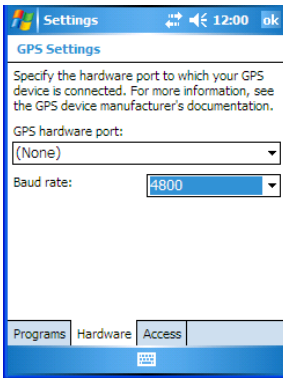
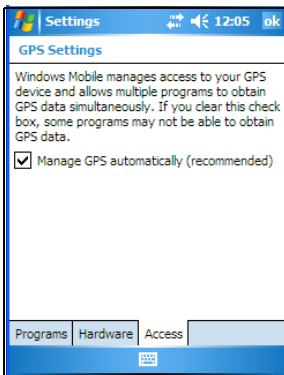


- Tap on the **Hardware** tab, and choose a **GPS hardware port** and the appropriate **Baud rate**.



Windows Mobile 6 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)*.

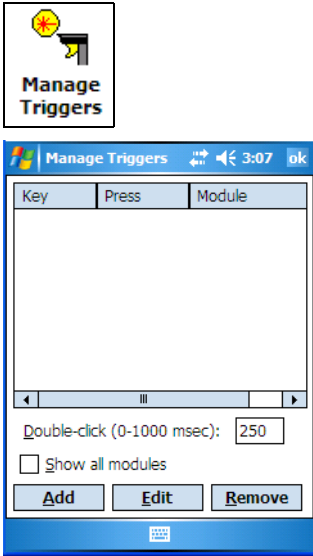


You can go to www.microsoft.com/pocketstreets if a map-viewing program is not included with your PDA, and copy the file to your PDA.

5.22 Manage Triggers

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

- Tap on **Start>Settings>System tab>Manage Triggers icon**.



5.22.1 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 120.

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

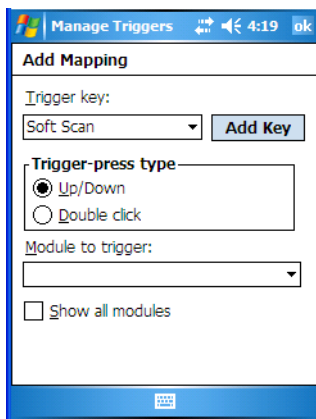
Tapping this button removes an existing mapping.

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 made will be discarded.

5.22.1.1 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.

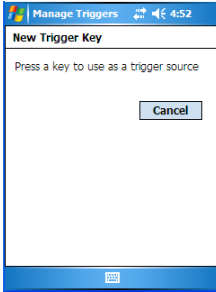


Note: It is possible to map the same source to different modules (trigger consumers—for example, to both the Imager and Non-Decoded Scanner. If so, both devices/operations will occur simultaneously. This is not recommended in most cases, especially with devices such as Imagers or RFID Readers.

It is also possible to map different sources to the same module (trigger consumer)—for example, two different trigger keys can be mapped to the RFID File System.

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

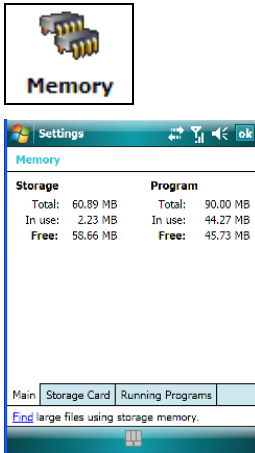
By default, inactive owners are not shown. By checking this checkbox, all owners, both active and inactive, are displayed.

5.23 Memory

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

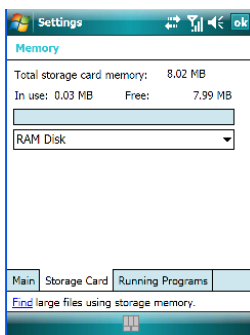
- Tap on **Start>Settings**. Tap on the **System tab** followed by the **Memory icon**.

5.23.1 Main Tab



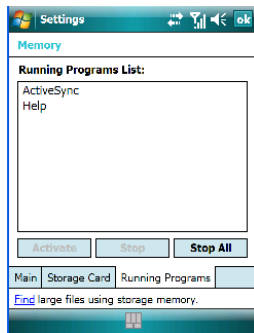
This tab lists the memory allocated for file and data storage and for program storage.

5.23.2 Storage Card



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

5.23.3 Running Programs



Running Programs behaves like the task manager found on your desktop PC, allowing you to activate or stop any running programs.

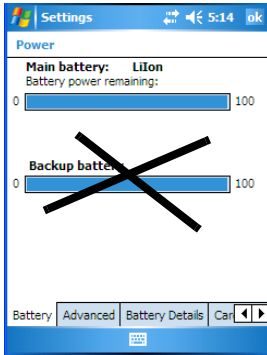
- Highlight an application(s).
- To end an application, tap on the **Stop** button. Tap on **Stop All** if you want to shut down all running applications, *or*
To activate an application, tap on the **Activate** button.

5.24 Power Icon

This icon allows you to view and manage battery use.

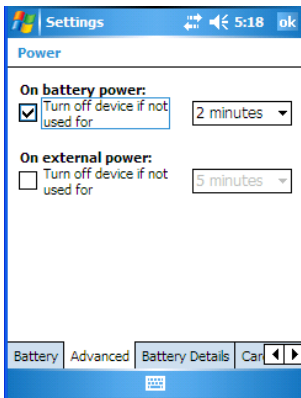
- Tap on **Start>Settings**. Tap on the **System tab** followed by the **Power icon**.

5.24.1 Battery Tab



This tab allows you to view the remaining battery capacity of the battery.

5.24.2 Advanced Tab



The *Advanced* tab allows you to manage battery consumption.

On Battery Power

When the iKôn PDA is operating on battery power, this option allows you to determine how long the unit will remain on when it is not in use.

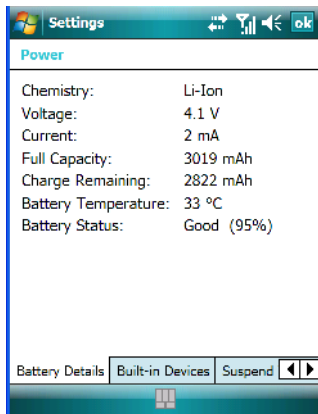
- Tap in the checkbox to the left of **On battery power** to enable this option. Tap in the dropdown menu to choose the number of minutes your unit can remain idle before it shuts down.

On External Power

When the PDA 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.

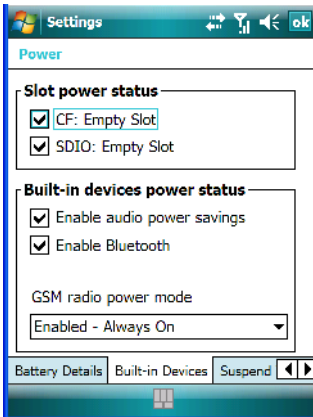
- Tap in the checkbox to the left of **On external power** to enable this option. Tap in the dropdown menu to choose the number of minutes your unit can remain idle before it shuts down.

5.24.3 Battery Details



This tab lists the specifications and battery capacity status of the battery installed in the iKôn PDA. This is a view-only screen.

5.24.4 Built-In Devices



Slot Power Status

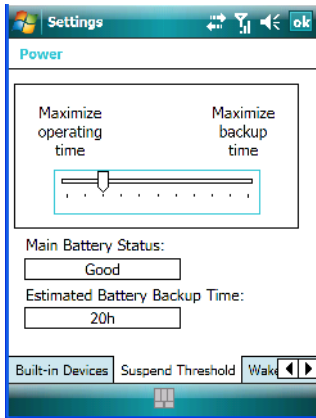
When you enable one or more of the card slots listed, power is supplied to the enabled slot(s).

Built-In Devices Power Status

This section of the dialog box allows you to enable (provide power) to the device(s) installed in your unit. Keep in mind that the content of this screen varies depending on the devices installed in your PDA. Tapping on **OK** activates your selections.

5.24.5 Suspend Threshold

This applet allows you to determine the amount of battery power that you want to reserve in the battery to protect the data stored in the iKôn PDA.



5.24.5.1 Suspend Threshold And Estimated Battery Backup

The *Estimated Battery Backup* is the amount of battery power that is reserved to protect data until a charged battery can be installed in the PDA. When the battery capacity is depleted up to the *Estimated Battery Backup* reserve specified in the *Suspend Threshold* tab, the PDA shuts off automatically and uses the reserve power to preserve the data stored on the iKôn PDA. Once the PDA 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 PDA's operating time – the amount of time the PDA 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 PDA while the battery is swapped for a fully charged one.

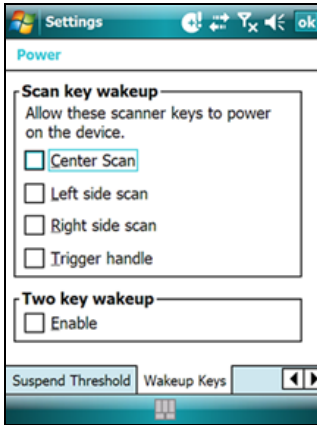


Important: *Once the battery is removed, the super-capacitors will preserve the data stored on the iKôn PDA for approximately 5 minutes. It is critical that you install a charged battery before this time elapses.*

5.24.6 Wakeup Keys Tab

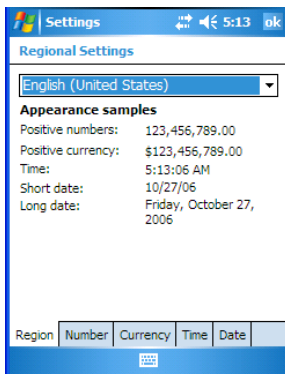
This option allows you to define which key can be pressed to wake the PDA from a suspend state.

If the *Two key wakeup* option is checked, the operator will need to press two keys ?? – [FN/BLUE][ENTER] – to switch the PDA on.



5.25 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.



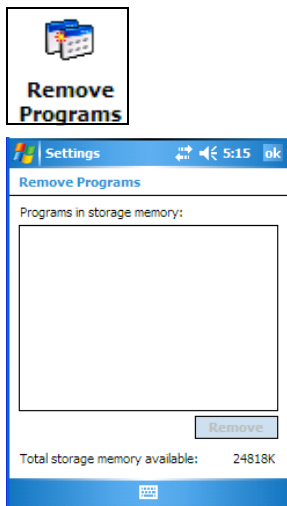
- Tap on the dropdown menu to choose your language and region.

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 PDA.

- Tap on the tab associated with each of the items and choose how each item will be displayed on your iKôn PDA.

5.26 Remove Programs

- Tap on **Start**>**Settings**. Tap on the **System tab** followed by the **Remove Program** icon.



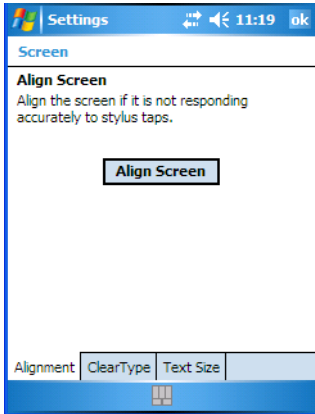
Tapping on the *Remove Programs* icon displays a screen listing the programs that can be removed from your unit.

- To remove a program, highlight it and then click on the **Remove** button.

5.27 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 PDA screen.

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

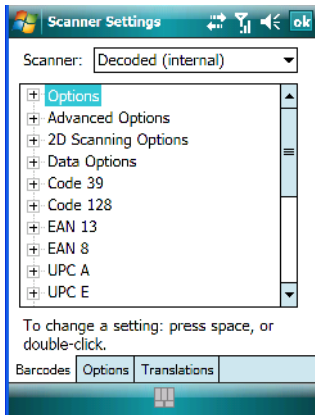


Important: Refer to “Aligning (Calibrating) The Touchscreen” on page 14 for details about this option.

5.28 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.

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



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 PDA: Decoded (internal), Decoded (HHP), Decoded (Intermec ISCP) and Imager.

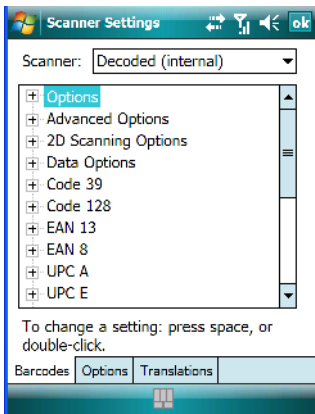
The symbologies listed change to reflect the scanner you choose and the bar codes it supports.



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.

5.28.1 Decoded (Internal) Scanners



5.28.1.1 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.

5.28.1.2 Decoded (Internal) Advanced Options

Continuous Scan Mode

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

Minimum Cancel Time

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

Low Power Timeout

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

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



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

Parameter Scanning

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

Linear Security Level

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

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

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

Code Type	Length
Codabar	All

MSI Plessey	4 or less
D 5 of 5	8 or less
I 2 of 5	8 or less

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

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

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

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

Bi-Direction Redundancy



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

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

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



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

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

5.28.1.4 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].

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.

5.28.1.5 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”.

Code 32 Prefix



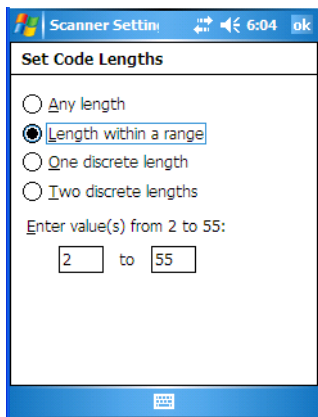
Note: “Convert to Code 32” must be enabled in order for this parameter to function.

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.

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.

5.28.1.6 Field Size/Chars

Field Size

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

Prefix Char

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

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 “ALAG Strip” is performed before the “Strip Leading”.

Strip Trailing

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

5.28.1.7 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*.

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.

Field Size/Char

Refer to page 137 for details.

5.28.1.8 EAN 13

Enabled

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

5.28.1.9 Prefix/Suffix

Prefix Char

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

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: The appended character is treated as any other keyboard character. For example, if [BKSP] is pressed, the usual action for that key is performed.

Strip Trailing

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

5.28.1.10EAN 8

Enabled

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

EAN-8 Zero Extend

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

Prefix/Suffix

Refer to page 137 for details.

5.28.1.11UPC A

Enabled

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

UPC-A, Check Digit

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

UPC-A, Preamble

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

Prefix/Suffix Chars

Refer to page 137 for details.

5.28.1.12UPC E

Enabled UPC-E

Set this parameter to *on* to allow “UPC E” bar code scans.

Enabled UPC-E1

Set this parameter to *on* to allow “UPC-E1” (zero suppressed) bar code scans.

UPC-E And UPC-E1 Check Digit

If you enable one or both of these parameters, a check digit is included with the decoded bar code data.

UPC-E And UPC-E1 Preamble

When you double-tap on one of these parameters, a dialog box is displayed where you can choose one of three options for lead-in characters for UPC-E and UPC-E1 symbols transmitted to the host device: *System Char* – system character transmitted with the data, *Country code and System Char* – both the country code (“0” for USA) and system character are transmitted with the data or *None* – no preamble is transmitted. The lead-in characters are considered part of the symbol.

Conv. UPC-E To UPC-A

This parameter converts UPC-E (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).

Conv. UPC-E1 To UPC-A

This parameter converts UPC-E1 (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).

Prefix/Suffix

Refer to page 137 for details.

5.28.1.13UPC/EAN Shared Settings

The parameters you set here are a shared across all available UPC and EAN bar codes.

Enable Bookland EAN

Setting this parameter to on allows your scanner to recognize “Bookland EAN” bar codes.

Supplementals

‘Supplementals’ are additionally appended characters (2 or 5).

Double-tapping this parameter displays a list of options. If Ignore is chosen, UPC/EAN is decoded and the supplemental characters are ignored. If Decode is chosen, UPC/EAN symbols are decoded with supplementals. Autodiscriminate works in conjunction with the Supp. Redundancy parameter.

Supp. Redundancy

With Autodiscriminate selected in the Supplementals parameter, “Supp. Redundancy” adjusts the number of times a symbol without supplementals is decoded before transmission. When you double-tap on this parameter, a dialog 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 omnidirectional engine only.

5.28.1.14 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.

Field Size/Char

Refer to page 137 for details.

5.28.1.15 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.

Field Size/Char

Refer to page 137 for details.

5.28.1.16MSI Plessey

Enabled

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

Set Length L1 And Set Length L2

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

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

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 6 to 55.

Check Digits

Double-tapping on this parameter displays a dialog box in which you can choose One or Two check digit(s).

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



Note: If Two check digits is selected, an MSI Plessey “Check Digit Algorithm: must also be selected. See 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.

Field Size/Char

Refer to page 137 for details.

5.28.1.17 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.

Field Size/Char

Refer to page 137 for details.

5.28.1.18 Discrete 2 of 5

Enabled

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

Set Length L1 And Set Length L2

Lengths for “Discrete 2 of 5” can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

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

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 1 to 12.

Field Size/Char

Refer to page 137 for details.

5.28.1.19 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.

Field Size/Char

Refer to page 137 for details.

5.28.1.20Composite



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.

5.28.1.21PDF-417

Enable

Setting this parameter to *on* enables PDF-417 two dimensional (2D) coding.

Field Size/Char

Refer to page 137 for details.

5.28.1.22 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

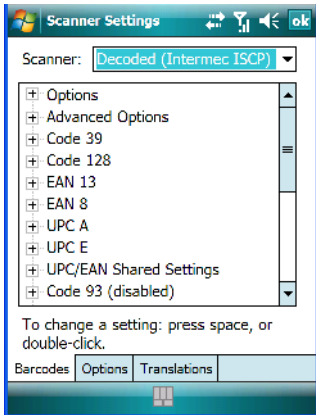
]L4 if the first codeword is 908 or 909

]L5 if the first codeword is 910 or 911

Field Size/Char

Refer to page 137 for details.

5.28.2 Decoded



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

5.28.2.1 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.

5.28.2.2 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 PDA 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.

5.28.2.3 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).

Field Size/Char

Refer to page 137 for details.

5.28.2.4 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 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).

Field Size/Char

Refer to page 137 for details.

5.28.2.5 EAN 13

Enabled

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

ISBN Conversion

When this parameter (International Standard Book Number) is enabled, the first 3 characters (‘978’) are ignored and the checksum (0.9, ‘X’) is calculated on the remaining characters.

Transmit Check Digit

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

Prefix/Suffix

Refer to page 137 for details.

5.28.2.6 EAN 8

Enabled

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

Transmit Check Digit

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

Convert To EAN 13

If this parameter is enabled, an EAN 8 bar code is converted to EAN 13.

Prefix/Suffix

Refer to page 137 for details.

5.28.2.7 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.

Prefix/Suffix

Refer to page 137 for details.

5.28.2.8 UPC E

Enabled

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

Enable UPC-E1

Set this parameter to *on* to allow “UPC-E1” (zero suppressed) bar code scans.

Transmit Check Digit

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

Transmit Number System

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

Convert To UPC-A

This parameter converts UPC E (zero suppressed) decoded data to UPC A format before transmission. After conversion, data follows UPC A format and is affected by UPC A programming selections (e.g. Check Digit).

Prefix/Suffix

Refer to page 137 for details.

5.28.2.9 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.

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.

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.

5.28.2.10 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).

Field Size/Char

Refer to page 137 for details.

5.28.2.11 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.

Field Size/Char

Refer to page 137 for details.

5.28.2.12MSI 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.

Plessy Transmit Check Digit

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

Minimum Length

Minimum lengths for the bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Plessy Minimum Length

Minimum lengths for the Plessy bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Field Size/Char

Refer to page 137 for details.

5.28.2.13Code 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).

Field Size/Char

Refer to page 137 for details.

5.28.2.14 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 choose to set L1 as *Minimum Length* or L1,L2,L3 as *Fixed Length*.

Field Size/Char

Refer to page 137 for details.

5.28.2.15 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).

Field Size/Char

Refer to page 137 for details.

5.28.2.16 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 *Identicon* (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*.

Field Size/Char

Refer to page 137 for details.

5.28.2.17 Telepen

Enabled

Set this parameter to *on* to enable “Telepen”.

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).

Field Size/Char

Refer to page 137 for details.

5.28.2.18 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.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.2.19PDF-417

Enabled

Set this parameter to *on* to enable “PDF-417”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.2.20Micro 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:

]C1if the first codeword is 903-907, 912, 914, 915

]C2if the first codeword is 908 or 909

]C0if 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:

]L3if the first codeword is 903-907, 912, 914, 915

]L4if the first codeword is 908 or 909

]L5if the first codeword is 910 or 911

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.2.21Codablock

Enable Codablock A

Set this parameter to *on* to enable “Codablock type A”.

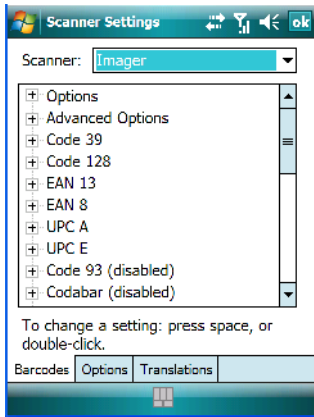
Enable Codablock F

Set this parameter to *on* to enable “Codablock type F”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3 Imager



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

5.28.3.1 Options-Imager

TekImager Enabled

Setting this option to *on* enables the imager installed in your PDA.

Continuous Scan Mode

Setting this parameter to *on* keeps image capture active and continuously decoding as long as the scanner button is pressed and held down.

Center Bar Code Only



Note: This parameter must be disabled when reading Composite bar codes.

When more than one bar code is visible in a single snap shot, this parameter allows you to specify that only the centre image within the imager framing marker be read. When this pa-

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.

Window Width

“Window Width” determines the width of the captured image in pixels.



Note: The driver will validate and reassign the value assigned to this parameter, if necessary; the driver will also use the Window Width value to horizontally center the image in the field of view.

Window Height

This parameter determines the height of the captured image in pixels.



Note: The driver will validate and reassign the value assigned to this parameter, if necessary; the driver will also use “Window Height” value to vertically center the image in the field of view.

Dot Time (msec)

The value selected for “Dot Time (msec)” determines (in milliseconds) how long the targeting dot remains on before the scanner begins capturing images. When you double-tap on this parameter, a dialog box is displayed in which you can enter a value of between 0 and 3000. A value of 0 disables the target dot.

5.28.3.2 Advanced Options - Imager



Important: *Do not adjust the advanced options without first consulting Psion Teklogix technical support.*

Factory Defaults On Reboot

The value assigned to this parameter determines whether or not the driver will restore the factory defaults to the imager device on the next reboot.



Note: The driver will default the imager device on a 'clean' reset, regardless of the value of this parameter.

Min Scan Duration

This parameter defines the minimum amount of time in seconds that the imager will scan when the trigger is pressed and held down without successful decode.



Note: The actual scan duration when the trigger is pressed relies on the value assigned to Captures Per HW Trigger, below.

Captures Per HW Trigger

The value assigned to this parameter determines the number of captures the imager device will take while the imager's internal hardware trigger is held down.



Note: This parameter, together with "Min Scan Duration", determines the actual scan duration. When the scan trigger is pressed and held down, the driver starts a timer based on the value of "Min Scan Duration" and also sends a command to emulate the hardware trigger. When completed, if the time has not yet expired, it will send another command to the imager device, forcing the imager to flash again using the value assigned to "Captures Per HW Trigger".

Auto Exposure



Important: This parameter value should only be changed by qualified Psion Teklogix personnel. It should be left at the default value – 'on'.

Setting this parameter to *on* allows the imager to make automatic gain, integration and illumination adjustments based on ambient light before capturing the bar code. If the adjustment is insufficient, further adjustments are made automatically before another image is captured.

Fast Converge



Note: “Auto Exposure” must be set to ‘on’ in order for this parameter to function.

Keep in mind that while this parameter can improve imager performance, “Fast Converge” increases battery power consumption.

Setting this parameter to *on* speeds the “Auto Exposure” process. It allows the imager to rapidly snap a number of bar code capture attempts while finding ideal values for gain, integration and illumination.

Max Gain, Max Integration And Max Illumination



Important: *These parameter values should only be changed by qualified Psion Teklogix personnel.*

These parameters represent internal values used by the 2D imager. The “Auto Exposure” parameter automatically adjusts the “Max Gain”, “Max Integration” and “Max Illumination” parameters to produce the best bar code read. Keep in mind that “Auto Exposure” must be set to *on* in order for these parameter values to be automatically adjusted.

Double-tapping on any of these parameters displays an associated dialog box in which an allowable range is displayed: Max Gain – 357 to 7920, Max Integration – 0 to 65535, Max Illumination – 0 to 7.

Decoder Timeout

The decoder is a set of algorithms that examine the image and attempt to find the bar codes, and then turn the pixels into data that the computer can use—this process takes time. “Decoder Timeout” limits the amount of time the decoder will spend attempting to decode an image, and forces it to stop and grab a new image, which will probably be easier to decode.

Note: When decoding multiple bar codes in one image, the value assigned to ‘Decoder Timeout’ should be increased to 200ms/extra bar code after the first.

Adaptive Windowing

“Adaptive Windowing” is an advanced technique used to speed up bar code recognition in certain applications. This parameter automatically reduces the size of the window to the user-programmed window size when it successfully decodes (which reduces decode time the next time it is used), but increases it to the full size window (1280x1024 for SX5303) on a failed decode.





Note: This feature assumes that you have reached an understanding about how the device operates in your application, and that, after a learning period, operators will get used to using the imager in one particular way. It also assumes that a trained operator will usually only have near miss scenarios.

Constant Illumination

“Constant Illumination” is used to reduce the intrusiveness of the device’s illumination on the observer. Instead of the illumination turning on and off every time the device attempts a decode (2-4 times per second), the illumination stays on from the time the trigger is pulled until a decode is successful. This feature is useful in low light environments, since it will also reduce the distraction that the illumination can have on nearby coworkers.

5.28.3.3 Code 39 Settings

Enabled

Set this parameter to *on* to enable “Code 39”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.4 Code 128 Settings

Enabled

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

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.5 EAN 13

Enabled

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

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.

Prefix/Suffix

Refer to page 137 for details.

5.28.3.6 EAN 8

Enabled

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

Addendum

Refer to page 154.

Prefix/Suffix

Refer to page 137 for details.

5.28.3.7 UPC A

Enabled

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

Addendum

Refer to page 154.

Prefix/Suffix

Refer to page 137 for details.

5.28.3.8 UPC E

Enabled

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

Addendum

Refer to page 154.

Prefix/Suffix

Refer to page 137 for details.

5.28.3.9 Code 93

Enabled

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

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.10 Codabar

Enabled

Set this parameter to *on* to enable “Codabar”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.11 Interleaved 2 of 5

Enabled

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

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.12 RSS Code (Reduced Space Symbology)

Enable

Setting this parameter to *on* enables “RSS Code” scanning capability.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.13 Composite



Important: *To successfully read this type of bar code, the two types of symbologies included in a composite bar code must be enabled.*

Enabled

Set this parameter to *on* to enable “Composite” bar codes.

5.28.3.14 PDF-417

Enable

Setting this parameter to *on* enables PDF-417 two dimensional (2D) coding.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.15 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.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.16 2D Data Matrix

Enable

Set this parameter to *on* to enable “Data Matrix”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.17 2D QR Code

Enabled

Set this parameter to *on* to enable “2D QR Code”.

Field Size/Char

Refer to page 137 for details.

5.28.3.182D Maxicode

Enabled

Set this parameter to *on* to enable “2D Maxicode”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.192D Aztec

Enabled

Set this parameter to *on* to enable “Aztec”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.20Postal: PlaNET

Enabled

Set this parameter to *on* to enable “Postal: PlaNET”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.21Postal: PostNET

Enabled

Set this parameter to *on* to enable “Postal: PostNET”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.22Postal: Australian

Enabled

Set this parameter to *on* to enable “Postal: Australian”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.23Postal: Japanese

Enabled

Set this parameter to *on* to enable “Postal: Japanese”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.24Postal: Korean

Enabled

Set this parameter to *on* to enable “Postal: Korean”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.3.25Postal: Royal

Enabled

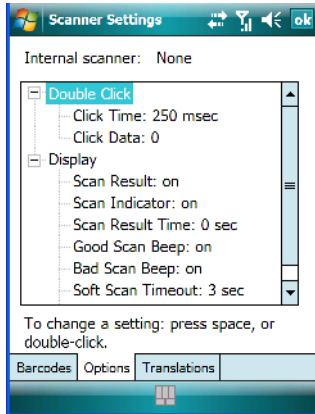
Set this parameter to *on* to enable “Postal: Royal”.

Field Size/Char

Refer to “Field Size” on page 137 for details.

5.28.4 Options Tab

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



5.28.4.1 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 PDA 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.

5.28.4.2 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 PDA 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

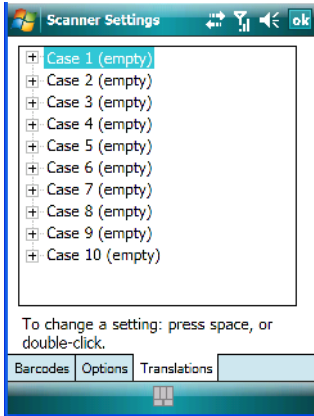
This parameter is used by the SDK “Scan” function (soft-scan: starting a scan session via the SDK function, instead of a physical user trigger press). The value assigned to this parameter determines the soft-scan timeout from 1 to 10 sec. (default is 3 sec.).

Scan Log File

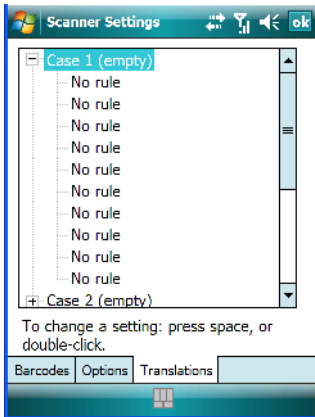
If this parameter is enabled, the input barcode and the modified/translated output bar code are logged in the file \Flash Disk\ScanLog.txt. Keep in mind that if the “Scan Log File” is enabled, there is a slight performance effect when performing multiple scans since the log file is written to persistent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

5.28.5 Translations Tab

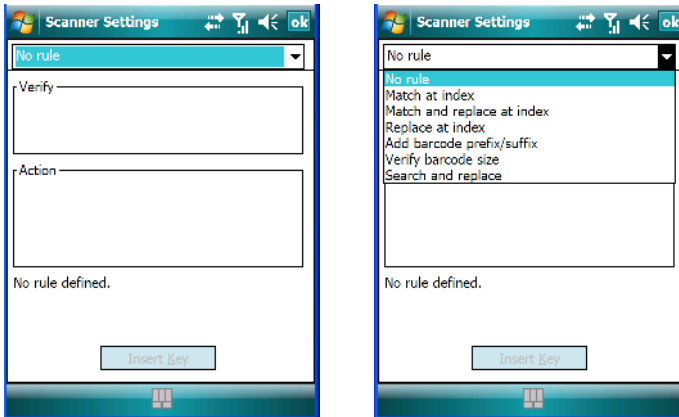
The Translations tab allows you to define up to 10 cases, each consisting of up to 10 rules in sequential order. Only one case will be applied to a bar code and a case will only be applied if all rules specified in the case are successful – if a rule within a case fails, the entire case fails.



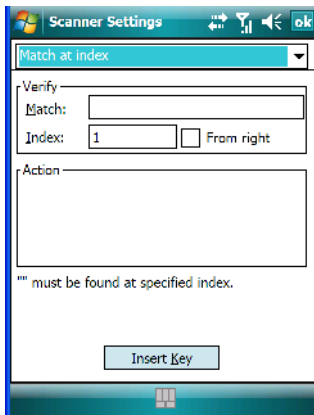
- In the Translation tab, tap on the Case # to create rules.



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



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



5.28.5.1 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.*

Translation information about the status of each case/rule is displayed in the scan log file (see “Scan Log File” on page 173) when enabled. This is useful if a case fails, and you are trying to determine why a rule is failing.

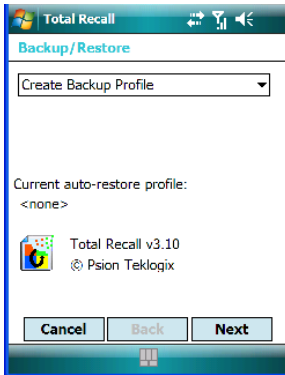
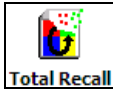
5.29 Total Recall

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



Note: *In Windows Mobile 6, the registry and installed programs are stored in the Flash file system and are not lost on reset. However, in special cases where Psion Teklogix personnel 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 SD/MMC card or externally to the device on a USB memory stick or on a PC.*

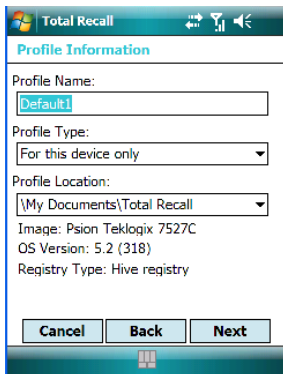
- Tap on **Start>Settings**. Tap on the **Total Recall** icon.



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*.

5.29.1 Creating A Backup Profile

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



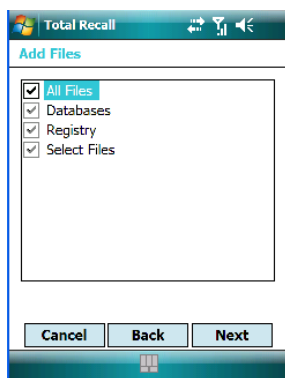
Profile Information

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*.

- 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.
- *AutoRestore for this and other devices* – creates a profile that automatically restores after resuming from a clean start, but it will not contain the touchscreen calibration coordinates or the Wireless radio settings.
- Finally, choose a *Profile Location* – The location for the profile is either *\Flash Disk* or *\SD-MMC Card*.
- Tap on the **Next** button to display the next dialog box, *Add Files*.

Add Files

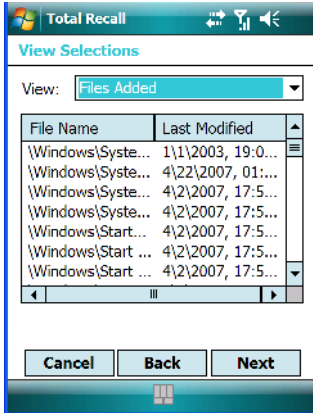


By default, **All Files** is selected so that all installed or copied files, database entries, and the Registry will be saved. You can, however, limit the backup to databases, the registry and/or Selected Files.

- Tap on the **Next** button to view your selections.

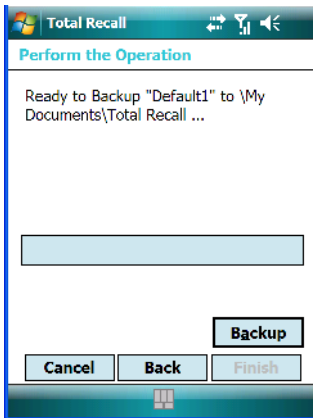
View Selections

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

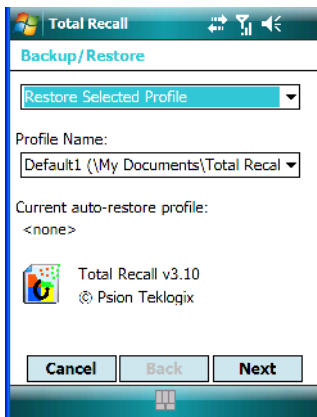


- Tap on **Backup** to begin the process and create a profile.

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*.

5.29.2 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.

5.30 Connections Tab

This tab is used to setup connections using *Bluetooth*, 802.11 radios, and you can also set up Wireless WAN connections.

The *Wireless WAN* icon is only visible when *Windows Mobile 6 Classic* is installed in your iKôn PDA.

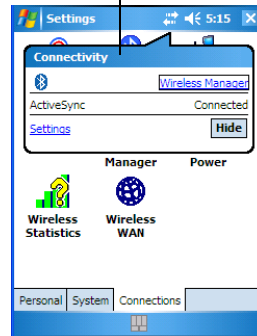
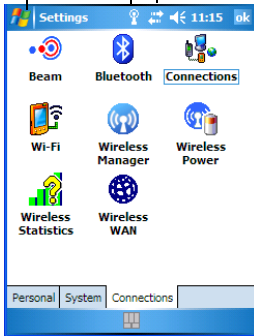
- Tap on **Start>Settings>Connections** tab to display your connection options.



Navigation Bar

Tap on these connectivity hotkeys
to display Notification Bubbles

Notification Bubble

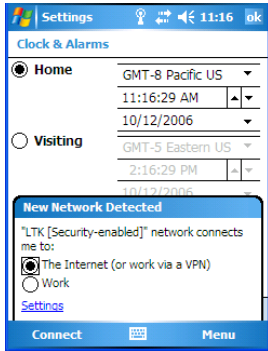


Navigation Bar Connectivity Hotkeys

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 Network Detection

If a wireless network is available when you switch on your unit, 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*.

5.31 Beam

If your unit is equipped with an IrDA end-cap, tapping on *Start>Settings* and then tapping on the *Connections* tab followed by the *Beam* icon allows you to enable *Receive all incoming beams* so that your unit can accept incoming data from other IrDA devices.

5.32 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**. Next, tap on the **Connection** tab followed by the **Bluetooth icon**.

5.32.1 The Devices Tab

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

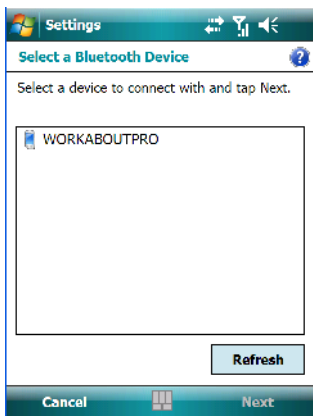


*Note: You may need to enable your **Bluetooth** radio before you begin. Refer to “Bluetooth Mode” on page 185 for details.*

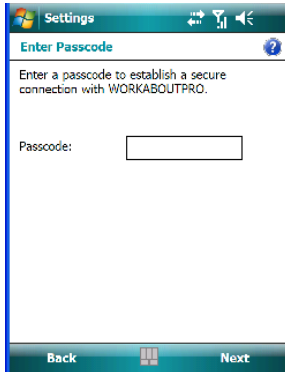
To add a new device:

- Tap on **Add new device...**

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



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



- Type your **Passcode**. Tap on **Next**.
- In the *Display Name* screen, edit the name of the device. This is *optional*.
- Tap on **Finish**.



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

5.32.1.1 Pairing A Device

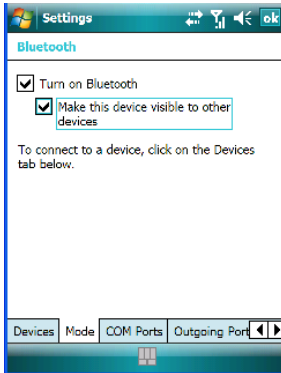
If you intend to pair devices (a headset, for example), power on and bring the device within 10 meters of the PDA before proceeding with the discovery process described below.



Important: *Follow the steps under “Pairing A Bluetooth Headset Or Other Bluetooth Devices” on page 45 to pair a Bluetooth device with your PDA.*

5.32.2 Bluetooth Mode

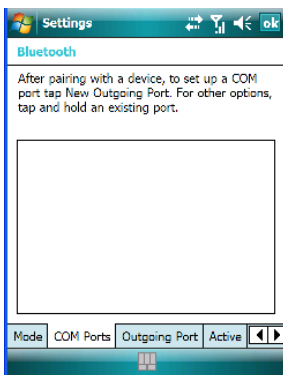
- Tap **Start>Settings**. Tap on the **Connections tab>Bluetooth icon** and then tap on the **Mode tab**.



When *Turn on Bluetooth* is enabled (a checkmark is displayed in the checkbox), *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 PDA 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.

5.32.3 Bluetooth COM Ports



New Incoming Port

The *Bluetooth COM Ports* dialog box allows you to assign a COM port number. If a port number has not been assigned, tapping on *New Incoming Port* allows you to choose a COM port number. If a port number already exists that you'd like to change, tap and hold the stylus on *Incoming Port (COM #)* to display a pop-up menu. Choose *Edit* and assign a new COM port number.

New Outgoing Port

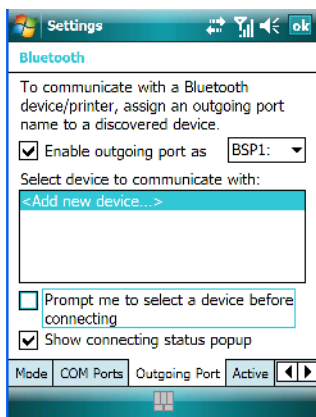
When you pair the iKôn PDA with another device, *New Outgoing Port* is listed in this dialog box. Tapping on this option allows you to assign an outgoing COM port number.

- 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 PDA 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.

5.32.4 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

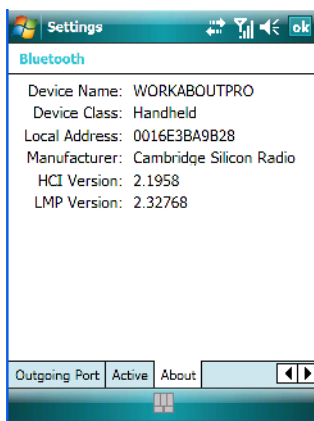
of your PDA so that you are prompted to choose the device with which you want to communicate.

5.32.5 Active Connections List



This tab displays the currently active *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.

5.32.6 About Tab

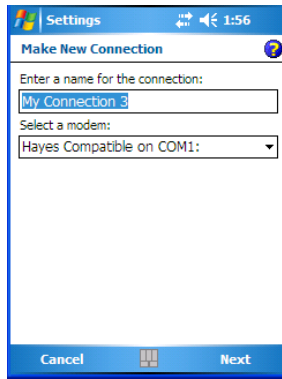


The About tab displays information about the *Bluetooth* module, such as the manufacturer name, local address and version. Like the *Active* tab, this information cannot be edited.

5.32.7 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* radios in your iKôn PDA and phone are enabled (turned on), and that the PDA 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 the **phone** and then tap on the **Next** button.
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**.

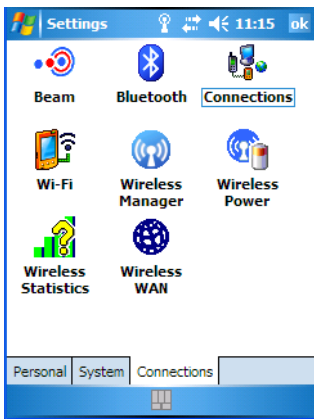
You can begin using the *Bluetooth* phone connection, for example, to send and receive e-mail, browse the Internet with Internet Explorer, and so on.

5.33 Connections - Connecting To The Internet

To activate a connection, make certain that any necessary equipment is installed in your PDA 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.



2. Tap on the **Connections** icon.
3. Under **My ISP**, tap on **Add a new modem connection**.



*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.*

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 190.
5. To connect to the Internet, launch the program you want to use. For example, launch Internet Explorer on your iKôn PDA to browse the Internet. Your PDA automatically connects.



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

5.33.1 Modem Connection Setup

Before you begin, you'll need the following information from your ISP or network administrator: telephone number, user name, password, domain name and TCP/IP settings.

If your iKôn PDA 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.

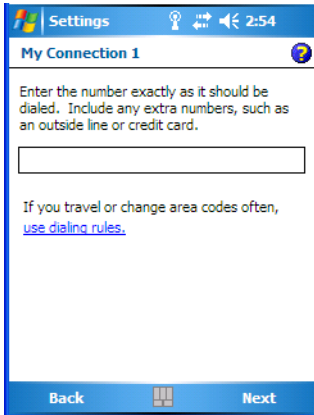


4. In the dropdown menu below *Select a modem*, tap on your modem type.

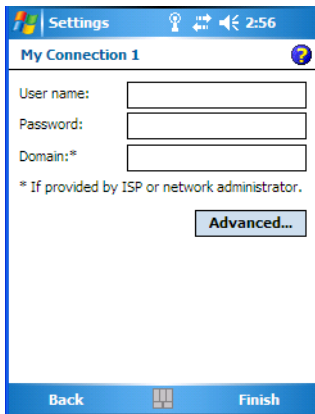


Note: If your modem is not listed in the dropdown menu, choose Hayes Compatible on COM1.

5. Tap on the **Next** button.



6. In the next screen, enter the phone number *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 **Next** button.



8. Type the **User Name**, **Password** and **Domain Name** as provided by your ISP or network administrator.



*Note: Generally, you will **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.

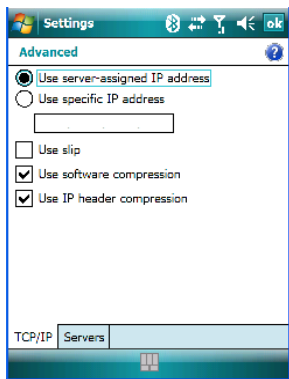
9. Tap on the **Finish** button.

If you need to edit the Advanced settings, refer to “Advanced Modem Settings” in the next section.

5.33.1.1 Advanced Modem Settings

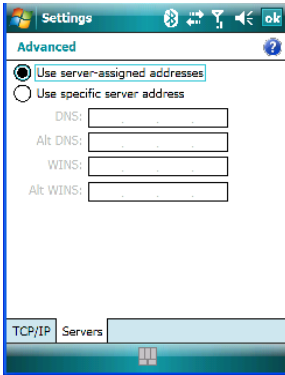
TCP/IP Settings Tab

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 PDA 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.

5.34 Wireless Power Icon

While you can access network card settings through the Wi-Fi icon, and you can access *Bluetooth* settings through the *Bluetooth* icon, and for units that support it, *GSM/GPRS* connections, the Wireless Power icon acts as a connection manager, providing access to all these types of network connections.



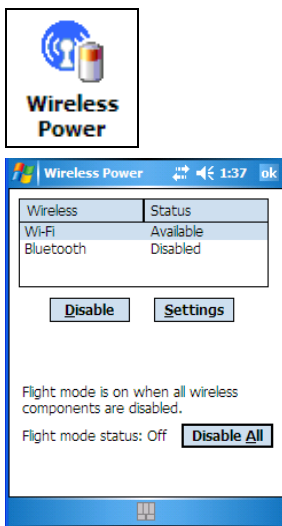
*Note: The **Wireless Manager** icon, as the name implies, also provides connection management. However, if you need to disable all connections (Flight Mode), the **Wireless Manager** icon will not be available. The **Wireless Power** icon, on the other hand, is always visible even when you disable all network connections.*



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

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

- Tap on **Start>Settings>Connections tab>Wireless Power icon.**



5.34.1 Flight Mode - Disabling Wireless Components

To disable all wireless components when, for example, you are taking your PDA 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.

5.34.2 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 PDA.



Important: *The iKôn PDA 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.*

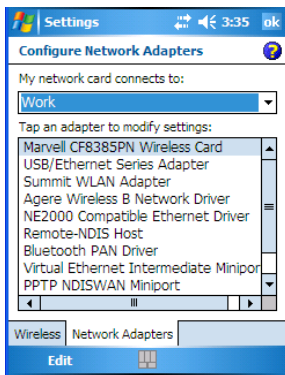
5.34.3 Network Adaptor Cards



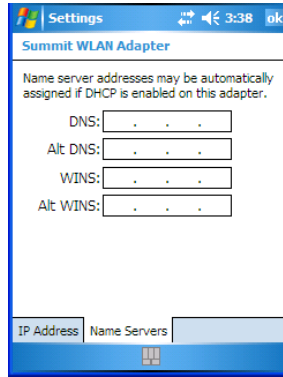
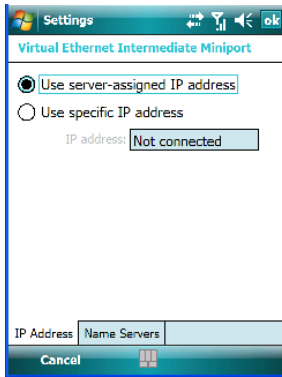
Important: *For 802.11b/g (Summit) CF card adaptor setup details, refer to “Setting Up A 802.11b/g Radio–Summit Client Utility” on page 15.*

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 Adapters icon**.



- 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.



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 PDA will connect automatically.

5.34.4 Changing Network Card Settings

- If you use your network card in two locations like 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 below *My network card connects to*, choose either **The Internet** or **Work**.

5.34.5 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 PDA: **IPSec/L2TP** or **PPTP**. Your network administrator will let you know which option applies to your unit.
- 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 192 for details about this tab.

- Tap on **Finish**.
- Launch a program like Internet Explorer to activate the connection. The VPN connection will start automatically.

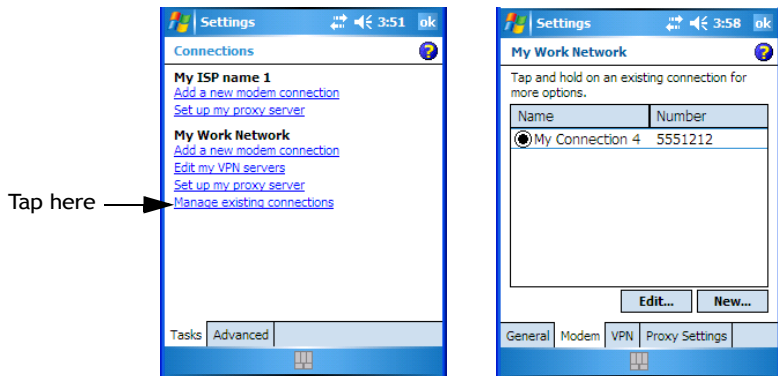
5.34.6 Managing An Existing Connection

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

5.34.6.1 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.



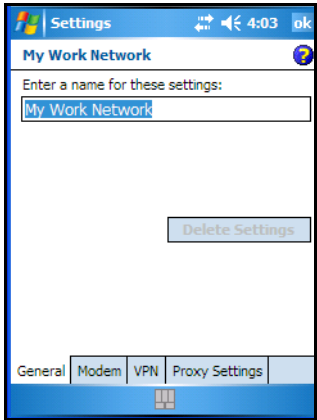
*Note: You can also create a new connection by tapping on the **New** button. To make changes to the settings for this connection, tap on **Edit**.*

5.34.6.2 Changing A Connection Setting Name

Your iKôn PDA 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**.

- Tap on the **General** tab.



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

5.34.7 Selecting A Network

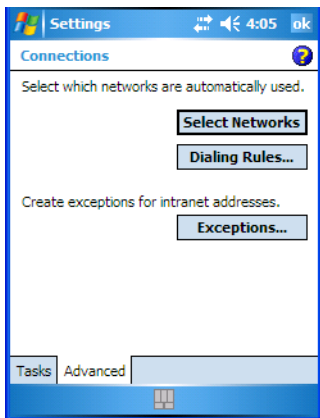


Important: *Normally, you will not need to change these settings. Contact your ISP or network administrator before making any changes.*

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 PDA 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 PDA connects.

- Tap **Start>Settings**. Tap on the **Connections** tab followed by the **Connections** icon.

- Tap on the **Advanced** tab.



- Tap on **Select Networks**.
- In the appropriate lists, choose **My ISP** or **My Work Network**.

5.34.8 Proxy Server Setup

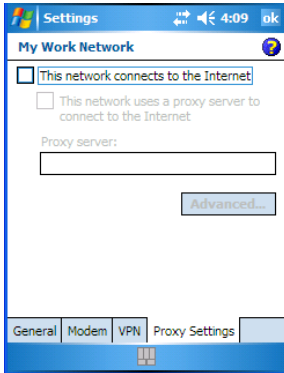


Note: If you are connected to your ISP or private network during synchronization, the iKôn PDA will download the appropriate settings during synchronization from your PC. If these settings are not on your PC, or if they need to be changed, you'll need to set up the proxy server connection manually.

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**.



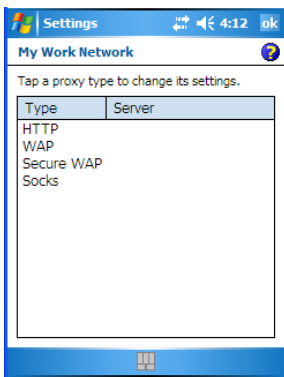
- Add a checkmark next to **This network connects to the Internet** and **This network uses a proxy server to connect to the Internet**.
- In the *Proxy server* field, type the proxy server name.
- Tap on **OK** to save your changes.



*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 201.*

5.34.8.1 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**.

5.35 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.


5.36 Wireless WAN (Windows Mobile 6 Classic Only)


The Wire WAN icon is visible for iKôn PDAs running *Windows Mobile 6 Classic*. A PDA equipped with a GSM/GPRS, CDMA/1xRTT or UMTS radio has wide area networking *data* transfer capabilities.

5.36.1 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 (e.g. the user is required to enter a PIN).


 A non-recoverable (fatal) error has occurred.


GSM/GPRS Status Indicators


 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 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%.

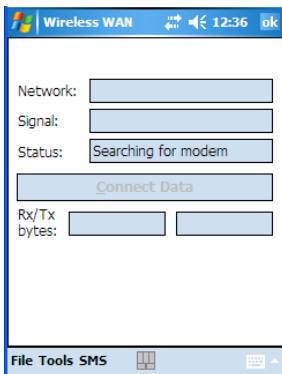
 Signal strength is between 61% and 80%.

 Signal strength is between 81% and 100%.

 A CDMA/1xRTT packet data connection is active.

5.36.2 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 204 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*.

5.36.3 Disconnecting From A Network

To disconnect from the network:

- Tap on the **Disconnect** button, and then on **OK**.

When the iKôn PDA 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.

5.36.3.1 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.

5.36.4 Advanced Information

In most cases, when a GSM/GPRS radio and SIM are installed in your PDA, setup is automatic. Follow the steps outlined under the heading “Establishing A Connection” on page 203 to make a connection. The information in this section is for advanced setup purposes.

5.36.4.1 Entering A PIN

If a PIN is required, a PIN entry dialog box is displayed.

- Type your **PIN**, and press [ENTER].



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.

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*.

5.36.4.2 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

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.

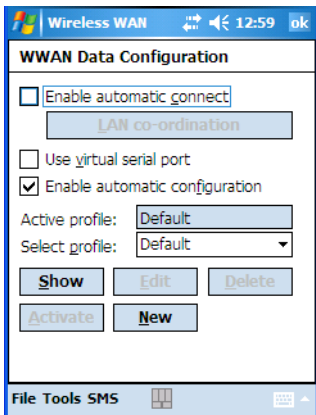
- NDIS error

An internal software error has occurred. If a reset does not clear this condition, Psion Teklogix technical support may need to investigate further.

5.36.5 Tools Menu

The *Tools* menu in the main *Wireless WAN* dialog box offers some additional, advanced setup features.

5.36.5.1 Data Connection Configuration



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.

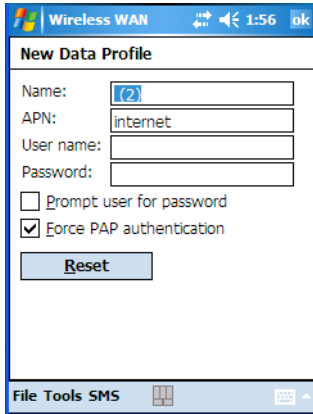
If connection profiles are configured manually then the *Enable automatic configuration:* checkbox should normally be unchecked.

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* drop-down 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.

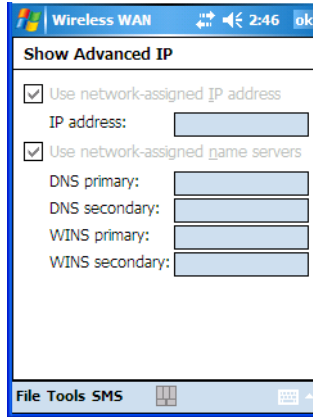
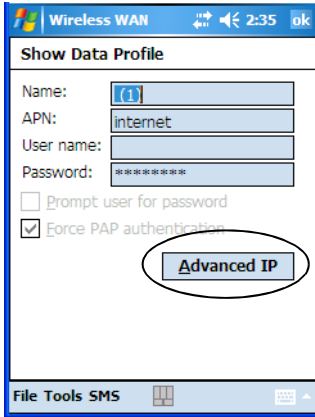
- **New** – Tapping on the *New* button allows you to create a new profile.



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.



5.36.5.2 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.

5.36.5.3 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.

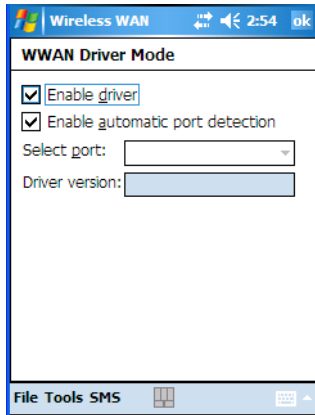
Available networks can also be viewed without changing any settings. Scanning for available networks is a lengthy operation – a progress bar is shown while the scan is active. For every network that is found, the network name, country, status and numeric network identifier (MCC/MNC, Mobile Country Code 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'.

5.36.5.4 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.

5.36.5.5 Modem Information

The fields in this dialog box cannot be edited – they only display information about the iKôn PDA 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 PDA is turned on. Power is removed from the modem when the iKôn PDA 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 PDA, 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 PDA is turned on. Power is removed from the modem when the terminal enters suspend mode.

- Enabled – Always On

When the iKôn PDA enters suspend mode, the modem remains powered indefinitely.

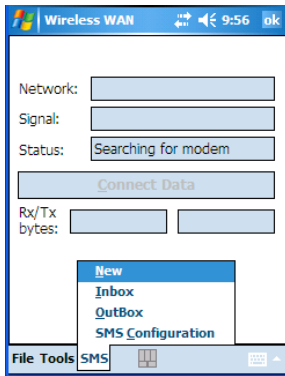
- Enabled – Keep on for 5 min
- Enabled – Keep on for 15 min
- Enabled – Keep on for 30 min
- Enabled – Keep on for 1 hour
- Enabled – Keep on for 2 hours

When the PDA enters suspend mode, the modem remains powered. If the iKôn PDA 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.

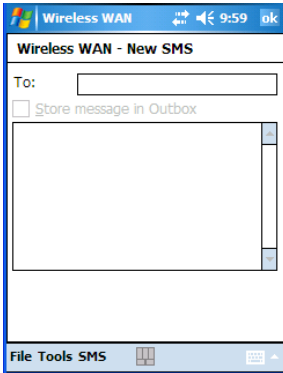
At the cost of a slightly increased power consumption in suspend mode, the modes where the modem remains powered during suspend mode have several advantages. When the PDA wakes from suspend mode, the modem is ready immediately; modem or network initialization is not required. A packet data session can thus remain active during suspend mode. In these modes, the modem is also able to wake up the PDA if the network status changes, or there is a new incoming SMS.

5.36.6 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.



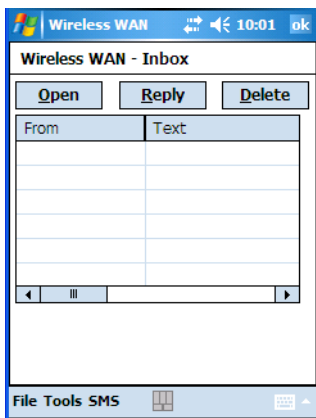
5.36.6.1 New SMS



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.

5.36.6.2 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.

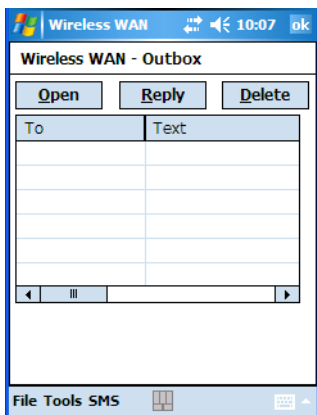
Clicking the same column heading twice reverses the sort order. Pressing any letter or digit moves the highlight to the next message whose address begins with that letter or number.



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.

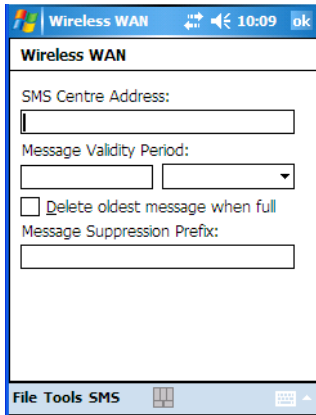
The *Open* button opens the selected message in a new window such that the entire message can be read including the original formatting (line breaks are replaced by spaces in the Inbox message list). Pressing the *Reply* button opens the new message dialog as described above, except the destination phone number is already filled in. Pressing the *Delete* button erases the message.

5.36.6.3 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.

5.36.6.4 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.

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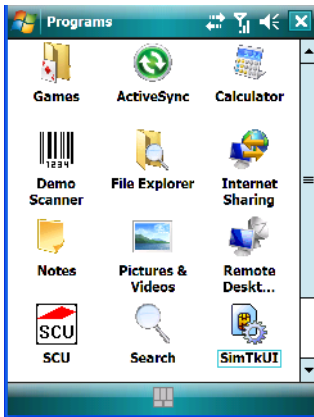
6.1 Programs

The *Programs* menu provides access to all the applications available on your iKôn PDA.

- Tap on **Start>Programs** to display this screen.

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

Figure 6.1 Programs Tabs



6.2 Games

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

6.3 ActiveSync®

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

ActiveSync can be installed from the *Getting Started CD* included with your iKôn PDA. Refer to “The Getting Started CD ??” on page 12 for details.

6.3.1 Synchronization

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

<http://www.microsoft.com/windowsmobile/activesync/default.aspx>

6.4 Calculator

Tapping on *Start>Programs>Calculator* displays a standard calculator with regular functions.

- Use your stylus to tap the calculator buttons.

6.5 Demo Scanner

The *Demo Scanner* icon is used to test how the PDAPDA 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.

6.6 Office Mobile

This icon contains the following abridged Microsoft programs: Excel 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.

6.6.1 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.

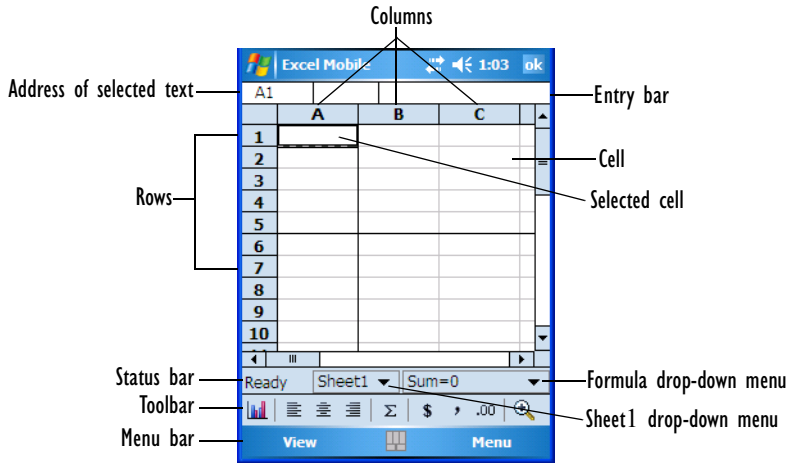
Excel Mobile allows you to copy Excel workbooks from your PC onto your iKôn PDA and update them while you're away from your desk.

- 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**.

6.6.1.1 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.

6.6.2 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.

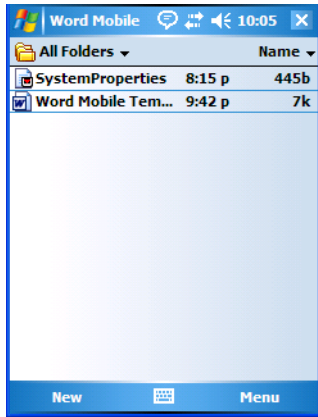


Note: Keep in mind also that a Word document created on your PC can lose key formatting features such as styles and tables if you make changes to it on your iKôn PDA.

- 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 Mobile* document, it will be listed in the *Word Mobile* window.



- Tap on **New** in the softkey bar to create a new Word document.

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.

6.6.2.1 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 71 for details.

You can also use the iKôn PDA keyboard for data entry.

6.6.2.2 Sharing Documents With Your PC

Documents created on a PC are recognized by your iKôn PDA. 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 PDA.



Important: *To avoid translation 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 238 for details.*

6.6.3 PowerPoint Mobile

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

- 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.

6.7 File Explorer

Windows Mobile 6 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 64 for details about this program.*

6.8 Internet Sharing

This option allows you to use your iKôn PDA 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 PDA.

6.8.1 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**.

6.8.2 Using Internet Sharing

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

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 click on **File>Connection Settings**.
- Disable **Allow USB connection** by clicking in the checkbox to the left of this option.
- Connect the iKôn PDA to your PC using *Bluetooth* or a *USB cable*.
- On your iKôn PDA, tap **Start>Programs>Internet Sharing**.
- Choose the **PC Connection** type—USB or *Bluetooth*.
- Choose the **network connection** that the iKôn PDA should use to connect to the Internet.
- Tap **Connect**. It takes approximately 30 seconds to establish a connection. (If you are prompted to turn on *Bluetooth*, tap **Yes**.)

If you are using a *Bluetooth* connection, execute the following steps *on your PC*:

- Click **Start>Control Panel>Network Connections**.
- Right-click on **Bluetooth Network Connections**, and click on **View Bluetooth Network Devices**.

- If the iKôn PDA is listed as a *Network Access Point*, click **Connect**. If it is not listed, click **Create a new connection** and use the *New Connection Wizard* to add the iKôn PDA to the list.

6.9 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 PDA 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.



6.9.1 Creating A Note

- Choose an entry mode for your note.

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

To use your stylus to handwrite on the screen, tap on the pen icon .



Important: Refer to “Entering Text” on page 71 for text entry details.


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

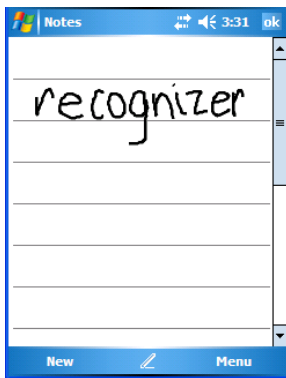
Your note is automatically saved. The file name is the first line of the note if you used the keyboard—otherwise, it's named Note1, Note2 and so on.

6.9.2 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 PDA to recognize your handwriting and convert it into printed text.

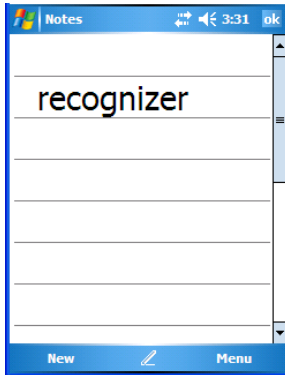
To convert handwriting into text:

- Tap on the pen tool 
- and compose a note using your stylus.



- Tap on **Menu>Tools>Recognize**.

The text in the note is converted from handwritten to printed text.



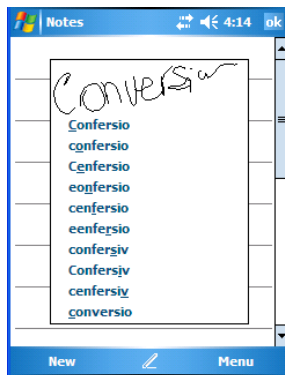
*Note: To convert only a specific portion of your handwritten note into printed type, tap the stylus just before the first letter of the text, pause for a second, and then drag your stylus across the text you want to select. Then, tap on **Tools>Recognize** to convert only the highlighted text.*


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.

Figure 6.2 Incorrect Conversions



- 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.

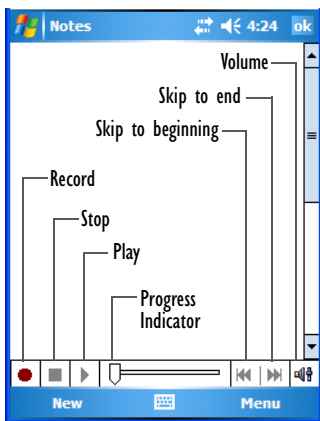
6.9.3 Renaming A Note

- 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**.

6.9.4 Recording Notes

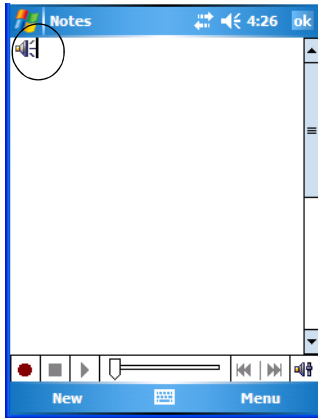
It's sometimes easier to record a note than to write it down just to make certain that you've captured an idea before it drifts away. To make an audio recording:

- 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 PDA, or move the PDA 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.

6.9.5 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 PDA help file to synchronize your note.

6.10 Pictures & Videos

Pictures & Videos is a photo and video viewing program. This program also provides a number of tools that allow you to crop, 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 are transferred to the iKôn PDA.*

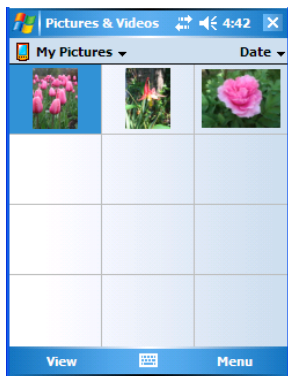
6.10.1 Moving Photos To The iKôn PDA

- 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.

6.10.2 Opening A Photo

- Tap on **Start>Programs>Pictures & Videos**. You'll see a thumbnail of your photos.



Note: If you've stored your photos on a storage card, you'll need to tap on the storage card icon to display your photos.

- Tap on a thumbnail to open a photo.

6.10.3 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.

6.10.4 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*.

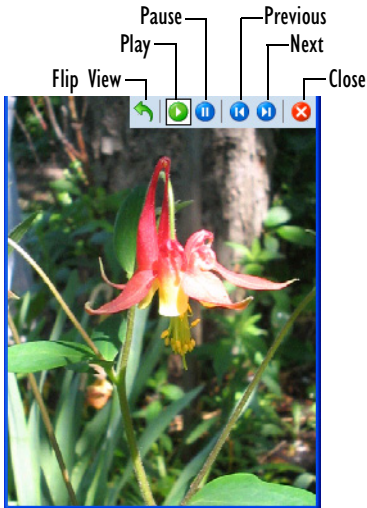
6.10.5 Creating A Slide Show

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.

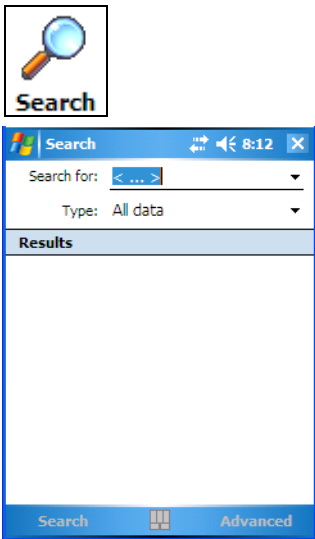


6.11 Summit Client Utility (SCU)

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 2.7.2 Using The SCU To Connect To The WLAN15 for setup details.

6.12 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*.

6.12.1 Internet Explorer

You can connect to *Internet Explorer* in two ways: by connecting the iKôn PDA directly to the Internet or by connecting through your PC while the PDA is attached via ActiveSync (see “ActiveSync®” on page 221).

6.12.2 Browsing Web Sites

There is little difference between the standard Internet Explorer found on your PC and that found on your iKôn PDA, 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:

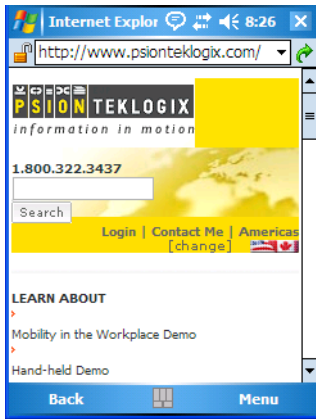
- Connect your iKôn PDA to the Internet. (If you're not certain how to do this, tap on **Start>Internet Explorer** to display a blank window. Next, tap on **Start>Help** and follow the steps listed.)

- Tap on **Start>Programs>Internet Explorer** to open Internet Explorer.

If *Internet Explorer* is also from the *Today* 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.



6.13 Messaging

The *Messaging* program is used to send and receive e-mail on your iKôn PDA. 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.

6.13.1 Folders

If you use an Outlook e-mail account, messages in the Inbox folder in Outlook are automatically synchronized with your iKôn PDA. 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 PDA 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 PDA

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 PDA.

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 PDA or your PC.

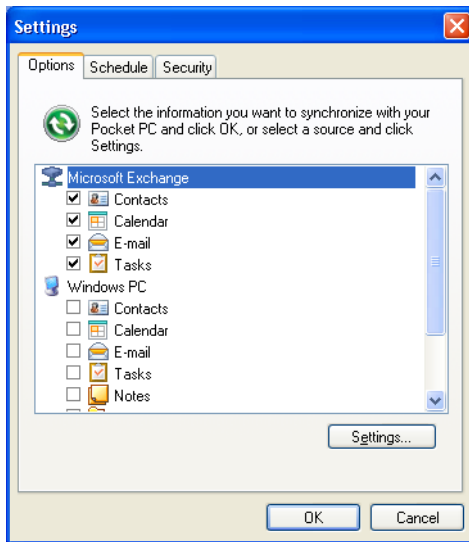
6.13.2 Synchronizing E-mail With Outlook

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



Note: Synchronizing e-mail does not require that the iKôn PDA have an independent connection to the Internet.

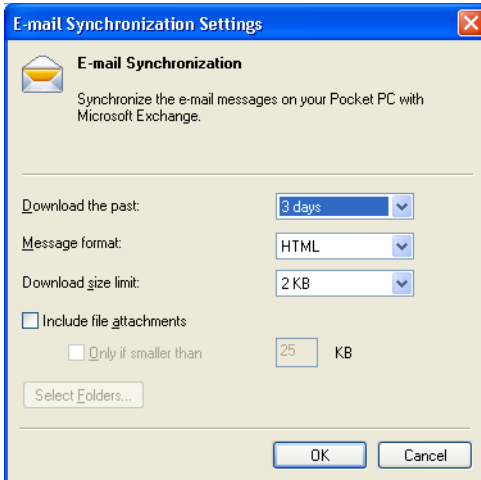
- In ActiveSync on your PC, tap on **Tools>Options** in the tool bar at the top of the screen.



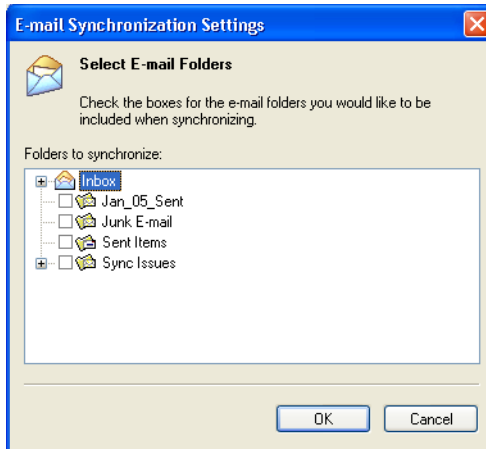
- Make certain that a check mark is displayed in the checkbox next to *E-mail*. Tap on **OK**. Once you check *E-mail* for synchronization, Outlook e-mail messages are synchronized as part of the general synchronization process. The next time you synchronize with ActiveSync, the e-mail in Outlook on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

6.13.3 Changing Synchronization Settings

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



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



- Add a checkmark next to the folders in this screen that you want to synchronize with your iKôn PDA, 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**.

6.14 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 57.

6.15 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 PDA.

6.15.1 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**.

6.15.2 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 PDA.*

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

6.15.3 Ending A Session

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

6.16 Windows Media

Windows Media Player Mobile allows you to play music and videos on your iKôn PDA. You can use Windows Media to play digital audio and video files that are stored on your device 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**.

6.17 Windows Update

This program checks for software updates, and if found, downloads updates to your iKôn PDA. 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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8.1 iKôn PDA Specifications (Model No. 7505)



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

8.1.1 Hardware

Physical Dimensions

- 15.5 cm x 8.0 cm x 4.0 cm (6.1 in. x 3.15 in. x 1.57 in.).

Weight (with battery pack)

- 350 g (0.77 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 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 PDA 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:	+/- 15kVdc air discharge, +/- 8kVdc contacts

8.1.2 Software

Platform

- PXA270 @ 624 MHz, 32 bit RISC CPU

- 128 MB flash, 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 dialler and Personal Information Manager (PIM) included with Windows Mobile 6 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 in 7505-BTSDCMMC75.*

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)

Chapter 8: Specifications
Bar Code Applications (optional)

- 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 (Applies to Model 7505-BTHC25 & 7505-BTSDCMHC25)

- UMTS/HSDPA: Triple band, 850//1900/2100 MHz

Note: ~~All the user upgradeable~~ 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 II, ver 2
 - Support Enhanced Data Rate (EDR) for up to 3Mbps data rate
 - Support Advanced Frequency Hopping (AFH) for reduced interference with 802.11b/g radio

4 **Bar Code Applications (optional)**



- Optional 1D EV15 imager
- Optional 2D SW5400 imager
- Optional 1D SE955 laser scanner

•

8.1.6 Accessories

Power

- AC power supply (charge & operate PDA)
- Automotive power supply (charge & operate hand-held)
- Single slot battery pack chargers
- Powered cradle for vehicle-mount applications

Communications

- Quad Dock (4-site) with 10/100 BaseT Ethernet and charge functions
- Desktop Docking Station (charges PDA & spare battery) provides USB1.1 host and device ports and supports optional plug-on expansion modules supporting 10/100 BaseT Ethernet or RS232 connections
- USB cable supports Active Sync without requiring a docking station

Carrying Accessories

- Hand strap, holster and a variety of protective carrying cases and pouches. ??

8.1.7 Approvals

Safety:	CSA/UL60950-1, IEC 60950-1, EN60950-1
EMC:	FCC Part 15 Class B
	EN 55022
	EN 55024
	EN 301 489
Laser:	IEC 60825-1, Class 2

	FDA 21 CFR 1040.10
	1040.11 Class II
<i>Bluetooth:</i>	1.2
RF:	<i>Bluetooth</i> and 802.11b/g: EN300 328, Part 15.247
GSM/GPRS:	EN301 511; EN50360/361, NAPRD03; 3GPP51.010; FCC Parts 22 & 24; Industry Canada; RSS-132 & 133
In-Vehicle Cradle:	e Mark

8.2 Radio Specifications

8.2.1 802.11 b/g WLAN Radio

Form factor	Compact Flash Type I extended
Antenna port	Two Hirose U.FL connectors for both transmit and receive antenna diversity
Antenna	Two PCB slot antennas 2.1 dBi
Form Factor	Proprietary module based on 16 bit CF interface
Transmit Power	802.11b: 70mW (+18.5dBm) 80mW maximum (+19 dBm)
Frequency Range	2.400 - 2.4897 GHz
Channels	FCC: 11 ETSI: 13 TELEC: 13
RX Sensitivity	-96dBm @ 1Mbps, -90dBm @ 11Mbps, -94dBm @ 6Mbps, -75dBm @ 54Mbps
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 - serial interface (ITU-T V.24 protocol) - SIM card interface 3 V, 1.8 V
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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 \pm 2dB) for EGSM850 Class 4 (+33dBm \pm 2dB) for EGSM900 Class 1 (+30dBm \pm 2dB) for GSM1800 Class 1 (+30dBm \pm 2dB) for GSM1900 Class E2 (+27dBm \pm 3dB) for GSM 850 8-PSK Class E2 (+27dBm \pm 3dB) for GSM 900 8-PSK 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 <ul style="list-style-type: none">- Multislot Class 10- Full PBCCH support- Mobile Station Class B- Coding Scheme 1 – 4 EGPRS <ul style="list-style-type: none">- 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 <ul style="list-style-type: none">- 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
Software:	AT commands AT-Hayes GSM 07.05 and 07.07, Siemens AT commands for RIL compatibility (NDIS/RIL) Microsoft™ compatibility RIL / NDIS for

Interfaces: Windows Mobile™
 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 1.2 compliant (features Adaptive Frequency Hopping for better co-existence with 802.11 radio)
 Chip Antenna Gain 1dBi peak
 Transmit Power -3dBm (0.5mW) minimum, +4dBm (2.5mW) max
 Frequency Range 2.400 - 2.4835 GHz
 RX Sensitivity (BER≤0.1%) -80dBm 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 - Model No. CH3000

8.3.1 Electro-Chemical Description

Description	Specification
Chemistry	Lithium-Ion (Li-Ion)
Capacity	5000 mAh nominal at 1000mA discharge 20 C to 3.0V (min)
	3000 mAh nominal at 1000mA discharge at -20 C to 3.0V
Voltage	3.7V nominal (3.0V min. to 4.2V max.)

Description	Specification
Cell Configuration	2P1S (2 parallel connected cells)
Cell Type	Cylindrical
Maximum discharge current	5.0A (1C) -20°C to +60°C (-4°F to +140°F)
Charge algorithm	Constant - current / constant voltage with taper current & timeout termination
Maximum charge voltage	4.2V +/- 1%
Maximum charge current	1C - dependant on cell manufacturer
Discharge cutoff	2.7V min - safety circuit initiates
Recommended fast charge	1C for 2.5 hr - dependant on cell manufacturer
Maximum fast charge time	2.5 hr
Recommended termination taper current	100 - 250 mA
Recommended charge termination timeout	4.0 hr - charging must stop
Charge temperature	0°C to +40°C (32°F to +104°F)
Discharge Temperature	-20°C to +60°C (-4°F to +140°F)
Storage Temperature	-20°C to +50°C (-4°F to +122 °F)—storage at elevated temperatures not recommended 25°C (77 °F)—recommended storage temperature.
Cycle Life	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)
Impedance	100 mΩ max. @ 1kHz AC, fully charged cells
Total Internal Resistance	180 mΩ max., fully charged new pack (including cell resistance and protection circuits)
High temperature recovery	> 55% nominal capacity after 20 days @ 60°C (140°F) (full charge)
Low temperature recovery	> 80% nominal capacity after 72 hours @ -20°C (full charge)
Capacity recovery	-20°C to +60°C (-4°F to +140°F) > 80% capacity recovery within 1 month -20°C to +45°C > 80% capacity recovery within 3 month -20°C to +20°C > 80% capacity recovery within 1 year

8.3.2 Electrical Specifications

Description	Specification
Communication interface	Smart Management Bus (SMB)
Internal Battery Data	Dependent upon cell parameters. Vendor to calculate and provide data.
Charge control	CV 4.2V, CC5.0A- dependant on cell manufacturer, Pre-charge 100mA, Current taper 100 - 250mA
Fuel gauge	Texas Instruments BQ27350PW
	Accuracy: +/- 1% of remaining battery capacity
	Resolution: 10 steps minimum
Calibration	Self Calibrating
Current accuracy	Charge/discharge: +/- 5%
Voltage accuracy	Charge/discharge: +/- 1%, measured at cell stack
Battery temperature	+/- 5°C (from -20°C to +60°C)
Battery Authentication	Texas Instruments BQ26100 SHA-1 encryption
Series resistance	Max. 180mΩ (contact + shunt + safety components + cells)
Internal electronics consumption	Normal operation 300μA Max Power-down Mode 20μA Max

8.3.3 Environmental And Safety Specifications

Description	Specification
Internal Protection	<p>Over-temperature: thermal fuse disconnect above 90°C</p> <p>Over-voltage: temporary disconnect if any cell voltage > 4.40V (discharge not inhibited)</p> <p>Electronics shall support 5.0A continuous load at 60°C without tripping the protection circuit.</p> <p>Over-current: temporary disconnect above 10.0A for > 20ms [shorting of battery terminals shall not damage the electronics or cells. Over current protection will have two series devices - Polyswitch/ fuse and switch FETs.]</p> <p>Under-voltage: temporary disconnect if total cell voltage < 2.75V (protection circuit to enter power-down mode and gas gauge function should be prohibited, but data shall not be lost as long as one cell is over 1.5V.)</p>

Description	Specification	
Drop Rate	IEC 60068-2-32 Test Ed: Free fall	Drop sample battery on all faces from height of 1.2 meters onto concrete floor. No explosion, fire, vent, leakage and the open circuit voltage higher than 3.7V.
Vibration	IEC 60721-3-5 CLASS 5M3 60068-2-64	Fh: vibration broadband random
Weatherproofing	IEC 529	IP54
Enclosure rating	UL 94-V0	Polycarbonate plastic
Electrostatic Discharge	EN61000-4-2	+/- 8kV air discharge, +/- 4kV contact discharge. Each contact 10 times with no corruption of internal volatile registers.
Cell safety certification	UL 1642	Safety of Lithium-Ion Batteries
Battery Standard certification	IEEE 1725-2006	Standard for Rechargeable Batteries for Cellular Telephones
Low Pressure		Must be able to withstand 8.0 PSI (16000ft) min. without damage
Restriction of Hazardous Substances (RoHS)	European Directive 2002/95/EC	Must comply with latest version of the RoHS directive.
Shipping	UN 3090	Shipping directive for Li Ion batteries
Other	PTCRB	Battery Program Management Directive

8.4 Scanner/Imager Model Numbers

Scanner/Imager Engine	Model Number
1D Laser SE 955	??
1D Imager EV15	??
2D Imager SX5400	??

8.5 Scanner Specifications

8.5.1 SE 955HP Specifications

Scan Engine	SE 955HP
Scan Angle	47° ± 3° default / 35° ± 3° reduced
Scan Rate	104 (± 12) scans/sec (bi-directional)
Scan Pattern	Linear
Wavelength	650nm
Input Voltage	3.0-5.5 VDC ± 10%
Input Current	65 mA typical
Standby Current	8 µA max
Operating Temperature	-20° to 60° C -4° to 140° F
Print Contrast	Minimum 25% absolute dark/light reflectance measured at 650 nm
Dimensions	1.21 cm H x 2.16 cm W x 1.55 cm (max) 0.47 in. H x 0.85 in. W x 0.61 in. D (max)
Symbologies	UPC/EAN, Code 128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI Plessey

8.5.1.1 SE 955HP Decode Zone

Decode Zone Typical	
4 mil	1.0 in. - 5.5 in. / 2.54 cm - 13.97 cm
5 mil	1.25 in. - 8 in. / 3.18 cm - 20.32 cm
7.5 mil	1.5 in. - 13.25 in. / 3.81 cm - 33.66 cm
10 mil	1.5 in. - 17.5 in. / 3.81 cm - 44.45 cm
UPC 100%	1.5 in. - 23.5 in. / 3.81 cm - 59.69 cm
15 mil	1.5 in. - 29.5 in. / 3.81 cm - 74.93 cm

20 mil	1.75 in. - 35.5 in. / 4.45 cm - 90.17 cm
40 mil	* - 40 in. / * - 101.6 cm
55 mil	* - 55 in. / * - 139.7 cm
* dependent on width of bar code	

8.5.2 EV15 Imager Specifications

Parameter	EV15
Light Source	617nm Highly Visible LED
Scan Angle	40°
Minimum Print Contrast	Minimum 25%
Min x. Dimension	0.1 mm (4 mils)
Reading Distance	Up to 90cm (35 in)
Symbologies	UPC (E&A), EAN, RSS, Code 39, Code 128, UCC/EAN 128, ISBN, ISBT, Interleaved, Matrix, Industrial and Standard 2 of 5, Codabar, Code 93/93i, Code 11, MSI, Plessey, Telepen, PDF417, Micro PDF417
Ambient Light	Works in any lighting conditions, from 0 to 100,000 lux
Shock	2000G, 0.7ms, half sinus, 3 axes
Vibration	50G r.m.s

8.5.2.1 EV15 Imager Decode Zone

0 Lux to 100,000 Lux		
	Minimum range	Maximum range
Mil Size	Inches	Inches
5	2.5	7
10	3	14
UPC	2	14.5
20	2.5	22

40	3	35.5
High quality symbols in normal room light.		

8.5.3 SX5400 Imager

Specification	SX5400
Optical resolution	752H x 480V
Field of view at 160mm	120mm (H) x 78mm (V) 41.1° (H) x 27.4° (V)
Pitch angle	±45°
Skew angle	±45°
Ambient light	0 to 100,000 lux (full sunlight) 300 lux nominal
Minimum contrast	10%
Targeting	Intuitive range finding 626 nm LED
Self illumination	Red LED (standard) White LED (optional)
Supply voltage	5 V ± 10%
Power supply	3.6 Volt DC nominal (2.7 - 5 Volts DC)
Connectivity	USB 1.1 or serial async
Connector to the interface board	Molex 52892-1295 or HiRose FH12-12S-.5SH
Symbologies supported	Code 39; Code 39 Full ASCII; UPC-A, -A2, -A5; UPC-E, -E2, -E5; EAN-8 -13; JAN; I2of5; Code 128; Codabar/NW7; RSS 14, RSS Limited, RSS Expanded, RSS 14 Truncated, PDF417, microPDF417; Composite, CC-A, CC-B, CC-C; image capture and signature capture, Data Matrix; QR Code; Maxicode; Aztec Code; Planet; Postnet; Royal Mail 4SCC; 4 State postal codes from Australia, Canada, Japan; Korean Post 3of5.
Operating temperature	-20° to 50 °C (-4° to 122°F)
Storage temperature	-30° to 60°C (-22° to 140°F)

Relative humidity	5% to 95% (non-condensing)
Weight	Image engine 4.1 grams Co-processor board 6.80 grams
Shock	15 drops, 5 ft to concrete at room temperature when integrated correctly into end-user packaging

8.5.3.1 SX5400 Near, Far & Depth Of Reading*

Symbology	Size (mil)	Near Avg. (Inches)	Far Avg. (Inches)	DOR Avg. (Inches)
C39	7.5	4.0	7.0	3.0
C39	10	2.75	9.25	6.5
C39	15	2.25	11.0	8.75
PDF6.6	6.6	4.0	6.5	2.5
PDF10	10	3.25	9.0	5.75
PDF15	15	2.25	10.75	8.5
DM15	15	3.0	8.0	5.0
QR15	15	3.75	7.5	3.75
UPC	12.5	3.0	9.5	6.5

* Typical performance at 300 lux for the SX5400 @ 160 mm focus when using Grade A photographic quality bar codes.

APPENDIX A

SUMMIT CLIENT UTILITY (SCU)

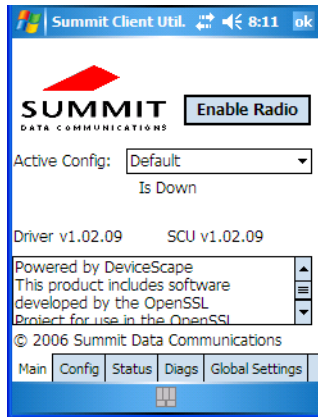
For quick setup instructions for the 802.11b/g Summit radio using the Summit Client Utility, refer to “Setting Up A 802.11b/g Radio–Summit Client Utility” on page 15.

A.1 SCU Tabs

This section provides a detailed description of each of the tabs available in the SCU – Main, Config, Status, Diags and Global Settings.

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*.
- **Active Config:** Lists the name(s) of the active configuration profile(s) which are referred to as *configs*. When a *config* is chosen from the *Active Config* dropdown menu, the settings for that config become active.

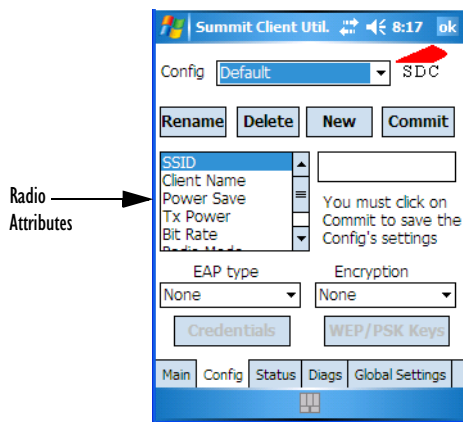
If *ThirdPartyConfig* is selected, after the iKôn PDA goes through a power cycle, WZC is used for configuration of the radio. See “ThirdPartyConfig” on page A-6 for details.

- **Association Status:** Indicates if the radio is associated to an access point. If this is not the case, Association Status indicates the radio status.
- **Software Version:** This field displays the version of the device driver and the SCU that are running on the iKôn PDA.
- **About Box:** This box provides information about the SCU.

A.3 Config Tab

The *Config* tab allows you to define radio and security settings that are stored in the registry as part of the configuration profile or *config*.

The *config* you create and save is listed in the *Active Config* dropdown menu in the *Main* tab. You can define up to 20 *configs*.



- **Config:** Used to choose the config to be viewed or edited. If *ThirdPartyConfig* is chosen, after the iKôn PDA goes through a power cycle, WZC is used for configuration of the radio.
- **Rename:** Allows you to assign a config name.
- **Delete:** Deletes the config unless it is currently active.
- **New:** Allows you to create a new config with default settings and assign it a name.
- **Commit:** Saves all changes.
- **Radio Attributes:** 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.

The following table describes the options in the *Radio Attributes* dropdown menu:

Radio Attributes	Description	Value	Default
Config	Name of config (configuration profile). Use Rename button to change name.	Maximum of 32 characters.	None
SSID	Service set identifier (SSID) for WLAN to which the radio connects.	Maximum of 32 characters.	None
Client Name	Name assigned to radio & iKôn PDA into which it is installed.	Maximum of 16 characters.	None
Power Save	Power save mode for radio.	CAM: Constantly awake. Maximum: Maximum power savings. Fast: Fast power save mode.	Fast
Tx Power	Maximum transmit power.	Max: Maximum defined for current regulatory domain. Measured in mW: 50,30,10, 1.	Max
Bit Rate	Used by radio when interacting with WLAN access point.	Auto: Rate automatically negotiated with access point. Rates in Mbps: 1, 2, 5.5, 6.9 11, 12, 18, 24, 36, 48, 54.	Auto
Radio Mode	Used by 802.11g when interacting with access point.	B rates only: 1, 2, 5.5, & 11 Mbps. G rates only: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps. BG rates full: All B and G rates. BG rates optimized: 1, 2, 5.5, 6, 11, 24, 36 & 54 Mbps.	BG rates optimized
Auth Type	802.11 authentication type used when associating with access point.	Open, shared-key, or LEAP (Network-EAP).	Open
EAP Type	Extensible Authentication Protocol type used for 802.1X authentication to access point.	None, LEAP, EAP-FAST, PEAP-MSCHAP – To use EAP-TLS, you must use WZC.	None

Credentials	Authentication credentials for the selected EAP type. Refer to “EAP Credentials” on page A-5.	User: Username or Domain/Username (up to 64 characters). Password: up to 64 characters. For PEAP: CA Cert–CA server certificate filename.	None
Encryption	Type of encryption used to protect transmitted data.	Off, 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.	None

- **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-5 and “SCU Security Capabilities” on page A-4 for details about these settings.

A.3.1 SCU Security Capabilities

The SCU provides integrated security to protect transmitted data as well as the hand-held 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.
- **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 config, 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 config are incorrect and that config is used, the authentication fails without an error message; you will not be prompted to enter correct credentials.
- If the credentials are not specified in the config, when the radio tries to associate using that config, you will be prompted to enter the credentials.

ThirdPartyConfig

- 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 on OK, the radio will associate but will not authenticate; you will be prompted again to enter credentials.
- If you tap on Cancel or clear the credentials fields and tap on OK, the radio will not attempt to associate with that *config* until you perform one of the following actions (while the *config* is the *active config*):
 - Cause the iKôn PDA 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 config, and tap on **Commit**.

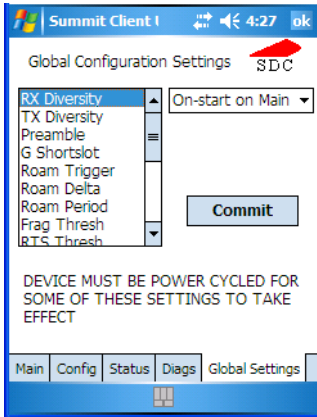
Alternatively, you can choose another *config* as the active *config* and then switch back to the *config* for which EAP authentication was cancelled.

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 *config* 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.

A.4 Global Settings Tab



The *Global Settings* tab allows you to define radio and security settings that apply to all *configs* (profiles), along with settings that apply specifically to the *SCU*.

The *Global Settings* in the table below can be edited in the *SCU*:

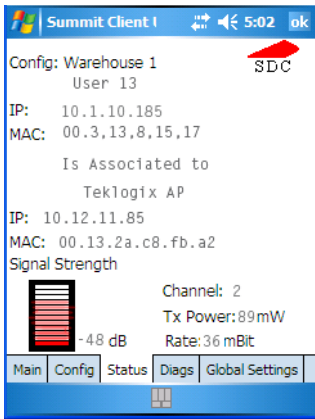
Global Setting	Description	Value	Default
CCX features	Activates three CCX features: AP-assisted roaming, AP-specified maximum transmit power & radio management.	On, Off	Off
Cert Path	Directory where certificates for EAP authentication are stored.	Valid directory path up to 64 characters.	Dependent on device.
Frag Thresh	Packet is fragmented when packet size (in bytes) exceeds threshold.	Integer from 256 to 2346.	2346
G Shortslot	802.11g short slot timing mode.	Auto, Off, On	Auto
Hide Passwords	On - SCU as well as EAP authentication dialog boxes hide passwords, WEP keys and other sensitive information.	On, Off	Off
LED	Available only with MCF10G.	On, Off	Off

Global Settings Tab

Preamble	Type of radio preamble or headers.	Auto, Short, Long	Auto
Ping Payload	Amount of data to be transmitted on a ping.	Bytes: 32, 64, 128, 256, 512 & 1024	32
Ping Timeout ms	Amount of time in milliseconds that passes without a response before ping request is considered a failure.	Integer from 0 to 30000.	5000
Ping Delays ms	Amount of time in milliseconds between successive ping requests.	Integer from 0 to 7200000.	1000
Roam Delta	Amount by which second AP's RSSI must exceed the moving average RSSI for the current AP before the radio will attempt to roam to a second AP.	dBm: 5, 10, 15, 20, 25, 30, 35	15
Roam Period	Following an association or roam scan (with no roam), the number of seconds the radio collects RSSI scan data before considering roaming.	Seconds: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60	10
Roam Trigger	If RSSI from AP is less than roam trigger value, radio performs roam scan or probes for an AP with stronger signal.	dBm: -50, -55, -60, -65, -70, -75	-70
RTS Thresh	Packet size above which RTS/CTS is required on link.	An integer from 0 to 2347.	2347
RX Diversity	Defines how to handle antenna diversity when receiving data from AP.	-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.	On-Start on Main

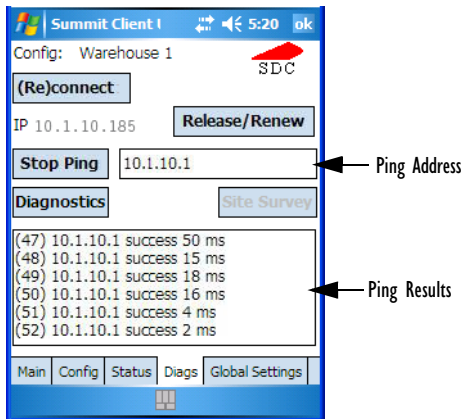
TX Diversity	Defines how to handle antenna diversity when transmitting data to AP.	-Main only: Use main antenna only. -Aux only: Use auxiliary antenna only. -On: Use diversity.	On
WMM	Use Wi-Fi Multimedia Extensions, also know as WMM.	On, Off	Off

A.5 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.6 Diags Tab



Use the *Diags* tab as a troubleshooting tool. The functions are as follows:

- **(Re)Connect:** Enables/Disables the radio, applies/reapplies current config and tries to associate and authenticate to the wireless LAN, logging all activity in the output area at bottom of the dialog box.
- **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, config settings, global settings and BSSID list of APs. The SCU is saved to a file called *_sdc_diag.txt* in the Windows directory.

APPENDIX B

PORT PINOUTS

B.1 Dock Interface Connector Pinout

PIN #	Signal Name	Type	Description
1	Ground Reference	Ground	Connects to Dock Ground
2	External DC Power	Power Input Terminal	Dock Power
3	External DC Power	Power Input Terminal	Dock Power
4	External DC Power	Power Input Terminal	Dock Power
5	Battery Power Out	Output from Terminal	Not used in Dock
6	Audio (Inverted)	Output from Terminal	Not used in Dock
7	Audio (Non-inverted)	Output from Terminal	Not used in Dock
8	USB OTG Power	Input to Terminal	From USB B connector
9	Docking Identification	Bi-directional	Terminal comms with Dock
10	USB OTG Data Negative	Bi-directional	USB Data line
11	USB OTG Data Positive	Bi-directional	USB Data Line
12	USB OTG Identification	Input to Terminal	Dock identifies whether A or B connector is being used
13	Ground Reference	Ground	Connects to Dock Ground
14	RS232 Transmit	Serial TX	Not used in Dock
15	RS232 Receive	Serial RX	Not used in Dock
16	Ground Reference	Ground	Connects to Dock Ground

B.2 Desktop Dock Spare Battery Charger Connector Pinout

Pin #	Signal Name	Description
1	POS	Positive lead of battery
-		Plastic Rip
2	POS	Positive lead of battery
3	CLK	SMBus clock line
4	TEMP	Thermistor 10K NTC
5	DATA	SMBus bi-directional data line
6	NEG	Negative lead of battery
7	NEG	Negative lead of battery

B.3 Battery Contact Pinout

PIN #	Signal Name	Description
1	POS	Positive lead of battery
-		Plastic Rip
2	POS	Positive lead of battery
3	CLK	SMBus data clock
4	TEMP	Thermistor 10K NTC
5	DATA	SMBus bi-directional data line
6	NEG	Negative lead of battery
7	NEG	Negative lead of battery

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