin the partnership between the Ikôn and the PC. Now you’ll be able to pass notes back and forth between your PC and your Ikôn.

Creating A Note

• If Office Mobile is listed in your Start menu, tap on Start>Office Mobile>OneNote Mobile icon.
If this is not the case, tap on **Start>Programs>Office Mobile** icon. Tap on the **OneNote Mobile** icon.

- Tap on **New** to create a note page. Begin typing.

- When you complete your note, tap on **Done**.

**Note:** Remember that you can tap on the **Menu** softkey to **Undo** typing, add **Formats** (Bold, *Italic*, Underline, Strikethrough), include **Lists** (Numbered, Bulleted, Clear)
Using The OneNote Menu

Tapping on Menu displays a list of options to help you work with the OneNote Mobile applet.

- **Undo, Redo, Cut, Copy** and **Paste**: These commands operate in the same way as they do in any Windows Office application.
- **Format**: Tapping on this command lists the formatting options you can apply to your note: **Bold, Italic, Underline, Strikethrough** and **Clear All**.
- **Take Picture**: When you tap on this option, the Ikôn switches to camera mode so that you can snap a picture to include in your note.
Press [ENTER] to snap a photo that is automatically inserted into your note.

- **Insert Picture**: Tapping on this command automatically displays your *My Pictures* folder where you can tap on an existing picture to insert it into your note.
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OneNote Mobile

- **Insert Recording:** When you tap on this command, a recording panel is displayed.

Tap on the **Record** button to *record* your message.
Tap on **Stop** when you’ve completed your message.
Tap on **Play** to *listen* to your voice message.
To *discard* your message, tap on **X** – the **Cancel** button.
To *save* your message, tap on **OK**. An audio icon is displayed in your note. You can tap on it to listen to your message.

**Synchronizing Ikôn One Note With PC OneNote**

- Connect the Ikôn to your PC using either a USB cable or *Bluetooth*.
When the connection is complete, take one of the following steps:
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Word Mobile

• In Microsoft ActiveSync on your PC, choose Sync.

or

On your Ikôn, tap on Start>ActiveSync, and then tap on Sync.

During synchronization, the notes you created on your Ikôn are copied to a new Office OneNote 2007 notebook called OneNote Mobile on your PC. When synchronization is done, you can drag the transferred notes into any other sections and other notebooks on your PC.

Note: If you prefer to synchronize Ikôn notes automatically, you can set up ActiveSync so that synchronization is continuous or occurs on a schedule. In ActiveSync on your PC, in the Tools menu, tap Options, and then tap on the Schedule tab.

5.6.3 Word Mobile

If you’ve used Microsoft Word on your Mac or PC, Word Mobile will be familiar to you. Keep in mind however that Word Mobile is designed for a small screen and limited memory.

Note: Keep in mind also that a Word document created on your PC can lose key formatting features such as styles and tables if you make changes to it on your Ikôn.

• Tap on Start>Programs>Office Mobile>Word Mobile.

If Office Mobile is listed in your Start menu, tap on Start>Office Mobile and then tap on Word Mobile.

If you’ve already create a Word document, it will be listed in the Word Mobile window.

• Tap on New in the softkey bar to create a new Word document.
Chapter 5: Programs

PowerPoint Mobile

Using Word Mobile Help
If you need help using this application, you can review the instructions in the associated help files. To display Word Mobile help files:

- Launch the Word Mobile program.
- Tap on Start>Help, and review the instructions provided.

5.6.3.1 Data Entry Modes
In addition to the soft keyboard, you can enter text using Block Recognizer, Letter Recognizer or Transcriber. Refer to “Entering Text” on page 78 for details.
You can also use the Ikôn keyboard for data entry.

5.6.3.2 Sharing Documents With Your PC
Documents created on a PC are recognized by your Ikôn. However, some formatting is lost when a Word document is converted to a Word Mobile document. This loss also occurs when you open a .doc file and change it on the Ikôn.

⚠️ Important: To avoid problems, you can work on copies of .doc files. In addition, keep in mind that you can use the Terminal Services Client program to log onto a desktop PC that is also running Terminal Services, and then you can use any program on your PC, including Microsoft Word (rather than Word Mobile). Refer to “Remote Desktop Mobile” on page 106 for details.

5.6.4 PowerPoint Mobile
PowerPoint Mobile works just like the desktop version that may be installed on your PC. To launch this program on your Ikôn:

- Tap on Start>Programs.Office Mobile>PowerPoint Mobile.

If Office Mobile is listed in your Start menu, tap on Start.Office Mobile and then tap on PowerPoint Mobile.

Using PowerPoint Mobile Help
If you need help using this application, you can review the instructions in the associated help files. To display PowerPoint help files:

- Launch the PowerPoint Mobile program as described above.
- Tap on Start>Help, and review the instructions provided.
5.7 **File Explorer**

Windows Mobile 6.1 files are stored in folders and sub-folders that are accessible through *File Explorer*. You can open, save, rename, copy and paste files in the same manner as you would on any desktop PC.

⚠️ *Important: Refer to “Managing Files And Folders” on page 70 for details about this program.*

5.8 **Getting Started**

For information about the Getting Started applet, refer to “The Getting Started Centre” on page 16.

5.9 **PTSI Imager Demo**

*Note: This icon is only available when an HHP 5000 imager is installed in your Ikôn.*

To run a demonstration of the *Teklogix Imager* applet features:

- Tap on **Start>Programs>PTSI Imager** icon.

⚠️ *Important: For details about this applet, refer to Appendix C: “Teklogix Imagers Applet”.*
Chapter 5: Programs

5.10 Internet Sharing

This option allows you to use your Ikôn to connect your PC to the Internet. Before you can use Internet Sharing, you must make certain that you have established a data connection on your Ikôn.

5.10.1 Creating An Internet Connection

Follow the steps in this section only if you have not already setup an Internet connection. You’ll need the following information before you begin:

*From your cellular service provider:* data connectivity information, access point name and PAP/CHAP security settings.

*From your Internet service provider (ISP) or wireless service provider:* access point name and password and any additional security information.

For a GPRS, 1xRTT or dialup connection:

- Tap on Start>Settings>Connections tab. Tap on the Connections icon.
- Under My Work Network, tap Add a new modem connection.
- Type a name for the connection, and choose Cellular Line (GPRS), or for 1xRTT connections, choose Cellular Line. Tap on Next.
- Type the phone number or access point name provided by your service provider, and tap Next.
- Type the credentials supplied by your service provider, and tap Finish.

5.10.2 Using Internet Sharing

- Make certain that your data connect is running, and that you can access the Internet from the Ikôn.

If you are using a USB cable to connect to your PC, you will need to disable the ActiveSync USB connection.

- On your PC, open the ActiveSync window, and tap on File>Connection Settings.
- Disable Allow USB connection by tapping in the checkbox to the left of this option.
- Connect the Ikôn to your PC using Bluetooth or a USB cable.
- On your Ikôn, tap Start>Programs>Internet Sharing.
- Choose the PC Connection type–USB or Bluetooth.
- Choose the network connection that the Ikôn should use to connect to the Internet.
Chapter 5: Programs

Notes

• Tap Connect. It takes approximately 30 seconds to establish a connection. (If you are prompted to turn on Bluetooth, tap Yes.)

If your are using a Bluetooth connection, execute the following steps on your PC:
• Tap Start>Control Panel>Network Connections.
• Right-click on Bluetooth Network Connections, and click on View Bluetooth Network Devices.
• If the Ikôn is listed as a Network Access Point, choose Connect. If it is not listed, choose Create a new connection and use the New Connection Wizard to add the Ikôn to the list.

5.11 Notes

The Notes application is an electronic notepad you can use to jot down your ideas quickly. You can enter text using the soft keyboard, the Ikôn keyboard, or you can write on the screen using your stylus. You can also record a message.

Notes can also be shared through e-mail and synchronization with your PC.
• Tap on Start>Programs>Notes to launch this application.
• If a blank Note like the sample screen here is not displayed, tap on New in the softkey bar.

5.11.1 Creating A Note

• Choose an entry mode for your note.
Chapter 5: Programs

Converting Handwritten Notes To Text

To enter text with the soft keyboard, the Transcriber, the Block or the Letter Recognizer, tap the stylus on the arrow to the right on the soft keyboard icon \(\text{ soften keyboard} \) to choose your text input method.

To use your stylus to handwrite on the screen, tap on the pen icon \(\text{ pen} \).

\[ \text{Important: Refer to “Entering Text” on page 78 for text entry details.} \]

- Compose your note using the method you’ve chosen.
- Tap on OK when you’re done.

Your note is automatically saved. The file name is the first line of the note if you used the keyboard–otherwise, it’s named Note1, Note2 and so on.

5.11.2 Converting Handwritten Notes To Text

When you use the pen tool, you can write notes in your own handwriting and keep them as is, if you like. You can also teach the Ikôn to recognize your handwriting and convert it into printed text.

To convert handwriting into text:
- Tap on the pen tool \(\text{ pen} \) and compose a note using your stylus.
- Tap on Menu>Tools>Recognize.
The text in the note is converted from handwritten to printed text.

![Recognized text](image)

Note: To convert only a specific portion of your handwritten note into printed type, tap the stylus just before the first letter of the text, pause for a second, and then drag your stylus across the text you want to select. Then, tap on **Tools>Recognize** to convert only the highlighted text.

**Failed Conversions**

The Recognize tool sometimes gets the conversion wrong. If some words are not converted properly:

- Press and hold the stylus on the incorrectly converted word.
- In the pop-up menu, choose **Alternative** to display a list of possible alternatives to the incorrectly converted word. Your handwritten version is displayed along the top of the menu.

![Incorrect Conversions](image)
Chapter 5: Programs

Renaming A Note

• Tap on the correct word in the list.
• If the correct word is not listed, as is the case in the sample screen above, tap on the soft keyboard icon to display the soft keyboard, and type the correct word.

5.11.3 Renaming A Note

• Press and hold the stylus on the file name in the Notes screen that you want to rename. In the pop-up menu, choose Rename/Move, or
• Tap the file name to select it, and tap on Menu>Rename/Move.
• In the Name field, type the new name, and tap OK.

5.11.4 Recording Notes

It’s sometimes easier to record a note than to write it down just to make certain that you’ve captured an idea before it drifts away. To make an audio recording:
• Tap on New to open a fresh note.
• Tap on Menu>View Recording Toolbar.
• Tap on the Record button—a beep alerts you that your device is now ready to record.
• Begin speaking into the microphone on the Ikôn, or move the Ikôn to within a few feet of the source of the sound you want to record.
• Tap on the Stop button when you’ve completed your recording.
• Tap on OK to save the note.
A speaker icon is displayed in the note indicating the presence of a recording within the note.

- To play the recorded note, tap on the speaker icon.

### 5.11.5 Synchronizing A Note

Like *Tasks*, *Contacts* and so on, the *Notes* program can be synchronized with Outlook on your PC. In this way, all notes, recordings and drawings created in the *Notes* program are copied to your PC and can be edited in Outlook’s Notes module.

- To review the steps required to synchronize a note, with a *Note page opened*, tap on **Start>Help**.

Follow the steps in the Ikôn help file to synchronize your note.

### 5.12 Pictures & Videos

The *Pictures & Videos* applet allows you to snap photographs and record video footage. It is also a photo and video viewing program.

**Important:** The *Pictures & Videos* program can only display .bmp or .jpg formats. *Photos in other formats will need to be converted on your PC before they are transferred to the Ikôn.*

### 5.12.1 Using The Camera

- Tap on **Start>Programs>Pictures & Videos**.
Keep in mind that if there are no pictures stored on your Ikôn as yet, you’ll only see the Camera icon in this screen.

- Tap on the **Camera icon** to activate the camera.
The screen will display the image your camera is pointed at. (The camera is built into the back of the Ikôn.)

- Frame the image in the Ikôn screen. Press **[ENTER]** to snap the photograph.

**Photo Menu**

When the camera is activated, tapping on **Menu** displays a set of commands to help you modify how your camera operates, the quality of the photos it takes, and so on. You can also use this menu to activate the video recorder rather than the still camera.
Chapter 5: Programs

Moving Photos To The Ikôn

5.12.2 Moving Photos To The Ikôn

- Connect your device to your PC with ActiveSync.
- On your PC, using Windows Explorer (right-click My Computer and click on Explorer), drag photos from their folder to the Mobile Device>My Pictures folder.

5.12.3 Opening A Photo

- To open a photo, tap on Start>Programs>Pictures & Videos. You’ll see a thumbnail of your photos.

Note: ‘Video’ is a toggle command. When the still camera is activated, ‘Video’ is available in this menu. When the video recorder is activated, ‘Still’ (camera) is available in this menu.
5.12.4 Deleting A Photo

- Press and hold the stylus on the thumbnail photo you want to delete to display a pop-up menu. Tap on Delete.
- Confirm your choice when prompted.

5.12.5 Editing A Photo

- Tap a thumbnail photo to open it.
- Tap on Menu>Edit.

The Rotate command is now displayed in the softkey bar. Additional editing tools are now listed in the Menu.

5.12.6 Creating A Slide Show

To view a slide show:

- Tap on the Menu>Play Slide Show.

The slide show begins—in slide show mode, photos are displayed for about five seconds, one after the other.
• To display the slide show tool bar, tap anywhere on the photo.

5.12.7 Using The Video Recorder

• Tap on the Camera icon.
• In the bottom-right corner of the camera screen, tap on Menu>Video.

• Press [ENTER] to begin recording.

• To end the video, press [ENTER] again, or tap on the Stop softkey.

Note: When the ‘Video’ recorder is activated, a Menu is available to tailor the operation of the recorder, the quality of the recording, and so on.

5.13 Remote Desktop Mobile

This program allows you to log onto a Windows Terminal Server and run the desktop programs from the server on your Ikôn.
5.13.1 Connecting To A Terminal Server

- Tap on Start>Programs>Remote Desktop Mobile
- In the Server dialog box, type the Terminal Server name or TCP/IP address, or choose a server from the dropdown menu.
- Tap on Connect.
- In the Remote Desktop Connection window, type your user name, password, and domain (if required). Tap on OK.

5.13.2 Disconnecting Without Ending A Session

⚠️ Important: These commands are accessed from the Start menu in the Terminal Services screen used to access the PC’s commands. Do NOT use the Start menu on your Ikôn.

- In the Remote Desktop Connection window, tap on Start>Shutdown.
- Tap on Disconnect>OK

5.13.3 Ending A Session

- In the Terminal Services Client screen, tap on Start>Shutdown.
- Tap on Log Off>OK

5.14 Summit Client Utility (SCU)

The SCU provides the utilities you will need to configure the Summit 802.11b/g Compact Flash radio module so that it can communicate through a wireless LAN network effectively and securely. Refer to “Using The SCU To Connect To The WLAN” on page 17 for setup details.
Chapter 5: Programs

Search

5.15 Search

- Tap Start>Programs, and then tap on the Search icon.

- In the Search for field, type the item for which you’re looking.
- To narrow your search, tap on the Type dropdown menu and choose from a list of pre-existing programs. To search through all files, leave this option at All Data.

5.16 Task Manager

Refer to “Task Manager” on page 171 for details about this applet.

5.17 Tasks

This program helps you stay ahead of your schedule by managing your tasks, appointments, and so on. For details about Tasks, refer to “Task Notification” on page 63.

5.18 Internet Explorer

Note: Internet Explorer is available from the Start menu by default. If you prefer it only be accessed from the Programs window, tap on Start>Settings, tap on the Menus icon and uncheck Internet Explorer.
You can connect to *Internet Explorer* in two ways: by connecting the Ikôn directly to the Internet or by connecting through your PC while the Ikôn is attached via ActiveSync (see “ActiveSync®” on page 85).

### 5.18.1 Browsing Web Sites

There is little difference between the standard Internet Explorer found on your PC and that found on your Ikôn, sometimes referred to as *Pocket Internet Explorer*. You can enter URLs, set a ‘home page’, turn images on and off, e-mail links to friends, and so on.

To go to a web site:

- Connect your Ikôn to the Internet. (If you’re not certain how to do this, tap on Start>Internet Explorer to display a blank window. Next, tap on Start>Help and follow the steps listed.)
- Tap on Start>Programs>Internet Explorer to open Internet Explorer.

If Internet Explorer is listed in the Start menu rather in the Program screen, tap on Start>Internet Explorer.

- Tap on the address bar – the field near the top of the screen where URLs are entered – to highlight the current URL.
- Type a new URL in the address bar. Tapping on the softkeys in the softkey bar at the bottom of the screen display Internet Explorer commands like those you find on your PC.
Chapter 5: Programs
Messaging

5.19 Messaging

Note: Messaging is available from the Start menu by default. If you prefer it only be accessed from the Programs window, tap on Start>Settings, tap on the Menus icon and uncheck Messaging.

The Messaging program is used to send and receive e-mail on your Ikôn. To send and receive e-mail, you’ll need to synchronize your PC or connect to a Post Office Protocol 3 (POP3) or Internet Message Access Protocol 4 (IMAP4) mail server.

For each of these methods, you need to set up an e-mail account with one exception – Outlook e-mail accounts are set up by default.

5.19.1 Folders

If you use an Outlook e-mail account, messages in the Inbox folder in Outlook are automatically synchronized with your Ikôn. You can use ActiveSync on your PC to synchronize additional folders. The folders and messages you move are mirrored on the server.

For POP3 accounts, if you move e-mail messages to a folder you create, the link between the messages on the Ikôn and the copies on the mail server are broken. When you next connect, the mail server will recognize that the messages are missing from the Ikôn Inbox folder and delete them from the server, preventing duplication of messages. Keep in mind however that you will not have further access to messages that you moved to folders from anywhere except with the Ikôn.

For IMAP4 accounts, the folders you create and the messages you move are reflected on the server, making messages available any time whether you connect to your mail server from your Ikôn or your PC.

5.19.2 Synchronizing E-mail With Outlook

By synchronizing the Ikôn Messaging program with Outlook on your PC, your e-mail is available on both the Ikôn and on your PC.

Note: Synchronizing e-mail does not require that the Ikôn have an independent connection to the Internet.
In ActiveSync on your PC, tap on **Tools>Options** in the tool bar at the top of the screen.

- Make certain that a check mark is displayed in the checkbox next to **E-mail**. Tap on **OK**. Once you check **E-mail** for synchronization, Outlook e-mail messages are synchronized as part of the general synchronization process. The next time you synchronize with ActiveSync, the e-mail in Outlook on your PC will be transferred to the Messaging program on your Ikôn.
Chapter 5: Programs
Changing Synchronization Settings

5.19.3 Changing Synchronization Settings

- In ActiveSync on your PC, double-tap the **E-mail** item in the **Sync Options** tab.

![E-mail Synchronization Settings](image)

- Tap on the **Select Folder** button.

![Select E-mail Folders](image)

- Add a checkmark next to the folders in this screen that you want to synchronize with your Ikôn, and tap on **OK**.

The **E-mail Synchronization** screen is displayed again.

- If you want to accept file attachments, add a check mark next to **Include file attachments**. To limit the size, tap on **Only if smaller than**, and specify a size in the **KB** box.

- Tap on **OK**.
5.20 Windows Media

Windows Media allows you to play music and videos on your Ikôn. You can use Windows Media to play digital audio and video files that are stored on your Ikôn or on the Web.

- To work with this applet, tap on Start>Programs>Windows Media.
- To find detailed instructions about this option, tap on Start>Help, and in the list of help files, tap on Use Windows Media Player Mobile.
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6.1 Settings

The Settings screen is divided into three tabs – Personal, System and Connections.

• Tap on Start>Settings to display this screen.

Figure 6.1 Settings Tabs

6.2 Personal Settings

The Personal tab allows you to tailor the general behaviour of your Ikôn such as defining input methods, Start menu options, owner information, password assignment, sound specifications, and so on.

6.3 App Launch Keys

The App Launch Keys icon allows you to map a key to an application so that you can then launch the application from a single key-press.
Chapter 6: Settings

App Launch Keys

• Tap on **Start>Settings**, and then tap on the **App Launch Keys** icon.

![App Launch Keys icon](image)

To assign an application key:

• Tap the **Add** button.

![Add button](image)

• Press the key you want to use to launch an application. (If an unsupported key is pressed, a message appears on this screen letting you know.)
The cursor moves to the *App* field and a new screen is displayed where you can choose the application to which you want to assign the application key. If you need to, you can *Browse* through the information in your Ikôn until you locate the application you want to launch.

• Once you’ve selected the file you want to map, tap on *OK*.

The cursor moves to the *Data* field. You can use this field if you need to define special parameters to your application launch key. If you don’t want to assign any parameters, you can leave the *Data* field blank. If, for example, you want to assign an application launch key to launch the *Word Mobile* application, you can leave this field blank. If you want to assign an application launch key that will open a specific document in the *Word Mobile* application, you need to browse to and choose that document while the cursor is in the *Data* field.

• Tap on *OK*.

• If you need to *Edit*, *Remove* or *Add* another *App Launch Key*, you can do it from this final screen. Otherwise, tap on *OK* to save your *Application Launch Key*.

• To launch the application you chose, press the application key you assigned.
6.4 **Buttons Icon**

- Tap on **Start>Settings**, and then tap on the **Buttons** icon to display your options.

*Note: The ‘Program Buttons’ option is not available on the Ikôn Rugged PDA.*

6.4.1 **Up/Down Control**

![Buttons Icon](image)

Sliding the *Delay before first repeat* bar to the left decreases the delay between key repeats while sliding the bar to the right increases the repeat delay time.

Sliding the *Repeat rate* bar to the left slows the rate at which an [Up/Down] button repeats when pressed. Sliding the bar to the right increases the key repeat rate.
6.4.2 Sequence

This slider determines the allowable pause between alpha key presses on a numeric keypad. For example, suppose you want to type the letter ‘c’ – you would need to press the [2] key three times. With the [ORANGE] key locked ‘on’, if you press [2] twice and then pause between key presses for 1 second, the letter ‘b’ will be selected automatically. Moving the Sequence slider to the right increases the pause time between alpha key presses.

6.4.3 One Shots

The options in this tab allows you to determine how modifier keys on your Ikôn behave. For each modifier key—[ALT], [SHIFT], [CTRL], [ORANGE] and [BLUE] – you have the following options in the dropdown menu: Lock, OneShot, and OneShot/Lock.
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 dropdown 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. If you choose this option and press the modifier key once, it remains active only until the next key is pressed.

If you choose OneShot/Lock and then press the modifier key twice, it is locked ‘on’, remaining active until the modifier key is pressed a third time to turn it ‘off’.

Show Modifier Key State
When you enable Show modifier key state, a shift-state indicator icon replaces the soft keyboard icon in the softkey bar at the bottom of the screen. When a modifier key is pressed, a square in this icon is highlighted. A ‘locked’ modifier key is displayed in the shift-state indicator icon with a black frame around it.
6.4.4 Keyboard Macro Keys

Macro keys are not labelled on the keypad. However, you can map up to 12 macro functions using the keyboard remapping function described in “Scancode Remapping” on page 129. A macro has 20 programmable characters (or “positions”). The macro keys can be programmed to replace frequently used keystrokes, along with the function of executable keys including [ENTER] and [BKSP], function keys, and arrow keys.

Recording And Saving A Macro

• 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 Record Macro screen is displayed.

• 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.
Chapter 6: Settings

Unicode Mapping

• When you’ve finished recording your macro sequence, tap on **Stop Recording**. A new screen – **Verify Macro** – displays the macro sequence you created.
• Tap on the **Save** button to save your macro. Your macro key sequence is listed in the **Macro** screen.
• Tap on **OK** to save your macro key assignment.

**Executing A Macro**

• Press the macro key to which you’ve assigned the macro to execute it.

**Deleting A Macro**

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

### 6.4.5 Unicode Mapping

• Tap on the **Unicode Mapping** tab to display this screen.

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, “a (U+0061)” indicates that the character “a” is represented by the Unicode value “0061”, and so on. Keep in mind that Unicode configurations are represented as hexadecimal rather than decimal values.

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

Important: Changes to Unicode mappings are not saved until you exit the Unicode Mapping tab by tapping on [OK].

- Tap on the Add/Change button.
- Highlight a value in the Unicode mapping list.
- 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], tap on the checkbox next to ‘SHIFT Pressed’ and/or ‘CTRL Pressed’.

Removing Unicode Values
- In the Unicode Mapping tab, highlight the item you want to delete, and tap the Remove button.

6.4.6 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] key, etc.), perform a function (e.g. turn the scanner on, change volume/contrast, etc.) or run a macro.
Chapter 6: Settings

Scancode Remapping

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.

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 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 to: 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*, and tap on *OK*.

**Editing A Scancode Remap**

- In the *Scancode Remapping* tab, tap 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

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

6.4.7 Lock Sequence

The Lock Sequence tab allows you to lock the Ikôn keyboard to prevent keys from being pressed accidentally when, for example, the unit is inserted in a holster.

- To lock the keyboard, tap in the checkbox next to Enable key lock sequence.

Note: It is useful to leave the ‘Show popup message’ enabled (default) so that anyone attempting to use the Ikôn keyboard will see the key sequence they will need to enter to unlock the keyboard displayed on the screen.

- If you want the keyboard to be locked at startup, tap in the checkbox next to Keyboard locked at startup. Otherwise, leave this option disabled.
- In the Key sequence dropdown menu, choose the key sequence you will use to lock and unlock the keyboard.
- Tap on OK.
- To lock the keyboard, type the key sequence you chose – for example, Orange-Blue-0.
A locked keyboard icon is displayed in the softkey bar when the keyboard is locked.

- To unlock the keyboard, type the key sequence again.

### 6.5 Input

The Input icon provides access to text input options you can use to tailor the soft keyboard, block recognizer, letter recognizer and transcriber along with voice recording options.
6.5.1 Input Method Tab

- Tap on Start>Settings and then on the Input icon to display your options.

A dropdown menu next to Input method allows you to tailor your methods of input – Block Recognizer, Keyboard, Letter Recognizer and Transcriber.

**Block Recognizer**

Block Recognizer teaches you how to conform your handwriting to what the Ikôn can recognize.

⚠️ **Important:** Refer to “Block Recognizer And Letter Recognizer” on page 80 for additional details.
Keyboard Options

This screen is displayed when you choose Keyboard in the Input method dropdown menu. You can use it to customize the soft keyboard. You can choose Large Keys or Small Keys to increase or decrease the size of the keys displayed on the soft keyboard.

If you enable Use gestures for the following keys, these keys are removed from the soft keyboard. Gestures are handwriting shortcuts for the keyboard keys. Before you can enable this option, you’ll need to tap on the radio button to the left of Large keys.

Letter Recognizer Options

Letter Recognizer teaches you how to conform your handwriting to what the Ikôn can recognize.

⚠️ Important: Refer to “Block Recognizer And Letter Recognizer” on page 80 for additional details.

To display additional letter recognition options, tap on the Options button in the Letter Recognizer screen.
Chapter 6: Settings

Input Method Tab

Figure 6.2 Letter Recognizer Quick Settings

These options allow the Letter Recognizer to better interpret any specialized strokes and accents you may wish to use.

Transcriber Options

*Note: Before you can display the Options for Transcriber, you need to select Transcriber as the active input method. Tap on the arrow to the right of the keyboard icon in the taskbar, and choose Transcriber.*

When you choose Transcriber as the input method, three tabs of options are available to you – Quick Settings, Inking and Advanced.

Quick Settings

The Quick Settings tab allows you choose the writing direction—the icons indicate direction. In addition, you can choose to enable or disable the display of the Introductory screen and the sound each time you launch the Transcriber.
In Inking tab, you are presented with a number of options. Recognition Delay allows you to determine the time delay between writing something on the Transcriber screen and its recognition into printed text.

Enabling Add space after automatically adds a space after each word you write. The Pen option allows you to choose the line Width and Colour. Finally, tapping on Match Letter Shapes to your writing displays a screen in which you can learn how to form letters to help the Ikôn to recognize the most often used characters.

Advanced
In this tab, Shorthand allows you to create a shortened word that the Transcriber will recognize and expand into a complete word automatically. You can also insert data such as a date or run a program.
6.5.1.1 Word Completion

This tab speeds the writing process regardless of the input method chosen. When you begin entering a word, this option displays what it assumes is the complete word, saving you having to type the word in its entirety. You can also tailor how and when you want word suggestions made.

6.5.2 Options–Additional Choices

This tab offers a few choices including choosing a voice recording format, zoom percentage for writing and typing, automatic capitalization of the first letter in a sentence and automatic scrolling when you’ve reached the bottom of the screen.
6.6 Lock

To protect the data stored in your Ikôn, you can assign a password that must be entered each time the unit is switched on.

- Tap on Start>Settings, and then tap on the Lock icon.

![Lock Icon]

It is critical that you store your password in a safe place. If you forget it, a ‘clean start’ must be performed by certified Psion Teklogix personnel. A clean start returns the Ikôn to factory settings. Only the data stored in a CF or SD memory card are preserved.

- Tap in the checkbox next to Prompt if device unused to turn on password protection.
- Choose the amount of time that the unit can remain idle before you are prompted to enter your password.
- In the Password type dropdown menu, choose the type of password you prefer to assign. Simple PIN allows you to enter a minimum of four numeric characters. Strong alphanumeric requires a minimum of 7 characters and must contain at least three of the following: uppercase and lowercase alpha characters, numbers and punctuation.
- Tap on the Hint tab to enter a word or phrase that will remind you of your password. The Ikôn will display the hint after the wrong password is entered five times.
- Tap on OK. A dialog box asks whether or not you want to save your password settings. Tap on YES to save your password assignment.
6.7 Menus
The *Menus* icon allows you to display options to customise the *Start Menu*.

- Tap on *Start>Settings* and then tap on the *Menus* icon.

6.7.1 Start Menu Tab
This tab allows you to define the items that will be listed in your *Start* menu.

- In the *Start Menu* dialog box, tap on the items you want to appear in your *Start* menu. The checked items will be listed in your *Start* menu.
6.8 Owner Information

Tapping on Start>Settings and then tapping on the Owner Information icon allows you to add your personal information to the Ikôn. Some of this information will be displayed in the desktop Today screen.

Important: Refer to “Ownership Information” on page 62 for details about this option.
Chapter 6: Settings
Phone (Windows Mobile 6.1 Professional Only)

6.9 Phone (Windows Mobile 6.1 Professional Only)
Tapping on Start>Settings and then tapping on the Phone icon allows you to adjust phone settings such as the ring type and tone, choose phone services such as barring calls, and you can also determine network selections.

![Phone Settings Icon]

Important: Refer to “Managing Phone Settings” on page 25 for details about this option.

6.10 Sound & Notifications
The Sounds & Notifications icon allows you to specify when your Ikôn will emit sounds.
6.10.1 Sounds

- Tap on Start>Settings, and then tap on the Sounds & Notifications icon to display this dialog box.

- Tap in the checkboxes and radio buttons to enable the event(s) that will cause your unit to emit a sound.

6.10.2 Notifications

This tab allows you to determine how you are notified about different events.

- Choose an event from the Events dropdown menu.
- Choose the Ring type and Ring tone. Tap on the arrow below Ring tone to test your choices. The small square button stops the ring test.
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Today Screen

6.11 Today Screen

This option allows you to tailor the appearance of the Today screen – the desktop screen.

- Tap on Start>Settings, and then tap on the Today icon.

6.11.1 Appearance

This screen allows you to customize the background displayed on the Today screen.

- Choose the background you want to use from the list.

6.11.2 Items

This tab allows you to choose and to sort the item(s) that you want listed in the Today screen.
• Tap in the checkbox to the left of the item(s) you want displayed in the Today screen.
• To rearrange the list of items, highlight the item you want to move up or down and tap on the Move Up or Move Down button. Keep in mind that the Date cannot be moved.

6.12 System Tab Settings
To display the icons grouped in the System tab:
• Tap on Start>Settings, and tap on the System tab.

6.13 About
Tapping on Start>Settings>System tab, and then the About icon displays a grouping of tabs that provide device information.

Version Tab
This tab outlines the Windows Mobile 6.1 version, processor information, memory size and a description of the expansion card, if one is in use.

Device ID Tab
This tab provides fields in which you can assign a Device name and Description (optional) for the Ikôn. This name is used by the Ikôn to identify itself to other devices.
Keep in mind that this must be a unique name across a network. If you are unable to connect to a network because another device with the same name is already connected, you’ll need to assign a new name here.

Copyrights
The Copyright tab lists the copyright information for the software loaded on your Ikôn.
6.14 About Device

Tapping on the About Device icon under Settings>System tab provides access to three tabs related to your Ikôn. The Properties tab lists hardware information related to your Ikôn. The Copyrights tab lists the copyrights that apply to your Ikôn. The Experience tab allows you to choose a category to help you define your Experience. These categories include Microsoft settings, Psion Teklogix settings and Custom settings in a dropdown menu. Each category contains a group of default settings. If you change a default setting, the category is automatically changed to Custom settings.

6.15 Backlight

• Tap on Start>Settings, then tap on the System tab. Tap on the Backlight icon.

Tapping on the Backlight icon allows you to determine the power properties of the Ikôn.

6.15.1 Battery Power

This tab allows you to tailor the Ikôn backlight behaviour to best preserve battery life.

• To define how long the backlight should stay on when the Ikôn is not in use, tap in the checkbox to the left of Turn off backlight if device is not used for.

• Tap on the dropdown menu, and choose the number of seconds or minutes the backlight will remain on when the Ikôn is idle.
• To Turn on backlight when a button is pressed or the screen is tapped, tap in the checkbox to the left of this option.

6.15.2 External Power

This tab determines the behaviour of the backlight when the Ikôn is using external rather than battery power.

Important: Refer to “Battery Power” on page 146 for details about these options.

6.15.3 Intensity

This tab is used to adjust the light intensity of the display backlight and the keyboard backlight. Sliding the bar to the left lowers the light intensity, and sliding it to the right raises the intensity.
6.16 Certificates

A public key is transmitted as part of a certificate. The certificates listed in the Certificates tabs ensure that the submitted public key is, in fact, the public key that belongs to the submitter. The Ikôn checks that the certificate has been digitally signed by a certification authority that the Ikôn explicitly trusts.

Your Ikôn has certificates already preinstalled in the unit. Personal certificates establish your identity, Intermediate certificates, as the name suggests, identifies intermediate certification authorities and Root certificates establish the identity of the servers with which you can connect.

- Tap on Start>Settings, and then tap on the System tab.
- Tap on the Certificates icon.

Personal Tab

The Personal tab lists the name of the certificate issuer and the expiration date.

- To view additional information about a personal certificate, tap on a certificate in the list.
- To delete a certificate, tap and hold the stylus on the item you want to delete until a pop-up menu is displayed. Tap on the Delete command.
Intermediate Certificates

The items in this list help identify intermediate certification authorities.

Root Certificates

- To view details about a certificate — who issued the certificate, to whom it was issued, the issue date and the expiry date — tap on a certificate in the list.
- To delete a certificate, tap and hold the stylus on the certificate you want to delete.
- In the pop-up menu, tap on the **Delete** command.
6.16.1 Choosing A Certificate

Normally, certificates already configured for your network are chosen automatically by the Ikôn. If a certificate cannot be chosen automatically, you must choose it from the Certificates list.

- To choose a certificate, tap the desired certificate. Your Ikôn will connect automatically.

6.17 Clock & Alarms

Located under Start>Settings>System tab, the Clock & Alarm icon allows you to set the current date and time, and it allows you to define up to three alarms.

![Clock & Alarms Icon]

Important: Refer to “Today’s Date, Clock And Alarm” on page 61 for details about setting up these options.

6.18 Customer Feedback

This option allows Microsoft to track how you use your Ikôn so that they can make improvements to the software. The radio buttons allow you to turn this feature on or off.
Note: If you want to make this option inaccessible, go to Start>Settings and tap on the About Device icon. In the Experience tab, remove the checkmark to the left of Enable Customer Feedback and SQM (reset required). As indicated, you’ll need to reset the Ikôn.

6.19 Encryption

This option allows you to encrypt the data on your storage card.
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6.20 Error Reporting

Error Reporting allows you to enable or disable Microsoft error reporting prompts.

• Tap on Start>Settings. Tap on the System tab followed by the Error Reporting icon.
6.21 GPS (Global Positioning System)

With a Global Positioning System (GPS) receiver, you can locate your exact position on a map. However, even without a GPS receiver, several different mapping programs can run on your Ikôn.

- Tap on **Start>Settings>System tab>GPS icon.**

  ![GPS Settings](image)

  - Tap on the **GPS program port** dropdown menu, and choose the communication (COM) port that the GPS software will use to communicate with the GPS receiver.

  **Note:** Your Ikôn may automatically detect the GPS receiver that you are using and enter the settings in the Hardware tab. If not, you’ll need to enter this information yourself. You can find this information in the user manual of the GPS receiver.
Chapter 6: Settings

GPS (Global Positioning System) Settings

- Tap on the **Hardware** tab, and choose a **GPS hardware port** and the appropriate **Baud rate**.

Windows Mobile 6.1 automatically manages access to the GPS receiver. However, some programs may not work with automatic configuration. If this is the case:

- Tap on the **Access** tab, and disable **Manage GPS automatically (recommended)**.

You can go to [www.microsoft.com/pocketstreets](http://www.microsoft.com/pocketstreets) if a map-viewing program is not included with your Ikôn, and copy the file to your Ikôn.

### 6.22 GPS (Global Positioning System) Settings

This applet allows you to define how the GPS module operates. You can determine when the GPS module can draw power and under what conditions, and choose from a set of GPS profiles built into the modem. You can also set up AGPS (Assisted Global Positioning System).
Chapter 6: Settings

GPS (Global Positioning System) Settings

- Tap on Start>Settings>System tab>GPS Settings icon.

Power Tab

This tab allows you to dictate how the GPS module behaves. The GPS Power dropdown menu is used to control when the GPS is powered on and off.

- **Off** – the GPS module is left off, always.
- **Always on** – the GPS module is powered on at all times regardless of the power state of the Ikôn (suspend or standby).
- **On, and off in suspend** – the GPS module is powered on, but if the Ikôn is in suspend mode, the GPS module is turned off.
- **On, and low power in suspend** – the GPS module remains in a low-power state while the Ikôn is in suspend mode.
Chapter 6: Settings

GPS (Global Positioning System) Settings

Profiles Tab

Tapping on the GPS Profile Selection dropdown menu allows you to choose an appropriate profile: Default, Automotive or Pedestrian.

- Default profile is a good general profile suitable for most uses.
- Automotive profile is designed for in-vehicle use, providing quick location updates as the vehicle moves. When the GPS module is set to this profile and the vehicle enters an area such as a tunnel where satellite coverage is interrupted, it will attempt to predict the vehicle position.
- Pedestrian profile is designed for those using the GPS module while walking. It takes into account the slower pace of the pedestrian when mapping the location of the user. When the GPS module is set to this profile and the operator moves into an area where satellite coverage is interrupted, the GPS module will not attempt to predict the operator’s movement.
AGPS (Assisted Global Positioning System) Tab

To determine your location, a GPS module receives data from three or more GPS satellites in fixed orbit around the Earth. The GPS module triangulates your location based on the time it takes for signals to get to and from the satellites. This works well in fairly clear areas – outdoors, for example. However, if you’re attempting to triangulate your location in city centres where signals bounce off tall concrete buildings or from within a building, the GPS module will have greater difficulty calculating a fix.

AGPS reduces Time To First Fix (TTFF) and increases the likelihood of finding and keeping a fix in poor coverage areas such as indoor sites. AGPS downloads satellite ephemeris (orbital) data to the Ikôn periodically through WiFi or WWAN. The downloaded data is used by the GPS module to speed the process of getting a fix.

Update

- Click on the Update button to download Extended Ephemeris (EE) files from a secure host on the internet using any interface that has an internet connection (WWAN or WiFi). These files contain several days worth of ephemeris (orbital) data that can be used if the satellite’s broadcast ephemeris is not available.

The Status field above the Update button displays the progress of the download, and once successfully downloaded, the Status field will read Idle.
Chapter 6: Settings

GPS (Global Positioning System) Settings

**Settings**

- Click on the **Settings** button to define the *AGPS server connection settings*.

![AGPS Server Connection Settings](image)

The *AGPS server connection settings* dropdown menu allows you to choose from two settings: *Use default settings* and *Use custom settings*.

The *Use default settings* option is generally acceptable for most applications. Note that aside from the *Update* field in which you can choose how long the fix is stored in your Ikôn, the field values cannot be edited.

The *Use custom settings* option is generally used to configure devices that will have access only to an *intranet* rather than the *Internet* and should only be altered with the assistance of qualified Psion Teklogix personnel. They will be able to help you configure your Psion Teklogix device(s) and web server to retrieve the ephemeris data.
Info Tab

This tab provides general information about the GPS module such as the firmware version, the date on which files were last updated, and so on. If GPS module support service is required, you may be asked to tap on the Save button in this tab and forward the information to Psion Teklogix support staff.

6.23 **Manage Triggers**

*Manage Triggers* allows you to configure how bar code scanners and other devices are triggered. You can configure the trigger ID for each trigger button for both single- and double-click, and the double-click time.
6.23.1 Trigger Mappings

A trigger mapping is an association between a particular key on the keyboard and a driver or application, the module(s) – sometimes referred to as “trigger consumer(s)” – of the trigger source. Along with keyboard keys, trigger sources can also be grip triggers, external hardware triggers or software-based. When the specified key is pressed, the trigger consumer (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 Press Type” on page 162.
Show All Modules

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 [ESC] key is pressed, all changes are discarded.

6.23.1.1 Add And Edit Trigger Mapping

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

Trigger Key

This dropdown list allows you to specify the source of the trigger events, such as the Grip Trigger, Left Scan, etc., for the trigger module selected.
Chapter 6: Settings
Trigger Mappings

Note: It is possible to map the same source to different modules (trigger consumers) – for example, 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.

It is also possible to map different sources to the same module (trigger consumer).

Add Key

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

Trigger Press 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 Up/down type has also been configured for the same source, it will only receive the first set of trigger events.

Module To Trigger

This identifies the driver or application receiving the trigger presses.

Show All Modules

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

Managed Programs lets you view, download and install applications that are deployed by the System Center Mobile Device Manager (a server-side solution that helps enable IT to have control of their device deployment with respect to security, management and access to the corporate network). To access Managed Program:

- Tap on Start>Settings>System tab>Managed Programs icon.

Note: Your system administrator can provide the details you’ll need to use Managed Programs effectively.

6.25 Memory

This applet allows you to view memory use and storage card memory allocation. To display the options for this applet:

- Tap on Start>Settings. Tap on the System tab followed by the Memory icon.
6.25.1 Main Tab

This tab lists the memory allocated for file and data storage and for program storage.

6.25.2 Storage Card

The Storage Card screen indicates the total storage card or RAM disk memory along with the amount in use.

6.26 Power Icon

This icon allows you to view and manage battery use.

- Tap on Start>Settings. Tap on the System tab followed by the Power icon.
6.26.1 Battery Tab

This tab allows you to view the remaining battery capacity.

6.26.2 Advanced Tab

The Advanced tab allows you to manage battery consumption.

**On Battery Power**

When the Ikôn is operating on battery power, this option allows you to determine how long the unit will remain on when it is not in use.
Chapter 6: Settings

Battery Details

- Tap in the checkbox to the left of **On battery power** to enable this option. Tap in the dropdown menu to choose the number of minutes your unit can remain idle before it shuts down.

**On External Power**

When the Ikôn is drawing external rather than battery power, this option allows you to determine the number of minutes the unit will remain on when not in use.

- Tap in the checkbox to the left of **On external power** to enable this option. Tap in the dropdown menu to choose the number of minutes your unit can remain idle before it shuts down.

6.26.3 Battery Details

![Battery Details Screen](image)

This tab lists the specifications and battery capacity status of the battery installed in the Ikôn. This is a view-only screen.
6.26.4 Built-In Devices

Checking the box next to *Enable Bluetooth* switches on the built-in *Bluetooth* radio.

6.26.5 Card Slots

When you select one or more of the card slots listed, power is supplied to the enabled slot(s). Clicking on the *Apply* button activates your selections. Keep in mind that if the characters on this button appear in grey typeface, the checked slots have already been enabled.
6.26.6 Suspend Threshold And Estimated Battery Backup

The *Estimated Battery Backup* is the amount of battery power that has been reserved or set aside to protect data until a fully charged battery can be installed in the Ikôn. When the battery capacity is depleted up to the *Estimated Battery Backup* reserve specified in the *Suspend Threshold* tab, the Ikôn shuts off automatically and uses the reserve power to preserve the data stored on the Ikôn. Once the Ikôn shuts down, it cannot be switched on until a fresh battery is installed, or the unit is inserted in a docking station or cradle.

- Slide the **Suspend Threshold** button to the right to increase the battery capacity reserved for backup purposes. Data will be preserved to a maximum of 124 hours.
- Slide the **Suspend Threshold** button to the left to decrease the power reserved for backup purposes; this increases the Ikôn’s operating time – the amount of time the Ikôn will operate before shutting down – but reduces the power reserved for backup purposes to a minimum of 24 hours.

Internal super-capacitors will protect the data stored in the Ikôn while the depleted battery is swapped for a fully charged one.

**Important:** Once the battery is removed, the super-capacitors will preserve the data stored on the Ikôn for approximately 5 minutes. It is critical that you install a charged battery before this time elapses.
6.26.7 Suspend Mode

When this option is enabled, any time the Ikôn enters suspend mode (e.g., an idle timeout, Power button press or through the Start menu), *Go to standby on suspend* forces the Ikôn to enter *Standby* mode. In *Standby* mode, applications, processors and services (e.g., Bluetooth) continue to run even while the Ikôn is powered down, making them instantly available when the unit is powered up again.

6.27 Regional Settings

To display the *Regional Settings* screen, tap on **Start**>**Settings**, and then tap on the **System** tab followed by the **Regional Settings** icon.
• Tap on the dropdown menu to choose your language and region.
Once you’ve selected a language and region, you may need to adjust the way numbers, currency, the time and the date appear in your Ikôn.
• Tap on the tab associated with each of the items and choose how each item should be displayed on your Ikôn.

6.28 Remove Programs
• Tap on Start>Settings. Tap on the System tab followed by the Remove Program icon.

Tapping on the Remove Programs icon displays a screen listing the programs that can be removed from your unit.
• To remove a program, highlight it and then tap on the Remove button.

6.29 Screen Icon
This icon allows you to align (calibrate) your touchscreen, turn ClearType on and off and adjust the size of the text displayed on the Ikôn screen.
• Tap **Start**>**Settings**. Tap on the **System tab**, and then tap on the **Screen icon**.

![Screen Icon]

**Important:** Refer to “Aligning (Calibrating) The Touchscreen” on page 45 for details.

**6.30 Task Manager**

The **Task Manager** screen lists all running tasks (applications) or processes. This applet provides a number of options to manage these.
Chapter 6: Settings

Task Manager

- Tap on Start>Settings. Tap on the System tab and then the Task Manager icon – the Task Manager screen is opened.

![Task Manager Screen]

- **End Task:** To shut down an application, highlight the program in the list, and tap on the End Task softkey in the taskbar at the bottom of the screen.

Task Manager Menu

The Task Manager menu provides additional options to help you manage your applications.
- Tap on the Menu softkey in the taskbar.

![Task Manager Menu]

- **Switch To:** Makes the highlighted application active.
• **End All Tasks:** Shuts down all applications listed.
• **View:** Allows you to list either all running applications or all processes.
• **Sort By:** Allows you to sort active applications or processes based on *Memory size, CPU* or application or process *Name*.
• **Refresh:** Updates the list of applications or processes.
• **Exit:** Closes the Task Manager.

### 6.31 Teklogix Error Handling Service

- Tap on **Start>Settings**. Tap on the **System** tab followed by the **Teklogix Error Handling Service** icon.

*Teklogix Error Handling Service* is an error diagnostic tool. Tapping in the checkbox next to *Enable error reporting* enables this service.

#### 6.31.1 ErrorLogInfo

- To log an error, tap on the **ErrorLogInfo** tab.
Chapter 6: Settings

NetLog

• Choose an Error Level, and tap on FlushToFile to log the information file. Psion Teklogix personnel can help you retrieve and forward the information file to our offices.

6.31.2 NetLog

The NetLog option is used to log network traffic. When you tap in the checkbox to the left of Enable NetLog Debug Capturing, debug data is collected so that, if necessary, it can be forwarded to a Psion Teklogix technician for evaluation. You can also define where you want the data stored and the maximum size of the file.
6.32 Teklogix Imagers Settings

The Teklogix Imagers applet is used to create, modify, delete and activate imager settings. The principle uses of the applet are to decode bar codes and to capture images.

Note: This icon is only when displayed when the HHP 5000 imager is installed in your Ikôn PDA.

To launch this applet:

- Tap on Start>Settings>System tab, and then tap on the Teklogix Imagers icon.

![Teklogix Imagers Icon]

Important: Refer to Appendix C: “Teklogix Imagers Applet” for details about this applet.

A PTSI Imager demo applet is also provided to illustrate how the imager works.
Chapter 6: Settings

Scanner Settings

To launch the demo:

- Tap on Start>Programs, and then tap on the PTSI Imager icon.

6.33 Scanner Settings

The Teklogix Scanners icon in the Settings menu provides access to dialog boxes in which you can tailor bar code options and choose the bar codes your scanner will recognize.
Chapter 6: Settings

Bar Code Settings - The Scanner Menu

- Tap on **Start>Settings**, and then tap on the **System** tab followed by the **Teklogix Scanner** icon.

### 6.33.1 Bar Code Settings - The Scanner Menu

The dropdown menu to the right of the **Scanner** option allows you to choose from one of the following scanner types used with your Ikôn: **Decoded (internal)**, **Decoded (Intermec ISCP)** or **Imager**.

The symbologies listed change to reflect the scanner you choose and the bar codes it supports.

⚠️ **Important**: Appendix D: “Bar Codes Settings” provides descriptions of the bar codes listed in the scanner menus.
6.33.2 Options Tab

This tab allows you to tailor the double-click parameters and the display options associated with your scanner.

6.33.2.1 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 Ikôn 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 key-press is displayed.
6.33.2.2 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 Ikôn 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 the “Scan Log File” is enabled, there is a slight performance effect when performing multiple scans since the log file is written to persistent storage.
6.33.2.3 Data Handling

This option allows you to choose the code page your Ikôn will use to display data – Default Local ASCII or ISO-8859-1 Latin 1.

**Codepage:**

Tapping on this option displays a window in which you can define the code page your Ikôn will use.

If you choose Default Local ASCII, the code page of the local OS is used. For example, if the local OS uses double-byte Chinese characters, choosing this option will filter data through the local ASCII of that OS and display it accurately, in this example, using double-byte characters.

If you choose ISO-8859-1 Latin 1, data will be displayed according to the character mapping of this Latin 1 code page, ignoring the local OS code page.

6.33.3 Translations Tab

The Translations tab allows you to define up to 10 cases, each consisting of up to 10 rules in sequential order. Only one case will be applied to a bar code and a case will only be applied if all rules specified in the case are successful – if a rule within a case fails, the entire case fails.
• In the *Translations* tab, tap on a **Case #** to create rules.
Chapter 6: Settings
Translations Tab

- Tap on the **No rule** dropdown menu to display the rules.

![Dropdown menu showing options](image)

When you choose a rule, an associated screen is displayed in which you can define the rule.

![Associated screen](image)

### 6.33.3.1 Case Rules

The case rules are defined as follows:

- **No rule** – ignored.
- Match at index – matches the match string at a specified index.
- **Match and replace at index** – matches the match string at a specified index and replaces/changes it.
- **Replace at index** – replaces/changes unspecified data in a given range.
- **Add barcode prefix/suffix** – adds a global prefix or suffix.
• **Verify barcode size** – verifies the bar code size. This rule should generally be assigned first, before creating subsequent rules.

• **Search and replace** – replaces all instances of the match string. (Note that this rule cannot fail.)

⚠️ **Warning:** *Keep in mind that the effects of previously applied rules must be taken into account when creating subsequent rules. For example, if the bar code size is important, it should be checked before any rules that might change the size are applied.*

The information about the status of each case/rule is displayed in the scan log file (see “Scan Log File” on page 179) when enabled. This is useful if a case fails, and you are trying to determine why a rule is failing.

### 6.33.4 Ports Tab

While you cannot configure the scanner, you can configure communications with a serial decoded scanner using the options in this tab.
6.33.4.1 Port Replicator Port A (COM5:)

Enabled
This parameter allows you to turn this port on (enable) and off.

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 data bits included in each asynchronous data byte. Most devices use 8 bit data bytes. Double-tapping on this option displays a pop-up window in which you can choose either 7 or 8 data bits.
Parity

This parameter determines the type of parity checking used on the data going through the tether port. Double-tapping on this option displays a pop-up window in which you can choose the appropriate Parity.

Stop Bits

This parameter specifies the number of stop bits – 1, 1.5, 2 – used for asynchronous communication.

Trigger On Sequence And Trigger Off Sequence

If a SICK scanner connected to the Ikôn port requires a serial stream of data bytes to trigger the scanner on and another to trigger the scanner off, the Trigger On Sequence and Trigger Off Sequence parameters allow you to define these serial streams.
Double-tapping on Trigger On Sequence or Trigger Off Sequence displays a screen with a hex array of 10 elements.

These parameters work in conjunction with Manage Triggers sending on and off data streams to the trigger module you assigned. For example, supposed you launch Manage Triggers and choose Decoded Scanner as the ‘module to trigger’. Next, you assign a ‘trigger key’ – for this example, a period (‘.’). To define the serial stream of data bytes to control the on and off function of the ‘trigger key’, enter a hex value in the Trigger On Sequence and the Trigger Off Sequence fields. When you press the trigger key, the Trigger On Sequence is sent and when you release the trigger key, the Trigger Off Sequence is sent, turning the trigger key on and off.

6.34 Total Recall

Total Recall is a Psion Teklogix utility developed to back up/restore applications and settings.

Note: In Windows Mobile 6.1, the registry and installed programs are stored in the Flash file system and are not lost on reset. However, in special cases, Psion Teklogix personnel may find it necessary to perform a ‘clean start’; this will reset not only the registry settings to factory defaults but will also erase any files or applications stored or installed on the built-in Flash file system, including any Total Recall profiles. This is why any data that needs to be protected must be stored on a microSD card or externally to the device on a USB memory stick or on a PC.
• Tap on **Start>Settings**. Tap on the Total Recall icon.

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

### 6.34.1 Creating A 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*. 
Chapter 6: Settings
Creating A Backup Profile

• Next, choose the Profile Type you want to create:
  - 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 start.
• Finally, choose a Profile Location.
• Tap on 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, the Registry and/or Selected Files.
• Tap on the Next button to view your selections.
View Selections
Depending on what you have selected for inclusion in your profile, you can view a list of all files, selected files, databases, and/or the registry.

- If you’re satisfied with the items in the profile, tap on Next.

Performing The Backup

- Tap on Backup to begin the process and create a profile. When the backup is finished, a dialog box is presented stating that the backup has been completed successfully.
- Tap on Finish to exit Total Recall.
Chapter 6: Settings
Restoring A Profile

6.34.2 Restoring A Profile

To manually restore a profile:

- Choose Restore Selected Profile from the dropdown menu, and choose the Profile Name you want to restore.
- In the next screen, tap on Restore to restore your profile.

6.35 TweakIT

This utility allows you to ‘tweak’ or adjust Advanced system settings (interface, network and servers), User settings (font size and docking port message), and provides a Registry Editor.
6.35.1 Advanced Interface And Network

Enable IPv6

This option allows you to enable Internet Protocol, version 6, that has been published to use 128-bit IP address (replacing version 4).

Modem Logging

When this option is enabled, the Ikôn logs AT commands (e.g., dial-out information, password string, etc.) that the administrator can monitor for debugging purposes. Modem commands are stored in: \MdmLog.txt.
6.35.2 Advanced Services Settings

FTP Server

This option is enabled by default to allow file transfers. Keep in mind that data transfer in either direction is restricted to the Temp folder – that is, data are always loaded from the FTP Server to the Temp folder and from the Temp folder to the FTP Server.

If this option is disabled, a warm reset must be performed to accept the change.

SNTP (Simple Network Time Protocol) Server

The SNTP Server Name typed in this dialog box is used to synchronize Ikôn time with that of the time server. A warm reset must be performed once the server name has been entered.
6.35.3 Radio Features

**AP Density**

This option allows you to determine the signal strength at which the Ikôn radio will begin searching for a new Access Point (AP): *High, Medium* or *Low*. If this option is set to *High*, the radio will begin searching for a new Access Point while still at a fairly strong signal strength. Setting *AP Density* to *Low* will cause the radio to wait until the signal strength is significantly low before attempting to connect to another Access Point.

Depending on your site configuration – for example, the shelving, the Access Point coverage, etc. – a higher setting may improve throughput, increase and maintain signal strength, and reduce missed transmissions.

**Radio Power Management**

When this option is enabled, access points that support it will use *Radio Power Management* guidelines to control the Ikôn radio. Access points determine how often the Ikôn radio enters...
sleep mode when no activity is detected to reduce power consumption. Another benefit is that when Radio Power Management is enabled, even when no activity is detected, the access point does not disassociate the Ikôn.

6.35.4 User System Setting

Docking Port Message

Checking this box blocks the message that normally pops up on the display when the Ikôn is docked.
6.35.5 Registry Editor

This option is reserved for senior administrators who have a strong understanding of registry keys and values. Careless registry editing can cause irreversible damage to the Ikôn.

6.36 Windows Update

This program checks for software updates, and if found, downloads updates to your Ikôn. You can choose to have updates checked automatically, or if you prefer, you can determine when your unit will check for updates.

6.37 Connections Tab

This tab is used to setup connections using Bluetooth and 802.11 radios. If you have the Windows Mobile 6.1 Classic operating system installed on your Ikôn, you can also set up Wireless WAN connections. (Keep in mind that the Wireless WAN icon not available when Windows Mobile 6.1 Professional is installed in your unit.)
6.37.1 Navigation Bar Hotkeys

Some of the connectivity icons in the Navigation Bar along the top of the screen are hotkeys that offer shortcuts to connection setups. Tapping on a hotkey displays a bubble that provides information about your connections and provides a shortcut to the Wireless Manager applet where you can set up your connections.

**Automatic Notification**

The Navigation Bar also displays notification icons to let you know, for example, that a network as been detected. or if your Ikôn is equipped with a phone, that you’ve missed a call, a voice mail or a text message.
Automatic Network Detection

If a wireless network is available when you switch on your PDA, a notification bubble may appear letting you know which networks have been found. You can choose a network from here.

Tapping on Connect in the softkey bar at the bottom of the screen will automatically connect to a network that’s already been set up. Tapping on Settings in the network bubble will launch the Wireless Manager applet.

If you prefer not see this notification bubble, you can tap on the Menu button in the softkey bar, and choose not to display the notification bubble.

Multiple Notifications

If more than one item is detected, all the items can be accessed by tapping on the small multiple notification icon shaped like a word bubble in the Navigation Bar. Tapping on it
displays a group of notification icons – in the sample screen below, a missed call icon and a new voice message icon.

Tapping on any of these icons displays an associated notification bubble with information about and access to the missed call(s) or voice message(s).

6.38 **Beam**

This option is not available for the Ikôn Rugged PDA.

6.39 **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 10 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.

- Tap on **Start>Settings**. Tap on the **Connections tab** followed by the **Bluetooth icon**.
6.39.1 The Devices Tab

This tab allows you to scan for other Bluetooth enabled devices, and it allows you to pair devices.

To add a new device:
- Tap on Add new device....

The Ikôn scans for a Bluetooth device within a 10 meter range. Any Bluetooth devices within range appear in the Bluetooth list box.

Note: You may need to enable your Bluetooth radio before you begin. Refer to “Bluetooth Mode” on page 202 for details.
Chapter 6: Settings

The Devices Tab

- Highlight the device you want to add. Tap on Next.

- If required, type your Passcode. If not, skip this step and just tap on Next.

  A pop-up message lets you know that your device has been connected to your Ikôn.
• To change the Display Name, tap on the Advanced button. This is an optional step.

• Tap on Save.

Note: To connect to a Bluetooth-equipped device that's already been added, tap on the item in Bluetooth list box.

6.39.1.1 Pairing A Device

If you intend to pair devices (a headset, for example), power on and bring the device within 10 meters of the Ikôn before proceeding with the discovery process described below.

Important: Follow the steps under “Pairing A Bluetooth Headset” on page 50 to pair a Bluetooth a headset with your Ikôn.

If you prefer, you can go to the Today screen, and tap on –

Getting Started>Set up Bluetooth – to get pairing information.
6.39.2 Bluetooth Mode

- Tap Start>Settings. Tap on the Connections tab following by the Bluetooth icon. Next, tap on the Mode tab.

When Turn on Bluetooth is checked, Bluetooth features are available. If this option is disabled, you cannot send or receive information using Bluetooth.

When Make this device visible to other devices is enabled, other Bluetooth devices within range (approximately 10 meters) can detect your Ikôn and can establish a bond or use a Bluetooth service. Note that other devices can detect your unit whether or not a bond has been created.
6.39.3 **Bluetooth COM Ports**

![Bluetooth COM Ports screenshot]

**New Outgoing Port**

When you pair the Ikôn with another device, *New Outgoing Port* is listed in this dialog box. Tapping on this option allows you to assign an outgoing COM port number.

- To work with an existing COM port number, tap and hold the stylus on an existing port. To assign a *new* port number, make certain that your Ikôn is connected to the other device via Bluetooth.
  - In the *COM Ports* tab, tap on *New Outgoing Port*.
  - Choose a *COM port number* from the list.

*Note: If a port cannot be created, the number you’ve chosen is already in use. Choose a different port number.*
Chapter 6: Settings

Outgoing Port

6.39.4 Outgoing Port

*Outgoing Port* acts as a serial port that can be used to connect to a list of *Bluetooth* devices (one at a time). This tab allows you to assign and enable an outgoing port and choose the device with which you want to communicate from the list. You can also tailor the behaviour of your Ikôn so that you are prompted to choose the device with which you want to communicate.

6.39.5 Services

The *Bluetooth Services* tab is used to assign a virtual serial port for incoming *Bluetooth* (serial) communications. Virtual ports are required because while normally, an application uses a true COM (hardware) port to transmit data, *Bluetooth* uses a virtual port.
You can assign either a \textit{BSP} or a \textit{COM} prefix from the dropdown menu. BSP (\textit{Bluetooth Serial Port}) was created by Microsoft to allow \textit{Bluetooth} to have its own serial prefix in order to free up virtual COM prefixes as these are limited and are widely used. (In Windows Mobile 6.1, the \textit{COM Ports} tab is used to assign a virtual outgoing COM port to a Paired \textit{Bluetooth} service, and the \textit{Outgoing Port} tab is used to assign multiple outgoing \textit{Bluetooth} services to a single virtual port.)

\textbf{6.39.6 Active Connections}

This tab displays the currently active \textit{Bluetooth} connections, listing the device name(s). The type of link is also included with the device name(s). Keep in mind that the information listed in this tab is ‘view only’; it cannot be edited.
6.39.7 About Tab

The About tab displays information about the Bluetooth module, such as the manufacturer name, local address and version. Like the Active tab, this information cannot be edited.

6.39.8 The Bluetooth GPRS Phone

Once you’ve completed the Bluetooth settings, you can go ahead and set up communication through your Bluetooth-equipped phone.

Before you begin, make certain that the Bluetooth phone is turned on, that the Bluetooth radio in your Ikôn and in your phone are switched on, and that the Ikôn and phone are within 10 metres of each other. Both should be discoverable.

1. Tap on Start>Settings and then tap on the Connections tab.
2. Tap on the Connections icon. Tap on Add a new modem connection.
3. Type a name for the connection.
4. Tap on the **Select a modem** dropdown menu, and choose **Bluetooth**. Tap on **Next**.
5. Make certain that the phone is discoverable. Some phones also need to be pairable in order to accept a bonding request. Refer to your phone documentation for additional information.
6. If the phone appears in the **My Connections** list, skip to step 12.
7. In the list, tap **phone** and then tap on **Next**.
8. In the **PIN** screen, type a personal identification number (PIN) – you can enter up to 16 characters.
9. Enter the **same** PIN on the phone.
10. If you wish, you can edit the name of the phone in the **Name** field.
11. Tap on the **Finish** button.
12. In the **My Connections** list, tap on the phone and then on **Next**.
13. Enter the dial-up phone number for this connection, and tap on **Next**.
14. In the **User name**, **Password** and **Domain** fields, enter the logon information for this connection, and tap on **Finish**.

You can begin using the **Bluetooth** phone connection, for example, to send and receive e-mail, browse the Internet with Internet Explorer, and so on.
Chapter 6: Settings
Connection Properties

6.40 Connection Properties
This applet is used to set up serial modem connections.

- Tap on Start>Settings>Connections tab>Connection Properties icon

- Choose a connection from the dropdown menu, and tap on Edit Properties.
6.40.1 Port Settings

Baud Rate
In the Baud rate dropdown menu, choose a new baud rate. Check your modem documentation for the appropriate baud rate.

Data Bits
This parameter determines the number of bits for the data going through this port. Possible values are: 4, 5, 6, 7, 8.

Parity
This parameter determines the type of parity checking used on the data going through the port. The options are: none, odd, even, mark and space.

Stop Bits
This parameter specifies the number of stop bits – 1, 1.5, 2 – used for asynchronous communication.

Flow Control
This parameter selects the type of flow control used in your PDA. The Ikôn can perform Software or Hardware handshaking, or you can choose None.
Chapter 6: Settings

6.40.2 Call Options

Cancel Call If Not Connected Within
Tap in the checkbox to enable this option to make certain that the Ikôn does not stay online too long while waiting to connect with a network.
Enter the number of seconds after which the call will be cancelled.

Wait For Dial Tone Before Dialing
To speed connection when using a modem, disable this option – tap in the checkbox to the left of this option.

Wait For Credit Card
If you are paying for calls with a credit card, enter the number of seconds you want the Ikôn to wait for a credit card prompt.

Extra Dial-String Modem Commands
Type your credit card number in this field.

6.41 Connections - Connecting To The Internet
To activate a connection, make certain that any necessary equipment is installed in your Ikôn such as a radio.
You’ll need the following information from your ISP to make an internet connection:
• ISP server phone number,
• user name, and
• password.
1. Tap **Start>Settings**, and then tap on the **Connections** tab.

![Connections Icon](image)

2. Tap on the **Connections** icon.

   **Note:** In the Connections window, the **Tasks** tab is used to create new connections and manage existing ones. The **Advanced** tab allows you to choose a network. If you need to change these settings, contact your ISP or network administrator before making changes.

3. Under **My ISP**, tap on **Add a new modem connection**.

4. In the **Select a modem** dropdown menu, choose a modem connection. If you haven’t already created a modem connection, refer to “Modem Connection Setup” on page 211.

5. To connect to the Internet, launch the program you want to use. For example, launch Internet Explorer on your Ikôn to browse the Internet. Your Ikôn automatically connects.

   **Note:** To set up a network card or wireless network connection to your ISP, add a new connection under My Work Network.

### 6.41.1 Modem Connection Setup

Before you begin, you’ll need the following information from your ISP or network administrator: telephone number, password, domain name, and TCP/IP settings.
If your Ikôn does not have access to a mobile phone network, insert a modem card in the unit.

1. Tap **Start>Settings**. Tap on the **Connections** tab followed by the **Connections** icon.
2. To create a new connection in either My ISP or My Work Network, tap on **Add a new modem connection**.
3. In the **Make New Connection** screen, type a name for the connection.

4. In the dropdown menu under **Select a modem**, tap on your modem type.

   *Note: If your modem is not listed in the dropdown menu, choose Hayes Compatible on COM1.*

5. Tap on the **Next** button.
6. In the next screen, enter the phone number \textit{exactly} as you want it dialed. If, for example, you need to dial 9 for an outside line, enter 9 at the beginning of the phone number.

7. Tap on the \textbf{Next} button.

8. Type the \textbf{User Name}, \textbf{Password} and \textbf{Domain Name} as provided by your ISP or network administrator.

\textbf{Note:} Generally, you will \underline{not} need to change any of the Advanced settings. For information about the Advanced settings, refer to “Advanced Modem Settings.”

Changes to Advanced settings are only required in the following instances:
- To change the baud rate settings, dialing string commands or credit card options.
- To change port settings.
- To enter TCP/IP settings because the server to which you are connecting does not dynamically assign addresses.

9. Tap on the \textbf{Finish} button.

If you need to edit the \textit{Advanced} settings, refer to “Advanced Modem Settings” in the next section.
6.41.1.1 Advanced Modem Settings

TCP/IP Settings Tab

If your server assigns IP addresses dynamically, you will not need to change these settings. If you need to make changes, contact your ISP or network administrator for addresses.

Server Settings Tab

If your server assigns IP addresses dynamically, you will not need to change these settings.

Servers requiring assigned IP addresses may also need a way to map computer names to IP addresses. The Ikôn supports a variety of name resolution options: DNS, Alt DNS, WINS and Alt WINS.

Your ISP or network administrator can determine which name resolution you need, and can also provide the server address. In addition, you will want to ask if alternate addresses are available. An alternate address may allow you to connect when the primary server is not available.
6.42 Wireless Manager Icon

The Wireless Manager icon acts as a connection manager, providing access to Wi-Fi, Bluetooth, GPS and GSM/GPRS settings.

Important: The ‘Wireless Manager’ option provides detailed Help files to assist you in setting up your Ikôn. Help is available from the Connections tab – not from within the Wireless Manager dialog box.

To access Wireless Manager help files, tap on Start>Settings>Connections tab. Tap on Start>Help.

- Tap on Start>Settings>Connections tab>Wireless Manager icon.
- To access radio Settings, highlight a radio in this dialog box, and tap on the Settings button.
- To turn off a radio, highlight the radio and tap on the Disable button.

6.42.1 Flight Mode - Disabling Wireless Components

To disable all wireless components when, for example, you are taking your Ikôn onto a plane where wireless connections need to be shut down:

- Tap on the Disable All button.

To enable wireless components:

- Tap on Enable All.
To disable a particular radio connection rather than all connections:

- Highlight an Available (enabled) radio listed in this dialog box, and then tap on the Disable button.

### 6.42.2 Setting Up A Network Card

Network (802.11) cards are used to connect to a network so that you can browse the Internet, download e-mail and so on. You can connect to an existing network, or you can set up a new connection on your Ikôn.

**Important:** The Ikôn is equipped with context sensitive Help Files. If you find that you're unsure how to proceed with a network connection at any point during setup, tap on the question mark icon in the navigation bar at the top of the screen.

### 6.42.3 Network Adaptor Cards

**Important:** For 802.11b/g (Summit) CF card adaptor setup details, refer to “Setting Up An 802.11b/g Radio–Summit Client Utility” on page 17.

When the network card is inserted in your unit for the first time, the Network Settings screen is displayed automatically so that you can configure the card. If it does not appear, or if you want to change settings:

- Tap on Start>Settings>Connections tab.
• Tap on the **Network Cards** icon.

![Network Cards icon](image)

• If you need to specify server information, double-tap on the appropriate **adaptor**, and then tap on the **IP Address** and/or **Name Servers** tab.

![Network Card Configuration](image)

**Note:** Because most networks use DHCP, you should not need to change these settings unless instructed to do so by your network administrator.

• If necessary, use a network cable to connect the network card to your network. Refer to the documentation shipped with your network card for details.

• To activate the connection, launch the desired program (e.g., Internet Explorer). The Ikôn will connect automatically.
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6.42.4 Changing Network Card Settings

- If you use your network card in two locations such as work and home, you’ll need to change the network to which the network card connects.
- Tap on Start>Settings>Connections tab>Network Cards icon.
- In the Configure Network Adapters dialog box, tap on the dropdown menu under My network card connects to, choose either The Internet or Work.

6.42.5 VPN Connection Setup

A VPN connection provides a secure connection to servers through the Internet. Before you begin, you need the following information from your network administrator: password, domain name, TCP/IP settings and a host name or IP address of the VPN server.

- Tap on Start>Settings. Tap on the Connections tab followed by the Connections icon.
- Under My Work Network, tap on Add a new VPN server connection.
- In the Name field, type a name for this connection.
- In Host name/IP, type the VPN server name or IP address.
- Tap on the VPN type radio button next to the type of authentication for your Ikôn: IPSec/L2TP or PPTP. Your network administrator will let you know which option applies to your PDA.
- Tap on Next.
- Choose the type of authentication in this screen. If you choose A pre-shared key, type the key provided by your network administrator.
- Tap on Next.
- Type your user name, password and domain name. If a domain name was not provided to you, try the connection without entering a domain name.

Note: Normally, you will not need to change any advanced settings. You will need to make changes only under only the following circumstances:

The server to which you are connecting does not dynamically assign addresses, and TCP/IP settings need to be entered.

Server DNS or WINS settings need to be changed.

If you need to edit the Advanced settings, refer to “Advanced Modem Settings” on page 214 for details about this tab.
- Tap on Finish.
• Launch a program like Internet Explorer to activate the connection. The VPN connection will start automatically.

6.42.6 Managing An Existing Connection

Once you’ve defined a connection, a new option appears in the first Connections screen—Manage existing connections.

6.42.6.1 Editing A Connection

• Tap on Settings>Connections tab. Tap on the Connections icon.
• Tap on Manage existing connections.

• To launch a connection from this screen, press and hold the stylus on the connection you want to activate. Choose Connect from the pop-up menu.
• To delete a connection, press and hold the stylus on the connection you want to delete. Choose Delete from the pop-up menu.

Note: You can also create a new connection by tapping on the New button. To make changes to the settings for this connection, tap on Edit.

6.42.6.2 Changing A Connection Setting Name

Your Ikôn has two sets of connection settings: My ISP and My Work Network. If you want to change one or both of these options to something more familiar to you, follow these steps.
• Tap on Start>Settings. Tap on the Connections tab followed by the Connections icon.
• Under My Work Network or My ISP, tap on Manage existing connections.
Chapter 6: Settings
Selecting A Network

- Tap on the General tab.

![Image of Settings tab]

- Type the name you prefer in the field labelled Enter a name for these settings.
- Tap on OK.

6.42.7 Selecting A Network

⚠️ **Important:** Normally, you will not need to change these settings. Contact your ISP or network administrator before making any changes.

Private networks are used for work-related activities. Internet networks are used for home connection to your ISP. The My Work Network settings are used for private network connections (corporate networks), while My ISP settings are used for Internet network connections.

When you use programs such as Internet Explorer, your Ikôn automatically connects using private network settings under My Work Network or Internet settings under My ISP, depending on specifications. You can determine how your Ikôn connects.

- Tap Start>Settings. Tap on the Connections tab followed by the Connections icon.
• Tap on the **Advanced** tab.

![Image of Settings menu]

• Tap on **Select Networks**.
• In the appropriate lists, choose **My ISP** or **My Work Network**.

6.42.8 **Proxy Server Setup**

*Note: If you are connected to your ISP or private network during synchronization, the Ikôn will download the appropriate settings during synchronization from your PC. If these settings are not on your PC, or if they need to be changed, you’ll need to set up the proxy server connection manually.*

To set up the proxy server connection manually, you’ll need the following information: proxy server name, server type, port, type of Socks protocol used, and the user name and password.

• Tap **Start>Settings**. Tap on the **Connections tab** followed by the **Connections icon**.
• Under *My Work Network*, tap on *Set up my proxy server*.

• Add a checkmark next to *This network connects to the Internet* and *This network uses a proxy server to connect to the Internet*.

• In the *Proxy server* field, type the proxy server name.

• Tap on *OK* to save your changes.

**Note:** If you need to change advanced settings such as a port number or proxy server type, you’ll need to tap on the *Advanced* button rather than tapping on *OK*. Advanced settings are described in “Changing Advanced Proxy Server Settings” on page 222.

### 6.42.8.1 Changing Advanced Proxy Server Settings

• To change advanced settings such as the port number or proxy server type, tap on the *Advanced* button.
• Tap on the **proxy type** you want to change. For the appropriate server type, type the proxy server name and port.

• Tap on **OK**.

### 6.43 Wireless Statistics

• Tap on **Start>Settings>Connections tab>Wireless Statistics icon** to display the communication statistics of your wireless connection along with the radio card name, MAC address, driver version and NDIS Compliance information.

• Tap on the **Zero** button to reset the statistics.

### 6.44 Wireless WAN (Windows Mobile 6.1 Classic Only)

The *Wireless WAN* icon is visible for Ikôns running *Windows Mobile 6.1 Classic*. An Ikôn equipped with a GSM/GPRS, CDMA/1xRTT or UMTS radio has wide area networking **data** transfer capabilities.

#### 6.44.1 Softkey Bar Icons

Wireless WAN icons in the softkey bar indicate the status of your wide area network connection. Note that these icons are only visible when a GSM/GPRS, CDMA/1xRTT or UMTS radio is installed in the unit, and the interface is enabled.

The letter in the signal strength icon (G for GSM/GPRS, U for UMTS and X for CDMA/1xRTT) indicates that a packet data service is available and initialized. Keep in mind that the signal strength icon is displayed without a letter if packet data service is not available or if it is available but not yet initialized.

- ![User interaction is required](image)
  User interaction is required (e.g. the user is required to enter a PIN).

- ![A non-recoverable error has occurred](image)
  A non-recoverable (fatal) error has occurred.

**GSM/GPRS Status Indicators**

- ![Signal strength is between 1% and 20%](image)

- ![Signal strength is between 21% and 40%](image)

- ![Signal strength is between 41% and 60%](image)

- ![Signal strength is between 61% and 80%](image)
Establishing A Connection

Signal strength is between 81% and 100%.
A GPRS packet data connection is active.

CDMA/1xRTT

Signal strength is between 1% and 20%.
Signal strength is between 21% and 40%.
Signal strength is between 41% and 60%.
Signal strength is between 61% and 80%.
Signal strength is between 81% and 100%.
A CDMA/1xRTT packet data connection is active.

6.4.4.2 Establishing A Connection

- Tap on Start>Settings. Tap on the System tab followed by the Wireless WAN icon.

Note: If you are prompted to enter a PIN, refer to “Entering A PIN” on page 225 for details.

The Status field indicates when the unit is ready to connect—the Connect Data button is enabled.
- Tap on the Connect Data button.
  The progress of the connection is tracked in the Status field.
• PPP link to modem active
• Authenticating user
• User authenticated
• Connected

Note: Keep in mind that these states may be displayed fairly quickly if the progress of the connection is rapid.

When the connection state reaches PPP link to modem active, the softkey bar icon changes to indicate an active connection. The Connect Data button changes, displaying Disconnect.

6.44.3 Disconnecting From A Network

To disconnect from the network:

• Tap on the Disconnect button, and then on OK.

When the Ikôn network connection is severed, the Status field displays Ready to Connect.

A unit equipped with a GSM/GPRS expansion board displays the signal strength in the main Wireless WAN screen, even while a connection is active. Units equipped with certain other modems (e.g. Sierra Wireless UMTS and CDMA modems, Novatel UMTS modems) do not display the signal strength while a connection is active. The Rx bytes and Tx bytes fields estimate the amount of data transmitted and received, respectively.

6.44.3.1 Shutting Down The Wireless WAN User Interface

While it is not usual to shut down the GSM/GPRS user interface, you can accomplish this by tapping on the File menu and choosing the Exit command in the Wireless WAN screen.

Note: Once you've shut down the user interface, you can only enable the radio by tapping on the Wireless WAN icon to display the dialog box.

6.44.4 Advanced Information

In most cases, when a GSM/GPRS radio and SIM are installed in your Ikôn, setup is automatic. Follow the steps outlined under the heading “Establishing A Connection” on page 224 to make a connection. The information in this section is for advanced setup purposes.

6.44.4.1 Entering A PIN

If a PIN is required, a PIN entry dialog box is displayed.

• Type your PIN, and press [ENTER].
Once the correct PIN or PUK is entered or if none was required, the modem is instructed to perform a GSM network registration followed by a GPRS attach. The main Wireless WAN dialog box reflects the progress of the initialization.

- Searching for modem
- Initializing modem
- SIM is ready
- Searching for network
- Registered on network
- Searching for packet data
- Ready to connect

If the modem loses the connection to the GSM network, the following states are repeated: Searching for network, Registered on network, Searching for packet data and Ready to connect.

6.44.4.2 Error States

The following temporary error states—states that may disappear without interaction—may be displayed:

- Emergency calls only

The modem has found a network but is not allowed to register (e.g. no roaming agreement between networks). The modem keeps searching for another network.

- No network found

A network is not currently available. The modem continues searching for a network.

- Packet data not available

The current network does not support packet data.

- Packet data not allowed

The modem is not allowed to use packet data on the current network (e.g. no packet data roaming agreement between network; a roaming agreement for voice may still be in place).

It is also possible that you do not have a subscription for packet data at all.

The remaining error states are permanent:

- SIM is missing

Note: If you exceed the number of allowable attempts, a PUK entry window is brought to the foreground. You'll need to enter a new PIN number.
The SIM card is missing. After the SIM has been inserted a reset may be required.

- **SIM failure**
  The SIM card is permanently disabled (e.g. because the wrong PUK has been entered too many times). A new SIM is needed.

- **Modem failure**
  The modem did not respond to commands as expected. If a reset does not clear this condition, the modem may need to be replaced.

- **NDIS error**
  An internal software error has occurred. If a reset does not clear this condition, Psion Teklogix technical support may need to investigate further.

### 6.44.5 Tools Menu

The *Tools* menu in the main *Wireless WAN* dialog box offers some additional, advanced setup features.

#### 6.44.5.1 Data Connection Configuration

![](image.png)

**Enable Automatic Connect**

If the *Enable automatic connect* checkbox is checked (unchecked by default), the Wireless WAN user interface will attempt to establish a packet data connection whenever packet data is available (e.g. after resume from suspend without further user interaction).

To activate the automatic connection mode:

- Tap on the **OK** button.
While automatic connection mode is enabled, the Connect Data button in the main Wireless LAN dialog box changes to Disable Auto.

To close the currently active connection (if any) and disable the automatic connection mode:

• Tap on Disable Auto.

**Important:** Automatic connection mode should not be used if applications other than the Wireless WAN user interface (e.g. Connection Manager) are expected to open and close connections.

If the automatic connection mode is enabled and another application closes the packet data connection, the WWAN user interface will immediately try to re-establish the connection.

**Use Virtual Serial Port**

If Use virtual serial port is enabled, packet data connections are established through the virtual serial port of the WWAN driver rather than through the WWAN driver directly. This checkbox should only be checked if certain third-party VPN (Virtual Private Network) clients are used that do not work correctly otherwise. The default setting is disabled (unchecked).

*Note: The connection setup takes longer through the virtual serial port.*

**Enable Automatic Configuration**

In most cases, the data connection is configured automatically and no user interaction is required. This is true even if multiple SIM cards from different operators are used with the same device. The connection parameters are adjusted automatically when a new SIM card is detected (this may require a reset). The connection parameters are retrieved from a database. Manual configuration should be necessary only if:

• One or more parameters in the database are incorrect or a new operator is not yet in the database. (The database should be corrected for subsequent software releases.)
• An operator has assigned individual packet data user names and passwords.
• A very large site has their own APN. Such connections always have to be configured manually.
• A customer has subscribed for a static IP address. By definition this must be configured manually.
Important: For CDMA/1xRTT, automatic configuration is not available – connections must be configured manually. Under APN, the packet service access number must be entered (typically “#777”).

In the following section, all the parameters that need to be configured for a connection (such as APN, user name, password, DNS server addresses etc.) are referred to as a profile. Every profile is identified by an arbitrary, unique name. The profile named Default is special in that it is always present and can neither be edited nor deleted. (A sample dialog box is presented on the page following.) The Default profile uses parameters from a built-in database. The home network (the network that issued the SIM) is used for the database look-up. While there can be many configured profiles, only one profile can be active at any time.

If connection profiles are configured manually then the Enable automatic configuration: checkbox should normally be unchecked.

In one particular use case, manually configured profiles may be combined with automatic configuration. If multiple SIM cards are used with the same device, each SIM card being from a different operator and some or all of them requiring a manually set up profile, automatic configuration may be used to automatically pick the correct manually configured profile for each SIM card. For this to work each profile has to be configured while the corresponding SIM card is inserted in the device and initialized (i.e. the status is at least SIM is ready).

The Select profile dropdown list in the data configuration profile selects which profile a subsequent action applies to. A profile named Default is always present and contains the current parameters from the database. The following actions are available:

- **Show** – The parameters for the selected profile are displayed when you tap on this button. For the Default profile, the publicly known password is shown – otherwise, the password is hidden.
- **Edit** – The parameters of the selected profile can be edited when you choose the Edit button. Keep in mind that you cannot edit the Default profile.
- **Delete** – The selected profile is deleted. You cannot delete the Default profile.
- **Activate** – When this button is chosen, the selected profile is made the active profile. Activation is possible only if the Enable automatic configuration: checkbox is unchecked.
• **New** – Tapping on the *New* button allows you to create a new profile.

The name of the newly created profile must be different from all existing profiles. Also, the name cannot be *Default*. When the *New Data Profile* dialog box is opened, a proposal for a unique name is filled in the corresponding entry field. If a manually configured profile has a secret password and unauthorized access to the device is a concern even after the SIM PIN has been entered, the password should not be entered in the *New Data Profile* dialog box and the *Prompt user for password* checkbox should be checked instead. In this case, you will be prompted for the password each time a connection is initiated (the *Connect Data* button in the main *Wireless WAN* dialog box is selected).

• **Reset** – The *Reset* button in the *New Profile* and *Edit Profile* dialog boxes resets all entry fields to the values they had when the dialog box was opened.
• **Advanced IP** – The *Advanced IP* button in the *Show Profile* and *Edit Profile* dialog boxes opens another dialog box that allows you to configure a static IP address as well as the IP addresses for the primary and secondary DNS and WINS resolvers.

![Advanced IP dialog box](image)

### 6.44.5.2 Security Configuration

The *Security Configuration* dialog box is called up through the *Tools* menu.

*Note: Security configuration is not available with CDMA modems.*

The *Security Configuration* dialog box allows you to enable, disable and change the PIN. You will need the current PIN to make any of these changes. The PIN must be enabled in order to be changed. (If the PIN is disabled, the *New PIN* entry field is greyed out.)

*Note: Keep in mind that some network operators do not allow the SIM PIN to be disabled. A new PIN must consist of 4 to 8 numeric digits.*

The *Require PIN on resume* checkbox is independent of the aforementioned settings. By default, this checkbox is unchecked. While the checkbox remains unchecked, any PIN entered on startup or through the *Security Configuration* dialog box and submitted successfully to the modem is stored in memory for as long as the device is not rebooted. This stored PIN is then used without further user interaction whenever the modem requires a PIN (such as resume after suspend or modem removal). The stored PIN is also automatically entered in the *Current PIN* text box whenever the *Security Configuration* dialog box is called up.
If unauthorized access to the device is a concern, the Require PIN on resume checkbox should be checked. In this case, you will be prompted whenever a PIN is required and the PIN is not stored.

### 6.44.5.3 Network Configuration

*Note: Network configuration is not available with CDMA modems.*

In the main *Wireless WAN* screen:

- Tap on the *Tools* menu, and choose *Network*.

By default the GSM radio modem automatically chooses from the available and allowed networks (allowed networks are the home network and all other networks with which the home network has a roaming agreement). You may find there are some situations in which you want to override this default behaviour. For example, you may want to disable roaming if you find yourself in a border area where the home network is not available but a foreign roaming partner is available. Abroad, you may find that an available network does not have packet data roaming agreements. In this case, you’ll need to manually select the network which you know to support packet data roaming.

Automatic network selection is enabled or disabled by checking or unchecking *Enable automatic network select* in the *Network* dialog box. When automatic network selection is disabled, you must select a network manually.

Available networks can also be viewed without changing any settings. Scanning for available networks is a lengthy operation – a progress bar is shown while the scan is active. For every network that is found, the network name, country, status and numeric network identifier (MCC/MNC, Mobile Country Code followed by the Mobile Network Code) is displayed.

*Note: Your home network operator will need to let you know which other networks have roaming agreements. Even when a network is listed with an ‘Available’ status, it does not necessarily follow that it can be used or that the roaming agreement covers packet data.

A status of ‘Forbidden’ indicates that the network cannot be used. If you choose a network that is not covered by a roaming agreement, the status in the main WWAN dialog box changes to ‘Emergency calls only’, ‘No network found’, ‘GPRS not available’ or ‘GPRS not allowed’.
6.44.5.4 Driver Mode Configuration

By default, the Wireless WAN driver is enabled (the Enable driver checkbox is checked). The driver must be disabled in order to access the modem directly (e.g. dial-up data, fax, or in order to manually submit AT commands to the modem for development, testing, approvals, etc.). In most cases, the Virtual WWAN serial port can be used and it is not necessary to disable the WWAN driver. If the Enable driver checkbox is **not** checked, the driver is shut down as soon as the OK button in the Driver Mode dialog box tapped.

If, on the other hand, the Wireless WAN driver is not running and the Enable driver checkbox is checked, the Wireless WAN driver is started as soon the Driver Mode dialog box is closed using the OK button.

*Note: When the driver is not running, no network status or signal strength can be displayed.*

Since all currently supported modems are automatically detected, the Enable automatic port detection checkbox should always be checked. If this checkbox is not checked, a serial port can be selected manually. This experimental feature allows the driver to be used with an internal GSM modem that was not recognized by the automatic detection or an external GSM modem connected to a serial port of the computer through USB or through Bluetooth. An external modem connected to a serial port must support 115.2kbit/s, 8bit, no parity and hardware flow control.

6.44.5.5 Modem Information

The fields in this dialog box cannot be edited – they only display information about the Ikôn modem. If the network operator has not programmed a user’s phone number into the SIM,
the **Phone** field remains empty. The modem serial number is called IMEI for GSM modems and ESN for CDMA modems.

The SIM ID is sometimes referred to as the ICC ID (International Charge Card Identifier). Not all modems support the retrieval of the SIM ID. In particular, the Novatel Merlin UMTS modems and the Option Globetrotter modems do not support SIM ID retrieval.

If the main menu shows an error status, at least partial modem information may be available.

**Modem Power Modes**

The power mode of the modem is controlled through the Power icon rather than through the **Wireless WAN** user interface.

To adjust PC Card and CF card modems settings:

- Tap on **Start>Settings**, and then tap on the **System** tab followed by the **Power** icon.
- Tap on the **Built-in Devices** tab.

If the checkbox for a modem is unchecked, power is not applied to the modem and a driver is not loaded (neither the serial port driver nor the Wireless WAN driver). If the checkbox is checked, power is applied to the modem and the drivers are loaded when the Ikôn is turned on. Power is removed from the modem when the Ikôn enters suspend mode.

To enable a modem module that is built into the unit:

- Tap on **Start>Settings**, and then tap on the **System** tab followed by the **Power** icon.

For a modem module that is built into the Ikôn, the settings can be found under the **Built-in Devices** tab. In this case, one of the following power modes can be selected:

- **Disabled** – No power is applied to the modem and no driver is loaded.
- **Enabled – Off in Suspend** Power is applied to the modem and the drivers are loaded when the Ikôn is turned on. Power is removed from the modem when the terminal enters suspend mode.
- **Enabled – Always On** When the Ikôn enters suspend mode, the modem remains powered indefinitely.
- **Enabled – Keep on for 5 min**
- **Enabled – Keep on for 15 min**
- **Enabled – Keep on for 30 min**
- **Enabled – Keep on for 1 hour**
- **Enabled – Keep on for 2 hours**
When the Ikôn enters suspend mode, the modem remains powered. If the Ikôn is not turned on again during the configured time, the unit briefly wakes up from suspend mode, shuts down the modem, and enters suspend mode again. The default mode is Enabled - Keep on for 1 hour.

At the cost of a slightly increased power consumption in suspend mode, the modes where the modem remains powered during suspend mode have several advantages. When the Ikôn wakes from suspend mode, the modem is ready immediately; modem or network initialization is not required. A packet data session can thus remain active during suspend mode. In these modes, the modem is also able to wake up the Ikôn if the network status changes, or there is a new incoming SMS.

6.44.6 SMS Menu

SMS functions are accessed through the SMS menu. For modems that support a SIM card, the SIM initialization typically takes longer than the network initialization, resulting in a noticeable delay before the SMS functions become available.
6.44.6.1 New SMS

Tapping on New opens a dialog box for sending a new SMS message. The recipient's phone number (to be entered in the To field) can consist of the digits 0 through 9, as well as the * and # characters, optionally preceded by one + character, indicating an international number (i.e. the country code follows immediately after the + character).

By checking the Store message in Outbox field, a new message can be stored in the Outbox before being sent. If no storage space is available or the modem does not support the storage of outgoing messages, this checkbox is disabled.

6.44.6.2 Inbox

Tapping on Inbox opens the list of received messages. Reading 50 messages, for example, from the SIM can take about 30 seconds. By default the list of messages is sorted with the
most recently received message first. The list can be sorted by any other column by clicking on the corresponding column heading.

Clicking the same column heading twice reverses the sort order. Pressing any letter or digit moves the highlight to the next message whose address begins with that letter or number.

>Note: The date and time formats can be changed through the Regional Settings in the Control Panel. For a new date or time format to take effect, the Inbox has to be closed and re-opened.

The *Open* button opens the selected message in a new window such that the entire message can be read including the original formatting (line breaks are replaced by spaces in the Inbox message list). Pressing the *Reply* button opens the new message dialog as described above, except the destination phone number is already filled in. Pressing the *Delete* button erases the message.

### 6.4.4.6.3 Outbox

Tapping on *Outbox* opens a list of sent messages. Otherwise the *Outbox* behaves exactly as the *Inbox* described above. The date and time when a message was sent is not available for GSM modems.
6.44.6.4 SMS Configuration

Tapping on SMS Configuration opens the SMS configuration dialog. The SMS Centre Address follows the same rules as the recipient's phone number in the New message dialog. The Message Validity Period parameter is sent to the SMS Centre with each message sent subsequently and instructs the SMS Centre on how long it should attempt to deliver the message to the recipient (the SMS Centre may impose an upper limit on the validity period regardless of the setting).

Note: Only certain discrete validity period values can be sent and thus, the validity period is rounded to the nearest allowed value. The next time the SMS configuration dialog is opened, the rounded value is shown.

The user interface tries to keep the SMS storage location available for a new incoming message if the Delete oldest message when full checkbox is checked. In this case, when a new message arrives and the SMS storage becomes full, the oldest received message is deleted. If any string is entered as the Message Suppression Prefix, messages beginning with that string will not be shown in either the Inbox or Outbox. In this way, messages intended for another application running on the same device can be hidden.
6.45 Windows Update

This program checks for software updates, and if found, downloads updates to your Ikôn. You can choose to have updates checked automatically, or if you prefer, you can determine when your unit will check for updates.
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7.1 Carrying Accessories

There are a variety of carrying accessories to help the operator work safely and comfortably with the Ikôn.

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<tr>
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<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand Straps</td>
<td>CH6021 (with stylus and tether)</td>
</tr>
<tr>
<td>Protective Carrying Cases</td>
<td>CH6090 leather pouch</td>
</tr>
<tr>
<td></td>
<td>(non-functional access to DC port, includes belt clip)</td>
</tr>
<tr>
<td></td>
<td>CH6095 leather case</td>
</tr>
<tr>
<td></td>
<td>(fully functional access to all Ikôn features, includes belt clip)</td>
</tr>
<tr>
<td>Stylus Tether Kit</td>
<td>CH6020 (stylus, tether and Velcro retainer)</td>
</tr>
</tbody>
</table>

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

7.1.1 The Hand Strap With Tether - Model No. CH6021

The hand strap with tether can be attached to the back of the Ikôn to provide a secure means for operators to carry the PDA.

Attaching The Hand Strap

The hand strap is attached by fixing the ends of the strap to the anchors located on the back and bottom of the unit (see Figure 7.1 on page 244).
Figure 7.1 Attaching The Hand Strap

Hand Strap Anchor

Bottom of Ikôn

Back of Ikôn

Velcro Tab
Velcro Pad (Underneath)
Leather
Elastic Stylus Holder
Eyelet for Tether
Buckle
Bracket
Screws M2 x 4

Elastic Strap
Velcro Pad
Plastic Loop
Chapter 7: Peripheral Devices & Accessories
The Hand Strap With Tether - Model No. CH6021

1. Attach the hand strap to the Ikôn by looping the Velcro tab around the pin and adhering the tab to the Velcro pad.

![Hand Strap Attachment Diagram]

2. Remove the bracket and screws from the Ikôn.

![Bracket and Screw Removal Diagram]
3. Slide the bracket through the plastic loop on the hand strap and install the screws.

4. Adjust the hand strap by pulling up the Velcro tab and readjusting to your hand as needed.

**Attaching The Stylus Tether To The Hand Strap**

The stylus tether can be attached to the hand strap at the back of the Ikôn.

1. If not assembled, thread the tether cord through the stylus as shown, pulling the cord tight.
2. Thread the tether through the eyelet on the strap.

3. Pass the stylus through the tether loop and pull the tether snug.
4. Slip the stylus into the elastic holder, and you’re finished.

7.1.2 Attaching The Tether - Model No. CH6020

The tether can be installed to the back of the Ikôn to provide a secure means for attaching the stylus to the PDA.

Figure 7.2 Attaching The Tether
Attaching The Velcro Retainer

Attach the retainer to the Ikôn by looping the Velcro tab around the pin and adhering the tab to the Velcro pad.
Attaching The Stylus Tether To The Retainer

1. If not assembled, thread the tether cord through the stylus as shown, pulling the cord tight.

2. Thread the tether through the eyelet on the strap.

3. Pass the stylus through the tether loop and pull the tether snug.
4. Slip the stylus into the elastic holder, and you’re finished.

7.1.3 Protective Carrying Cases
Two leather carrying cases are available for Ikôns to shield it from damage. The Model No. CH6090 pouch fully covers the Ikôn; the Model No. CH6095 case provides full access to the Ikôn screen and keyboard for functionality.

7.2 The Battery
The Ikôn operates with a 5000 mAh, Lithium-Ion battery pack.

Note: For information about inserting, removing and charging the battery, refer to “The Battery” on page 36. For battery specifications, refer to “Lithium-Ion 5000 mAh Battery Specifications” on page 291.

7.3 Adaptor Cable Options
The following are adaptors can be ordered for your Ikôn:

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Adaptor Cable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA1033</td>
<td>Tether to USB Host.</td>
</tr>
<tr>
<td>CA1032</td>
<td>Tether to USB Device. (For ActiveSync)</td>
</tr>
<tr>
<td>WA4010 - G1</td>
<td>USB to Ethernet adaptor.</td>
</tr>
<tr>
<td>CH1050</td>
<td>Power cable used with quad docking station CH4004.</td>
</tr>
</tbody>
</table>
Chapter 7: Peripheral Devices & Accessories

Chargers And Docking Stations

7.4 Chargers And Docking Stations

Important: Keep in mind when ordering a charger or docking station, you must also order the appropriate power cord separately.

Psion Teklogix offers a variety of chargers and docking stations for the Ikôn. These include:

- AC Adaptor – Model PS1050 - G1
- Automotive Power Adaptor – Model CH3050
- Desktop Docking Station – Model CH4000
- Quad Docking Station – Model CH4004

7.4.1 Important Safety Instructions

- Before using the AC adaptor, CH4000 Desktop Docking Station, or CH4004 Quad Docking Station, read all instructions and markings on the housing.
- Use the AC adaptor, batteries, and other attachments recommended or sold by Psion Teklogix.
- The mains power cord (sold separately) shall comply with the national safety regulations of the country where the equipment is to be used.
- These docking stations cannot be used with non-Ikôn PDAs. Although they may share the same battery terminating connector, they are designed with different applications in mind.
- Do not operate the AC adaptor with a damaged cord or plug. Replace immediately.
- Do not disassemble the AC adaptor; it should be repaired by qualified service personnel. Incorrect reassembly may result in electric shock or fire.
- To reduce the risk of damage to the electric plug and cord when unplugging a docking station, 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 AC adaptor, the CH4000, or the CH4004, if it is struck by a sharp blow, dropped, or otherwise damaged in any way; it should be inspected by qualified service personnel.
- To reduce the risk of electric shock, unplug the AC 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 adaptor.
- The extension cord is properly wired and in good electrical condition, and that the wire size is larger than 18 AWG.

- Do not expose the AC adaptor to rain or snow. However, both the CH4000 and CH4004 are designed to accept a wet Ikôn Rugged PDA without harmful effect.
- Do not place batteries in the docking stations if they are cold—temperatures below 0°C (32°F). Allow them to warm up to room temperature for at least 30 minutes.
- Do not use a docking station if after an overnight charge, the battery feels warmer than the charger housing. The dock should be inspected by qualified service personnel.
- Do not use a docking station if the battery, while charging, becomes more than lukewarm.

7.4.2 Installation: Chargers And Docking Stations

When installing a charger or docking station, consider the following guidelines.

- Keep chargers and docking stations away from excessive dirt, dust and contaminants.
- Chargers will not charge batteries outside an ambient temperature range of 0°C to 40°C (32°F to 104°F). It is recommended that the charger or docking station be operated at room temperature—between 18°C and 25°C (64°F to 77°F) for maximum performance.

After unpacking your unit:

- Visually inspect the charger for possible damage.
- Install the IEC power cord and apply power.

7.4.3 Power Consumption Considerations

Check to ensure the mains circuit supplying chargers and/or docking stations is adequate for the load, especially if several chargers and docking stations are being powered from the same circuit.

- Quad docking station can consume up to 1.9A @ 120 VAC or 1.5 A @ 240 VAC.
7.5 Desktop Docking Station - Model No. CH4000

**Important:** The CH4000 desktop docking station is shipped with its own user manual. It is critical that it be reviewed for additional information and updates.

**Note:** To preserve battery integrity, the desktop docking station will proceed with a charge only when the battery temperature falls between 0° C and 40° C (32° F to 104° F).

The CH4000 desktop docking station is a desktop model designed to:

- Fast charge the internal battery.
- Fast charge the spare battery pack (see Figure 7.3 on page 255)
- Supply Type A and Type B USB connectivity to the Ikôn (see Figure 7.4 on page 257).

The CH4000 storage temperature is -30° C to +60° C (-22° F to 140° F). Operating temperature and humidity are: 5 - 95% non-condensing and 0° C to 40°C (32° F to 104° F).

The desktop docking station provides sufficient power to concurrently support all the above functions. The CH4000 uses careful charge algorithms designed to maximize battery life while ensuring the shortest possible charge time. The charger supports proprietary Psion Teklogix Smart Batteries and handles a range of voltages and charge algorithms. See “The Battery” on page 36 for battery capacity, charge times and battery life for the Ikôn battery. See “Charging A Spare Battery” on page 256 for spare battery charge information.
7.5.1 Operator Controls

The CH4000 has one operator control – the USB door on the rear that switches from Type A to Type B (see “Operating The USB Dock” on page 256).

7.5.2 Indicators

The CH4000 desktop docking station is equipped with a single LED on the front panel that indicates the charge status of the spare battery.

7.5.3 Operation

7.5.3.1 Charging The Ikôn Battery

The CH4000 supplies DC power to enable the Ikôn internal fast charger. Normally, it takes 2.5 to 3.0 hours to charge the 5000 mAh battery installed in the Ikôn.

When the Ikôn Rugged PDA is installed in the dock, the battery charge LED on the Ikôn (the left-most LED) lights up to indicate the unit has external power and may charge the internal battery. The Ikôn charge LED follows the same convention as the CH4000 docking station.

Important: This docking station can only be used to charge Psion Teklogix approved Lithium-Ion batteries.
station LED. Refer to “Charging A Spare Battery” in the next section for details about LED behaviour.

Note: Battery charging continues whether the Ikôn is switched on or off.

7.5.3.2 Charging A Spare Battery

Note: Do not store a spare battery in a charger for more than 72 hours. Doing so may damage the battery or reduce its charge capacity.

- Insert the spare battery in the charge well at the back of the CH4000, aligning the contacts on the battery with the contacts in the spare battery charge well.

A full charge takes 2.5 to 3.0 hours for the 5000 mAh battery.

When the battery capacity reaches 95%, the LED turns solid green and remains in this state once the battery is completely charged.

7.5.3.3 Operating The USB Dock

The CH4000 Desktop Docking Station offers a rear-mounted host or device USB connection to the Ikôn. The Ikôn supports communication with low- and full-speed USB 1.1 compliant devices and hosts through the docking station. The Type B receptacle may be used for ActiveSync® among other applications typical for a Type B device (Figure 7.4 on page 257).

- Move the sliding door to the left or right to alternate between the Type A and Type B USB ports.
Linking An Ikôn To A PC

The desktop docking station can be connected to a PC so that you can exchange files in the same way that you would between PC drives. A USB cable is included with your docking station.

Note: For details about data transfer through Windows XP and ActiveSync and through Vista, refer to “Data Transfer Between The PC & The Ikôn” on page 14.

To link the Ikôn to a PC:

- Insert the Ikôn in the desktop docking station.
- Insert the USB cable into the docking station Type B USB connector. Attach the other end of the cable to a USB port on the PC.
Chapter 7: Peripheral Devices & Accessories

**Cleaning The CH4000**

*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 on a slightly damp cloth to clean the CH4000. Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The plastic case is susceptible to harsh chemicals. It is partially soluble in oils, mineral spirits and gasoline and slowly decomposes in strong alkaline solutions.
- To clean ink marks from the label, use isopropyl alcohol.

**Troubleshooting**

**7.5.5.1 Docking Station Does Not Power On**

- When first connected to the DC power supply, the spare charger LED should turn ON and remain on for 3 seconds. If this does not occur, the charger is defective and requires service.

**7.5.5.2 Ikôn Charge Indicator LED Stays Off**

When an Ikôn is docked into a powered CH4000 and the Ikôn charge indicator LED stays off, there may be a problem with the unit or with the docking station. Use an Ikôn with a properly functioning charge indicator to isolate the problem.

**7.5.5.3 Ikôn Charge LED Fast Flashes Green**

If the Ikôn charge LED (the left-most LED) fast flashes green when it is docked:

- Remove the Ikôn and disconnect the adaptor DC power cable.
- Wait at least 20 seconds, and then plug the cable in again.
- If the Ikôn LED still shows a fault, the Ikôn requires service.

**7.5.5.4 Dock Battery LED Fast Flashes Green With Battery Inserted**

- Try inserting a battery that has been tested in another charger and is known to work.
- If the spare charge slot LED continues to fast flash green with the known working battery, the charger is defective and requires service.
- *Your Psion Teklogix battery and desktop docking station are carefully designed for safety and capacity performance in accordance with IEEE 1725. If the battery or charger are not Psion Teklogix approved products, or the safety mechanism is faulty, the spare charge slot LED or Ikôn LED will rapidly flash green.*
7.5.5.5 **Dock Battery LED Does Not Turn On When Battery Is Inserted**

- Inspect the charge slot contacts for damage. Are they bent, flattened, twisted or broken?
- Reinstall the battery and check that it is fully seated in the slot.
- Try inserting a battery that you know to be working in the charger slot.
- Disconnect and reconnect the DC adaptor, and check that the spare battery LED indicator flashes at power-up.
- If the charge slot fails to charge the known working battery, it is defective and requires service.

7.6 **Quad Docking Station - Model No. CH4004**

![Image of CH4004 Quad Docking Station]

**Important:** The CH4000 desktop docking station is shipped with its own user manual. It is critical that it be reviewed for additional information and updates.

The CH4004 Quad Docking Station is a desktop model designed to accept up to four Ikôn Rugged PDAs. The docking station powers the Ikôns and their internal battery charger. The docking station also connects from one to four Ikôns to a 10/100 Base-T Ethernet network and allows for Ethernet data transfer.

**Figure 7.5 CH4004 Quad Docking Station Front View**

7.6.1 **Operator Controls**

The CH4004 has no operator controls or power switch.

7.6.2 **Indicators**

The quad docking station is equipped with two rear Ethernet LEDs and no front LEDs.
7.6.3 Quad Dock Operation

7.6.3.1 Charging The Ikôn Battery

- Insert the DC power MINI FIT JR plug into the CH4004 rear DC input receptacle. The adaptor LED should be ON when powered from the mains.

The CH4004 supplies DC power to enable the Ikôn internal fast charger. Normally, a full charge of the 5000 mAh Ikôn battery will take from 2.5 to 3.0 hours.

- Insert up to four Ikôns into the docking station charge wells, pressing down gently but firmly to seat them securely.

- During the charge, the Ikôn LED slow flashes green.

- When the battery capacity reaches 95%, the LED turns solid green.

*Note: Battery charging continues whether the Ikôn is switched on or off.*

7.6.3.2 Connecting To The Ethernet Network

The rear-mounted RJ45 connector incorporates LEDs that indicate data traffic (see Figure 7.6) when:

- The Ikôn is in the docking station and powered on;
- The docking station is powered by the AC adaptor;
- The docking station is connected to Ethernet network with a Category 5 cable plugged into the RJ45 rear socket.

The green Link LED flashes to indicate the presence of data traffic. The yellow Speed LED is steady ON when the network is 100 Mbps and OFF when the network is 10 Mbps.
Network Access

The Ikôn automatically detects insertion into the docking station and loads the appropriate drivers to communicate with the network.

Network Addressing

The host application uses standard TCP/IP protocol to name, locate and communicate with a specific Ikôn on the network.

If a link is established between an Ikôn and a host, the application on the host and on the Ikôn must have a recovery mechanism in the event that the Ikôn is removed from the dock, interrupting the link.

7.6.4 Cleaning The CH4004

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 on a slightly damp cloth to clean the CH4004. Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The plastic case 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 label, use isopropyl alcohol.
Chapter 7: Peripheral Devices & Accessories
Troubleshooting

7.6.5 Troubleshooting

7.6.5.1 Ikôn Charge Indicator LED Stays Off
When an Ikôn is docked into a powered CH4004 and its charge indicator LED stays off, there could be a problem with the Ikôn or with the docking station. Use an Ikôn with a properly functioning charge indicator to isolate the problem.

7.6.5.2 Ikôn Charge Indicator LED Fast Flashes Green
If the Ikôn charge indicator fast flashes green when the Ikôn is in any of the four sites:
• Remove the Ikôns and disconnect the adaptor DC power cable.
• Wait at least 20 seconds, and then plug the cable in again.
• If the Ikôn indicator still shows a fault, the Ikôn requires service.

7.6.5.3 Green LED OFF When Connected To A Network
• Check the Category 5/5e cable. Replace if the cable is suspect.
• Contact your network administrator.

7.6.5.4 Yellow LED OFF When Connected To A 100Base-T Network
• Check the Ethernet cable. Replace if the cable is suspect.
• Contact your network administrator to ensure the network is running at 100 Mbps.

7.6.5.5 Powered Adaptor LED Stays Off
• Check the AC cable. Replace with the same type if the cable is suspect.
• If the adaptor's LED stays OFF, the adaptor is defective and requires service.

7.7 AC Wall Adaptor - Model No. PS1050-G1
The AC wall adaptor available for your Ikôn allows you to operate your Ikôn using AC power while charging the battery inserted in the unit.
Adaptor plugs suitable for use in the following countries are shipped with the AC wall adaptor: United Kingdom, Switzerland, Japan, Israel, Australia, Europe, and North America (see Figure 7.7 on page 263).
Choose the adaptor plug that is suitable for use in your country. Slide the adaptor plug into the Universal AC power supply, snapping it into place. These two pieces, coupled together, are referred to as an AC wall adaptor.

- Insert the DC power plug into the DC IN port at the base of the Ikôn, located between the tether and LIF ports.
- Plug the pronged end into an AC outlet.

### 7.8 Automotive Power Adaptor - Model No. CH3050

**Important:** It is critical that you review the safety instructions outlined in the quick start guide enclosed with your automotive power adaptor before using the accessory.

The automotive power adaptor allows you to power your Ikôn and recharge your battery using power drawn from your vehicle’s automotive power outlet.
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The Non-Powered Vehicle Cradle – Model No. CH1000

7.9 The Non-Powered Vehicle Cradle - Model No. CH1000
The CH1000 vehicle cradle is a passive device, designed to securely grip the Ikôn. The cradle design permits access for the DC input cable to connect to the Ikôn (see Figure 7.9 on page 265).

• A stylus holder.
• A loop for tethering the stylus.
• A cable tidy for draping the power cables or storing the disconnected DC plug.

Note: Shock and vibration specifications for the Ikôn are verified using Psion Teklogix-approved RAM mounts and mounting hardware. Use of non-certified Psion Teklogix mounting hardware is not recommended, and may void warranty coverage.
Chapter 7: Peripheral Devices & Accessories

Important Instructions

7.9.1 Important Instructions

The CH1000 storage temperature is -40°C to +70°C (-40°F to 158°F). Operating humidity and temperature is 5 - 95% non-condensing and -30°C to 60°C (-22°F to 140°F).

7.9.2 Vehicle Cradle Operation

7.9.2.1 Operator Controls

The vehicle cradle has no operator controls or power switch.

7.9.2.2 Indicators

The CH1000 has no front indicators. The Ikôn LED serves as the power indicator.

7.9.2.3 Placing The Ikôn In The Vehicle Cradle

Connect the vehicle power to the Ikôn prior to inserting it in the vehicle cradle.

The vehicle cradle is designed with a front opening through which you can pass the connected cable while inserting the Ikôn (see Figure 7.9 on page 265).

When placing the Ikôn into the vehicle cradle, press firmly on the top of the PDA and the Ikôn will bottom out on the cradle base. This action will make the final fit to the cradle base to allow the rear restraining mechanism to resist vibration.
7.9.2.4 Removing The Ikôn From The Vehicle Cradle

When removing the Ikôn, apply slight pressure to the rear and pull upwards. The rear-first motion will assist in disengaging the rear restraining mechanism.

7.9.3 Vehicle Cradle Mounting Recommendations

**Warning:** Before mounting a vehicle 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: “Summit Client Utility (SCU)”). 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.

**Important:** Ikôn vehicle cradles are designed to be compatible with any RAM®-B mounting interface. For other mounting options please contact our Technical Support offices.

The most effective way to mount the vehicle cradle RAM mount is to use the seven #M4 threaded inserts on the rear of the unit. Bolts must not extend more than 5mm into the vehicle cradle. You may also remove the rear Ram-B mount accessory to custom mount the vehicle cradle to a surface other than the recommended RAM-B (Figure 7.10 on page 267).

7.9.3.1 Mounting Template

The vehicle cradle is shipped with detailed mounting instructions including a drill template. Refer to the CHI1000 Ikôn Rugged PDA Vehicle Cradle Quick Start Guide (PN 8000163).

In every case, please take the following precautions:

1. When installing the cradle, ensure the driver's view is not obstructed.
2. Install cradles so as not to obstruct vehicle safety features, i.e. air bags, seat belts, etc.

3. Ensure cradle is secured to the vehicle in a safe location. Injury may result otherwise.

4. Ensure the mounting has the capacity to hold the cradle and the Ikôn. Cradle plus Ikôn weight is approximately 1kg (2.2 lb.).

5. Psion Teklogix has recommended and approved mounts. Consult Psion Teklogix Customer Service for direction.

Figure 7.10 Removing The RAM Mount

To accommodate the service loop of the power cable, leave a 10.2 cm (4 in.) clearance at the bottom of the vehicle cradle. Leave a 17.8 cm (7 in.) clearance at the top of the vehicle cradle to allow easy removal of the Ikôn. When selecting a mounting location, refer to the detailed assembly instructions that are packaged with the pedestal.

**Important:** Before Psion Teklogix releases a product, our engineering team exposes that product to vibration tests to ensure the Ikôn will remain secure during normal use. But as a low cost mount, the cradle will not defend against shock if the vehicle undergoes a front or rear impact. Take care to mount the cradle in an upright position in case of accidents.

If you choose to use a third party company-produced cradle, Psion Teklogix cannot take responsibility for the effects of that third party product when it causes failure to our device.
7.9.4 Cleaning The CH1000 Vehicle Cradle

**Important: Dampen a soft cloth with mild detergent to wipe the unit clean.**

- Use only mild detergent or soapy water on a slightly damp cloth to clean the CH1000. Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The plastic case 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 label, use isopropyl alcohol.

7.10 The Powered Vehicle Cradle – Model No. CH1005A

The CH1005A Powered Vehicle Cradle (12-24 VDC) is designed to securely grip the Ikôn when locked in and provides an easy single-handed release mechanism when the Ikôn needs to be quickly removed from the cradle. The cradle design permits access for the DC input cable to connect to the Ikôn (see Figure 7.14 on page 274). The cradle is also equipped with:

- One USB A connector.
- LED charge indicator.
- A stylus holder and tether latch.
- Built in speaker, identical to the one on Ikôn, that offers hands-free functionality. The powered cradle detects when the Ikôn is docked and can automatically transfer the speaker function from the Ikôn to the cradle.
- Depending on the cradle variant, there can be up to two full RS-232 connectors.
  - PN 1081148-500: no RS-232 connectors.
  - PN 1081148-400: one RS-232 connector.
  - PN 1081148-200: two RS-232 connectors.

The cradle comes with four mounting screws and a CH1005A Powered Cradle Quick Start Guide (PN 8000164), with illustrated electrical and mounting instructions.

Before Psion Teklogix releases a product, our engineering team exposes that product through a series of severe testing to ensure that it will survive in the rugged environments in which our products are typically used. These tests usually include shock and vibration testing as well as IP testing for water and dust, electrical shock, etc.

If a third party vehicle mount is used, the third party should perform the same type of testing in order to ensure that the design will maintain the factory specifications of the product. If the third party company is unwilling to perform the necessary testing and take responsibility
for the effects of the design, then we highly recommend using Psion Teklogix designed and supported accessories.

If you elect to use a third party company produced cradle, Psion Teklogix cannot take responsibility for the effects of that third party product if it causes failure of our device.

**Important:** Before using a vehicle cradle, read all instructions and markings on the housing.

Do not operate a vehicle cradle if damaged by a sharp blow, dropped, or otherwise damaged in any way; qualified service personnel should inspect for internal damage.

Shock and vibration specifications for the Ikôn are verified using Psion Teklogix-approved RAM® mounts and mounting hardware. Use of non-certified Psion Teklogix mounting hardware is not recommended, and may void warranty coverage.

Do not expose to rain or snow! However, the Powered Vehicle Cradle is designed to accept a wet Ikôn handheld without harmful effect.

This Powered Vehicle Cradle cannot be used with non-Ikôn cradle accessories.

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Figure 7.11 CH1005A Front View
Chapter 7: Peripheral Devices & Accessories

CH1005A Vehicle Cradle Mounting Recommendations

7.10.1 CH1005A Vehicle Cradle Mounting Recommendations

**Important:** Before mounting a vehicle cradle in a vehicle, there are a number of operator safety issues that require careful attention. An improperly mounted vehicle 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.

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 Ikôn Powered Vehicle Cradle is designed to be compatible with any RAM-B mounting interface.

The most effective way to mount the vehicle cradle RAM mount is to use the four #M4X12 threaded inserts on the rear of the unit (see Figure 7.12). Bolts are supplied with the cradle and must not extend more than 7 mm into the vehicle cradle.

Figure 7.12 CH1005A Rear View
If you wish to custom mount the vehicle cradle to a surface other than the recommended RAM-B, please take the following precautions:

- When installing the cradle, ensure the driver’s view is not obstructed.
- Install cradles so as not to obstruct vehicle safety features, i.e. air bags, seat belts, etc.
- Ensure cradle is secured to the vehicle in a safe location. Injury may result otherwise.
- Ensure the mounting has capacity to hold the cradle and Ikôn. Cradle plus Ikôn weight is approximately 1.3 kg.
- Psion Teklogix has recommended and approved mounts—consult Customer Service for instructions.

To accommodate the service loop of the connecting cable, leave a 10 cm clearance at the bottom of the vehicle cradle. Leave a 17 cm clearance at the top of the vehicle cradle to allow easy removal of the Ikôn. Refer to the detailed assembly instructions that are packaged with the pedestal when selecting a mounting location.

7.10.1.1 Mounting Template

For detailed mounting instructions including a drill template, refer to the CH1005A Ikôn Rugged PDA Vehicle Cradle Quick Reference Guide (PN 8000165).

7.10.2 Cable Arrangement

Before installing cables between the cradle and other devices, review the following:

- Ensure that drilling holes will not damage the vehicle or its wiring.
- Protect cable runs from pinching, overheating and physical damage.
- Use grommets to protect cables that pass through metal.
- Use plastic straps and tie-downs to secure cables and connectors in their desired location, away from areas where they may get snagged or pulled.
- Keep cables away from heat sources, grease, battery acid and other potential hazards.
- Keep cables away from control pedals and other moving parts that may damage the cables or interfere with the operation of the vehicle.

7.10.3 Electrical Requirements

The Powered Vehicle Cradle is designed to allow the Ikôn to be powered by a vehicle battery. The battery installed in the Ikôn is also recharged by the vehicle battery system.
7.10.3.1 Wiring Vehicle Power To The Cradle

The Powered Vehicle Cradle uses the automotive power outlet or the vehicle fuse box to power from the vehicle battery system. The CLA power cable (PN 1081141) is used for the automotive power outlet; the Power Extension cable (PN 1081146) is used for the vehicle fuse box.

Warning: Applying a voltage above 36VDC or reversing polarity may result in permanent damage to the vehicle cradle power section and will void the product warranty. For safety reasons, disconnect the vehicle cradle power cable when the vehicle battery is being charged by an source other than the vehicle alternator.

Warning: A properly trained technician must perform the power connection using Power Extension cable (PN 1081146) and the CH1005A. Improper connection can damage the vehicle or the cradle.

This cable can be used to provide power to CH1005A from a fused circuit. The vehicle cradle should be added to a fused circuit with a new maximum load capacity of the original load plus the cradle load, which is 4A.

Power cables are equipped with fuses and instructions are supplied with each cable. Use only a 4A slow blow Safety-approved fuse in the fuse assembly.

These cables should only supply operating power from the vehicle to the Powered Vehicle Cradle from 12VDC or 24VDC systems.
Chapter 7: Peripheral Devices & Accessories

USB And Serial Connections

- The Powered Vehicle Cradle draws no more than 1.9 A @ 12 VDC or 0.95 A @ 24 VDC. Any additional wiring, connectors or disconnects used should be rated for at least 4A. The Powered Vehicle Cradle and peripherals can be used with both negative ground systems when using the Power Extension cable. Peripheral wiring should be closely examined to avoid ground loops in positive ground systems.

- There is the option of connecting power to the cradle before or after the ‘key’ switch.
  - It is preferable to wire after the key switch. In this configuration, when the key is turned ON, the vehicle will power the cradle and docked Ikôn, charging the internal battery when needed. When the vehicle ignition is OFF, the Ikôn docked in the cradle will run on its internal battery.
  - However, if the operator switches the key off repeatedly for long periods during a shift, it may make more sense to wire the vehicle cradle before the switch. In this case, the Ikôn will always operate from vehicle power and that power will charge the battery when needed.
  - Keep in mind that the Ikôn will continue to operate with or without vehicle power as long as the internal battery has sufficient charge.

7.10.4 USB And Serial Connections

**Important: Depending on the configuration, the CH1005A Powered Vehicle Cradle has up to three data connectors and one power connector.**

The Powered Vehicle Cradle full configuration consists of two serial DE-9M ports and one USB Type A port located at the base of the product. These are COM and USB ports that allow the communication of serial and USB devices with the Ikôn. These ports are:

- One powered USB A (Host).
- One full Serial port.
- One Serial port that provides power over pin 9. This port is located nearest the front LED and is marked as COM 6 in Figure 7.14.
Peripherals such as scanners, printers, GPS, etc., may be used with the Ikôn and the cradle. Check with Psion Teklogix if there is any compatibility issue with the device you want to use with the Ikôn and the cradle.

7.10.5 Using The Vehicle Cradle

If your Ikôn is equipped with a shoulder strap or protective cover, these accessories need to be removed before installing the unit in a vehicle cradle. There is no need to remove hand straps or tethered devices from the unit.

- Slide the Ikôn into the cradle, and press firmly downward to the point where resistance is met. Press the Ikôn down through the resistance until it bottoms in the cradle—the locks on the latches will engage. This can be one smooth motion if you wish. Electrical contact will not be made until the Ikôn is fully inserted. On a vehicle, it’s a good idea to pull up on the Ikôn to be certain that it is secure.
- To remove the unit, push the latches upwards—the Ikôn will be released so that it can be removed.

7.10.6 Maintaining The Vehicle Cradle

- 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 on a slightly damp cloth to clean the vehicle cradle.
- Avoid abrasive cleaners, solvents, or strong chemicals for cleaning.
- The vehicle cradle has a plastic case and stamped logo that is susceptible to harsh chemicals. The plastic and stamping is partially soluble in oils, mineral spirits and gasoline. They slowly decompose in strong alkaline solutions.
• To clean ink marks from the label, use isopropyl alcohol.
• The two-lock assembly in the Powered Vehicle Cradle holds the Ikôn firmly in place. Although this mechanism is designed for at least 20,000 cycles, it will wear over time and will no longer lock the Ikôn securely in the cradle. For replacement parts and instructions contact Psion Teklogix. Partial disassembly is required.

7.11 Scanners And Imagers
The Ikôn supports several scanner/imager options to address a variety of user application requirements. The scanner/imager installed in your unit can be configured using the Scanner Settings located under Settings>System>Teklogix Scanners (see “Scanner Settings” on page 176) and the Manage Triggers application (see “Manage Triggers” on page 159).

Scanner/imagers available for your Ikôn include: 1D Laser SE955, 1D Imager EV15, and the 2D Imager SX5400.

It is critical that you review the safety information in the “Ikôn Rugged PDA Regulatory & Warranty Guide”, PN 8000148 before proceeding.

7.11.1 Scanning Techniques
• 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 laser scanner, make certain that the scan beam crosses every bar and space on the bar code, including the margins on either end of the symbol.
• If you are using a 2D imaging scanner, make certain the red, oval shaped framing mark is centred 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.

A bar code icon appears on the screen during a scan. While the scanner beam is active, the onscreen message states: SCANNING. To disable the onscreen message:
• Tap on Start>Settings>System tab.
• Tap on the Teklogix Scanners icon followed by the Options tab.
• Under the Display menu, disable Scan Indicator.
When the scan is successful, the bar code data is displayed on the screen until the scan button is released providing that Scan Result is set to on. If this option is not enabled:

- Tap on Start>Settings>System tab.
- Tap on the Teklogix Scanners icon followed by the Options tab.
- In the Display menu, set Scan Result to ON.

### 7.11.2 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 Ikôn 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 Ikôn display the warning without scanning? This suggests a hardware problem in the Ikôn.
- Is the laser beam scanning across the bar code?
- Once the scan beam has stopped, check the scanner window for dirt or fogging.

### 7.11.3 Operating One Dimensional (1D) Laser Scanners

- Turn the Ikôn 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 D-2 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.
7.11.4 Operating Two Dimensional (2D) Imagers

An imager 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 Ikôn 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 imagers 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 Ikôn.

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

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.

- Switch the Ikôn on. Wait until the unit has booted up completely.
- Aim at the bar code and press the scan key or the trigger. Hold the trigger until a successful or failed scan result is obtained.
- 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.

The illumination LEDs will flash (typically several times) and a picture of the bar code(s) is taken.
Chapter 7: Peripheral Devices & Accessories

7.12 Bluetooth Peripherals

The Ikôn is equipped with a Bluetooth radio, making it possible to communicate with a variety of Bluetooth peripherals, including GSM/GPRS handsets, scanners, printers and so on.

Psion Teklogix provides built-in support for the Bluetooth peripherals listed below.

- GSM/GPRS universal handset
- Bluetooth printer
- Bluetooth headset

Keep in mind that Bluetooth and IEEE 802.11b/g radios both operate in the 2.4GHz band. Although the Ikôn 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 Ikôn at the same time, they cannot transmit simultaneously—this has a negative impact on overall system throughput. To minimize the impact on the backbone 802.11g network, Psion Teklogix recommends using Bluetooth peripherals that have low transaction rates (such as printers and scanners).

Refer to “Bluetooth Setup” on page 198 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 pair with the Ikôn host.

7.13 Digital Camera

The Ikôn can be equipped with an optional digital camera that can take still pictures or short video clips. Refer to “Pictures & Videos” on page 101 for details about using the camera.

The Pictures & Videos applet allows the operator to activate the camera for still shots or video clips. It also provides a number of tools to crop photos, adjust picture contrast and brightness, zoom in and out of photos, and save your adjustments.

⚠️ Important: The “Pictures & Videos” program can only display .bmp or .jpg formats. Photos in other formats will need to be converted on your PC before they can be transferred to the Ikôn PDA.
SPECIFICATIONS

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8.1.3 Wireless Communication
8.1.4 Bar Code Applications (optional)
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8.2.4 Bluetooth Radio
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8.1  Ikôn Specifications - Model No. 7505

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

8.1.1  Hardware

Physical Dimensions
- 16 cm x 8.1 cm x 4.5 cm (6.3 in. x 3.2 in. x 1.8 in.)

Weight (with battery pack)
- 450 g (1.0 lbs.)

User Interface
   Color Touchscreen Display: 9.39 cm (3.7 in.) diagonal
   Full VGA 480x640 resolution
   Transflective, portrait mode TFT
   Adjustable Backlight
   Sunlight readable (for outdoor use)
   High reliability LED backlight
   Easily replaceable and customizable bezel
   Passive stylus or finger operation
   Signature capture

Keyboards:
   Alphanumeric
   Numeric
   Ergonomically enhanced for ambidextrous, one-hand operation
   Backlit, high durability hard-capped keys

Indicators And Controls:
   3 LEDs indicate battery charge, application, and radio on/off status

Audio:
   Hands-free speaker, total output volume: 95dB SPL
   Microphone/Receiver
Wireless headset via Bluetooth capability
Audio jack (mono)

**Expansion Slots**
- One Micro-SD memory card slot – user accessible.
- 60-PIN expansion interface: GSM/GPRS EDGE, and other third-party expansion modules developed using Psion Teklogix Ikôn Hardware Developer’s Kit.
- Flex cable interface with robust connector: supports scanner (serial) and imager (USB) modules.

**External Connectors**
- One Tether connection with full RS-232 and USB On-the-Go (OTG) functionality.
- One Low-Insertion Force (LIF) docking connector.
- DC Power Jack.

**Power Management**
- Battery Pack: Lithium-Ion 5000 mAh capacity
- Advanced Smart Battery with gas gauge.
- 3 power source options: Runs off battery, AC power, or automotive power supplies.
- Backup power >10 minutes.

**Environmental Specifications**
- Drop Test: Withstands 6 drops at 1.5 meters (5 ft.) on all surfaces.
- Rain/Dust: IP65, IEC 60529.
- Operating Temperature: -10°C to +50°C (14°F to 122°F)
- Relative Humidity: 5% to 95% RH non-condensing
- Storage Temperature: -20°C to +60°C (-4°F to 140°F)
- Shock and Vibration: 5 to 400 Hz PSD (random) and 30 g (3 axis)
- ESD: +/- 8kVdc air discharge, +/- 4kVdc contacts

**8.1.2 Software**

**Platform**
- XScale PXA270 @ 624 MHz, 32 bit RISC CPU
Chapter 8: Specifications

Wireless Communication

- 256 MB Flash ROM, 128 MB RAM

Operating System
- Microsoft® Windows® Mobile® 6 Classic
- Microsoft® Windows® Mobile® 6 Professional

Programming Environment
- Psion Teklogix Mobile Devices SDK
- Hardware Development Kit (HDK)
- .NET and C++ programming using Microsoft® Visual Studio® 2005
- Java programming supporting JDK 1.2.2 or higher
- Standard Protocol APIs
  - Windows sockets (CE .net)

Application Software
- Internet Explorer® Mobile included with Windows® Mobile® 6
- Windows Mobile Device Center
- Voice dialer and Personal Information Manager (PIM) included with Windows Mobile 6.1 Professional
- PTX Connect VoIP
- Optional Open TekTerm terminal emulation software, supports IBM 5250, IBM 3270, HP2392, ANSI and TESS
- Mobile Control Center (MCC) device management

8.1.3 Wireless Communication

Note: 802.11b/g, GSM and Bluetooth are available simultaneously.

Optional expansion modules for:
- 802.11b/g (proprietary module) operating in the 2.4GHz band:
  - Supports IEEE 802.11b data rates of 1,2,5.5 and 11Mbps using Direct Sequence Spread Spectrum (DSSS).
  - Supports IEEE 802.11g data rates of 6,9,12,24,36,48 and 54Mbps, using Orthogonal Frequency Division Multiplexing (OFDM) base band modulation
- GSM/GPRS EDGE (via expansion interface)
Quad-Band – 850/900/1800/1900 MHz
- Voice and Data
- GPRS Class B, Multi-Slot Class 12
- EGPRS Class B, Multi-Slot Class 12

- UMTS
  - UMTS/HSDPA: Triple band, 850/1900/2100 MHz
  - GSM/GPRS/EDGE: Quad band, 850/900/1800/1900 MHz
  - Audio: 1 analog interface
  - USB supports a USB 2.0 Full Speed 12 Mbit/s device interface
- Bluetooth class 2, version 2.0
  - Support Enhanced Data Rate (EDR) for up to 3Mbps data rate
  - Support Advanced Frequency Hopping (AFH) for reduced interference with 802.11b/g radio

8.1.4 Bar Code Applications (optional)

Note: All are user upgradeable.

- Optional 1D EV15 imager
- Optional 2D SX5400 imager
- Optional 1D SE955 laser scanner

8.1.5 Digital Camera (optional)

- Colour 2 Megapixel (UXGA) fixed focus with flash
- Technology: CMOS
- Max Picture Resolution: 1600x1200
- Focal Length: 3.52mm
- Focus Range: 50cm to infinity
- Functions: Auto exposure, white balance, black reference, color saturation
- Flash: Integrated LED flash
8.1.6 Accessories

For details about accessories available with the Ikôn, refer to Chapter 7: “Peripheral Devices & Accessories”.

- **Carrying accessories:**
  - Hand strap with or without tether and stylus.
  - Carrying case, either functional or non-functional
  - Soft shell holster

- **Communications:**
  - Quad dock (4-site) with 10/100 BaseT Ethernet and charge functions.
  - Desktop dock with Type A and Type B USB connectivity and charge functions for an internal battery along with a spare battery.

- **Power supplies:**
  - AC wall adaptor
  - Automotive power adaptor

- **Vehicle peripherals:**
  - Powered and Non-powered cradle
  - RAM Mount with screws

8.1.7 Approvals

<table>
<thead>
<tr>
<th>Safety:</th>
<th>CSA/UL60950-1, IEC 60950-1, EN60950-1</th>
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<td>FCC Part 15 Class B</td>
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<td>EN 55022</td>
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<td>RF:</td>
<td><em>Bluetooth</em> and 802.11b/g: EN300 328, Part 15.247</td>
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<td>EN301 511; EN50360/361, NAPRD03;</td>
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8.2 Radio Specifications

8.2.1 802.11 b/g WLAN Radio

- **Form Factor**: Proprietary module based on 16 bit CF interface
- **Antenna port**: Two Hirose U.FL connectors for both transmit and receive antenna diversity
- **Antenna**: Two PCB slot antennas 2.1 dBi
- **Transmit Power**: 802.11b: 70mW (+18.5 dBm)  
  802.11g: 30mW (+15 dBm)
- **Frequency Range**: 2.400 - 2.4897 GHz
- **Channels**: FCC: 11  
  ETSI: 13  
  TELEC: 13
- **RX Sensitivity**: -96dBm @ 1 Mbps, -90 dBm @ 11 Mbps,  
  -94 dBm @ 6 Mbps, -75 dBm @ 54 Mbps
- **Data Rates**: 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps  
  802.11b: 1, 2, 5.5, 11 Mbps

8.2.2 Siemens MC75 GSM/GPRS/EDGE Radio

- **Quad-Band GSM 850/900/1800/1900 MHz**
- **EDGE (E-GPRS) multi-slot class 12**
- **GPRS multi-slot class 12**
- **GSM release 99**
- **Output power**:  
  - Class 4 (2 W) for EGSM850  
  - Class 4 (2 W) for EGSM900  
  - Class 1 (1 W) for GSM1800
- Class 1 (1 W) for GSM1900

Control via AT commands
(Hayes 3GPP TS 27.007 and 27.005)

Internet Services: TCP, UDP, HTTP, FTP, SMTP, POP3
Supply voltage range: 3.2 to 4.3 V

Specifications for:

EDGE data transmission: EDGE class 12: max 236.8 kbps (downlink)
  Mobile station class B
  Modulation and coding scheme MCS 1-9

GPRS data transmission: GPRS class 12
  Mobile station class B
  PBCCH support
  Coding schemes CS 1-4

CSD data transmission: Up to 14.4 kbps
  V.110
  Non-transparent mode

SMS: Point-to-point MO and MT
  Text and PDU mode

Voice: Triple-rate codec for HR, FR and EFR
  Adaptive multi-rate AMR
  Basic hands-free operation
  Echo cancellation
  Noise reduction

Interfaces: Hirose U.FL-R-SMT 50 ohm antenna connector
  Antenna solder pad
  Molex 80-pin board-to-board connector
  - Power supply
  - Audio: 2x analog, 1x digital
8.2.3 Siemens HC25 UMTS Modem

Frequency bands:
- UMTS/HSDPA: Triple band, 850//1900/2100MHz
- GSM/GPRS/EDGE: Quad band, 850/900/1800/1900MHz

GSM class:
- Small MS

Output power (as per Release 99):
- Class 4 (+33dBm ±2dB) for EGSM850
- Class 4 (+33dBm ±2dB) for EGSM900
- Class 1 (+30dBm ±2dB) for GSM1800
- Class 1 (+30dBm ±2dB) for GSM1900
- Class E2 (+27dBm ±3dB) for GSM 850 8-PS
- Class E2 (+27dBm ±3dB) for GSM 900 8-PS
- Class E2 (+26dBm +3/-4dB) for GSM 1800 8-PSK
- Class E2 (+26dBm +3/-4dB) for GSM 1900 8-PSK
- Class 3 (+24dBm +1/-3dB) for UMTS 2100, WCDMA FDD BdI
- Class 3 (+24dBm +1/-3dB) for UMTS 1900, WCDMA FDD BdII
- Class 3 (+24dBm +1/-3dB) for UMTS 850, WCDMA FDD BdV

RoHS:
- All hardware components fully compliant with EU RoHS Directive

HSDPA features:
- 3GPP Release 5, DL 3.6 Mbps, UL 384 kbps
- UE CAT. [1-6], 11, 12 supported

UMTS features:
- 3GPP Release 4, PS data rate – 384 kbps DL / 384 kbps UL
- CS data rate – 64 kbps DL / 64 kbps UL

GSM / GPRS / EGPRS features: Data transfer GPRS
- Multislot Class 10
- Full PBCCH support
- Mobile Station Class B
- Coding Scheme 1 – 4

EGPRS
- Multislot Class 10
- EDGE E2 power class for 8 PSK
- Downlink coding schemes – CS 1-4, MCS 1-9
- Uplink coding schemes – CS 1-4, MCS 1-9
- Uplink coding schemes – CS 1-4, MCS 1-9
- BEP reporting
- SRB loopback and test mode B
- 8-bit, 11-bit RACH
- PBCCH support
- 1 phase / 2 phase access procedures
- Link adaptation and IR
- NACC, extended UL TBF
- Mobile Station Class B

CSD
- V.110, RLP, non-transparent
- 9.6 kbps

SMS: Point-to-point MT and MO
Text and PDU mode
Audio: Audio speech codecs
GSM: AMR, EFR, FR, HR
3GPP: AMR
DTMF supported
CEPT and ANSI supervisory tones supported
Chapter 8: Specifications

Bluetooth Radio

Software:
- AT commands AT-Hayes GSM 07.05 and 07.07, Siemens
- AT commands for RIL compatibility (NDIS/RIL)
- Microsoft™ compatibility RIL / NDIS for Windows Mobile™

Interfaces:
- USB Supports a USB 2.0 Full Speed (12Mbit/s) device interface
- Audio: 1 analog interface
- UICC interface: Supported chip cards: SIM / UICC 3V, 1.8V
- Antenna 50Ohms. External antenna can be connected via antenna connector or antenna pad (spring contact)
- Module interface 50-pin board-to-board connector

8.2.4 Bluetooth Radio

Embedded (920 kbps serial interface)

Bluetooth Version
- Version 2.0 compliant (features Adaptive Frequency Hopping for better co-existence with 802.11 radio and Enhanced Data Rate (EDR) for up to 3Mbps data rate)

Chip Antenna Gain
- 1dBi peak

Transmit Power
- -3 dBm (0.5 mW) minimum, +4 dBm (2.5 mW) max

Frequency Range
- 2.400 - 2.4835 GHz

RX Sensitivity (BER£0.1%)
- -80 dBm max

Data Rate
- V1.2 = 732.2kbps and 57.6kbps asymmetric, 433.9kbps symmetric
- V2.0 = 2 & 3Mbps
8.3 Lithium-Ion 5000 mAh Battery Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
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<tr>
<td>Model Number</td>
<td>CH3000</td>
</tr>
<tr>
<td>Part Number</td>
<td>1081236 (North America) 1081506 (World)</td>
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<tr>
<td>Chemistry</td>
<td>Lithium-Ion (Li-Ion)</td>
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<tr>
<td>Capacity</td>
<td>5000 mAh nominal at 1000mA discharge 20 C to 3.0V (min)</td>
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<tr>
<td>Voltage</td>
<td>3.7V nominal (3.0V min. to 4.2V max.)</td>
</tr>
<tr>
<td>Cell Configuration</td>
<td>2P1S (2 parallel connected cells)</td>
</tr>
<tr>
<td>Maximum charge voltage</td>
<td>4.2V +/- 1%</td>
</tr>
<tr>
<td>Recommended charge termination timeout</td>
<td>5.0 hr - charging must stop</td>
</tr>
<tr>
<td>Charge temperature</td>
<td>0°C to +40°C (32°F to +104°F)</td>
</tr>
<tr>
<td>Discharge Temperature</td>
<td>-20°C to +50°C (-4°F to +122°F)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-20°C to +50°C (-4°F to +122 °F)–storage at elevated temperatures not recommended 25°C (77 °F)–recommended storage temperature.</td>
</tr>
<tr>
<td>Cycle Life</td>
<td>300 cycles minimum with no degradation below 80% of nominal capacity based on 1C charge / 1C discharge rates (to 3.0V) @ 25°C (77 °F)</td>
</tr>
</tbody>
</table>

8.4 Scanner/Imager Specifications

8.4.1 SE 955HP Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SE 955HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan Angle</td>
<td>47° ± 3° default / 35° ± 3° reduced</td>
</tr>
<tr>
<td>Scan Rate</td>
<td>104 (+ 12) scans/sec (bi-directional)</td>
</tr>
<tr>
<td>Scan Pattern</td>
<td>Linear</td>
</tr>
<tr>
<td>Wavelength</td>
<td>650nm</td>
</tr>
</tbody>
</table>


8.4.1.1 SE 955HP Decode Zone

<table>
<thead>
<tr>
<th>Decode Zone Typical</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 mil</td>
</tr>
<tr>
<td>5 mil</td>
</tr>
<tr>
<td>7.5 mil</td>
</tr>
<tr>
<td>10 mil</td>
</tr>
<tr>
<td>UPC 100%</td>
</tr>
<tr>
<td>15 mil</td>
</tr>
<tr>
<td>20 mil</td>
</tr>
<tr>
<td>40 mil</td>
</tr>
<tr>
<td>55 mil</td>
</tr>
<tr>
<td>* dependent on width of bar code</td>
</tr>
</tbody>
</table>

8.4.2 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>
</tbody>
</table>
### 8.4.2.1 EV15 Imager Decode Zone

<table>
<thead>
<tr>
<th>Mil Size</th>
<th>Minimum range (Inches)</th>
<th>Maximum range (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>2.5</td>
<td>7</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>UPC</td>
<td>2</td>
<td>14.5</td>
</tr>
<tr>
<td>20</td>
<td>2.5</td>
<td>22</td>
</tr>
<tr>
<td>40</td>
<td>3</td>
<td>35.5</td>
</tr>
</tbody>
</table>

High quality symbols in normal room light.

### 8.4.3 SX5400* Imager

<table>
<thead>
<tr>
<th>Specification</th>
<th>SX5400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical resolution</td>
<td>752H x 480V</td>
</tr>
<tr>
<td>Field of view at 160mm</td>
<td>120mm (H) x 78mm (V) 41.1° (H) x 27.4° (V)</td>
</tr>
</tbody>
</table>
## 8.4.3.1 SX5400 Imager Performance

The table below presents the typical performance of the SX5400 Imager at 300 lux (@ 160mm focus when using Grade A photographic-quality bar codes). Listed are the average near, far, and Depth of Reading (DOR) numbers.

<table>
<thead>
<tr>
<th>Symbology</th>
<th>Size (mil)</th>
<th>Near Avg. (inches)</th>
<th>Far Avg. (inches)</th>
<th>DOR Avg. (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C39</td>
<td>7.5</td>
<td>4.0</td>
<td>7.0</td>
<td>3.0</td>
</tr>
<tr>
<td>C39</td>
<td>10</td>
<td>2.75</td>
<td>9.25</td>
<td>6.5</td>
</tr>
<tr>
<td>C39</td>
<td>15</td>
<td>2.25</td>
<td>11.0</td>
<td>8.75</td>
</tr>
<tr>
<td>PDF6.6</td>
<td>6.6</td>
<td>4.0</td>
<td>6.5</td>
<td>2.5</td>
</tr>
</tbody>
</table>

*Formerly known as Symagery SX5400.
8.4.4 HHP 5000 Imager Performance

<table>
<thead>
<tr>
<th>Symbology</th>
<th>Size (mil)</th>
<th>Near Avg. (inches)</th>
<th>Far Avg. (inches)</th>
<th>DOR Avg. (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDF10</td>
<td>10</td>
<td>3.25</td>
<td>9.0</td>
<td>5.75</td>
</tr>
<tr>
<td>PDF15</td>
<td>15</td>
<td>2.25</td>
<td>10.75</td>
<td>8.5</td>
</tr>
<tr>
<td>DM15</td>
<td>15</td>
<td>3.0</td>
<td>8.0</td>
<td>5.0</td>
</tr>
<tr>
<td>QR15</td>
<td>15</td>
<td>3.75</td>
<td>7.5</td>
<td>3.75</td>
</tr>
<tr>
<td>UPC</td>
<td>12.5</td>
<td>3.0</td>
<td>9.5</td>
<td>6.5</td>
</tr>
</tbody>
</table>

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>HHP 5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Sensor</td>
<td>752H x 480 CMOS sensor</td>
</tr>
<tr>
<td>Motion Tolerance</td>
<td>4 in. (10.2 cm) per second</td>
</tr>
<tr>
<td>Rotational Sensitivity</td>
<td>360°</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>±40°</td>
</tr>
<tr>
<td>Ambient light</td>
<td>Total darkness to 100,000 lux (full sunlight)</td>
</tr>
<tr>
<td>Illumination LEDs</td>
<td>626 nm ±30 nm</td>
</tr>
<tr>
<td>Aiming</td>
<td>LEDs: 526 nm ±30 nm</td>
</tr>
<tr>
<td></td>
<td>Laser: 650 nm ±10 nm</td>
</tr>
<tr>
<td>Size</td>
<td>1.78 cm Depth x 2.79 cm Width (without mounting tabs) x 1.21 cm Height</td>
</tr>
<tr>
<td></td>
<td>0.7 in. Depth x 1.1 in. Width (without mounting tabs) x 0.475 in. Height</td>
</tr>
<tr>
<td>Weight</td>
<td>5.9 grams (.21 ounces)</td>
</tr>
<tr>
<td>Operational Input Voltage</td>
<td>Imager: 3.3 VDC ±5% (23°C)</td>
</tr>
<tr>
<td></td>
<td>Illumination + Aimer 5300: 3.0 VDC to 5.5 VDC (23°C)</td>
</tr>
</tbody>
</table>
Chapter 8: Specifications
HHP 5000 Imager Performance

### 8.4.4.1 HHP 5000 Decode Zone

**Performance Focal Point**

<table>
<thead>
<tr>
<th>SR 7</th>
<th>inches (17.8 cm) from lens plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF4.5</td>
<td>inches (11.4 cm) from lens plate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SR Working Range</th>
<th>8.3 mil Linear (.02 cm)</th>
<th>10 mil PDF417 (.025 cm)</th>
<th>13 mil UPC (.033 cm)</th>
<th>15 mil Data Matrix (.038 cm)</th>
<th>15 mil QR (.038 cm)</th>
<th>35 mil Maxi-code (.089 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near</td>
<td>3.5 in. (8.9 cm)</td>
<td>3.1 in. (7.9 cm)</td>
<td>2.1 in. (5.3 cm)</td>
<td>2.3 in. (5.8 cm)</td>
<td>2.1 in. (7.9 cm)</td>
<td>2.0 in. (5.1 cm)</td>
</tr>
<tr>
<td>Far</td>
<td>7.6 in. (19.3 cm)</td>
<td>9 in. (22.9 cm)</td>
<td>13.2 in. (33.5 cm)</td>
<td>10.2 in. (25.9 cm)</td>
<td>8.8 in. (22.4 cm)</td>
<td>13.0 in. (33 cm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SF Working Range</th>
<th>6.6 mil PDF417 (.017 cm)</th>
<th>7.5 mil Linear (.019 cm)</th>
<th>8.3 mil Data Matrix (.021 cm)</th>
<th>8.3 mil QR (.021 cm)</th>
<th>10 mil Linear (.025 cm)</th>
<th>13 mil UPC (.033 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near</td>
<td>2.8 in. (7.1 cm)</td>
<td>2.5 in. (6.4 cm)</td>
<td>3.4 in. (8.6 cm)</td>
<td>3.4 in. (8.6 cm)</td>
<td>2.2 in. (5.6 cm)</td>
<td>2.0 in. (5.1 cm)</td>
</tr>
<tr>
<td>Far</td>
<td>6 in. (15.2 cm)</td>
<td>6.5 in. (16.5 cm)</td>
<td>5.7 in. (14.5 cm)</td>
<td>5.4 in. (13.7 cm)</td>
<td>7.6 in. (19.3 cm)</td>
<td>8.9 in. (22.6 cm)</td>
</tr>
</tbody>
</table>
This appendix provides details about each tab in the Summit Client Utility (SCU).

For quick setup instructions for the 802.11b/g Summit radio using the Summit Client Utility (SCU), refer to “Setting Up An 802.11b/g Radio–Summit Client Utility” on page 17.

A.1 SCU Tabs

This section provides a detailed description of each of the tabs available in the SCU – Main, Profile, Status, Diags and Global.

A.2 Main Tab

The Main tab is displayed when you tap on the Start>Programs>SCU icon.

• **Enable/Disable Radio**: Enables or disables the radio. This is a toggle button; when the radio is enabled, this button reads Disable Radio and when the radio is disabled, the button reads Enable Radio.
Appendix A: Summit Client Utility (SCU)

Profile Tab

- **Active Profile**: Lists the name(s) of the active configuration profile(s). When a profile is chosen from the Active profile dropdown menu, the settings for that profile become active. If ThirdPartyConfig is selected, after the Ikôn goes through a power cycle, WZC is used for configuration of the radio. See “ThirdPartyConfig” on page A-7 for details.
- **Radio Type**: Indicates the type of radio installed in the device, e.g. “BG” when an 802.11b/g radio is installed.
- **Reg. Domain**: Indicates the regulatory domain (e.g. ETSI, FCC or TELEC) for which the radio is configured. “Worldwide” means that the radio can be used in any domain.
- **Status**: Indicates if the radio is associated to an access point. If this is not the case, Association Status indicates the radio status.
- **Auto Profile**: When this option is set to On, SCU automatically switches between configured network profiles depending on their availability. To specify which networks will be scanned, tap on the List button, and add a checkmark next to the profiles you want SCU to consider when switching between networks; only the selected networks will be scanned for Auto Profile selection.
- **Driver and SCU**: These fields display the version of the device driver and the SCU that are running on the Ikôn.
- **About SCU**: This box provides details about the SCU software.

A.3 Profile Tab

The Profile tab allows you to define radio and security settings that are stored in the registry as part of the configuration profile.
The profile you create and save is listed in the *Active Profile* dropdown menu in the *Main* tab. You can define up to 20 *profiles*.

- **Edit Profile**: Used to choose the profile to be viewed or edited. If *ThirdPartyConfig* is chosen, after the Ikôn goes through a power cycle, WZC is used for configuration of the radio.
- **New**: Allows you to create a new profile with default settings and assign it a name.
- **Rename**: Allows you to assign a profile name.
- **Delete**: Deletes the profile unless it is currently active.
- **Scan**: Opens a new window which displays a list of available access points with their respective SSIDs, Signal Strength (RSSI value) and Security Status. Selecting an AP returns you to the profile page and populates a new profile with the information available from the scan to simplify setting up a new profile.
- **Radio**: Lists radio attributes. These attributes can be individually chosen from this menu. When an attribute is chosen, an associated list of options is displayed where you can assign new settings or view existing settings.
- **Commit**: Saves all changes.
The following table describes the options in the *Radio Attributes* dropdown menu:

<table>
<thead>
<tr>
<th>Radio Attribute</th>
<th>Description</th>
<th>Value</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSID</td>
<td>Service set identifier (SSID) for WLAN to which the radio connects.</td>
<td>Maximum of 32 characters.</td>
<td>None</td>
</tr>
<tr>
<td>Client Name</td>
<td>Name assigned to radio &amp; Ikôn into which it is installed.</td>
<td>Maximum of 16 characters.</td>
<td>None</td>
</tr>
<tr>
<td>Power Save</td>
<td>Power save mode for radio.</td>
<td>CAM: Constantly awake.</td>
<td>Fast</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum: Maximum power savings.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fast: Fast power save mode.</td>
<td></td>
</tr>
<tr>
<td>Tx Power</td>
<td>Maximum transmit power.</td>
<td>Max: Maximum defined for current regulatory domain.</td>
<td>Max</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Measured in mW: 50, 30, 10, 1.</td>
<td></td>
</tr>
<tr>
<td>Bit Rate</td>
<td>Used by radio when interacting with WLAN access point.</td>
<td>Auto: Rate automatically negotiated with access point.</td>
<td>Auto</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rates in Mbps: 1, 2, 5.5, 6.9, 11, 12, 18, 24, 36, 48, 54.</td>
<td></td>
</tr>
<tr>
<td>Radio Mode</td>
<td>Used by 802.11g when interacting with access point.</td>
<td>B rates only: 1, 2, 5.5, &amp; 11 Mbps.</td>
<td>BG rates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G rates only: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps.</td>
<td>optimized</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BG rates full: All B and G rates.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>BG rates optimized: 1, 2, 5.5, 6, 11, 24, 36 &amp; 54 Mbps.</td>
<td></td>
</tr>
<tr>
<td>Auth Type</td>
<td>802.11 authentication type used when associating with access point.</td>
<td>Open, shared-key, or LEAP (Network-EAP).</td>
<td>Open</td>
</tr>
<tr>
<td>EAP Type</td>
<td>Extensible Authentication Protocol type used for 802.1X authentication to access point.</td>
<td>None, LEAP, EAP-FAST, PEAP-MSCHAP – To use EAP-TLS, you must use WZC.</td>
<td>None</td>
</tr>
</tbody>
</table>
Appendix A: Summit Client Utility (SCU)

SCU Security Capabilities

- **EAP-Type & Encryption**: Security settings. These settings allow you to enhance the security of data across the wireless LAN. Refer to “EAP Credentials” on page A-6 and “SCU Security Capabilities” on page A-5 for details about these settings.

### A.3.1 SCU Security Capabilities

The SCU provides integrated security to protect transmitted data as well as the PDA and wireless WAN infrastructure that transmit and receive data.

A foundational element of the IEEE 802.11i WLAN security standard is IEEE 802.1X and a critical application on a mobile device is an 802.1X supplicant. This supplicant provides an interface between the radio and the operating system and supports the authentication and encryption elements required for 802.11i, also known as Wi-Fi Protected Access 2 (WPA2), as well as predecessors such as WPA and WEP. Summit software includes an integrated supplicant that supports a broad range of security capabilities, including:

- 802.1X authentication using pre-shared keys or an EAP type, required for WPA2 and WPA.
- Data encryption and decryption using WPA2 AES, WPA TKIP or WEP.

Common EAP types include:

- **EAP-TLS**: Uses the same technology as a follow-on to Secure Socket Layer (SSL). It provides strong security, but relies on client certificates for user authentication.

<table>
<thead>
<tr>
<th>Radio Attribute</th>
<th>Description</th>
<th>Value</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credentials</td>
<td>Authentication credentials for the selected EAP type. Refer to “EAP Credentials” on page A-6.</td>
<td>User: Username or Domain/Username (up to 64 characters). Password: up to 64 characters. For PEAP: CA Cert–CA server certificate filename.</td>
<td>None</td>
</tr>
<tr>
<td>Encryption</td>
<td>Type of encryption used to protect transmitted data.</td>
<td>None, Manual WEP, Auto WEP (generated during EAP authentication), WPA PSK, WPA TKIP, WPA2 PSK, WPA2 TKIP, WPA2 AES, CCKM TKIP. For Manual WEP: Up to four static WEP keys. For PSK: ASCII passphrase or hex PSK.</td>
<td>None</td>
</tr>
</tbody>
</table>
Appendix A: Summit Client Utility (SCU)

EAP Credentials

- **PEAP**: Provides secure user authentication by using a TLS tunnel to encrypt EAP traffic. Two different inner methods are used with PEAP:
  - EAP-MSCHAPV2, resulting in PEAP-MSCHAP: This is appropriate for use against Windows Active Directory and domains.
  - EAP-GTC, resulting in PEAP-GTC: This is for authentication with one-time passwords (OTPs) against OTP data bases such as SecureID.
- **LEAP**: Is an authentication method for use with Cisco WLAN access points. LEAP does not require the use of server or client certificates. LEAP supports Windows Active Directory and domains but requires the use of strong passwords to avoid vulnerability to off-line dictionary attacks.
- **EAP-FAST**: Is a successor to LEAP and does not require strong passwords to protect against off-line dictionary attacks. Like LEAP, EAP-FAST does not require the use of server or client certificates and supports Windows Active Directory and domains.

Note: PEAP and EAP-TLS require the use of Windows facilities for the configuration of digital certificates.

SCU EAP Types

The following EAP types are supported by the integrated supplicant and can be configured in SCU: PEAP-MSCHAP, PEAP-GTC, LEAP and EAP-FAST. With each of these four types, if authentication credentials are not stored in the profile, you will be prompted to enter credentials the first time the radio attempts to associate to an access point that supports 802.1X (EAP).

Consider the following when configuring one of the EAP types:

- **PEAP-GTC**: SCU supports static (login) passwords only.
- **LEAP**: Strong passwords are recommended.
- **EAP-FAST**: SCU supports automatic, not manual, PAC provisioning.

EAP-TLS will work with a 802.11b/g radio module when Windows Zero Config (WZC) rather than the SCU is used to configure the type. With WZC, the native Windows supplicant instead of the SCU integrated supplicant is used.

A.3.2 EAP Credentials

Keep the following in mind when defining security settings:

- If the credentials specified in the profile are incorrect and that profile is used, the authentication fails without an error message; you will not be prompted to enter correct credentials.
Appendix A: Summit Client Utility (SCU)  
ThirdPartyConfig

- If the credentials are not specified in the profile, when the radio tries to associate using that profile, you will be prompted to enter the credentials.
- When prompted, you can enter valid credentials, enter invalid credentials, or cancel the operation.
- If you enter valid credentials and tap OK, the radio will associate and authenticate.
- If you enter invalid credentials and tap OK, the radio will associate but will not authenticate; you will be prompted again to enter credentials.
- If you tap Cancel or clear the credentials fields and tap OK, the radio will not attempt to associate with that profile until you perform one of the following actions (while the profile is the Active Profile):
  - Cause the Ikôn to go through a power cycle or suspend/resume.
  - Disable and enable the radio, or tap the Reconnect button on the Diags windows.
  - Modify the profile, and tap on Commit.

Alternatively, you can choose another profile as the active profile and then switch back to the profile for which EAP authentication was cancelled.

A.3.3 ThirdPartyConfig

If you choose to configure ThirdPartyConfig, the SCU will work with the operating system’s Windows Zero Config (WZC) to configure radio and security settings for the CF radio installed in the unit.

Choosing this profile means that WZC must be used to define the following radio and security options: SSID, Auth Type, EAP Type and Encryption. The SCU settings for ThirdPartyConfig include: Client Name, Power Save, Tx Power, Bit Rate and Radio Mode. These SCU settings along with SCU global settings and the WZC settings will be applied to the radio module.
Appendix A: Summit Client Utility (SCU)

Status Tab

A.4 Status Tab

The Status tab provides status information including IP address and MAC address for the client radio, IP address and MAC address for the AP, signal strength, channel, transmit power and data rate.

A.5 Diags Tab

Use the Diags tab as a troubleshooting tool. The functions are as follows:

- **(Re)connect**: Enables/Disables the radio, applies/reapplies current profile and tries to associate and authenticate to the wireless LAN, logging all activity in the output area at bottom of the dialog box.
Appendix A: Summit Client Utility (SCU)

**Global Settings Tab**

- **Release/Renew**: Obtains a new IP address through DHCP and logs all activity in the output area.
- **Start Ping/Stop Ping**: Starts a continuous ping to the address in the text box next to this button. This a toggle button so when you tap on it, it changes to Stop Ping. Closing this window or tapping on another button also stops the ping.
- **Diagnostics**: Attempts to connect or reconnect to an AP, and provides a more detailed dump of data than if you used (Re)connect. The dump includes the radio state, profile settings, global settings and BSSID list of APs. The SCU is saved to a file called _sdc_diag.txt in the Windows directory.

### A.6 Global Settings Tab

The *Global* settings tab allows you to define radio and security settings that apply to all *profiles*, along with settings that apply specifically to the *SCU*.

The *Global* settings in the table below can be edited in the *SCU*:

<table>
<thead>
<tr>
<th>Global Setting</th>
<th>Description</th>
<th>Value</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roam Trigger</td>
<td>If RSSI from AP is less than roam trigger value, radio performs roam scan</td>
<td>dBm: -50, -55, -60, -65, -70, -75, Custom</td>
<td>-75</td>
</tr>
<tr>
<td></td>
<td>or probes for an AP with stronger signal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roam Delta</td>
<td>Amount by which second AP’s RSSI must exceed the current moving average RSSI</td>
<td>dBm: 5, 10, 15, 20, 25, 30, 35, Custom</td>
<td>10</td>
</tr>
</tbody>
</table>
## Appendix A: Summit Client Utility (SCU)

### Global Settings Tab

<table>
<thead>
<tr>
<th>Global Setting</th>
<th>Description</th>
<th>Value</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roam Period</td>
<td>Following an association or roam scan (with no roam), the number of seconds the radio collects RSSI scan data before considering roaming.</td>
<td>Seconds: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, Custom</td>
<td>10</td>
</tr>
<tr>
<td>BG Channel Set</td>
<td>Defines the 2.4 GHz channels to be scanned when the radio is set to roam and needs to determine what APs are available.</td>
<td>Full (all channels) 1, 6, 11 1, 7, 13 Custom</td>
<td>Full</td>
</tr>
<tr>
<td>DFS Channels</td>
<td>Reserved</td>
<td>Off, On</td>
<td>Off</td>
</tr>
<tr>
<td>Aggressive Scan</td>
<td>When this setting is On and the current connection to an AP becomes unreliable, the radio scans for available APs more aggressively. Aggressive scanning complements and works in conjunction with the standard scanning that is configured through the Roam Trigger, Roam Delta, and Roam Period settings. It is recommended that Aggressive Scan is left On unless there is significant co-channel interference because of overlapping coverage from APs on the same channel.</td>
<td>Off, On</td>
<td>On</td>
</tr>
<tr>
<td>CCX features</td>
<td>Activates three CCX features: AP-assisted roaming, AP-specified maximum transmit power and radio management.</td>
<td>Optimized, Full, Off</td>
<td>Optimized</td>
</tr>
<tr>
<td>WMM</td>
<td>Use Wi-Fi Multimeda Extensions, also known as WMM.</td>
<td>On, Off</td>
<td>Off</td>
</tr>
<tr>
<td>TX Diversity</td>
<td>Defines how to handle antenna diversity when transmitting data to AP.</td>
<td>-Main only: Use main antenna only. -Aux only: Use auxiliary antenna only. -On: Use diversity.</td>
<td>Main only</td>
</tr>
<tr>
<td>Global Setting</td>
<td>Description</td>
<td>Value</td>
<td>Default</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>RX Diversity</td>
<td>Defines how to handle antenna diversity when receiving data from AP.</td>
<td>-On-Start on Main: On startup, use main antenna. -On-Start on Aux: On startup, use auxiliary antenna. -Main only: Use main antenna only. -Aux only: Use auxiliary antenna only.</td>
<td>On-Start on Main</td>
</tr>
<tr>
<td>Frag Thresh</td>
<td>Packet is fragmented when packet size (in bytes) exceeds threshold.</td>
<td>Integer from 256 to 2346.</td>
<td>2346</td>
</tr>
<tr>
<td>RTS Thresh</td>
<td>Packet size above which RTS/CTS is required on link.</td>
<td>An integer from 0 to 2347.</td>
<td>2347</td>
</tr>
<tr>
<td>LED</td>
<td>Available only with MCF10G</td>
<td>On, Off</td>
<td>Off</td>
</tr>
<tr>
<td>Tray Icon</td>
<td>Enables the System Tray icon.</td>
<td>Off, On</td>
<td>Off</td>
</tr>
<tr>
<td>Hide Password</td>
<td>On - SCU as well as EAP authentication dialog boxes hide passwords, WEP keys and other sensitive information.</td>
<td>On, Off</td>
<td>Off</td>
</tr>
<tr>
<td>Admin Password</td>
<td>Password that must be specified when Admin Login button is pressed.</td>
<td>A string of up to 64 characters.</td>
<td>SUMMIT</td>
</tr>
<tr>
<td>Auth Timeout</td>
<td>Specifies the number of seconds that the software will wait for an EAP authentication request to succeed or fail. If authentication credentials are specified in the active profile and the authentication times out, then association will fail. If authentication credentials are not specified in the active profile and the authentication times out, then the user will be re-prompted to enter authentication credentials.</td>
<td>An integer from 3 to 60.</td>
<td>8</td>
</tr>
<tr>
<td>Certs Path</td>
<td>Directory where certificates for EAP authentication are stored.</td>
<td>Valid directory path up to 64 characters.</td>
<td>Dependent on device.</td>
</tr>
</tbody>
</table>
## Appendix A: Summit Client Utility (SCU)

### Global Settings Tab

<table>
<thead>
<tr>
<th>Global Setting</th>
<th>Description</th>
<th>Value</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ping Payload</td>
<td>Amount of data to be transmitted on a ping.</td>
<td>Bytes: 32, 64, 128, 256, 512, 1024</td>
<td>32</td>
</tr>
<tr>
<td>Ping Timeout ms</td>
<td>Amount of time in milliseconds that passes without a response before ping request is considered a failure.</td>
<td>Integer from 0 to 30000.</td>
<td>5000</td>
</tr>
<tr>
<td>Ping Delay ms</td>
<td>Amount of time in milliseconds between successive ping requests.</td>
<td>Integer from 0 to 7200000.</td>
<td>1000</td>
</tr>
</tbody>
</table>
## Port Pinouts

### B.1 Dock Port Pinout

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Pin Name</th>
<th>Signal</th>
<th>Direction Relative To DPA</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GND</td>
<td>DGND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>VDD_EXT_PWR</td>
<td></td>
<td>Input</td>
<td>These 3 pins are connected together.</td>
</tr>
<tr>
<td>3</td>
<td>VDD_EXT_PWR</td>
<td>VDD_EXT_PWR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>VDD_EXT_PWR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>BATT_OUT</td>
<td>VDD_BATT_OUT</td>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>AUDIO_P</td>
<td></td>
<td>Output</td>
<td>Audio positive.</td>
</tr>
<tr>
<td>7</td>
<td>AUDIO_N</td>
<td></td>
<td>Output</td>
<td>Audio negative.</td>
</tr>
<tr>
<td>8</td>
<td>VDD_USBOTG</td>
<td></td>
<td>Bi-directional</td>
<td>USB Power (+5.5V). As output, supplies external devices when Ikôn is in USB Host mode. As input, charges battery when Ikôn is in USB Client mode.</td>
</tr>
<tr>
<td>9</td>
<td>DOCK_ID</td>
<td></td>
<td>Input</td>
<td>Dock ID.</td>
</tr>
<tr>
<td>10</td>
<td>USB_OTG_DN</td>
<td></td>
<td>Bi-directional</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>USB_OTG_DP</td>
<td></td>
<td>Bi-directional</td>
<td></td>
</tr>
</tbody>
</table>

Ikôn Rugged PDA (Windows Mobile 6.1) User Manual  B-1
### Audio Port Pinout

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Pin Name</th>
<th>Signal</th>
<th>Direction Relative To DPA</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>USB_OTG_ID</td>
<td>Input</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>GND</td>
<td>DGND</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>GND</td>
<td>DGND</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**B.2 Audio Port Pinout**

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Pin Name</th>
<th>Direction Relative To DPA</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HPR</td>
<td>Output</td>
<td>Headphone output.</td>
</tr>
<tr>
<td>2</td>
<td>HP_DETECT</td>
<td>Input</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>N/C</td>
<td>-</td>
<td>Not connected.</td>
</tr>
<tr>
<td>4</td>
<td>MIC</td>
<td>Input</td>
<td>Microphone.</td>
</tr>
<tr>
<td>5</td>
<td>N/C</td>
<td>-</td>
<td>Not connected.</td>
</tr>
<tr>
<td>6</td>
<td>DGND</td>
<td>-</td>
<td>Ground.</td>
</tr>
</tbody>
</table>

**B.3 DC IN Port Pinout**

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Signal</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DGND</td>
<td>Side contact.</td>
</tr>
<tr>
<td>2</td>
<td>DGND</td>
<td>Side contact.</td>
</tr>
<tr>
<td>3</td>
<td>VDD_ACDC</td>
<td>Center contact pin.</td>
</tr>
</tbody>
</table>
### Battery Contact Pinout

<table>
<thead>
<tr>
<th>PIN #</th>
<th>Signal Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BATT-RAW</td>
<td>Positive lead of battery</td>
</tr>
<tr>
<td>-</td>
<td></td>
<td>Provides mechanical polarity</td>
</tr>
<tr>
<td>2</td>
<td>BATT-RAW</td>
<td>Positive lead of battery</td>
</tr>
<tr>
<td>3</td>
<td>BATT-CLK</td>
<td>SMBus data clock</td>
</tr>
<tr>
<td>4</td>
<td>BATT-THERM</td>
<td>Thermistor 10K NTC</td>
</tr>
<tr>
<td>5</td>
<td>BATT-DATA</td>
<td>SMBus bi-directional data line</td>
</tr>
<tr>
<td>6</td>
<td>GND</td>
<td>Negative lead of battery</td>
</tr>
<tr>
<td>7</td>
<td>GND</td>
<td>Negative lead of battery</td>
</tr>
</tbody>
</table>
APPENDIX C

TEKLOGIX IMAGERS APPLET

The Teklogix Imagers applet is used to create, modify, delete and activate imager settings. The principle uses of the applet are to decode bar codes and to capture images. A Demonstration Application is provided to demonstrates how the imager works. Refer to “PTSI Imager Demo” on page 95 for details.

C.1 Required Applets

In order to configure imaging, the Manage Triggers and Teklogix Scanners applets must be present in the Settings>System tab along with the Teklogix Imagers applet.

C.2 Presets

There are two methods that can be used to configure an imager using the Teklogix Imagers applet:

- Use a predefined preset.
- Create a custom preset based on a predefined preset.

⚠️ Important: It is strongly recommended that a predefined preset is used whenever possible. Each predefined preset contains a coherent group of settings that are known to work together in the intended environment. In almost all situations, at least one of the predefined presets results in a satisfactory outcome.

A preset is a group of exposure and image correction settings. Each preset configures the imager for a specific purpose such as bar code decoding or image capture. Presets also allow easier and faster configuration of the imager after power-on or resume from suspend.

The predefined presets are generic and satisfy most user requirements. A custom preset can be created for a specific user application, such as: include only specified bar codes, read only a specified number of bar codes or for reading unusual media.
Every preset belongs to a preset type. The following preset types are available:

- Imaging for photo capture.
- Imaging for bar code decoding.
- Symbology selection.

At any time, only one preset of each type can be designated as the user-selected active preset.

### C.2.1 Predefined Presets

Predefined presets are built into the imaging software and cannot be changed. The predefined presets allow you to use the imager to perform specified tasks without having to understand and set numerous variables. In almost all cases these predefined presets are sufficient.

### C.2.2 Bar Code Predefined Presets

These presets encompass the majority of the most popular bar codes and their subtypes. The bar code decoding symbology predefined presets define which bar codes can be decoded. The bar code decoding camera predefined presets determine how the bar code images are captured.

#### C.2.2.1 Bar Code Decoding Symbology Predefined Presets

The following presets select groups of similar bar codes for decoding.

*Note: It is recommended that the default preset be used whenever possible.*

**Factory Default**

This preset enables the decoding of frequently used bar codes.

**My Default**

This preset is synchronized with the Teklogix Scanners applet and contains all the symbologies selected using the Teklogix Scanner applet. For details on this synchronization see, “Configuring Symbologies in the Teklogix Imagers Applet” on page C-17.

**All**

This preset enables the decoding of all bar codes that the imager can decode. For a description of these symbologies see “Imager” on page D-37.
Appendix C: Teklogix Imagers Applet

Bar Code Decoding Camera Predefined Presets

Linear
This preset enables the decoding of all the 1D symbologies that the imager can decode. See “Imager” on page D-37 for a description of these symbologies.

Linear and PDF417
This preset enables the decoding of all the 1D and PDF symbologies that the imager can decode. See “Imager” on page D-37 for a description of these symbologies.

Matrix
This preset enables the decoding of all 2D symbologies that the imager can decode. See “Imager” on page D-37 for a description of these symbologies.

Postal
This preset enables the decoding of all the postal symbologies that the imager can decode. See “Imager” on page D-37 for a description of these symbologies.

C.2.3 Bar Code Decoding Camera Predefined Presets
The following presets enable successful bar code image capture in almost all conditions.

Note: It is recommended that the default preset be used whenever possible.

Default
This preset works in a wide range of conditions. It is optimized for a normal office lighting (about 300 Lux).

Low light
This preset is designed for very dark conditions such as inside a warehouse where the lights are kept low, or inside an unlit truck. This preset increases either the exposure time or the gain.

Low power
This preset minimizes the use of the flash so as to conserve the battery power on the Ikôn.

Glossy surface
This preset minimizes the use of the flash so as to reduce reflection. This preset is used to read bar codes that are behind glass, or inside the plastic window of an envelope.
C.2.4 Image Capture Predefined Presets

The following presets enable successful image capture in almost all conditions.

*Note: It is recommended that the default preset be used whenever possible.*

**Default**
This preset works in a wide range of conditions. It is optimized for a normal office lighting (about 300 Lux).

**Motion**
This preset uses a shorter exposure time so as to freeze motion.

**Low light near**
This preset is designed for dark conditions, it uses a longer exposure time and includes the flash.

C.3 Using The Teklogix Imagers Applet

C.3.1 Configuring The Image Capture Presets

To configure the image capture presets, open the dialog box as follows:

- Tap on **Start>Settings>System** tab.
- Tap on the **Teklogix Imagers** icon, and if it’s not already selected, tap on the **Imaging** tab.
The following screen is displayed:

**Figure C.1 Imaging Tab**

![Imaging Tab Screen]

This window lists all the presets, both predefined and custom. Presets are identified as follows:

- Predefined presets are marked as *read-only*.
- Custom presets are marked as *read and write*.
- One preset – either predefined or custom – is marked as *active*.

### C.3.2 Selecting A Camera

If your Ikôn has more than one built-in camera, one camera must be selected for configuration. To select a camera:

- Tap on the **Camera Presets** dropdown menu to view the camera options.
- Choose a **camera** – either **Front Imager**, the imager located at the top of the unit, or **Bottom Colour Camera**, the camera located at the back of the Ikôn.

**Important:** Currently, only the ‘Front Imager’ can be used to read bar codes. The ‘Bottom Colour Camera’ is limited to taking photos.

### C.3.3 Setting The Active Preset

An active preset has an *A* to the right; in Figure C.1 on page C-5, the active preset is **Low light near**. To set an active preset:

- Highlight the preset, and tap on the **Activate** button.
C.3.4 Viewing A Preset

To view the parameter settings in a preset:

- Highlight a preset, and tap on the View button.

The associated preset window is displayed.

- Tap on the + sign to expand the lists so that you can view the parameter settings.

C.3.5 Creating A Custom Preset

A new custom preset is created by modifying a preset – either a predefined preset or an existing custom preset. To create a custom preset:

- Highlight a preset, and tap on the Add button.
In this example, the *Low light near* preset was chosen. A screen like the sample below is displayed.

- Type the **name** of the new preset in the dialog box.
- Tap on **OK** to save your changes.

The preset list is displayed; the new custom preset appears at the end of the list. It is marked as read and write.

---

**C.3.6 Modifying A Custom Preset**

The parameter values in a custom preset can be modified. It is recommended that very few changes be made to a custom preset. To ensure that it will work reliably, it should be as close as possible to the original predefined preset. To change a parameter value:
Appendix C: Teklogix Imagers Applet

Modifying A Custom Preset

- Highlight the custom preset, and tap on the Edit button.

- Tap on the + symbols to expand the lists so that you can view the parameter settings.
- Scroll through the parameter list until you reach the parameter that you want to change.
- For a parameter that can take a range of values:
  - Highlight the parameter, and then press the [SPACE] key or double-click the parameter.
  - An associated dialog box containing the valid range of values for the parameter and the current setting like the sample screen following is displayed.

  - Type a value in the field provided.
- For a parameter that toggles between two values such as on or off and enabled or disabled:
- Highlight the parameter and then press the [SPACE] key, or double-click on the parameter. Either method toggles between the two available values.

• When you’ve completed your edits, tap on OK.

The parameter list is displayed; the new value for the changed parameter is shown.
• Tap on OK to exit to the preset list and save the changes.

C.3.7 Removing A Custom Preset
• Highlight the custom preset you want to delete, and tap on the Remove button.

A window is displayed warning you that you are about to remove a preset.
• Tap on Yes to remove the preset or No to cancel the operation.

C.4 Configuring The Bar Code Decoding Camera Presets
To configure the bar code decoding camera presets:
• Tap on Start>Settings>System tab.
• Tap on the Barcoding tab.

Figure C.2 Bar Code Presets

This window lists all the presets, both predefined and the custom. Presets are identified as follows:
• Predefined presets are marked as read-only. For a description, review “Predefined Presets” on page C-2.
• Custom presets are marked as read and write.
• One preset – either predefined or custom – is marked as active.
Note: The top portion of the window displays the bar code decoding camera presets.

The top port of the window displays the bar code decoding camera presets.

**C.4.1 Selecting A Camera**

If your Ikôn has more than one built-in camera, one camera must be selected for configuration. To select a camera:

- Tap on the **Camera Presets** dropdown menu to view the camera options.
- Choose a **camera** – either **Front Imager**, the imager located at the top of the unit, or **Bottom Colour Camera**, the camera located at back of the Ikôn.

**Important:** Currently, only the ‘Front Imager’ can be used to read bar codes. The ‘Bottom Colour Camera’ is limited to taking photos.

**C.4.2 Setting The Active Preset**

An active preset has an **A** to the right; in Figure C.2 on page C-9, the active preset is **Defaults**. To set an active preset:

- Highlight the preset, and tap on the **Activate** button.

**C.4.3 Viewing A Preset**

To view the parameter settings in a preset:

- Highlight a preset, and tap on the **View** button.
Appendix C: Teklogix Imagers Applet
Creating A Custom Preset

The associated preset window is displayed.

![Preset Window]

- Tap on the + sign to expand one of the lists so that you can view the parameter settings.

C.4.4 Creating A Custom Preset

A new custom preset is created by modifying a preset – either a predefined preset or an existing custom preset. To create a custom preset:

- Highlight a preset, and tap on the Add button.

A screen like the sample following is displayed.

![Create Preset Screen]

- Type the name of the new preset in the dialog box.
- Tap on OK to save your changes.
Appendix C: Teklogix Imagers Applet

Modifying A Custom Preset

The preset list is displayed; the new custom preset appears at the end of the list. It is marked as read and write.

C.4.5 Modifying A Custom Preset

The parameter values in a custom preset can be modified. It is recommended that very few changes be made to a custom preset. To ensure that it will work reliably, it should be as close as possible to the original predefined preset. To change a parameter value:

• Highlight the custom preset, and tap on the Edit button.

• Tap on the + symbols to expand the lists and view the parameter settings.

• Scroll through the parameter list until you reach the parameter that you want to change.

• For a parameter that can take a range of values:
- Highlight the parameter, and then press the [SPACE] key or double-click the parameter.
- An associated dialog box containing the valid range of values for the parameter and the current setting like the sample screen following is displayed.

![Sample dialog box]

- Type a value in the field provided.
  - For a parameter that toggles between two values such as on or off and enabled or disabled:
    - Highlight the parameter and then press the [SPACE] key, or double-click on the parameter. Either method toggles between the two available values.
    - When you’ve completed your edits, tap on OK.
The parameter list is displayed; the new value for the changed parameter is shown.
  - Tap on OK to exit to the preset list and save the changes.

C.4.6 Removing A Custom Preset

- Highlight the custom preset you want to delete, and tap on the Remove button.
  A window is displayed warning you that you are about to remove a preset.
- Tap on Yes to remove the preset or No to cancel the operation.

C.4.7 Configuring The Bar Code Decoding Symbologies

To configure the bar code decoding camera presets:

- Tap on Start>Settings>System tab.
- Tap on the Barcoding tab.
C.4.8 Setting The Active Preset

An active preset has an A to the right; in Figure C.2 on page C-9, the active preset is Defaults. To set an active preset:

- Highlight the preset, and tap on the Activate button.

C.4.9 Viewing A Preset

To view the parameter settings in a preset:

- Highlight a preset, and tap on the View button.

The associated preset window is displayed.
C.4.10 Creating A Custom Preset

A new custom preset is created by modifying a preset – either a predefined preset or an existing custom preset. To create a custom preset:

- Highlight a preset, and tap on the Add button.

A screen like the sample following is displayed.

- Type the name of the new preset in the dialog box.
- Tap on OK to save your changes.

The preset list is displayed; the new custom preset appears at the end of the list. It is marked as read and write.
C.4.11 Modifying A Custom Preset

The parameter values in a custom preset can be modified. It is recommended that very few changes be made to a custom preset. To ensure that it will work reliably, it should be as close as possible to the original predefined preset. To change a parameter value:

- Highlight the custom preset, and tap on the Edit button.
- Tap on the + symbols to expand the lists and view the parameter settings.
- Scroll through the parameter list until you reach the parameter that you want to change.
- For a parameter that can take a range of values:
  - Highlight the parameter, and then press the [SPACE] key or double-click the parameter.

![Symbology Settings]

```plaintext
Symbology Settings:

- Options
- Code 39
- Trigger Code (disabled)
- Code 128
- EAN 13
- EAN 8
- UPC-A
- UPC-E
- UPC/EAN Shared Settings
- Code 93

To change a setting: press space, or double-click.
```
- An associated dialog box containing the valid range of values for the parameter and the current setting like the sample screen following is displayed.

- Type a value in the field provided.
  - For a parameter that toggles between two values such as on or off and enabled or disabled:
    - Highlight the parameter and then press the [SPACE] key, or double-click on the parameter. Either method toggles between the two available values.
  - When you’ve completed your edits, tap on OK. The parameter list is displayed; the new value for the changed parameter is shown.
  - Tap on OK to exit to the preset list and save the changes.

C.4.12 Removing A Custom Preset
  - Highlight the custom preset you want to delete, and tap on the Remove button. A window is displayed warning you that you are about to remove a preset.
  - Tap on Yes to remove the preset or No to cancel the operation.

C.4.13 Configuring Symbologies in the Teklogix Imagers Applet
  All changes made in the Symbologies Presets in the Imagers Applet are also made in the Scanners Applet. The Scanner Applet will reflect the settings of whichever Symbologies Preset is made active in the Imager Applet.
Appendix C: Teklogix Imagers Applet
Filter Tab - Manipulating Bar Code Data

Configuring Symbologies In The Teklogix Scanners Applet

When a symbology is enabled or configured using the Teklogix Scanners applet, the changes are also made in the My Default preset. My Default automatically becomes the active bar code symbology preset. None of the other bar code decoding predefined presets is changed.

Configuring Symbologies In The My Default Preset

When My Default is the active preset
In this case, the changes to the symbology configuration are also made in the Teklogix Scanners applet.

When My Default is not the active preset
In this case, the changes to the symbology configuration are not made in the Teklogix Scanners applet.

C.4.14 Filter Tab - Manipulating Bar Code Data

To configure rules for manipulating bar code data:

- Tap on Start>Settings[System tab.
- Tap on the Teklogix Imagers icon, and then tap on the Filter tab.


The rules for manipulating data from selected bar code symbologies can be modified. To change the settings for a symbology:

- Tap on the + symbols to expand the lists and view the parameter settings.
Appendix C: Teklogix Imagers Applet
Filter Tab - Manipulating Bar Code Data

• Scroll through the parameter list until you reach the parameter that you want to change.
• For a parameter that can take a range of values:
  - Highlight the parameter, and then press the [SPACE] key or double-click the parameter.
  - An associated dialog box containing the valid range of values for the parameter and the current setting like the sample screen following is displayed.

![Minimum Length dialog box]

- Type a value in the field provided.
• For a parameter that takes a single character:
  - Highlight the parameter and then press the [SPACE] key, or double-click on the parameter. The following screen is displayed:

![Prefix Char dialog box]

- When you’ve completed your edits, tap on **OK**.
C.4.15 **Translation Tab - Configuring Rules**

Translation rules enable the automatic processing of bar code data. Up to 10 cases can be defined, each consisting of up to 10 sequential rules.

*Note:* Changes made to the translations configuration using the Teklogix Scanner Control Panel program are synchronized with changes made here. Changes made in either place affect both translation tables.

- Tap on **Start>Settings>System** tab.
- Tap on the **Teklogix Imagers** icon, and then tap on the **Translation** tab.

For instructions on adding, editing, and removing translation rules, refer to the “Translations Tab” on page 180.

C.4.16 **Advanced Tab**

C.4.16.1 **File Locations For Captured Images**

To configure the location for saved images, open the dialog box as follows:

- Tap on **Start>Settings>System** tab.
- Tap on the **Teklogix Imagers** icon, and then tap on the **Translation** tab.

To define the location where imager files will be stored:
• Tap on the **File Location** button.

![Save dialog]

• Type the file **Name**, choose the **Folder** and file **Type**.
• Choose the **Location** in which your files will be saved.
• When you have completed all the changes, tap on the **Save** button.

### C.4.16.2 Configuring Triggers

**Viewing The Trigger Configuration**

The trigger on the Ikôn PDA is configured using the *Manage Triggers* applet. The *Teklogix Imagers* applet provides a shortcut to the *Manage Triggers* applet.

• In the *Advanced* tab, tap on the **Trigger Control** button.
To view all the triggers and the hardware devices that are configured to use them, tap in the checkbox next to Show all modules.

Adding, Editing And Removing Triggers
For instruction about adding, editing and removing triggers, refer to “Manage Triggers” on page 159.

C.5 Teklogix Scanners Applet
The bar code symbologies that are to be read by the imager can be enabled using the Teklogix Scanners applet. Tapping on Start>Settings>System tab followed by the Teklogix Scanners icon displays this applet. Refer to “Imager” on page D-37 for a list of symbologies.

Warning: Changes made to the symbology configuration using the Teklogix Scanner applet are synchronized only with the My Defaults bar code symbology preset. For details, refer to “Configuring Symbologies in the Teklogix Imagers Applet” on page C-17.
### Appendix D

## Bar Codes Settings

### D.1 Scanner Menu

The dropdown menu to the right of the *Scanner* option allows you to choose from one of the following scanner types used with your Ikôn: Decoded (internal), Decoded (Intermec ISCP) or Imager.

The symbologies listed change to reflect the scanner you choose and the bar codes it supports.

⚠️ **Important:** To improve the decode speed and performance, enable 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 the *Barcode* dialog boxes.
Appendix D: Bar Codes Settings
Decoded (Internal) Scanner

D.2  Decoded (Internal) Scanner

D.2.1  Options – Decoded (Internal) Scanner

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 of 0 msec, 200 msec or 400 msec. A value of 0 (zero) disables the target dot.

Aim Duration
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.
Appendix D: Bar Codes Settings

D.2.2 Advanced Options - Decoded (Internal)

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.

Power Mode
This parameter is a power-saving option. Tapping on it displays a screen listing two power mode options: Continuous Power and Low Power.
In Continuous Power mode, the scanner is always on, waiting for a trigger pull or a serial communication.
In Low Power mode, the scanner is in a standby state, drawing minimal power until a trigger pull or serial communication wakes it. Keep in mind that while this option is more suitable for battery powered applications, there will be a slight delay while the scanner powers up to scan a bar code.

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 Ikôn 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>1 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>1 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.
Appendix D: Bar Codes Settings

Decoded (Internal) 2D Scanning Options

**Scan Angle**

This option allows you to choose from two scan angles: *Normal Angle* or *Alternate Angle*. Choosing *Normal Angle* allows the normal operation for scanning long range and short range. Choosing *Alternate Angle* widens the beam to allow scanning of long bar codes at short range but at the cost of long range scanning.

**D.2.3 Decoded (Internal) 2D Scanning Options**

**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 parameters 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.

**D.2.4 Data Options — Decoded (Internal) Scanner**

**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].
Appendix D: Bar Codes Settings

Code 39

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
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
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.

D.2.5 Code 39

Enabled
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”.

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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 (set to on), 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.
Appendix D: Bar Codes Settings

Code 39

Transmit Check Digit
If the check digit is to be transmitted with the data, this parameter must be 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
If this parameter is enabled, one of three decode levels can be chosen in the “Decode Performance Level” parameter.

Decode Perf. Level
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.

Length Restriction
The parameters in this sub-menu allow you to define the length of the bar codes that will be decoded using either the Field Size parameter or the Minimum Size and Maximum Size parameters (see below). The order of operation to either match the Field Size or determine if the length falls between the Minimum Size and Maximum Size is as follows:

- Strip the leading and trailing characters.
- Add the prefix and suffix characters.
- Count the number of characters remaining to either match the field size or determine if the length falls between the minimum and maximum size.

Field Size
When a value is assigned for this parameter, only bar codes that match the field size exactly can be transmitted. If a value is assigned to this parameter, a Minimum Size and Maximum Size value is not required.
Appendix D: Bar Codes Settings

Code 128

Minimum Size And Maximum Size
When a value is assigned to these parameters, only bar code lengths that fall between the minimum and maximum value can be decoded. If values are assigned to these parameters, a Field Size value is not required.

Add/Remove Data

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.

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.

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

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

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

D.2.6 Code 128

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

Enable GS1-128/GS1 US
Previously UPC/EAN and UCC, these types of bar codes include group separators and start codes.

Enable ISBT 128
To successfully scan this variation, “Enable ISBT 128” must be set to on.
Appendix D: Bar Codes Settings

**EAN 13**

**Decode Performance**
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**
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.

**Length Restriction**
Refer to “Length Restriction” on page D-8 for details.

**Add/Remove Data**
Refer to “Add/Remove Data” on page D-9 for details.

**D.2.7 EAN 13**

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

**Add/Remove Data**
Refer to “Add/Remove Data” on page D-9 for details.

**D.2.8 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.

**Add/Remove Data**
Refer to “Add/Remove Data” on page D-9 for details.
D.2.9  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 or None – no preamble is transmitted. The lead-in characters are considered part of the symbol.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.2.10  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.
Appendix D: Bar Codes Settings

UPC/EAN Shared Settings

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).

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.2.11 UPCEAN 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 box 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**

“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**

Setting this parameter to on enables “UPC Half Block Stitching” for the SE 3223 omnidirec-
tional engine only.

**D.2.12 Code 93**

**Enabled**

Set this parameter to on to enable “Code 93” or off to disable it.

**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.

**Length Restriction**

Refer to “Length Restriction” on page D-8 for details.

**Add/Remove Data**

Refer to “Add/Remove Data” on page D-9 for details.
Appendix D: Bar Codes Settings

Codabar

D.2.13  Codabar

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

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.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.2.14  MSI Plessey

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

Note: Symbol length does not include start and stop characters.
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 below for details.

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.

Length Restriction

Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data

Refer to “Add/Remove Data” on page D-9 for details.
Appendix D: Bar Codes Settings

**Interleaved 2 of 5**

**D.2.15 Interleaved 2 of 5**

*Enabled*

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

**Set Length L1 And Set Length L2**

Lengths for “Interleaved 2 of 5” can be set for *Any length, Length within a range, One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

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

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 4 to 14.

**Check Digit Verification**

When enabled, this parameter checks the integrity of an I 2 of 5 symbol to ensure it complies with a specified algorithm – either USS (Uniform Symbology Specification) or OPCC (Optical Product Code Council).

**Transmit Check Digit**

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

**Convert To EAN 13**

If this parameter is enabled, the I 2 of 5 bar code is converted to EAN 13.

**Length Restriction**

Refer to “Length Restriction” on page D-8 for details.

**Add/Remove Data**

Refer to “Add/Remove Data” on page D-9 for details.

**D.2.16 Discrete 2 of 5**

*Enabled*

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

---

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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.

Length Restriction

Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data

Refer to “Add/Remove Data” on page D-9 for details.

**D.2.17 RSS Code**

**Enable**

Setting this parameter to on enables “2D RSS Code” scanning capability.

**Enable RSS-14 (Reduced Space Symbology)**

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 it 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.
Appendix D: Bar Codes Settings

Composite

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.2.18  Composite

⚠️ Important: To successfully read this type of bar code, the two types of symbologies included in a composite bar code must be enabled. In addition, “Center Bar Code Only” must be disabled.

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 these parameters to on.

Enable TLC-39
This composite component integrates MicroPDF417 with the linear code. Setting this parameter to on enables this parameter.

D.2.19  PDF-417

Enable
Setting this parameter to on enables PDF-417 two dimensional (2D) coding.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.
Appendix D: Bar Codes Settings

Micro PDF-417

D.2.20  Micro PDF-417

Enable
Setting this parameter to on enables “Micro PDF-417” bar code scanning. Micro PDF-417 is a multi-row symbology that is useful for applications requiring greater area efficiency but lower data capacity than PDF-417.

Code 128 Emulation
When this parameter is enabled, the scanner transmits data from certain Micro PDF-417 symbols as if it was encoded in Code 128 symbols.

If Code 128 Emulation is enabled, the following Micro PDF-417 symbols are transmitted with one of the following prefixes:

]C1 - if the first codeword is 903-907, 912, 914, 915
]C2 - if the first codeword is 908 or 909
]C0 - if the first codeword is 910 or 911

If Code 128 Emulation is set to off, the Micro PDF-417 symbols are transmitted with one of the following prefixes:

]L3 - if the first codeword is 903-907, 912, 914, 915
]L4 - if the first codeword is 908 or 909
]L5 - if the first codeword is 910 or 911

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.
D.3 Decoded

- Tap on the Scanner dropdown menu, and choose Decoded (Intermec ISCP).

D.3.1 Options - Decoded Scanner

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 1 and 10 seconds.

D.3.2 Advanced Options - Decoded Scanner

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

Minimum Cancel Time
The value assigned to this parameter determines the time delay before the scanner is turned off, once the scanner trigger or button is released. This gives the scanner a minimum amount of time to complete its current decode before the scan is cancelled when the user quickly triggers on/off.
Low Power Timeout
To extend laser life, you can select the length of time the scanner remains active following a successful decode. The scanner wakes from low power mode when a bar code is scanned – a successful decode restores normal blinking.
When you double-tap on this parameter, a dialog box is displayed in which you can choose a value of 30 sec, 1 min, 2 min or 3 min.

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

Parameter Scanning
Setting this parameter to Enabled allows 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.

Add AIM ID Prefix
The AIM ID (Association for Automatic Identification and Mobility) is an international bar code identifier. When this parameter is enabled, the AIM ID is inserted at the beginning of the decoded bar code.

D.3.3 Code 39

Enable
Setting this parameter to on enables “Code 39”.
**Full ASCII**
If this parameter is enabled, the characters +, %, and / are used as escape characters. The combination of an escape character and the next character is converted to an equivalent ASCII character.

**Reading Range**
Determines the reading distance from which a bar code can be successfully scanned. The default setting, Extended, allows for increased reading distance.

**Start/Stop Transmit**
Setting this parameter to on enables the transmission of start and stop characters, which are usually not transmitted. Code 39 can start and end with either a * or a $ character (see also next parameter, “Accepted Start Char”).

**Accepted Start Char**
This parameter allows the user the option of using one of the two start/stop characters or both ($ char, * char, $ and * char).

**Check Digit Verification**
Uses the specified algorithm of the option you’ve chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted. The available options are: Disabled, MOD 43 Check, French CIP, or Italian CIP.

*Note: 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).

**Length Restriction**
Refer to “Length Restriction” on page D-8 for details.
Appendix D: Bar Codes Settings

Code 128

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.4 Code 128

Enable
Setting this parameter to on enables “Code 128”.

GS1-128
“GS1-128” is the GS1 implementation of the Code 128 barcode specification. The former correct name was UCC/EAN-128.

GS1-128 Identifier
“GS1-128 Identifier” allows the AIM ID "JC1" 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
Appendix D: Bar Codes Settings

EAN 13

Single transmits single codes or concatenated codes. If only one code of a pair is read, that code will be transmitted as a single code. If both codes in a pair are detected, they will be concatenated provided that ISBT Concat Any Pair (see below) is enabled.

**ISBT Concat Any Pair**

Enabling this parameter causes all code pairs that can be, to be concatenated even if they do not comply with Section 4.1 of the “ISBT 128 Bar Code Symbology and Application Specification for Labeling of Whole Blood and Blood Components” (June 2000, Version 1.2.1).

**Reading Range**

Determines the reading distance from which a bar code can be successfully scanned. The default setting Extended, allows for increased reading distance.

**Check Digit Verification**

The available options for this parameter are Disabled or French CIP. This parameter 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.

*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).

**Length Restriction**

Refer to “Length Restriction” on page D-8 for details.

**Add/Remove Data**

Refer to “Add/Remove Data” on page D-9 for details.

D.3.5 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.
Appendix D: Bar Codes Settings

EAN 8

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

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.6 EAN 8

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

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

Convert To EAN 13
If this parameter is enabled, an EAN 8 bar code is converted to EAN 13.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.7 UPCA

Enabled
Set this parameter to on to enable “UPC A” bar code scanning recognition.

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

Transmit Number System
If this parameter is enabled, the number system digit is transmitted with the decoded bar code data.

Convert To EAN 13
If this parameter is enabled, a UPC A bar code is converted to EAN 13.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.
Appendix D: Bar Codes Settings

UPC E

D.3.8 UPC E

Enabled
Set this parameter to on to enable “UPC E”.

Enable UPC-E1
Set this parameter to on to allow “UPC-E1” (zero suppressed) bar code scans.

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

Transmit Number System
If this parameter is enabled, the number system digit is transmitted with the decoded bar code data.

Convert To UPC-A
This parameter converts UPC E (zero suppressed) decoded data to UPC A format before transmission. After conversion, data follows UPC A format and is affected by UPC A programming selections (e.g. Check Digit).

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.9 UPC/EAN Shared

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.
Appendix D: Bar Codes Settings

Code 93

Addendum Add-on 2 And Addendum Add-on 5
Enabling these parameters sets the length of the addendum bar code to either 2 or 5 characters.

Addendum Security
If you tap on “Addendum Security”, a dialog box is displayed in which you can define the security level of add-on 2 or add-on 5 with a value from 0 to 100. As security levels increase, the scanner decode speed decreases.

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
This parameter determines the reading distance from which a bar code can be successfully scanned. The default setting, Extended, allows for increased reading distance.

D.3.10 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).

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.
D.3.11 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 a 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.
Appendix D: Bar Codes Settings

MSI Plessey

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.12 MSI Plessey

Enabled
Set this parameter to on to enable “MSI”.

Enable Plessey
Set this parameter to on to enable “Plessey”.

Check Digit Verification
The available options for this parameter are MOD 10 Check and Double MOD 10 Check. This parameter 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.

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

Plessey Transmit Check Digit
If the check digit is to be transmitted with the Plessey 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).

Plessey Minimum Length
Minimum lengths for the Plessey 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).

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.
Appendix D: Bar Codes Settings

Code 11

D.3.13  Code 11

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

Check Digit Verification
The available options for this parameter are MOD 10 Check and Double MOD 10 Check. This parameter 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.

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).

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.14  Interleaved 2 of 5

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

Reading Range
This parameter 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
The available options for this parameter are Disabled, MOD 10 Check and French CIP. “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.
Note: French CIP (French pharmaceutical) is only used with bar codes containing 7 characters.

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

Set Length L1, Set Length L2, And Set Length L3
Lengths for “Interleaved 2 of 5” 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.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.15 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).

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.
Appendix D: Bar Codes Settings
Discrete 2 of 5

D.3.16  Discrete 2 of 5

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

Standard 2 of 5 Format
This parameter allows you to choose a standard format – either Identic on (6 start/stop bars) or Computer Identics (4 start/stop bars).

Check Digit Verification
The available options for this parameter are Disabled and MOD 10 Check. “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.

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 “Discrete 2 of 5” 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.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.17  Telepen

Enabled
Set this parameter to on to enable “Telepen”.

Appendix D: Bar Codes Settings

RSS Code (Reduced Space Symbology)

Format
This parameter allows you to set the bar code character format 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).

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.18 RSS Code (Reduced Space Symbology)

Enable
Setting this parameter to on enables “RSS Code” scanning capability.

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.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.
Appendix D: Bar Codes Settings

Composite

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.19 Composite

\textbf{Important:} To successfully read this type of bar code, the two types of symbologies included in a composite bar code must be enabled. In addition, “Center Bar Code Only” must be disabled.

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 these parameters to \textit{on}.

Linear Transmission Only
When ‘Linear Transmission Only’ is enabled, only the linear code portion of the composite bar code is transmitted when scanned.

UPC-EAN Composite Message
This option allows you to choose how UPC-EAN shared bar codes are transmitted: \textit{Always Linked}, \textit{Never Linked} or \textit{Auto-discriminate}.

D.3.20 TLC-39

Enable
This composite component integrates MicroPDF417 with the linear Code 39 symbol. Setting this parameter to \textit{on} enables this parameter.

Linear Transmission Only
When “Linear Transmission Only” is enabled, only the linear portion of the composite bar code is transmitted when scanned.
Appendix D: Bar Codes Settings

PDF-417

**Security Level**
This parameter is used to differentiate between TLC-39 and standard Code 39. Tapping on “Security Level” displays a dialog box in which you can assign a value from 0 to 100. The higher the value assigned, the lower the decode rate.

**Length Restriction**
Refer to “Length Restriction” on page D-8 for details.

**Add/Remove Data**
Refer to “Add/Remove Data” on page D-9 for details.

**D.3.21  PDF-417**

**Enabled**
Set this parameter to *on* to enable “PDF-417”.

**Length Restriction**
Refer to “Length Restriction” on page D-8 for details.

**Add/Remove Data**
Refer to “Add/Remove Data” on page D-9 for details.

**D.3.22  Micro PDF-417**

**Enabled**
Set this parameter to *on* to enable “Micro PDF-417”.

**Code 128 Emulation**
When this parameter is enabled, the scanner transmits data from certain Micro PDF-417 symbols as if it was encoded in Code 128 symbols.

If Code 128 Emulation is enabled, the following Micro PDF-417 symbols are transmitted with one of the following prefixes:

*C1* - if the first codeword is 903-907, 912, 914, 915
*C2* - if the first codeword is 909 or 909
*C0* - if the first codeword is 910 or 911

If Code 128 Emulation is set to off, the Micro PDF-417 symbols are transmitted with one of the following prefixes:
Codablock

]L3 - if the first codeword is 903-907, 912, 914, 915
]L4 - if the first codeword is 908 or 909
]L5 - if the first codeword is 910 or 911

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.3.23 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”.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.
D.4 Imager

- Tap on the Scanner dropdown menu, and choose Imager.

D.4.1 Options - Imager

Center Barcode Only

*Note: This parameter must be disabled when reading Composite bar codes.*

When more than one bar code is visible in a single snap shot, this parameter allows you to specify that only the centre image within the imager framing marker be read. When this parameter is set to *on*, the target dot is pointed at the centre image and only that image is returned.

Max Number Barcodes

This parameter specifies the maximum number of bar codes the imager will attempt to decode in an image. A maximum of 6 bar codes can be decoded at one time.

Barcodes Must Decode

This parameter 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.*
Appendix D: Bar Codes Settings

Code 39 Settings

D.4.2 Code 39 Settings

Enabled
Set this parameter to on to enable “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.

Check Digit Verification
When this parameter is enabled (set to on), the integrity of a “Code 39” symbol is checked to ensure that it complies with specified algorithms.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.3 Code 128 Settings

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

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.4 EAN 13

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


Appendix D: Bar Codes Settings

EAN 8

Addendum
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. It should only be chosen if at least some of the bar codes being read have addendums.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.5 EAN 8

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

Addendum
Refer to “Addendum” on page D-26.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.6 UPC A

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

Addendum
Refer to “Addendum” on page D-26.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.
Appendix D: Bar Codes Settings

UPC E

D.4.7 UPC E

Enabled
Set this parameter to on to enable “UPC E”.

Addendum
Refer to “Addendum” on page D-26.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.8 Code 93

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

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.9 Codabar

Enabled
Set this parameter to on to enable “Codabar”.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.10 Interleaved 2 of 5

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

Appendix D: Bar Codes Settings

RSS Code (Reduced Space Symbology)

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).

Include Check
If this parameter is enabled, the check digit is transmitted along with the I 2 of 5 symbol.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.11 RSS Code (Reduced Space Symbology)

Enable
Setting this parameter to on enables “RSS Code” scanning capability.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.12 Composite

Important: To successfully read this type of bar code, the two types of symbologies included in a composite bar code must be enabled.

Enable
Set this parameter to on to enable “Composite” bar codes.

D.4.13 PDF-417

Enable
Setting this parameter to on enables PDF-417 two dimensional (2D) coding.
Appendix D: Bar Codes Settings

Micro PDF-417

D.4.14 Micro PDF-417

Enable
Setting this parameter to on enables “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.

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.15 2D Data Matrix

Enable
Set this parameter to on to enable “Data Matrix”.

Inverse Video Mode
Enabling this parameter allows the imager to read inverse bar codes – white symbols presented on a black background.

Rectangular
Enabling this parameter allows the imager to recognize rectangular (as opposed to square) symbols.

Small Physical Size
Set to on by default, this parameter is used to detect small sized or small featured 2D data matrix symbologies. Turning this option off may decrease response time only if there is a great deal of “clutter” (i.e., pictures) in the image. However because these images are normally clean (the labels contain only text and bar codes along with a significant amount of white space), response time is usually not improved by turning this parameter off.
Appendix D: Bar Codes Settings

2D QR Code

Length Restriction
Refer to “Length Restriction” on page D-8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page D-9 for details.

D.4.16 2D QR Code

Enabled
Set this parameter to on to enable “2D QR Code”.

Field Size
Refer to “Field Size” on page D-8 for details.

D.4.17 2D Maxicode

Enabled
Set this parameter to on to read “2D Maxicode” images.

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.

D.4.18 2D Aztec

Enabled
Set this parameter to on to read “Aztec” symbologies.

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.
Appendix D: Bar Codes Settings
Postal: PlaNET

D.4.19  Postal: PlaNET

Enabled
Set this parameter to on to enable “Postal: PlaNET”.

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.

D.4.20  Postal: PostNET

Enabled
Set this parameter to on to enable “Postal: PostNET”.

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.

D.4.21  Postal: Australian

Enabled
Set this parameter to on to enable “Postal: Australian”.

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.

D.4.22  Postal: Japanese

Enabled
Set this parameter to on to enable “Postal: Japanese”.

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Appendix D: Bar Codes Settings
Postal: Korean

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.

D.4.23 Postal: Korean
Enabled
Set this parameter to on to enable “Postal: Korean”.

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.

D.4.24 Postal: Royal
Enabled
Set this parameter to on to enable “Postal: Royal”.

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.

D.4.25 Postal: Kix
Enabled
Set this parameter to on to enable “Postal: Kix”.

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.
Appendix D: Bar Codes Settings
Postal: Canadian

D.4.26 Postal: Canadian

Enabled
Set this parameter to on to enable “Postal: Canadian”.

Length Restriction
Refer to “Length Restriction” on page 8 for details.

Add/Remove Data
Refer to “Add/Remove Data” on page 9 for details.
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