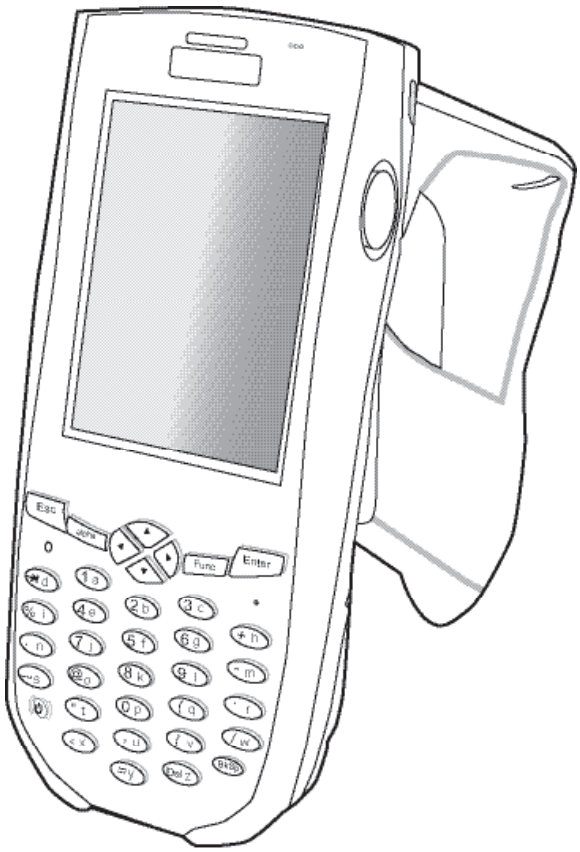
unitech

RH767 RFID Handheld Reader



User's Manual

400558G Rev. G

About This Manual

This manual explains how to install, operate and maintain the RH767.

Unitech global Web site address: http:\\www.unitech-adc.com

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Microsoft, Windows and ActiveSync are either registered trademarks or trademarks of Microsoft Corporation. Other product names mentioned in this manual may be trademarks or registered trademarks of their respective companies and are hereby acknowledged.

Unitech is a member of the Oracle Embedded Software Licensing Program.

Regulatory Compliance Statements

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, operates and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference through one of the following:

- Relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit that is different from the receiver.
- Consult the dealer or an experienced radio/television technician for help.

FCC Caution:

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any received interference, including interference that may cause undesired operation. This device and its antenna(s) must not cohabitate or operate in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. Please follow the operation instructions in this manual to maintain compliance with FCC RF exposure requirments. This RFID Handheld Terminal meets FCC RF exposure guidelines when used in handheld or desktop operation.

RoHS Statement

This device conforms to RoHS (Reduction of Hazardous Substances) European Union regulations that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

Laser Information

The Unitech RH767 series is certified in the U.S. to conform to the DHHS/CDRH 21CFR Subchapter J and IEC 825-1 requirnments. In addition, Class II and Class 2 products are not considered to be hazardous. The RH767 series contains an internal Visible Laser Diode (VLD) whose emissions do not exceed the maximum limits as set forth in the above regulations. The scanner is designed so that there is no human access to harmful laser light during normal operation, user maintenance or during prescribed service operations.

The laser safety warning label required by the DHHS/IEC is located on the RH767's back panel.

CAUTION! Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light. Use of optical instruments with the scanner will increase eye hazard. Optical instruments include binoculars, microscopes and magnifying glasses. This does not include eye glasses worn by the user.

IMPORTANT NOTE

FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 1.5 cm between the radiator and the user's body.

Warranty

Unitech Limited Warranty covers the following items that are free from defects during normal use:

- RH767 – 1-year limited warranty.
- Lithium-Ion battery – 6-month limited warranty.

the warranty becomes void if equipment is modified, improperly installed/used, damaged by accident/neglect, or if any parts are improperly installed or replaced by the user.

Use only the AC Adapter supplied. Using the wrong AC Adapter may damage the RH767 and will void the warranty.

Battery Notices

This Unitech RH767 is equipped with a Lithium-Ion Battery Pack and a Backup Battery. However, the RH767 may not start without an external power source due to battery discharge after extended storage periods. To charge the battery to full capacity, connect the RH767 to an external power source with the USB Charging Cable or the Unitech RH767 Cradle. Initially charge the RH767 for at least 16 hours.

The Backup Battery will receive power from an external power source, or through the main battery (But, only if the main battery has adequate power). In order to prevent data loss due to Backup Battery failure, connect the RH767 to the main Battery Pack or an external power source.

NOTE: Turn the RH767 Backup Battery Switch to the **ON** position before initial use.

To garauntee optimal performance, replace rechargeable batteries every year or after 500 charge/discharge cycles. It is normal for the battery to physically expand after one year or 500 cycles. Although it does not cause harm, the battery can not be used again and must be disposed of according to local battery saftey disposal procedures.

If the performance decrease is greater than 20 percent in a Lithium-Ion battery, the battery is at the end of its life cycle. Do not continue to use the battery, and ensure that the battery is properly disposed.

The length of time that a battery power lasts depends on the battery type and how the device is used. Conserve battery life through the following:

- Avoid frequent full discharges because this places additional strain on the battery. Several partial discharges with frequent recharges are better than a deep one. Recharging a partially charged Lithium-Ion battery does not cause harm because there is no memory.
- Keep the Lithium-Ion battery cool. Avoid a hot car. For prolonged storage, keep the battery at a 40 percent charge level.
- Do not leave the lithium-Ion battery discharged and unused for an extended time period because the battery will wear out and the longevity of the battery will be at least shorter than half of the one with frequent recharges.

Battery Charge Notice

It is important to consider the environment temperature when charging the Lithium-Ion Battery Pack. Charging is most efficient at room temperature or in a slightly cooler environment. It is essential that batteries are charged within the temperature ranges of 32º F - 104ºF (0°C - 40°C). Charging batteries outside of the specified temperature range could damage the batteries and shorten their charging life cycle.

CAUTION! Do not charge batteries at a temperature lower than 32ºF (0°C), which will increase the internal resistance to cause heat and make the batteries unstable and unsafe. Please use a battery temperature detecting device for a charger to ensure a safe charging temperature range.

Storage and Safety Notice

Although charged Lithium-Ion batteries may be left unused for several months, their capacity may deplete due to buildup of internal resistance. In this case they will require recharging. Lithium-Ion batteries may store at temperatures between -4Fº - 140Fº (-20°C to 60°C). But the batteries may deplete more rapidly at the warmer end of this range. It is recommended to store batteries at room temperature.

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Table of Contents

Chapter 1

Getting Started

Introducing the RH767

RH767 UHF

Unitech's RH767 Ultra High Frequency (UHF) handheld terminal is a rugged dual technology multi-tag UHF RFID and bar code reader. It can read both EPC Gen 1 and Gen 2 RFID tags and the device is embedded with RFID middleware and Windows CE 5.0. The RH767 has a battery life of up to 12 hours. Connectivity options include WLAN 802.11b/g and Bluetooth. It has an IP54 electronic enclosure sealing rating against the elements and a 4' (1.2 meter) drop threshold to concrete.

RH767 HF

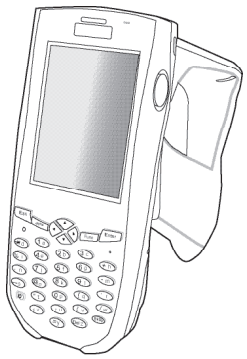
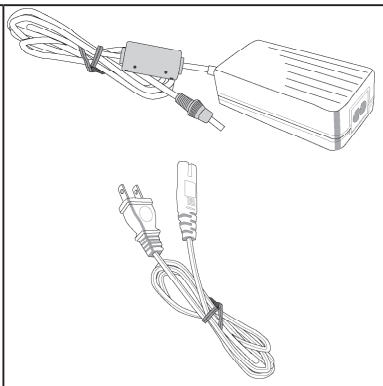
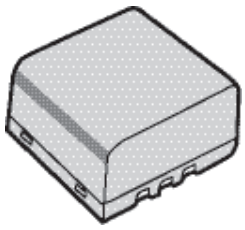
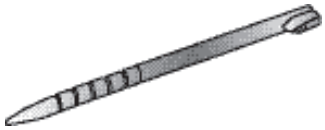
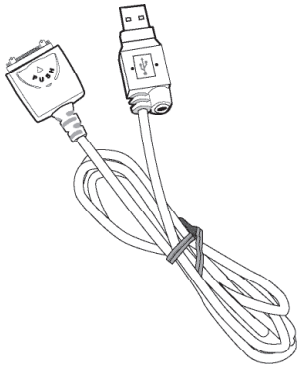
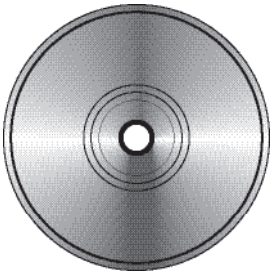
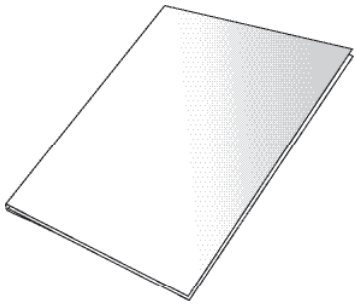
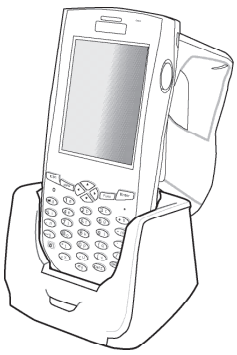
Unitech's RH767 High Frequency (HF) handheld terminal is a rugged dual technology multi-tag HF RFID and bar code reader. It can read 15693/ISO 1443A/B RFID tags and the device is embedded with RFID middleware and Windows CE 5.0. The RH767 has a battery life of up to 20 hours. Connectivity options include WLAN 802.11b/g, and Bluetooth and GPRS is possible via the PCMCIA slot. It has an IP54 electronic enclosure sealing rating against the elements and a 4' (1.2 meter) drop threshold to concrete.

Features

- Dual Technology Bar Code Scanner & RFID (HF or UHF) Reader.
- Embedded RFID Middleware.
- Built-in Bar Code Scanner.
- IP54 Rated and 4' (1.2m) Drop Threshold.
- Windows CE 5.0 Professional Plus Operating System.
- WLAN 802.11b/g and Bluetooth Connectivity.
- GPRS via PCMCIA slot (HF Model Only).

Package Contents

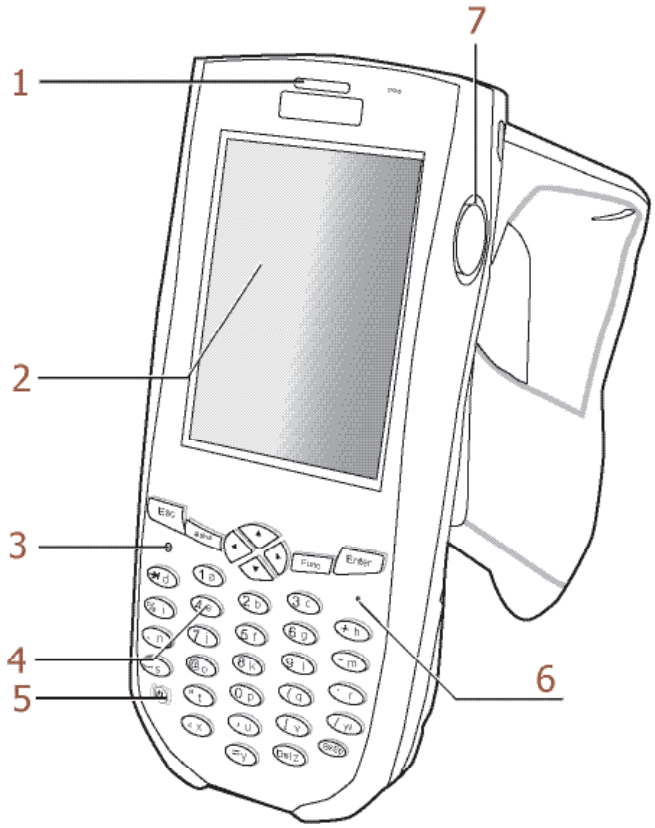
Make sure the following items are in the RH767 box:

		
RH767 Terminal	Power Adapter and Cable	Battery Pack
		
Stylus	Synchronization and Power Cable	CD-ROM
		
Quick Reference Guide	Cradle (Optional)	

Please contact a regional Unitech service representative if anything is missing or appears damaged.

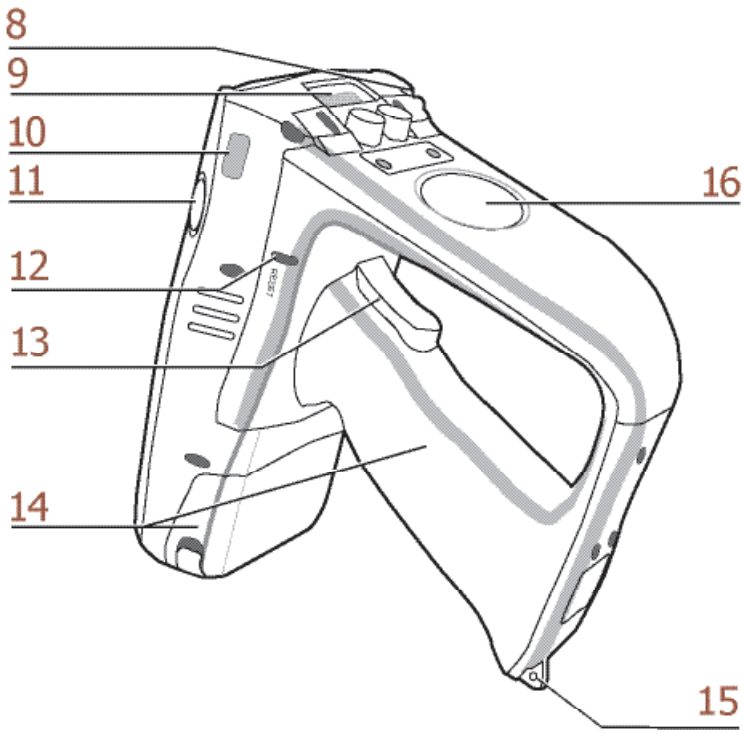
A Tour of the RH767

Front View



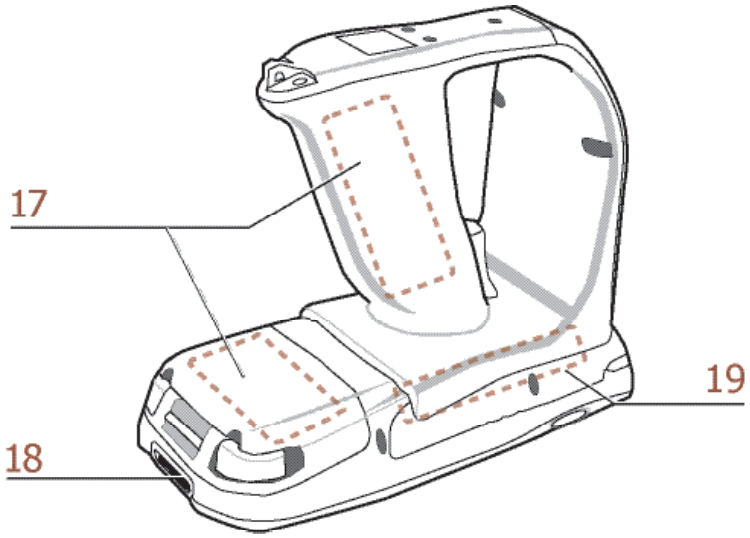
No.	Component	Description
1.	Status Indicator.	Indicates battery and bar code scanning status. **Green** - Battery charge is complete or a bar code is successfully captured. **Red -** Battery is charging, bar code scanner is activated and processing.
2.	LCD Touch-screen.	Displays the applications and data stored on the device. The screen is touch-sensitive and responds to the stylus or finger.
3.	Alpha Mode Indicator.	Indicates Alpha Mode status.
4.	Keypad.	Keypad interface for controlling the RH767. See *Using the Hardware* on page 14 for more information.
5.	Power Button.	Press this button to start the RH767. Alternatively, this key must be pressed down for at least two seconds to turn off the RH767.
6.	Microphone.	Receives sound.
7.	Right Scanner Trigger Button.	Press to activate the Laser Bar Code Scanner.

Back View



No.	Component	Description
8.	Stylus.	Remove the Stylus from its holder and hold it like a pen.
9.	Bar Code Scanner Window.	Scans bar codes.
10.	Infrared (IR) Port.	Utilizes infrared technology to transmit and receive data from other IR-enabled devices.
11.	Left Scanner Trigger Button.	Press to activate the laser bar code scanner.
12.	Reset Button.	Use a paper clip to press the Reset Button.
13.	Bar Code Scanner Trigger.	Press to activate the Bar Code Scanner.
14.	Battery Compartment.	Houses the removable and rechargeable 7.4V Lithium-Ion 4050mAh Battery Pack.
15.	Strap Hook.	Secures the strap to the RH767.
16.	RFID Antenna.	Receives data from an RFID tag.

Bottom View



No.	Component	Description
17.	Battery Compartment.	Houses the rechargeable Lithium-Ion Battery Pack.
18.	Universal Connector.	Connects the RH767 to the Synchronization Power Cable, which connects to the computer's USB Port. It also connects to the AC Adapter, which plugs into an external power source. This charges the device and performs Microsoft ActiveSync operation.
19.	PCMCIA Compartment	Open this compartment to access the PCMCIA slot. (It is optional to purchase the RH767 preloaded with a PCMCIA Card, but only with the HF model.)

Setting up the RH767

Install and charge the battery, check the battery status, connect the RH767 to a PC, turn on the RH767 for the first time, install an optional Wireless Local Area Network PCMCIA card and calibrate the screen through the following:

Installing the Battery Pack

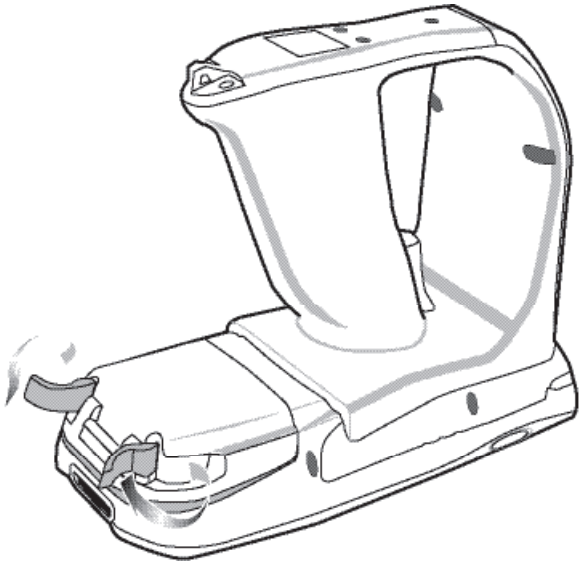
WARNING! If the battery pack is handled improperly there is risk of fire or burns. Do not disassemble, crush, puncture, short external contacts, or dispose the battery pack in fire or water. Do not attempt to open or service the battery pack. Dispose of used batteries according to local recycling guidelines.

The backup battery prevents data loss when the main battery disconnects from the RH767. This backup battery cell will only support the RH767 for a maximum of 72 hours.

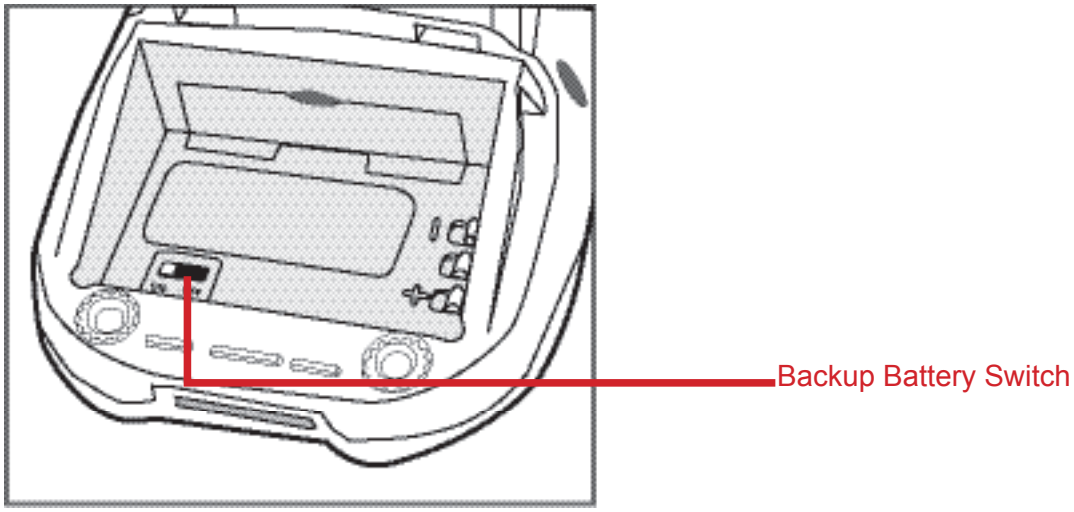
NOTE:

- Turn the RH767's Backup Battery Switch to the **ON** postition and charge the main battery pack for at least 16 hours before initial use. See page 6 for more informaiton.

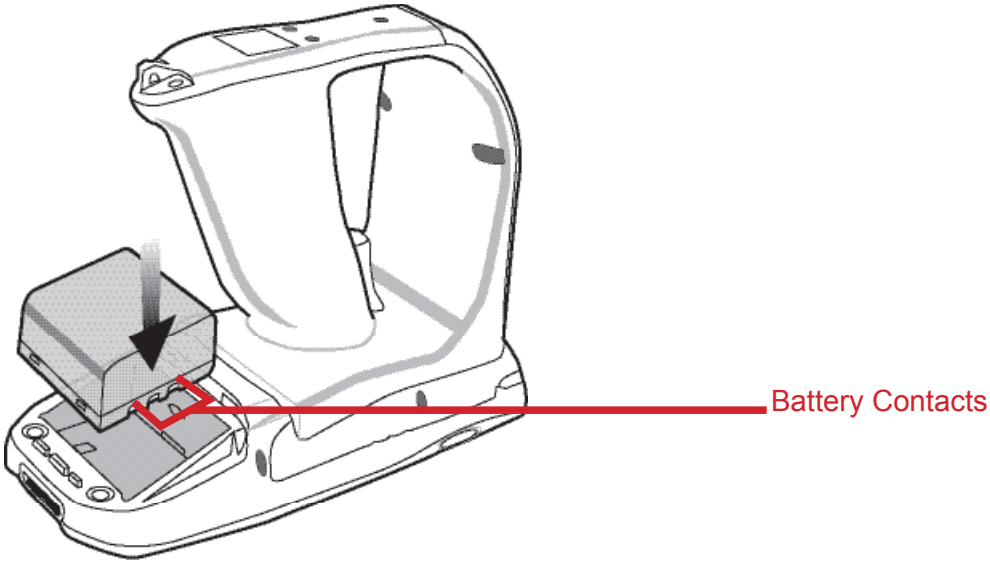
1. Open the Battery Compartment by sliding the tabs in the direction as shown below:



2. Locate the Backup Battery Switch and turn it to the **ON** position.



3. Align the Battery Contacts with the Battery Compartment Contacts as shown below:



4. Place the Battery Pack into the Battery Compartment and press the battery securely into place.
5. Replace the Battery Compartment cover, push down the tabs and slide them back into the lock position as shown below:

Charging the Battery

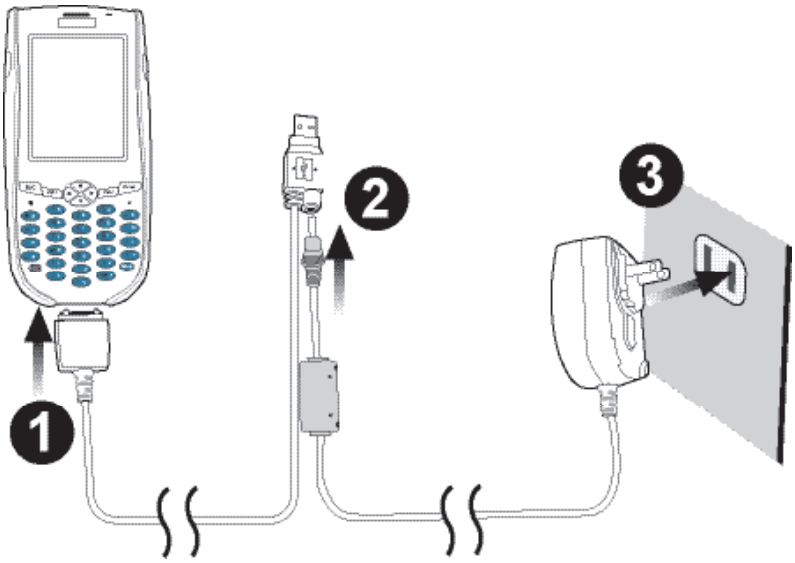
Charge the RH767 for at least 16 hours before initial use. Charge the device to full capacity after a full day of use with the Synchronization Power Cable or the Docking Station.

CAUTION! Operating the RH767 for the first time without fully charging the Backup Battery may result in data loss stored in the RAM memory. When the Main Battery is removed, the Backup Battery retains data in the RAM memory for 72 hours; charge the battery as soon as possible to avoid data loss.

NOTE: Turn the Backup Battery Switch to the **ON** position before charging the battery. Data loss may occur if the Backup Battery is not properly charged.

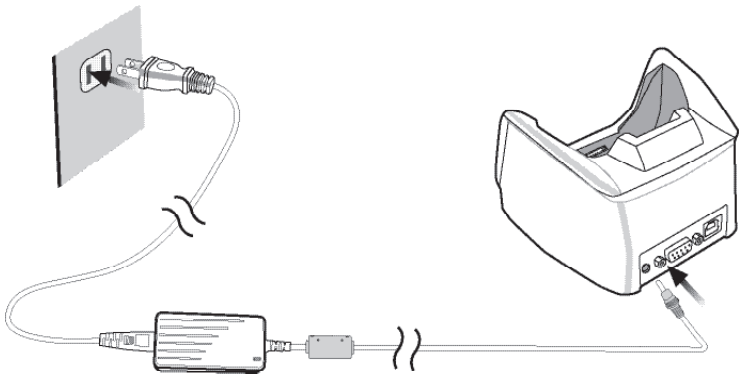
Charging the Battery using the Synchronization Power Cable

1. Connect the Synchronization Power Cable Connector to the RH767 (1).
2. Plug the AC Adapter cable into the USB Connector's power jack (2).
3. Connect the AC Adapter into an electrical outlet (3).

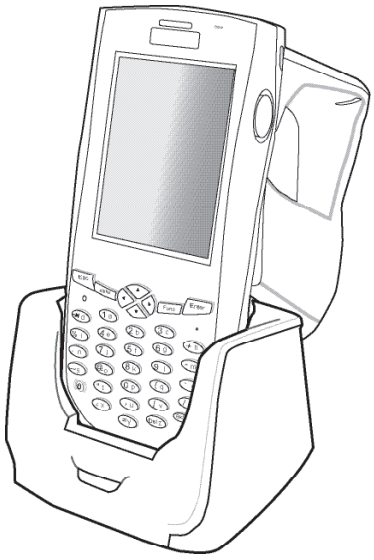


Charging the Battery with the Docking Station

1. Plug the AC Adapter cable into the Docking Station's power jack, then connect the AC Adapter into an electrical outlet.



2. Slide the RH767 into the Docking Station until it clicks into place.



3. The connection is secure when the bottom edge of the device aligns with the docking station. (The Docking Station's LED indicator lights up green, while the RH767's LED indicator lights up red.)

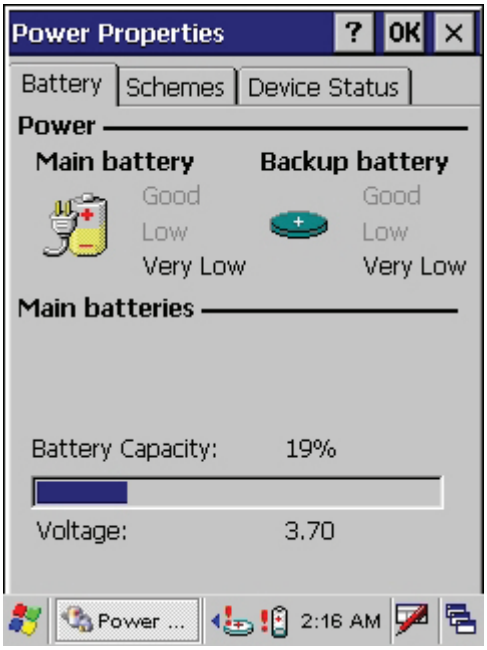
LED Status

	LED	Description
RH767	Solid Red	Charging.
	Solid Green	Charging Complete.
Docking Station	Solid Green	Power is On.

Checking the Battery Status

If the main battery level becomes low in the course of normal use, a status icon appears on the RH767 screen's system tray indicating low or very low battery status. In both cases, perform a Microsoft ActiveSync operation to backup data, then recharge the device as soon as possible. If the battery level reaches low status, the device will enter suspend mode; if the battery level reaches very low status, the device will enter deep sleep mode. In this case, recharge the Battery within 72 hours.

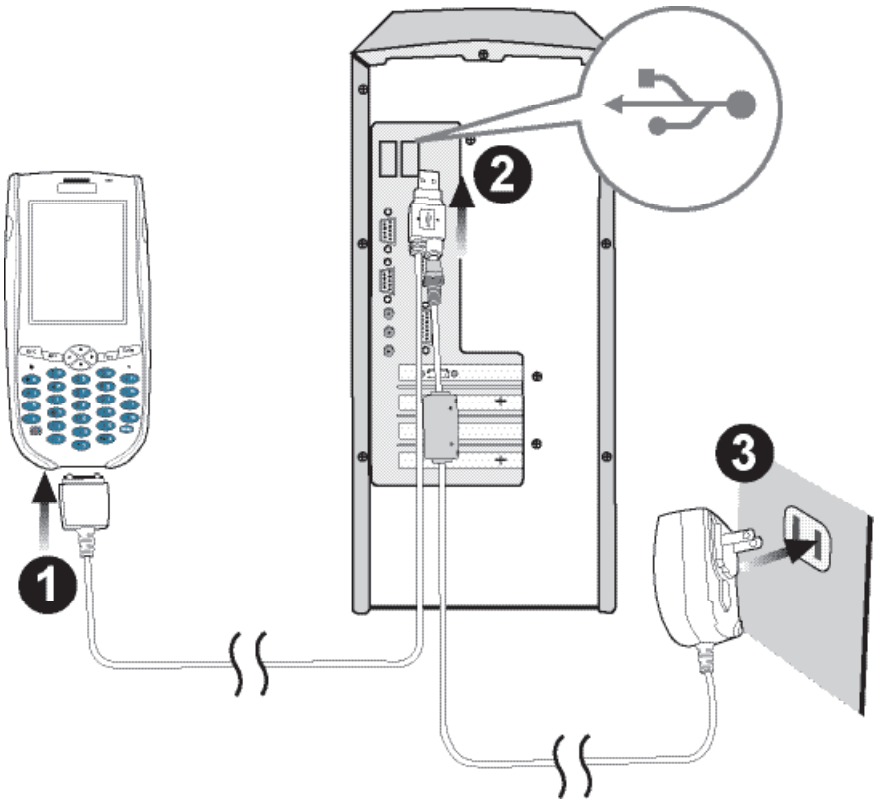
When the backup battery charge is low, an icon appears in the system tray indicating that the backup battery should be charged as soon as possible.



Connecting the RH767 to a PC

Use the Synchronization Power Cable to connect the RH767 to a PC.

1. Connect the USB Connector jack to the RH767 (1).
2. Plug the USB Connector into the PC's serial port and connect the AC Adapter into the USB Connector (2).
3. Connect the AC Adapter into an electrical outlet (3).

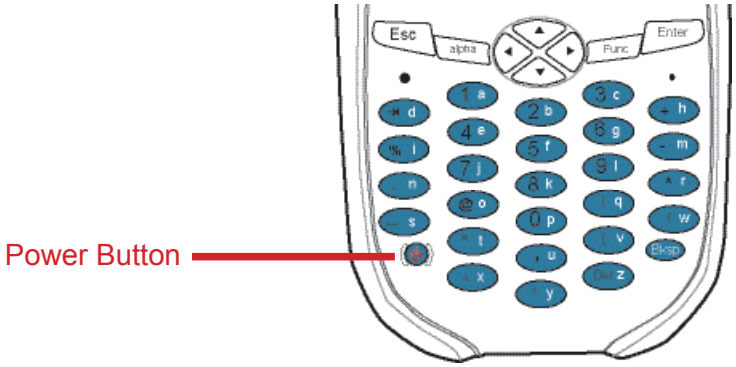


Turning the RH767 on for the First Time

The device is ready for use after it has been charged for at least 16 hours. Start-up the device to adjust the screen brightness, calibrate the display, and set up the system time zone date and time.

Powering On

1. Turn on the device by pressing the Power Button on the RH767's front panel.
2. The Unitech RH767 welcome screen appears followed by the calibration screen.



Using the Stylus

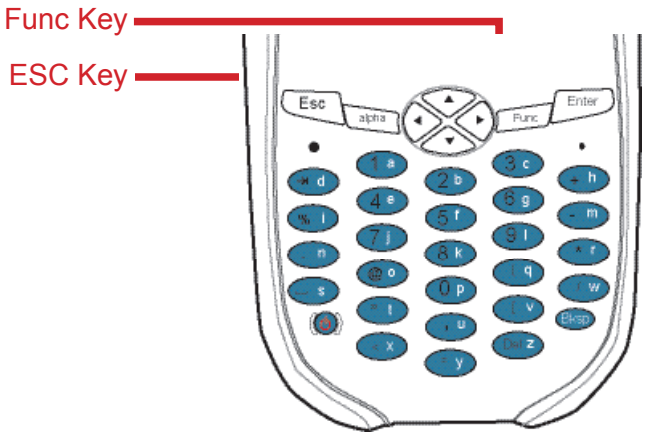
CAUTION! Never use anything other than the RH767 Stylus on the screen.

1. Remove the Stylus from its holder.
2. Hold the stylus like a pencil.
3. Lightly tap the tip of the Stylus to make a menu choice.
4. Double-tap to open programs.
5. Use the Stylus to print letters or numbers.

Calibrating the RH767 Screen

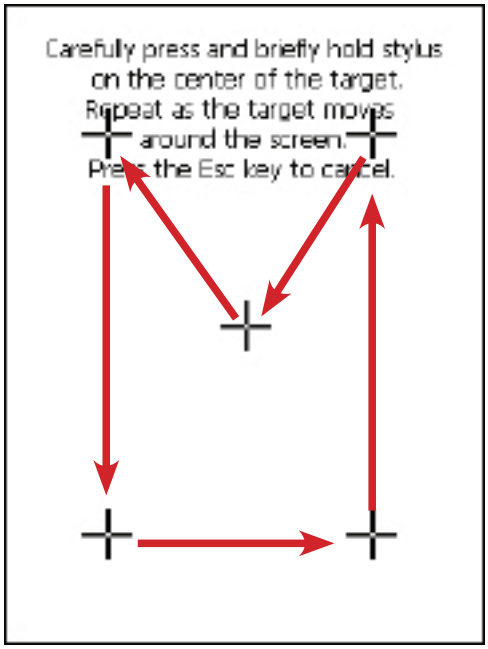
The calibration screen automatically appears when the unit powers on for the first time or after the system is reset.

Access the callibration screen at any time by simultaneously pressing the **Func** and **ESC** key.



Use a stylus to tap a sequence of target marks on the RH767's screen. Firmly hold the stylus on top of the target mark for a moment, and then remove. Continue to tap the target mark as it stops along the corners of the screen.

Press **Enter** to confirm the calibration or press **ESC** to cancel.

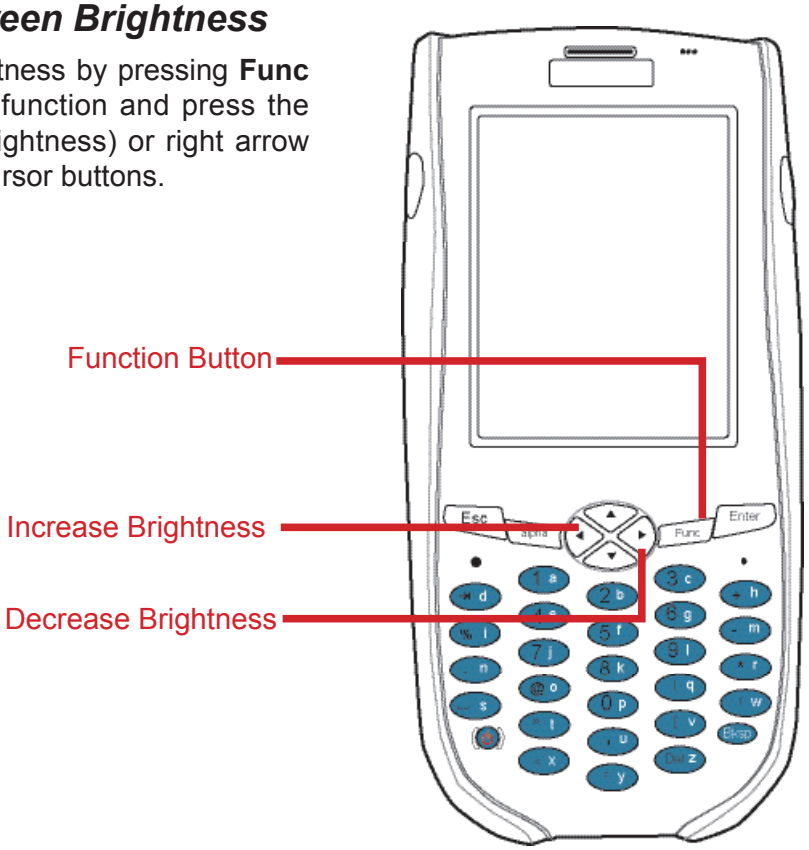


Setting the Time and Date

In the Date/Time Properties window, use the stylus to select the current date and time, time zone and daylight saving time option.

Adjusting the Screen Brightness

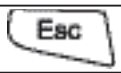
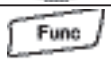
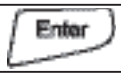
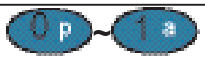
Adjust the screen brightness by pressing **Func** to enable the soft key function and press the left arrow (decrease brightness) or right arrow (increase brightness) cursor buttons.



Chapter 2

Using the Hardware

The following table describes the main keypad keys.

Key	Main Function
	Press this button to turn the RH767 on. And hold this button for two seconds to turn the RH767 off.
	Pressing this button corresponds to tapping **cancel** or **X**.
	Press the backspace key to erase characters.
	Press the function key to perform alternative key functions. This key is also used to toggle between upper and lower case alphabetic characters.
	Use the tab key to toggle between fields or to tab forward in word processing applications.
	Press the enter key to confirm an action or entry.
	Use these cursor keys to navigate through applications. Press and hold the Function key and then press the right and left arrows to raise and lower the screen brightness.
	Press the alpha key to toggle between numeric and alphabetic entry modes.
	Press these keys to enter numbers or characters depending on whether the Alpha key has been pressed. Press 0 to enter a space.
	Press this key to add punctuation.

Using Function keys

The RH767 provides many combination hot keys to activate specified screen setting functions or programs. These hotkeys are useful for calibrating the touch-screen, toggling the backlight, and adjusting screen contrast when the menu-driven operation is disabled. Below is the list of hotkeys. To use the keys, press and hold **Func** in combination with the corresponding second key.

Key	Function
[FUNC]+ ▲	Toggle Display Backlight.
[FUNC]+ ▼	Toggle Keypad LED Backlight.
[FUNC]+ ▶	Increase Screen Brightness.
[FUNC]+ ◀	Decrease Screen Brightness.

Toggle to Alpha Mode and CAPS

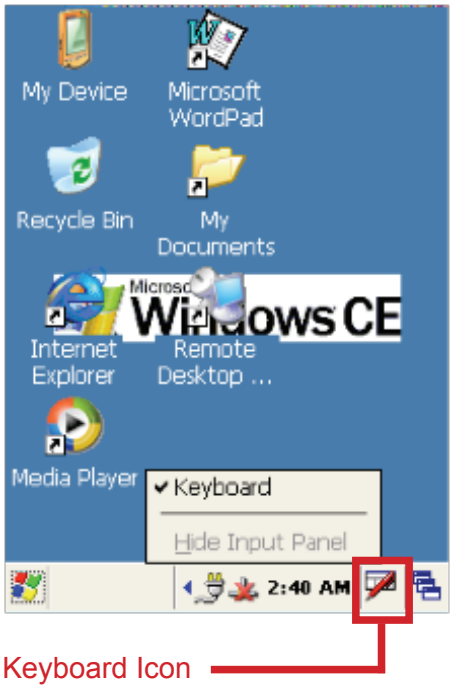
Numeric Mode is the RH767's default function. In Alpha Mode CAPS is the default condition. Use **alpha** and **Func** to toggle into CAPS.

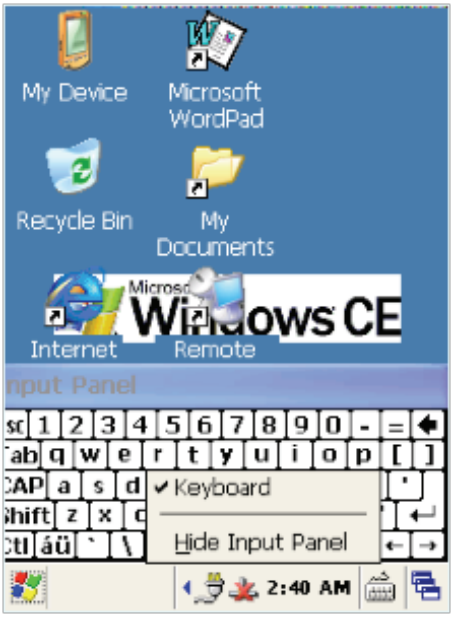
Key	Alpha OFF		Alpha ON	
	FUNC UP	FUNC DOWN	FUNC UP	FUNC DOWN
ESC	ESC	ESC	ESC	ESC
Backspace	Backspace	Backspace	Backspace	Backspace
Enter	Enter	Enter	Enter	Enter
1/F1/a	1	F1	a	A
2/F2/b	2	F2	b	B
3/F3/c	3	F3	c	C
TAB/d	TAB	`	d	D
4/F4/e	4	F4	e	E
5/F5/f	5	F5	f	F
6/F6/g	6	F6	g	G
+/^/h	+	^	h	H
%/BL/i	%	Backlight	i	I
7/F7/j	7	F7	j	J
8/F8/k	8	F8	k	K
9/F9/l	9	F9	l	L
-/_/m	-	_	m	M
./;/n	.	;	n	N
@/!/o	@	!	o	O
0/$/p	0	$	p	P
(/)/q	(	)	q	Q
*/#/r	*	#	r	R
SPACE/s	SPACE	SPACE	s	S
“/’/t	“	‘	t	T
,/?/u	,	?	u	U
[/]/v	[	]	v	V
//\/w	/	\	w	W
</>/x	<	>	x	X
=/&/y	=	&	y	Y
DEL/z	DEL	~	z	Z

Using the Windows CE Keyboard

The Windows CE Software provides a touch-screen keyboard for alphanumeric input. The Windows based keyboard replicates the layout of a standard PC keyboard.

Open the Windows CE keyboard by tapping the keyboard icon on the task bar and tap **Keyboard**.





Entering Characters

To input a character, tap the onscreen button corresponding to the desired symbol.

Special Character Support:

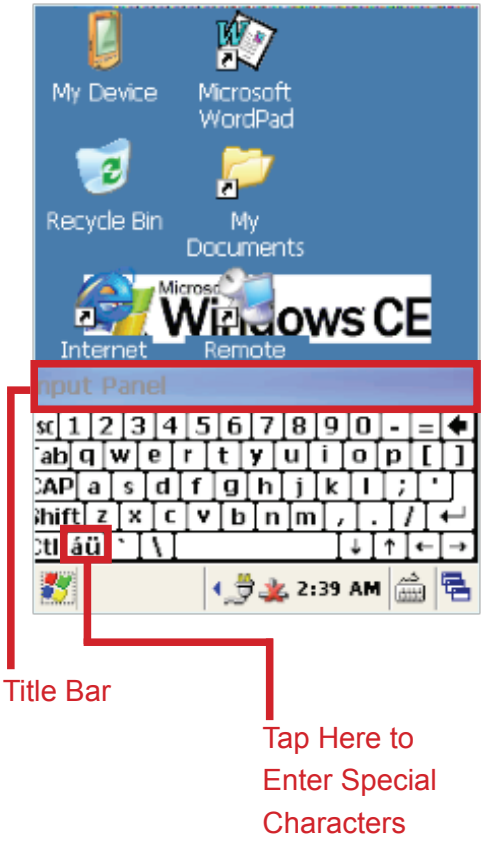
Tap **áü** to switch from the Standard English keyboard to the Special Characters keyboard.

Moving the Keyboard

Tap the title bar to drag and place the keyboard across the screen.

Closing the Keyboard

Tap the keyboard icon and tap Hide Input Panel to close the Windows CE keyboard.



Adjusting Settings

Adjust the RH767's settings through the following:

1. Tap **Start** → **Settings**→ **Control Panel**.

2. The Control Panel appears.

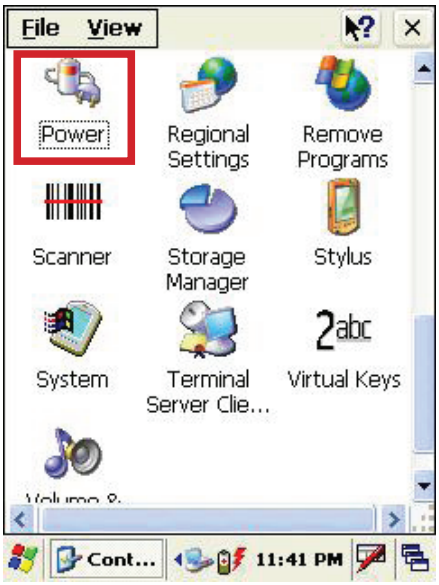
In the control panel it is possible to adjust the backlight, auto power off timer, system volume and processor speed. In addition, users can assign functions to buttons, configure menus, enter owner information and setup connections.

Checking the Main and Backup Battery Status

View the power level for both the Main and Backup Battery through the following:

NOTE: Conserve power by changing the settings for the auto-off function and the proccessor's operation speed.

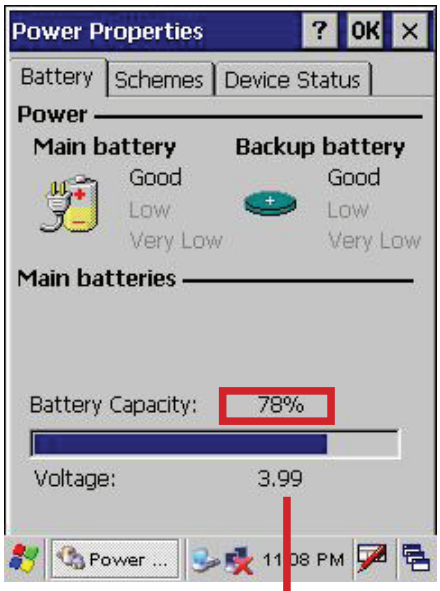
1. Tap **Start** → **Settings** → **Control Panel** → double-tap **Power**.



2. In the Power Properties window, under the **Battery** tab, the main and backup battery capacity are shown.

   For example, the screenshot to the right shows that both the Main battery and Backup battery are in "Good" condition. But, charge the RH767 as soon as possible when the Backup battery reaches "Very Low" status.

NOTE: Charge the Backup Battery when it reaches below 10 percent. If the battery does not accept a charge, contact Unitech Technical Support.



Main Battery Voltage

Using the Laser Scanner

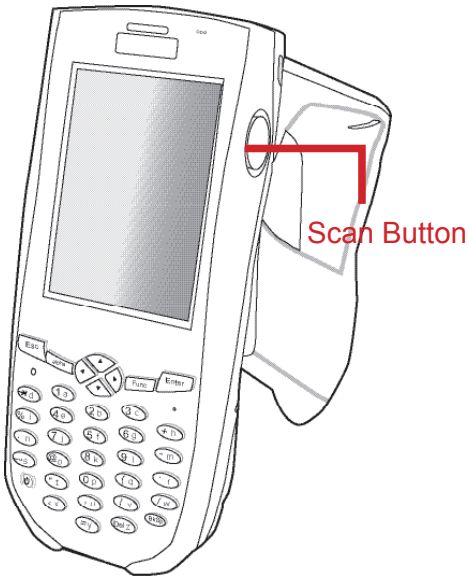
The RH767 has an integrated laser scanner, which reads all major bar code labels.

NOTE: Reading software must be enabled in order to operate the scanner. This can be a userloaded application or a pre-loaded utility such as a Scanner Setting.

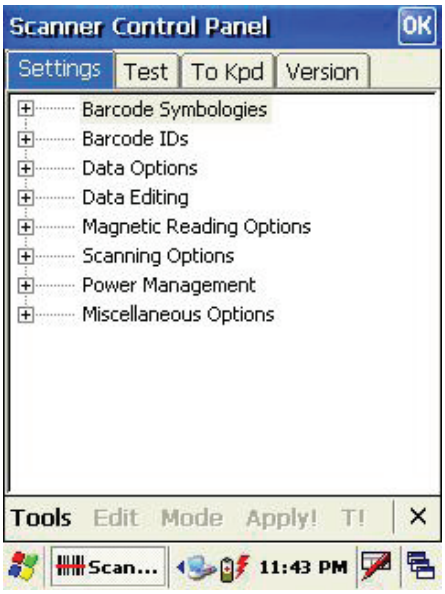
Activate the laser scanner by pressing either one of the trigger keys located on the RH767's left and right side. The RH767 has a built-in Scanner Setting utility that allows users to test the device's bar code scan function.

1. To launch Scanner Settings, simultaneously press **Func** and **7**.

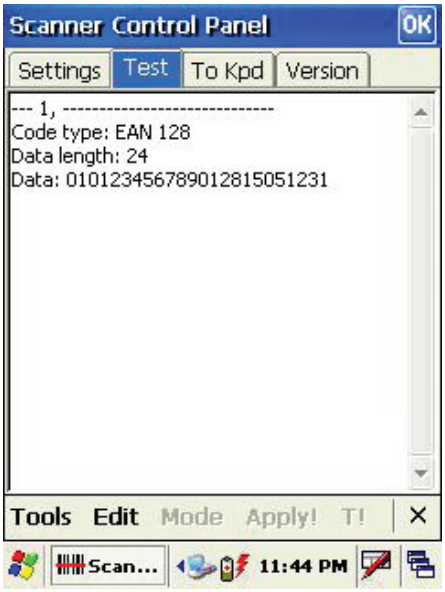
NOTE: Alternatively, tap **Start** → **Settings** → **Control Panel** → double-tap **Scanner**.



2. The Scanner Control Panel opens, where it is possible to configure bar code scanner parameters such as enabling or disabling bar code symbologies, setting data transmission options, configuring magnetic and proximity reading options and setting power management options.



3. Tap the **Test** tab to test the bar code scanner. Press one of the RH767's bar code scanner triggers and aim the scanner window at a 1D bar code. For example, scan a bar code from a soda can.

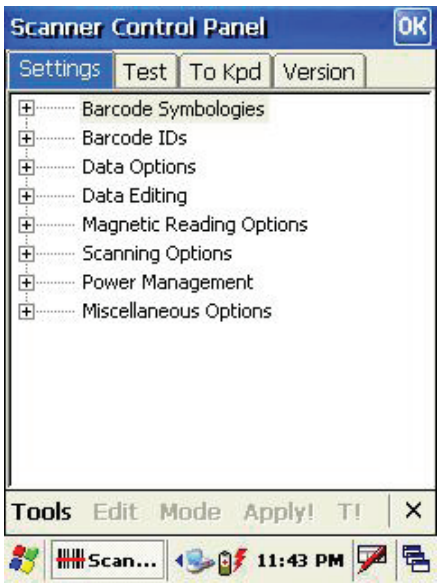


Scanner Settings

When it is necessary for the user to change the default bar code symbology for a different application, the Scanner Control Panel provides the ability to change default symbology, place delimiter characters behind scanned data, and save the settings.

Simultaneously press **Func** and **7** to display the Scanner Control Panel.

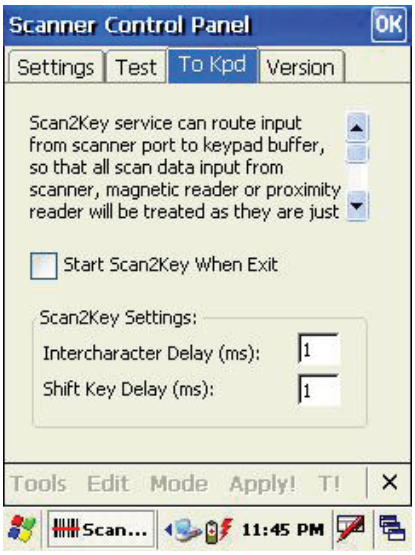
NOTE: Alternatively, tap **Start** → **Settings** → **Control Panel** → double-tap **Scanner** to display the Scanner Control Panel.



Scan2Key

The Scan2Key application routes input from a scanner port to a keypad buffer, making all input from the scanner emulate input from the keypad. Using Scan2Key, scanned data can directly input into a scanner port software application such as MS Mobile Word.

Simultaneously press **Func** and **7** to display the Scanner Control Panel, then tap **To Kpd** to access Scan2Key settings.



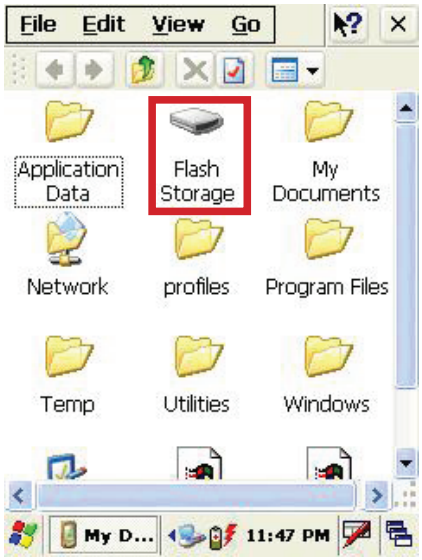
Using the RFID

The RH767 RFID sample application provides the ability to read RFID Class 0 and Class 1 Gen2 RFID tags. The RFID demo program is loaded in the Flash Storage. Use the RFID tags that ship with the RH767 box for the RFID Demo program.

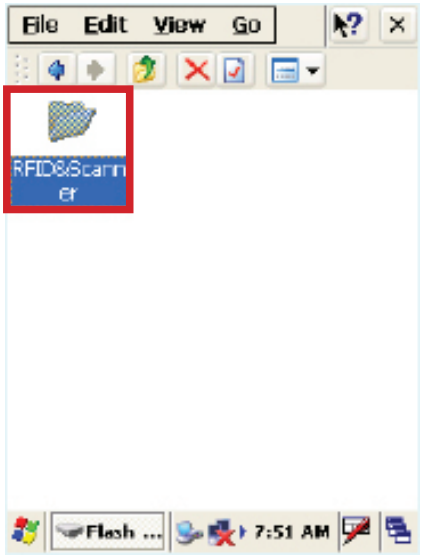
Launching the RFID Demo Program

Launch the RFID Demo program through the following:

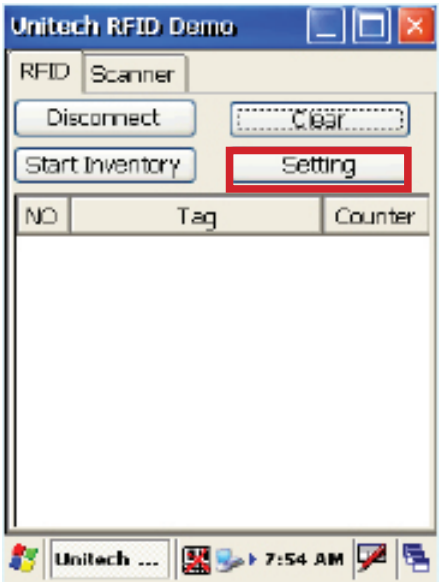
1. Double-tap **My Device**, and double-tap **Flash Storge**.



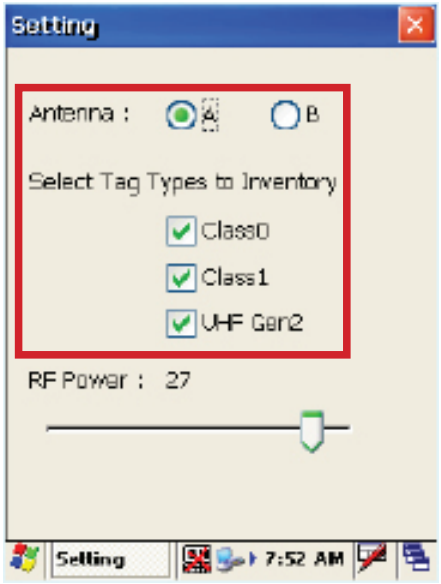
2. Double-tap the **RFID&Scanner** folder, and double-tap the **UnitechRFID Demo** icon.



3. In the RFID tab, tap **Setting**.

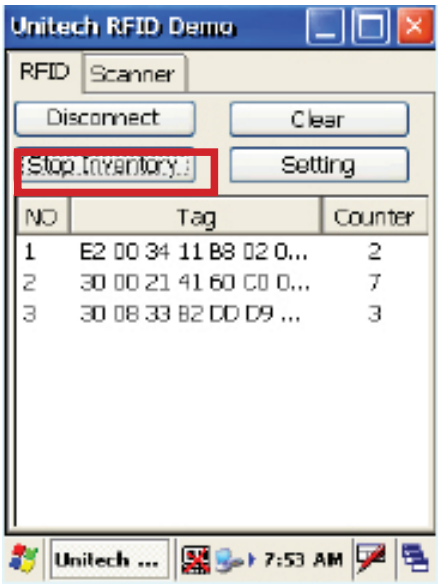


4. Select **A** in the **Antenna** field.
5. Check ClassO, Class1 and/or UHF Gen2 to enable these RFID tag readings in the **Select Tag Types to Inventory** field.
6. Set the RF Power by moving the slide bar to **27**db. Tap **X** to close the setting window.



7. Tap **Start Inventory**, to start reading RFID tags. In the field below, the **Counter** column indicates the number of continous RFID tag readings.

8. Tap **Disconnect** to stop the continous RFID tag readings.



Chapter 3

Getting Connected

The Unitech RH767 enables users to link to a host computer using an RS232, IrDA, or WLAN connection for data communication. Learn about an overview of the RH767's communication options through the following:

Establishing Device-PC Connection

Installing Microsoft ActiveSync

Microsoft ActiveSync must be installed on the computer in order to exchange information between the computer and the RH767. Microsoft ActiveSync is already installed on the RH767.

NOTE: If a previous version of Microsoft ActiveSync is installed on the computer, uninstall it first, before installing the latest version of Microsoft ActiveSync. The RH767 requires Mircosoft ActiveSync 4.2 or higher.

Install Microsoft ActiveSync on the computer through the following:

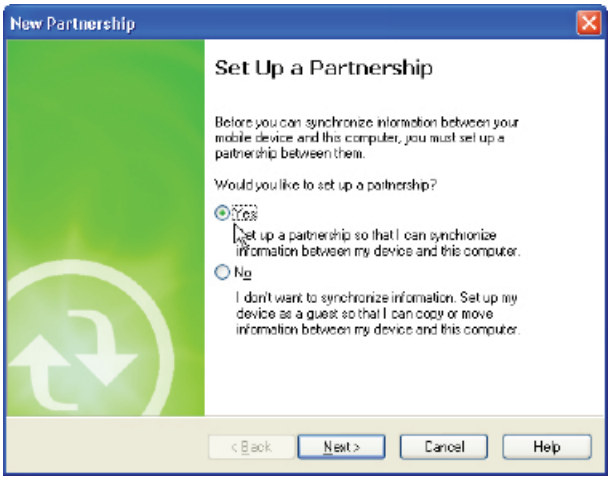
1. Close any open programs, including those that run at startup, and disable any antivirus software.
2. Download the Microsoft ActiveSync software from the Microsoft ActiveSync Download page at:

http://www.microsoft.com/downloads/details.aspx?FamilyID=7269173a-28bf-4cac-a682-58d3233efb4c&DisplayLang=en

3. Browse to the location of the downloaded file, and double-click it. The installation wizard begins.
4. Follow the instructions on the screen to install Microsoft ActiveSync.

Connecting the Device to the Computer

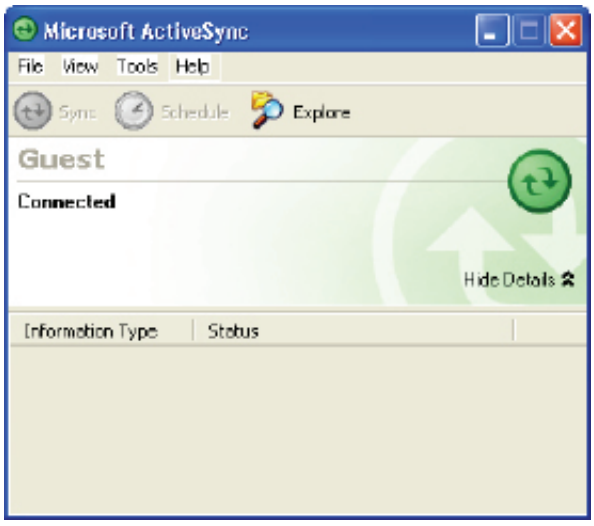
1. After Microsoft ActiveSync is installed, connect the RH767 to the PC (See *Connecting the RH767 to a PC* on page 9).
2. Start the RH767.
3. Microsoft ActiveSync starts automatically and configures the communication port to work with the RH767. The New Partnership setup wizard automatically starts.



NOTE: If Microsoft ActiveSync doesn't start automatically, click **Start** → **Programs** → **Microsoft ActiveSync**. If a message appears indicating that it is unable to detect a connection, click **Cancel** and manually configure the communication settings. To manually configure the communication settings on the PC, click **MAS** → **File** → **Connection Setting** → **Connect Device**.

4. Follow the onscreen instructions.

5. When the configuration process is complete, the Microsoft ActiveSync window appears.



6. Synchronization will initiate, and it will synchronize periodically or upon connection.

NOTE: A PC can partner with multiple RH767s. But, an RH767 can only partner with up to two computers.

Using ActiveSync to Exchange Files

Use Mircosoft ActiveSync to exchange information from the RH767 to the computer, and vice versa. Information changes made in one location will not impact information on the other. Synchronize the information to automatically update information on both the device and the computer.

It is possible to copy two types of information to the RH767: files and Pocket Access Windows CE Store information.

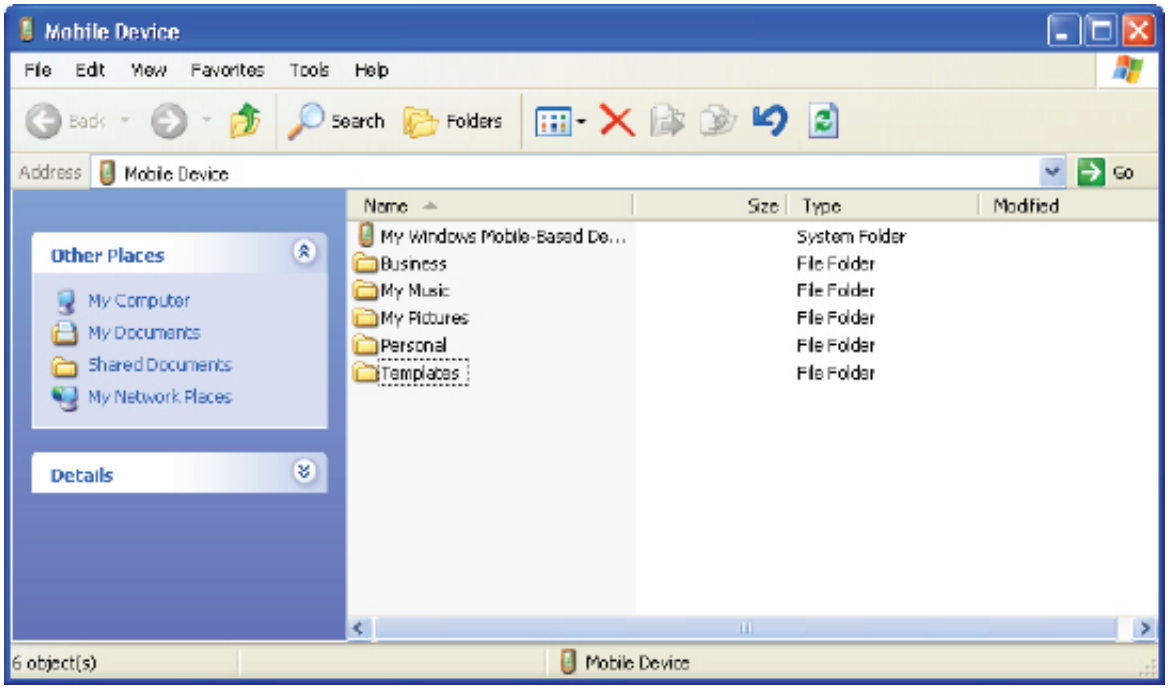
The following procedure only applies to copying files. Refer to the Microsoft ActiveSync Help on the computer for instructions on how to copy Pocket Access Windows CE Store information.

NOTE: Files created on the computer may need to be converted by Microsoft ActiveSync so that they can be viewed and edited on the RH767, and vice versa.

Copy files through the following:

1. Connect the RH767 to the computer.
2. In Microsoft ActiveSync on the computer, click **Explore**.

Windows Explorer opens the Mobile Device window for the RH767.



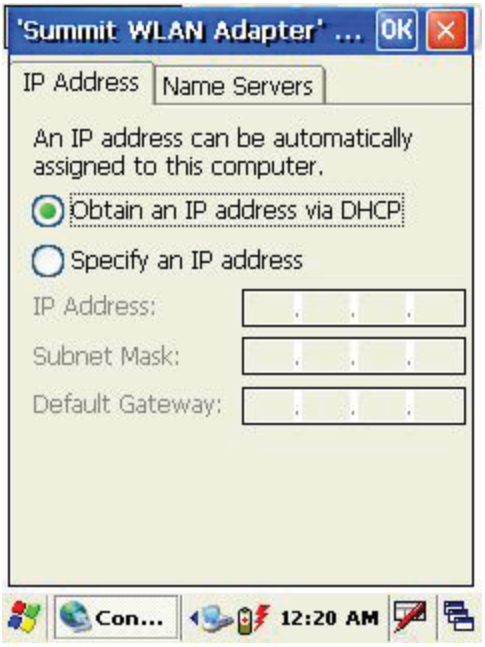
3. Locate the desired file to copy on the RH767 or computer.
4. Do one of the following:
   – To copy the file to the RH767, right-click the file and click **Copy**. Place the cursor in the desired folder for the RH767, right-click, then click **Paste**.
   – To copy the file to the computer, right-click the file and click **Copy**. Place the cursor in the desired folder for the computer, right click, then click **Paste**.

Using the WLAN

Setting up the Wireless Local Area Network Card

The RH767 is loaded with connection software. During initial installation, the RH767 automatically detects RF cards and then displays the 'Summit WLAN Adapter' window. Set the IP address through the following:

- Obtain an IP Address via DHCP Server.
- Specify an IP Address.



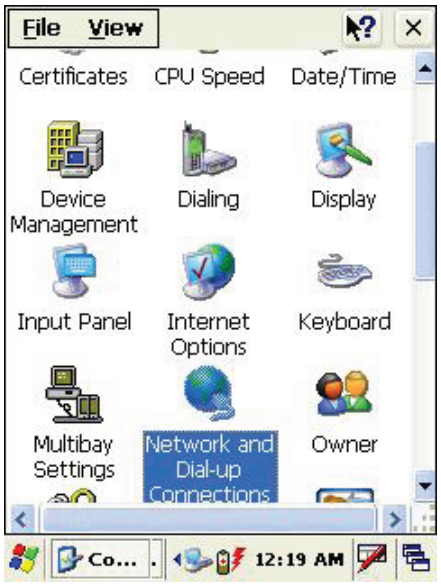
Obtaining an IP Address via DHCP Server

Check with the MIS department to determine whether a DHCP server is available in the LAN environment. If available, tap **Obtain an IP address via DHCP**, and then tap **OK**.

Specifying an IP Address

If there is no DHCP server in the LAN environment, assign an IP address to each RH767 through the following:

1. Tap **Start** → **Settings** → **Control Panel** and then double-tap **Network and Dial-up Connections**.

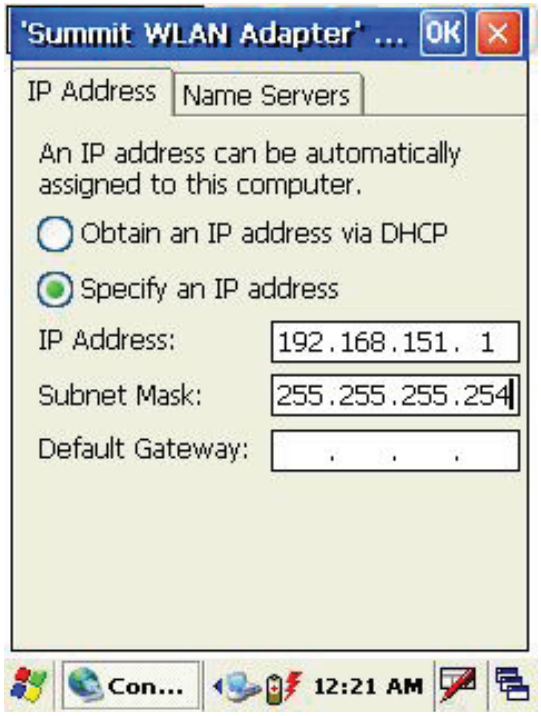


2. Double-tap **SDCCF10G1**.

3. Input the proper information in the **IP address:**, **Subnet Mask:** and **Default Gateway:** field.

4. Tap the **Name Servers** tab, and then input the proper information in the **Primary DNS:**, **Secondary DNS:**, **Primary WINS:** and **Secondary WINS:** field.

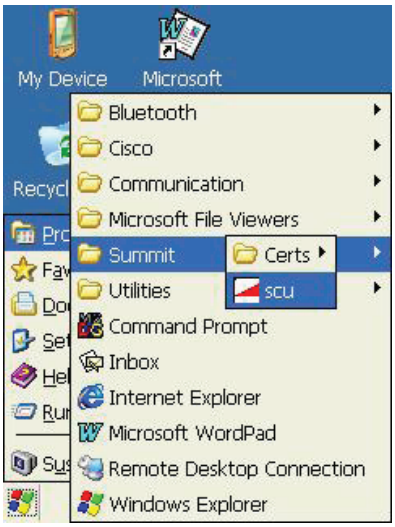
   To avoid conflict with the LAN environment, consult with the MIS department for the correct TCP/IP setting.



Wi-Fi Connection

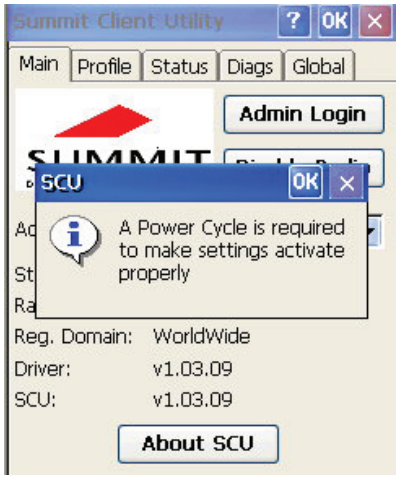
Unitech terminals come with a built-in RF facility. Setup the RF setting through the following:

1. Tap **Start** → **Programs** → **Summit** → **scu**.



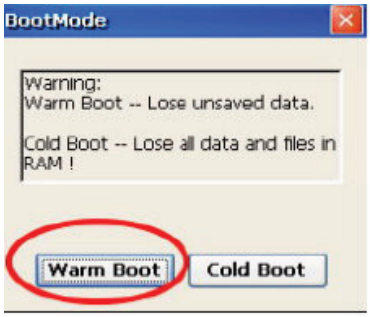
2. Under the **Main** tab, in the **Active Profile** drop down menu, select **ThirdPartyConfig**.

3. A window appears with the message: **A Power Cycle is required to make settings activate properly**. Tap **OK**.

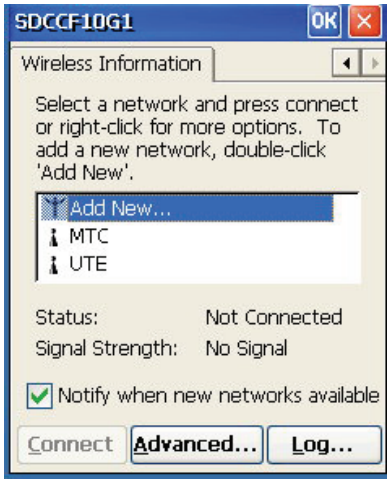


4. Tap **OK**.

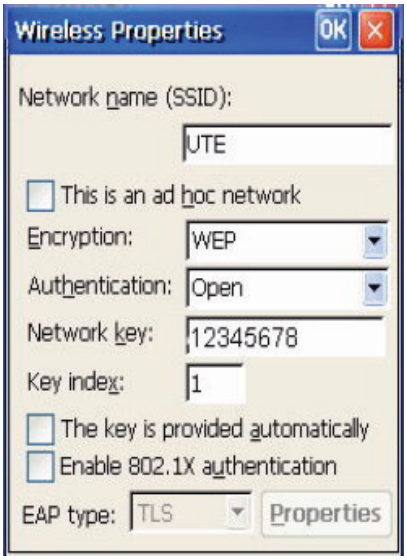
5. Warm Boot the RH767. Click **Start** → **Programs** → **Utilities** → **Bootmode** → **Warm Boot**.



6. Once the RF card is detected, the RF setting window appears.
7. Double-tap **Add New** (Or double-tap the preferred network) to add a new SSID.

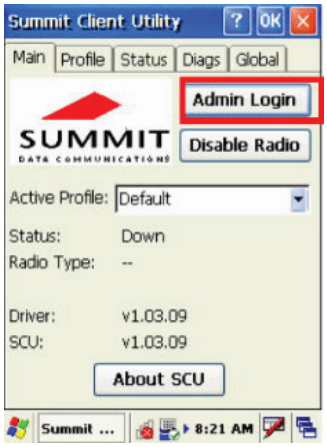


8. Enter the SSID. Uncheck **The key is provided automatically**. Enter the network key.
9. Tap **OK**. Start to search for an RF signal.



Using the Summit Utilities

Use the Summit Utility tool to setup or change the Wi-Fi setting through the following:



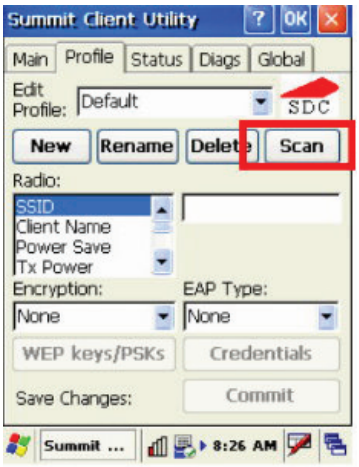
Admin Login

1. To login as an Administrator tap **Start** → **Programs** → **Summit** → **scu** → **Admin Login**.

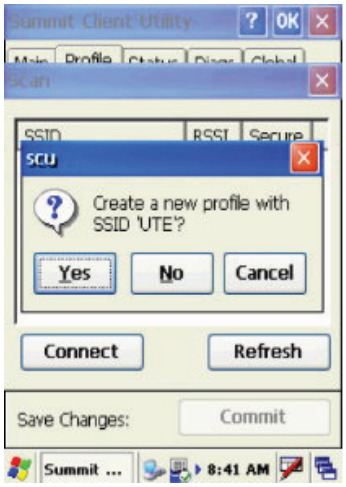
2. Enter the password (Default Password: **SUMMIT**). Tap **OK**.

Scan Available AP

1. Under the **Profile** tab, tap **Scan** for available AP.

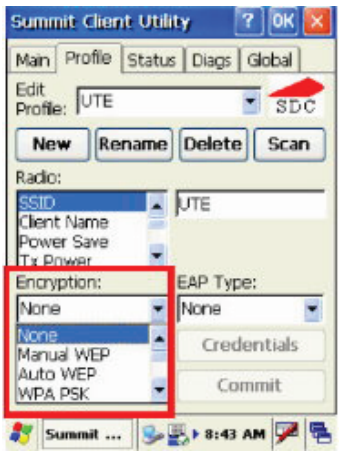


2. Select the desired AP and tap **Connect**.
3. Tap **Yes** to connect.



Encryption

1. To setup the encryption, scroll down the **Encryption** field and select the encryption type in the network.



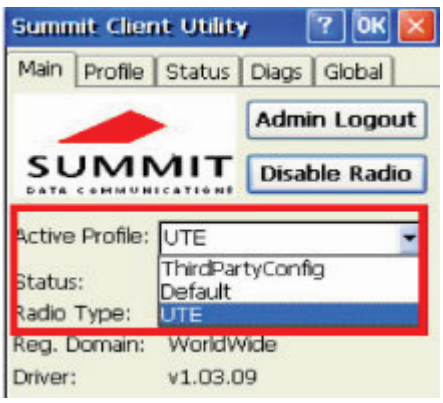
2. Tap **WEP keys/PSK's**.
3. Enter the WEP keys and tap **OK**.

Commit and Activate

1. Tap **Commit** to activate the setting.

2. Under the **Main** tab, select the profile to activate.

3. Under the **Status** tab, view the IP address and the signal strength.



Appendix A

Middleware Supporting List

- Oracle Sensor Edge Server.
- Oracle Sensor Edge Mobile.
- Oracle Database Lite.
- Microsoft BizTalk R2.

** Please contact a Unitech service representative for detailed information regarding supporting middleware.

System Specifications

Hardware	
Memory:	64 MB ROM / 64MB SDRAM
Microprocessor:	400Mhz Intel X-Scale
Display:	NEC (240 x 320 Pixels) Transflective TFT Color LCD, Support 256K Color, Backlight and Touch-screen
Operating System	
	Microsoft Windows CE 5.0 Professional Plus
Power	
Battery Type:	Rechargeable Lithium-Ion
Battery System:	7.4V 4050mAh (Double Cell)
Battery Life:	RH767 HF: UP to 24 Hours RH767 UHF: Up to 16 Hours
Recharging Time:	Within 6 Hours (Very Low Power Status)
Keypad with LED Backlight	
	36-key Keypad with Numeric Key, Alpha Key and Function Key
Standard Communications	
	Bluetooth, 802.11b/g, USB 1.0 and IrDA
Scanner Engine	Integrated SE950 Laser Scanner
RFID Reader	UHF 902 - 928Mhz, EPCG1C0, C1, Gen 2 HF 13.56Mhz 15693, 14443A/B
Physical Characteristics	Dimension: 7.17”L X 3.46”W X 5.91”H Weight: RH767 HF 24.05 oz. Weight: RH767 UHF 26.81 oz.
Environment	
Operating Temperature	23ºF - 122ºF (-5º - 50ºC)
Storage Temperature	-4ºF - 140ºF (-20º - 60ºC)
Relative Humidity:	5% - 95% (Non-condensing)
Key Accessories	Desktop Cradle 2 Slot Battery Charger 4 Slot Battery Charger 4 Slot Multi-bay Charging & Communication Cable
Software Development Kit	Unitech RH767 SDK, RFID Middleware SDK Microsoft Embedded Visual Tool
Software	Unitech RFID Middleware support Oracle Sensor Edge Server, Microsoft BizTalk RFID, IBM WebSphere
Regulatory	CE, FCC, VCCI, NCC, CCC

Appendix C

Worldwide Support

Region	Web site
Global Operation Center	www.unitech-adc.com
Unitech Taiwan	adc-utt.unitech.com.tw
Unitech Asia Pacific & Middle	www.unitech-utp.com.tw
Unitech China	www.ute.com.cn
Unitech Japan	www.unitech-japan.co.jp
Unitech America	www.ute.com
Unitech Latin America	latin.ute.com
Unitech Europe	www.unitech-europe.nl