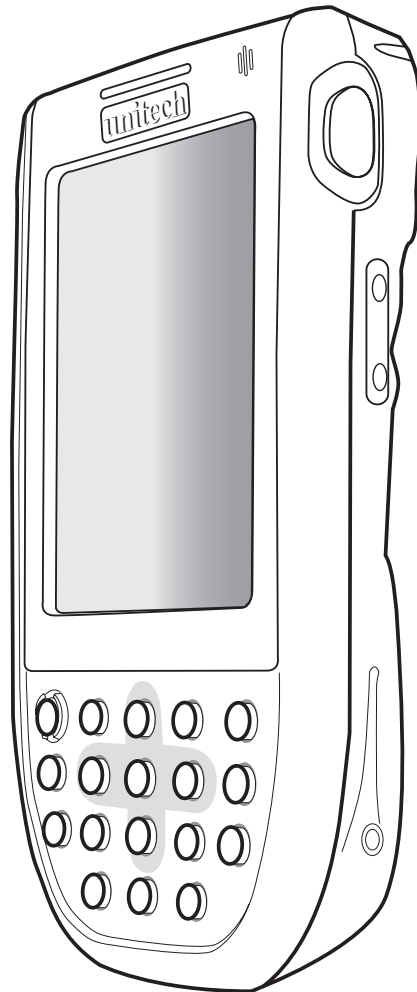


# **PA600 Rugged Enterprise PDA**

**- 2D/HF Model -**



## **User's Manual**

**382647G Version 1.0**

### About This Manual

This manual explains how to install, operate and maintain the PA600 Rugged Enterprise PDA.

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## Regulatory Compliance Statements

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### FCC Warning Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more 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.

1. This Transmitter must not cohabitate or operate in conjunction with any other antenna(s) or transmitter(s).
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure compliance requirements, avoid direct contact to the transmitting antenna during transmission.
3. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

## FCC Label Statement

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

## Canadian Compliance Statement

This Class B Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte les exigences du Règlement sur le matériel brouilleur du Canada.

## European Conformity Statement

Declaration of Conformity with Regard to the R&TTE 1999/5/EC and EMC 89/336/EEC directives.

## 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

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The Unitech PA600 series is certified in the U.S. to conform with DHHS/CDRH 21CFR Subchapter J and IEC 825-1 requirements. Please note that Class II and Class 2 products are not considered to be hazardous. The PA600 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 service operation.

The laser safety warning label required by the DHHS/IEC is on the PA600'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. However, this does not include eye glasses worn by the user.

## Battery Notices

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The PA600 is equipped with a Lithium-Ion Battery Pack and Backup Battery. Both batteries will discharge power if not frequently used.

Recharge the PA600 for at least 16 hours in order to fully charge the main battery and backup battery. Recharge the PA600 through either of the following:

1. Plug the USB Charging Cable to the PA600 and insert the AC Adapter into the USB Charging Cable's power jack.
2. Place the PA600 into the Docking Station and plug the AC Adapter to the Docking Station's power jack.

The Backup Battery ensures data stored on SDRAM is safe for up to 2 hours, when the Main Battery disconnects from the P600. To prevent data loss, do not leave the PA600 uncharged without the Main Battery for an extended time period.

**NOTE:** Rechargeable batteries are advised to replace every year or when 500 charge/discharge cycles occur to guarantee optimal performance. It is normal that the battery balloons or expands beyond one year or the maximum of 500 cycles. Although it does not cause harm, it can not be used again and must be disposed of according to the location's safe battery disposal procedures.

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

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 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 environmental temperature whenever the Lithium-Ion Battery Pack is charged. Charging is most efficient at room temperature or in a slightly cooler environment. It is essential that batteries are charged within the temperature range of 50°F - 113°F (10°C to 45°C). Charging batteries outside of this specified temperature range could damage the batteries and shorten their charging life cycle.

**CAUTION!** Do not charge batteries at a temperature lower than 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 be depleted due to build up of internal resistance. If this happens they will require recharging prior to use. Lithium-Ion batteries may be stored at temperatures between (-4° - 140°) -20°C to 60°C, however they may deplete more rapidly at the higher temperature ranges. It is recommended to store batteries within normal room temperature ranges.

## Warranty

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The following items covered under Unitech Limited Warranty are free from defects during normal use:

- PA600 – 1-year limited warranty.
- Lithium-Ion battery – 6-month limited warranty.

The warranty becomes void if the equipment is modified, improperly installed or used, damaged by accident or 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 unit and will void the warranty.

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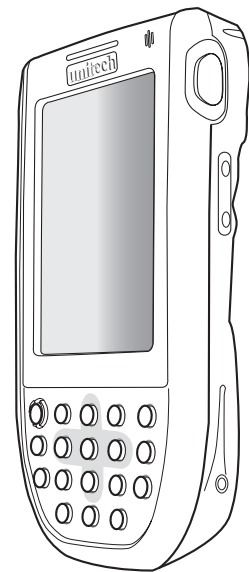
## Getting Started

### Introducing the PA600 MCA

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The PA600 MCA (Mobile Clinical Assistant) was designed for users who need a compact and rugged mobile computer for data collection in real time transactions. This compact and lightweight device incorporates a Windows CE 5.0 operating system, a laser bar code scanner and an RFID Reader. In addition, the PA600 contains a 3.5-inch QVGA color touch-screen, keypad and wireless communication capability.

To reduce total cost of ownership, the PA600 is sealed to meet IP64 standards and can withstand multiple 4-foot drops to concrete. Thanks for purchasing the PA600 Rugged Enterprise PDA.





# Features

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## Internal System

- Microsoft Windows CE 5.0 Professional Plus Operating System.
- 520 Mhz Intel PXA270 Processor.

## System Memory

- 128 MB SDRAM.
- 320 MB Flash ROM.

## Display

- 3.5" QVGA LCD Touch-screen.
- 240 x 320 Pixel Resolution.

## Bar Code Scanner

- Built-in 2D Bar Code Scan Engine.
- Built-in Vibration.

## RFID HF Reader

- Built-in RFID HF Reader.
- HF 13.56Mhz Supports ISO 15693 and ISO 14443A/B.

## Communication

- USB Host & Client.
- 802.11b/g.
- Bluetooth 1.2 Class 2 (Supports Bluetooth Printer, Bluetooth Modem and Bluetooth ActiveSync).

## Audio

- Microphone.
- Speaker.
- Headset Connector.
- Receiver.

## Wireless Connectivity

- IEEE 802.11b/g.
- Bluetooth.

## Expansion Slot

- Accommodates Secure Digital (SD) Memory Cards and can Serve as an SDIO Port.

## Battery System

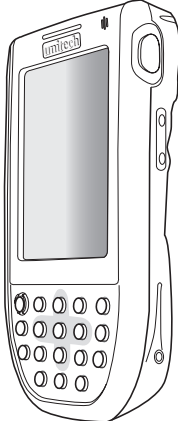
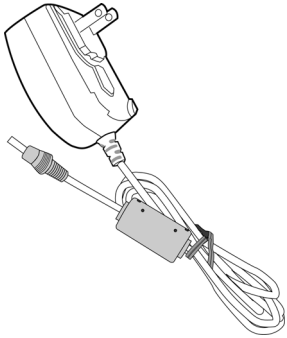
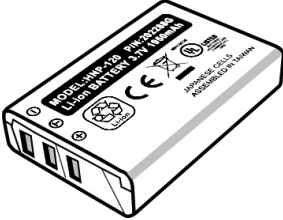
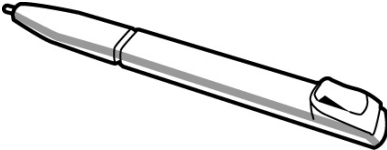
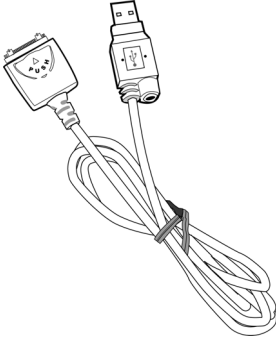
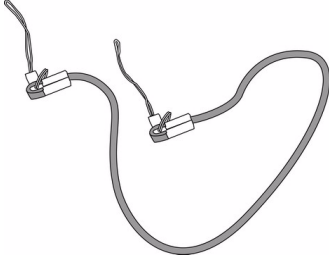

- 3.7V 2200mAH Lithium-Ion Battery Pack.
- Charging Time: Less Than five-Hours.
- Embedded Backup Battery Cell.

## User-friendly Interface

- Quick Launch Hot Keys for Enabling Backlight, Calibration, Software Keyboard, and Other Device Management Tasks.
- Trigger Keys for Bar Code Scanning.

# Package Contents

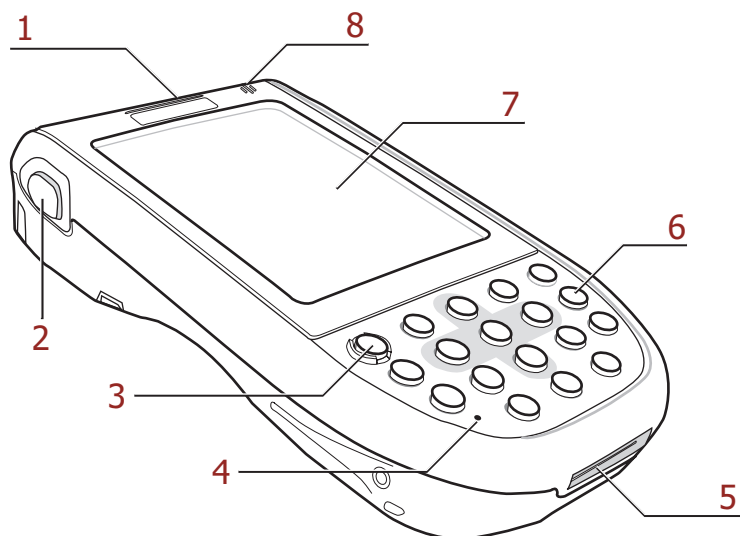
Ensure the following items are in the PA600 MCA box:

		
<p align="center"><b>PA600 Terminal</b></p>	<p align="center"><b>AC Adapter with Universal Plugs</b></p>	
		
<p align="center"><b>Battery Pack</b></p>	<p align="center"><b>Stylus</b></p>	
		
<p align="center"><b>USB Charging Cables</b></p>	<p align="center"><b>Elastic Stylus String</b></p>	<p align="center"><b>Unitech CD-ROM</b></p>

If anything appears missing or damaged, please contact a local Unitech representative.

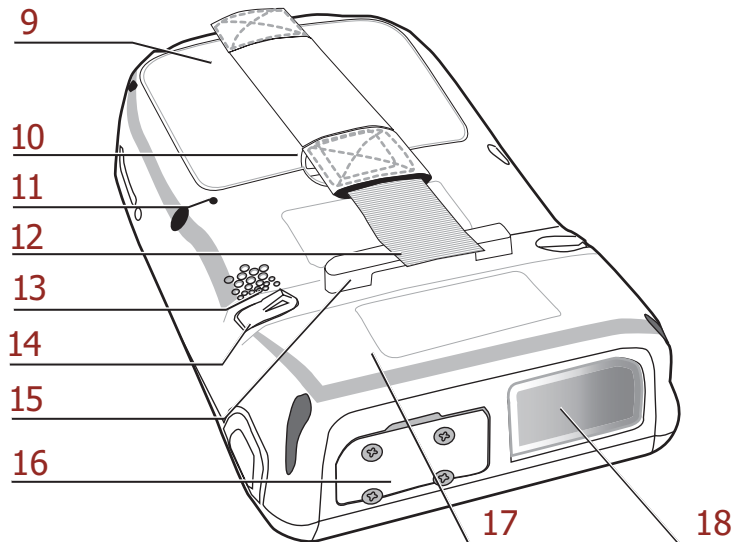
# A Tour of the PA600

## Front View



No.	Component	Description
1.	Status Indicator.	Indicates battery charging and bar code scanning status. <b>Green</b> - Battery is fully charged, or bar code scanning is successful. <b>Red</b> - Battery is charging, bar code scanner is operating.
2.	Left Scanner Trigger Button.	Press to activate the Laser Bar Code Scanner.
3.	Power Button.	Press to start the PA600. Also, press this button down for at least three seconds to turn the PA600 off.
4.	Microphone.	Records audio.
5.	Universal Connector.	Connects the PA600 to a USB Charging/Communication Cable. This USB cable connects to the computer's USB Port and accepts the 5V AC Adapter to provide power to the PA600. This unit can simultaneously recharge and perform a Microsoft ActiveSync operation. In addition use it to connect peripheral hardware, such as a docking station. This port can also support USB and RS232 hosting for devices such as a USB or RS232 scanner, keyboard or USB memory key.
6.	Keypad.	Keypad interface for controlling the PA600. See <i>Keypads and Function Buttons</i> on page 16 for more information.
7.	LCD Touch-screen.	Displays applications and data on the PA600. It is touch-sensitive and responds to the Stylus or finger.
8.	Speaker.	Enables audio from the PA600.

Back View



No.	Component	Description
9.	Battery Compartment.	Houses the removable and rechargeable 3.7V 2200 mAH Battery Pack.
10.	Battery Compartment Release Latch.	Opens the Battery Compartment.
11.	Reset Button.	Press the Stylus into the PA600's Reset Button to Clean Boot the device.
12.	Handstrap.	Enables users to securely hold the PA600.
13.	Speaker.	Enables audio from the PA600.
14.	Stylus.	Enables users to interact with the operating system. To use the Stylus, remove it from its holder and hold it like a pen or pencil.
15.	Strap Holder.	Secures the handstrap.
16.	Memory Card Slot.	Accommodates Secure Digital (SD) memory cards and can serve as a SDIO port.
17.	Bar Code Scanner Window.	Scans bar codes.
18.	RFID Antenna.	Receives the radio frequency signals.

# Getting Started

Install and charge the battery, check the battery status, turn on the PA600 and calibrate the PA600's screen through the following:

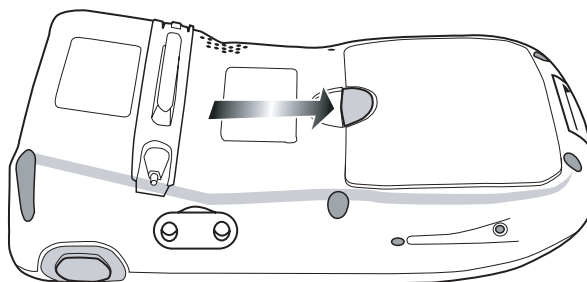
## Installing the Battery

**WARNING!** If the Battery Pack is handled improperly there is risk of fire and/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.

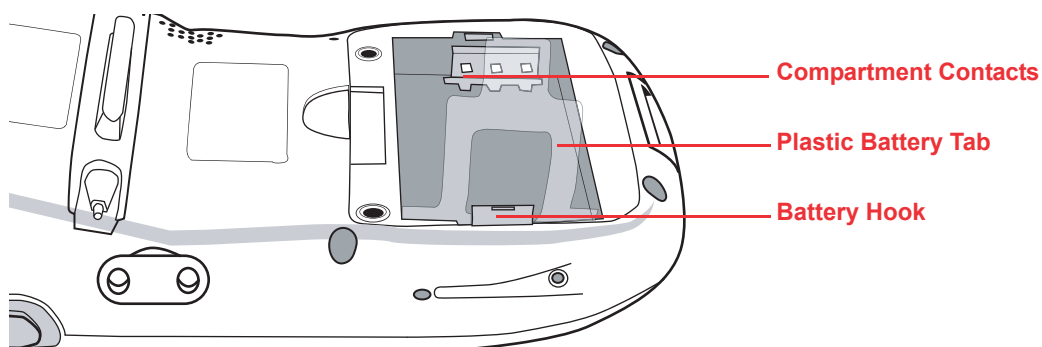
A Backup Battery cell is embedded in the PA600 to prevent data loss when the removable Battery Pack disconnects from the PA600. The Backup Battery will maintain data and system settings for up to 6 hours.

**NOTE:** Initially charge the Main Battery for at least 16 hours to provide the battery with enough power.

1. Access the Battery Compartment by pushing the Battery Compartment Cover Latch in the direction as shown below:

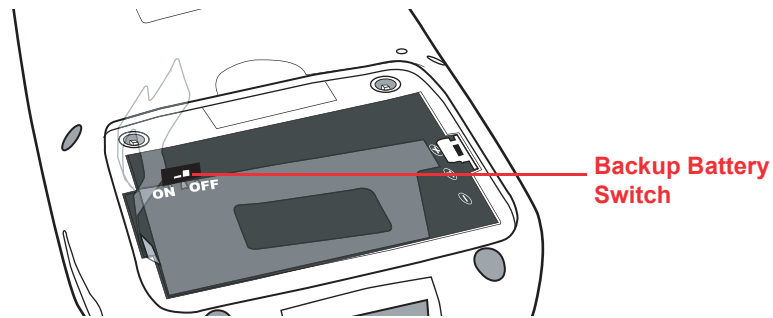


Components of the Battery Compartment are highlighted below:

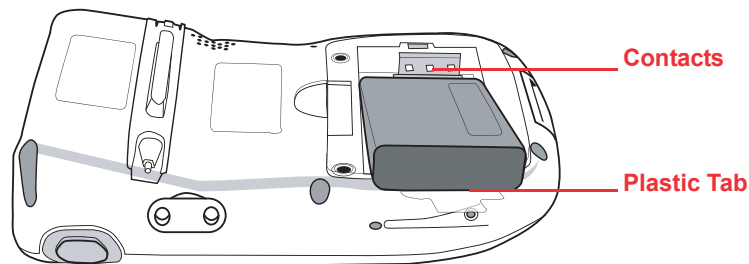


**NOTE:** Do not remove the Plastic Battery Tab, it is useful for removing the Battery.

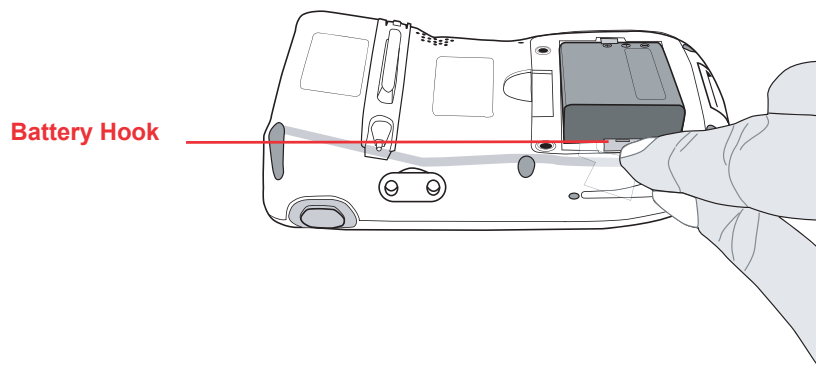
2. Locate the Backup Battery Switch in the Battery Compartment, and use a Stylus to move it to the left in the **ON** position.



3. Position the Battery so the Battery Contacts align with the Battery Compartment Contacts. Place the Battery on top of the Plastic Tab as shown below:



4. Simultaneously slide the Battery Pack into the Battery Compartment while pulling the Battery Hook until the battery snaps into place as shown below:



5. Replace the Battery Compartment Cover.

## Charging the Battery

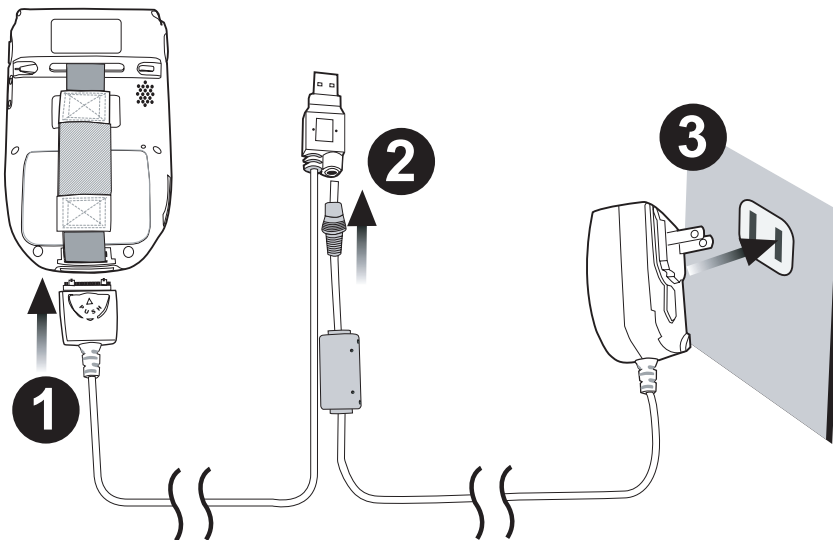
Charge the PA600 for at least 16 hours prior to initial use. After the initial charge, the PA600 will recharge to full capacity in about 4 hours. Only use the PA600 USB Charging Cable or the PA600 Cradle for charging the device.

**CAUTION!** Operating the PA600 for the first time without the AC Adapter, and without fully charging the Backup Battery may result in RAM memory data loss. When the Main Battery is removed, the Backup Battery retains RAM data for 2 hours. Charge the battery within this time period 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.

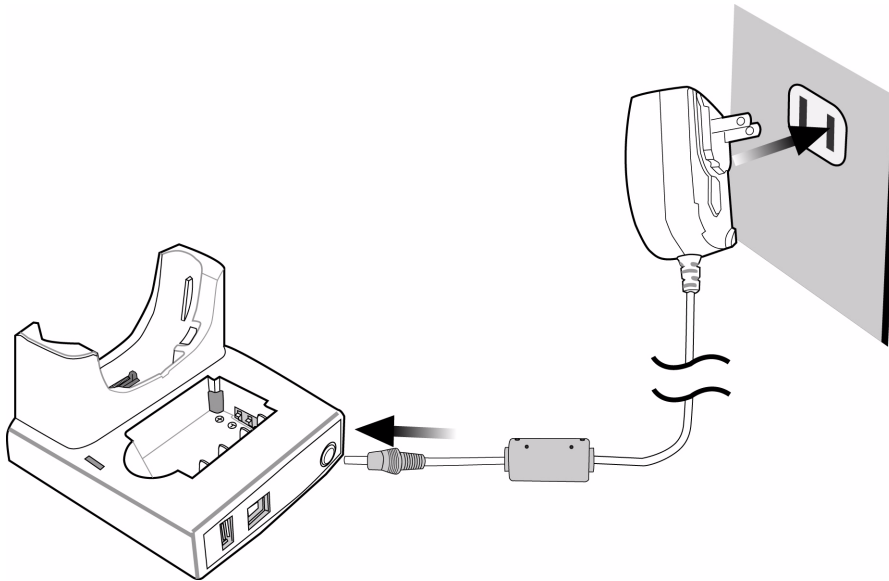
### Charging the Battery Using the USB Cable

1. Press and hold the USB Charging Cable's Release Buttons while connecting to the PA600 (1).
2. Plug the AC Adapter Cable into the USB Charging Cable's power jack (2).
3. Plug the other end of the AC Adapter Cable into an electrical outlet (3).

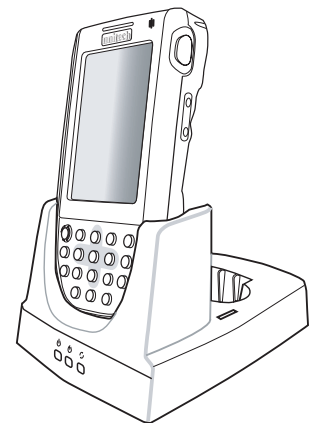


## Charging the Battery with the Docking Station

1. Plug the AC Adapter Cable into the Docking Station's power jack, and connect the other end of the AC Adapter into an electrical outlet.






2. Slide the PA600 down into the Docking Station until it snaps into place.



3. The connection is secure when the PA600's bottom edge aligns with the Cradle. (The PA600's LED indicator lights up red).

### LED Status

	LED	Meaning
PA600	Solid Red	Charging.
	Solid Green	Charging Complete.
Docking Station	 Power LED	Power is On.
	 Charging LED:	Charging (For Spare Battery Only).
	 Sync LED	Synchronization is Occurring.

### Checking the Battery Status

If the battery level becomes low during the course of normal use, a status icon appears on the PA600's screen indicating low or very low battery status. In both cases, perform a Microsoft ActiveSync operation to backup data, and recharge the PA600 as soon as possible. If the battery level reaches low status, the device will enter a sleep mode and cannot power up until the battery is charged, or until the PA600 connects to an external power source.

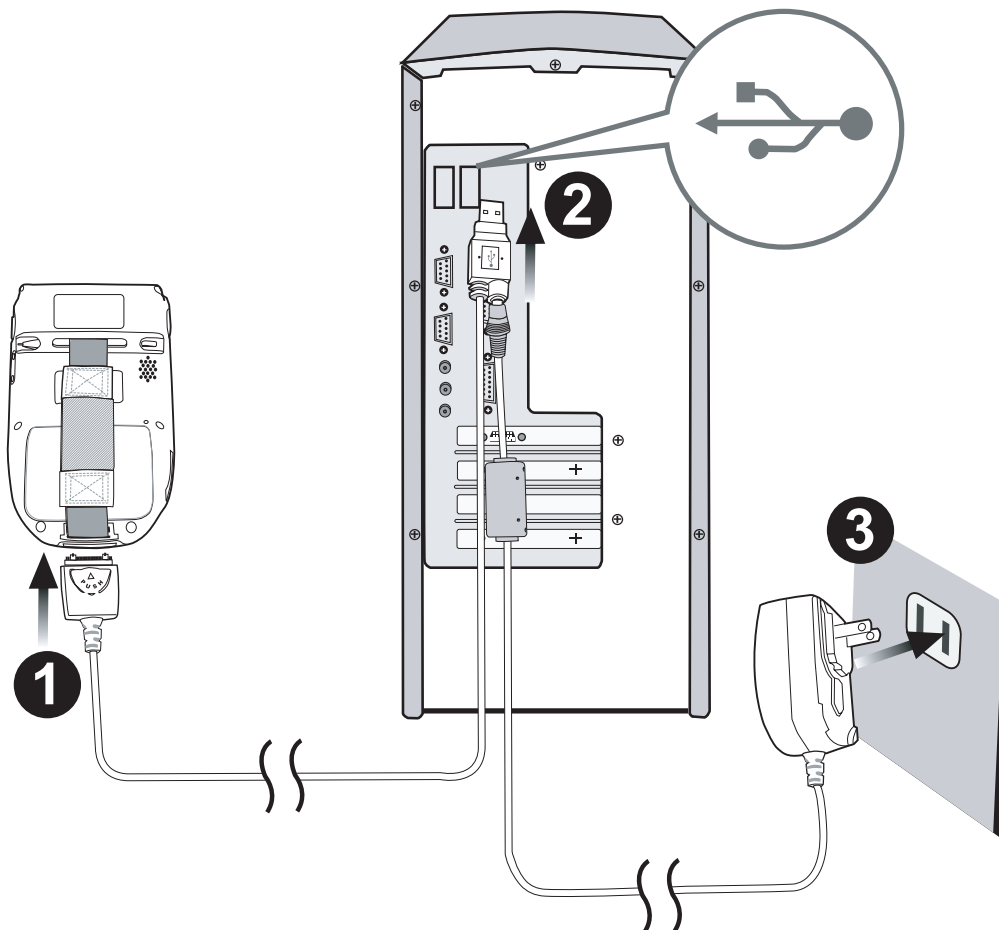


## Connecting the PA600 to a PC

Connect the PA600 to a PC with the USB Cable through the following:

**NOTE:** Connect the PA600 with an external power supply while synchronizing.

1. Press and hold the USB Charging Cable's Release Buttons while connecting to the PA600 (1).
2. Connect the USB Charging Cable to the PC/Notebook's USB Port and plug the AC Adapter Cable into the USB Charging Cable's power jack (2).
3. Plug the other end of the AC Adapter into an electrical outlet (3).



### Turning PA600 on for the First Time

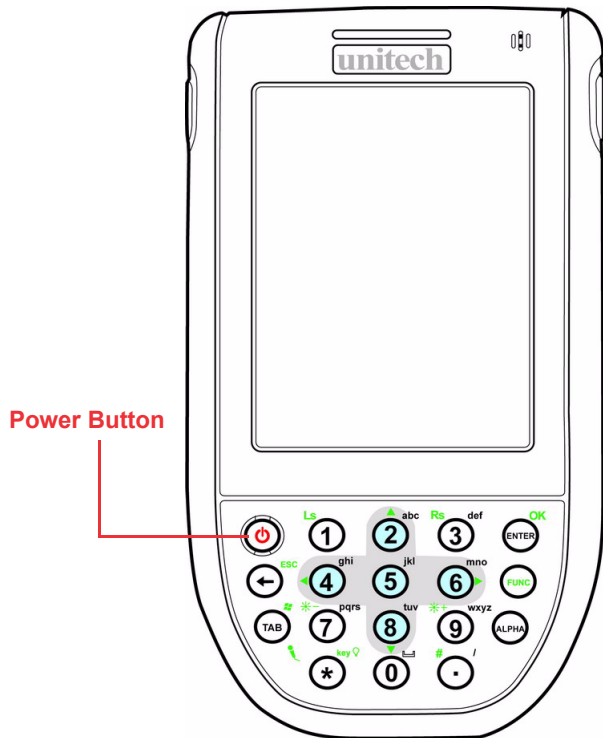
Charge the PA600 for at least 16 hours prior to initial use. Start the PA600, calibrate the display, learn some basic Stylus usage, and setup the date and time through the following:

#### Powering On

1. Start the PA600 by pressing the Power Button on the front panel.

**NOTE:** The PA600's screen ships with a protective plastic film. Remove the plastic film by peeling from one corner to another. The screen will be more susceptible to scratching without the film, but it will be more legible.

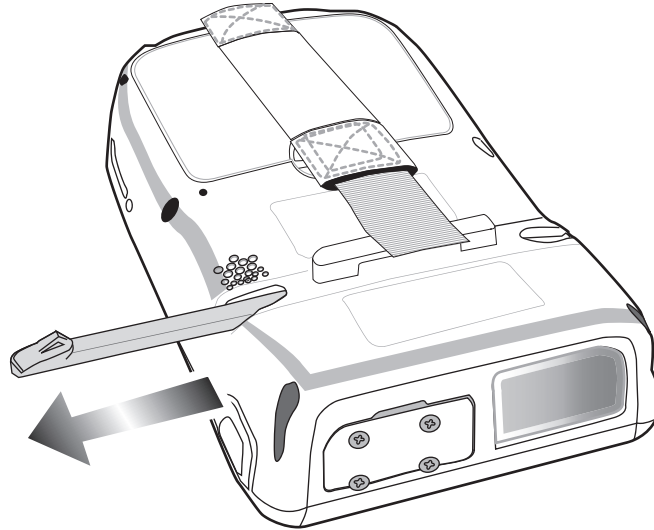
2. The Unitech PA600 welcome screen appears for a moment followed by the Windows Mobile screen.



## Using the Stylus

**CAUTION!** Never use anything other than the PA600 Stylus on the PA600's screen. Using an object other than the PA600 Stylus could cause permanent damage.

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. Use the Stylus to print letters or numbers into a field or on a form.

## Calibrating the PA600 Screen

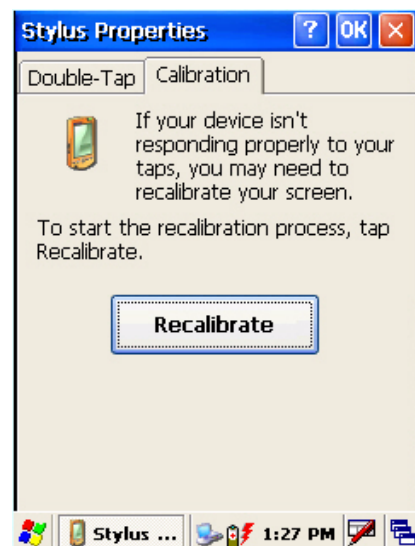
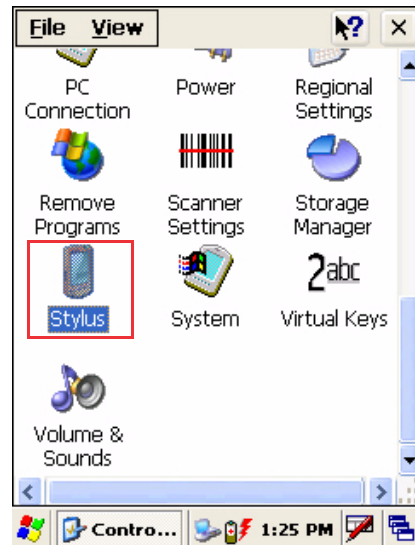
The calibration screen automatically appears when the PA600 powers on for the first time or after the system is reset. Calibrate the screen at any time through the following:

1. Tap **Start** → **Settings** → **Control Panel**.
2. Double-tap **Stylus**. The Stylus Properties window appears.

**NOTE:** Or, simultaneously press **FUNC** and **ESC**.

3. Tap the **Calibration** tab.

4. Tap **Recalibrate** to calibrate the screen. The align screen window appears.
5. Tap the target firmly and accurately.



Carefully press and briefly hold stylus on the center of the target. Repeat as the target moves around the screen. Press the Esc key to cancel.



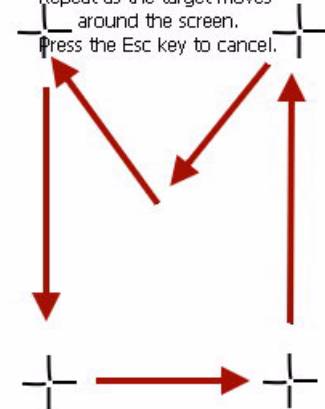
The target moves to the next location.

Carefully press and briefly hold stylus on the center of the target.  
Repeat as the target moves around the screen.  
Press the Esc key to cancel.



6. Continue tapping the target until calibration is complete.

Carefully press and briefly hold stylus on the center of the target.  
Repeat as the target moves around the screen.  
Press the Esc key to cancel.




7. Press **ENTER** to accept the new calibration settings or **ESC** to retain the old settings.

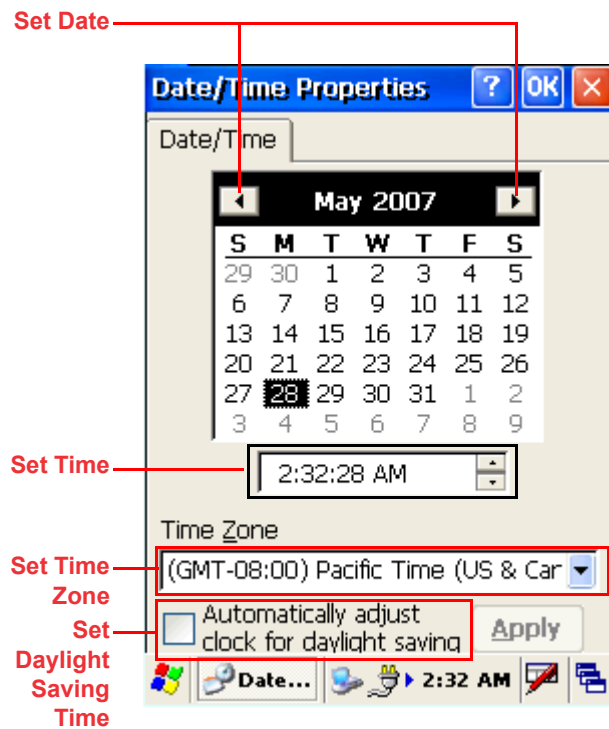
## Setting the Data and Time

### Set Date and Time

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

- Tap the left or right arrows to scroll through the year and month, or tap the year and month to select the setting.
- Tap on the Hr/Min/Sec/AM/PM to input the Hr/Min/Sec and set the time.
- Tap the arrow and set the correct time zone from the drop down menu.
- Check the box to enable Windows to **automatically adjust for daylight saving time**.
- Tap **OK** to save the settings and exit the Date/Time Properties dialog or tap **X** to exit without saving.


To change the time and date at any time tap  → **Settings** → **Control Panel** → Double-tap **Date/Time**.



## Using the Hardware






### Keypads and Function Buttons














The keypad enables users to enter data and interact with the operating system. The **FUNC** button activates secondary key functions.

Press  and a **Fn** icon appears on the PA600's taskbar.



The following table describes the keypad keys.

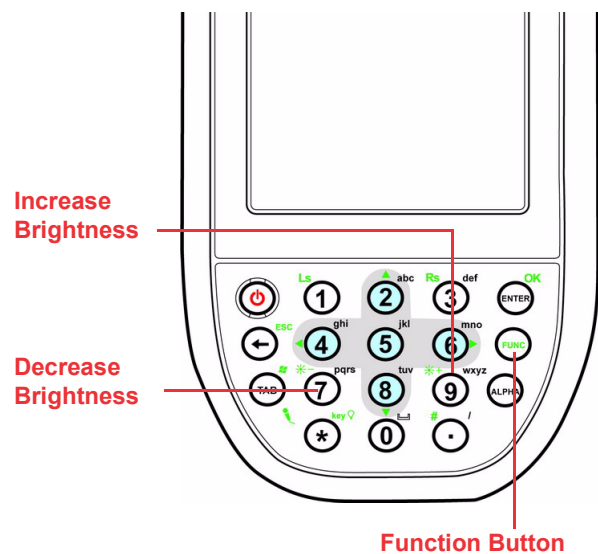
Key	Main Function	Secondary Function
	Turns the PA600 on and off.	—
	Number 1.	
	Alphanumeric 2, a, b and c.	Up navigation key.
	Alphanumeric 3, d, e and f.	
	Enter key.	OK.

Key	Main Function	Secondary Function
	Backspace.	Escape key.
	Alphanumeric 4, g, h and i.	Left navigation key.
	Alphanumeric 5, j, k and l.	—
	Alphanumeric 6, m, n and o.	Right navigation key.
	—	Enables/disables secondary function keys.
	Tab.	Windows key opens Start menu.
	Alphanumeric 7, p, q, r and s.	Decreases screen brightness.
	Alphanumeric 8, t, u and v.	Down navigation key.
	Alphanumeric 9, w, x, y and z.	Increases screen brightness.
	Alpha.	—
	Asterisk.	Illuminates keypad.
	Number 0 and space.	—
	Period.	Pound and Slash.



## Adjusting the Screen Brightness

Adjust the screen brightness by pressing **FUNC** to enable the secondary key function and press **7** (decrease brightness) or **9** (increase brightness).

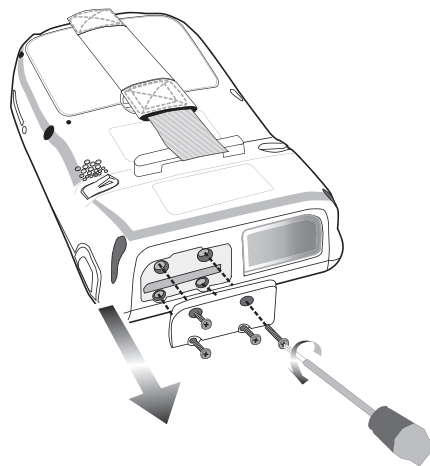


## Using the SD/MMC memory card

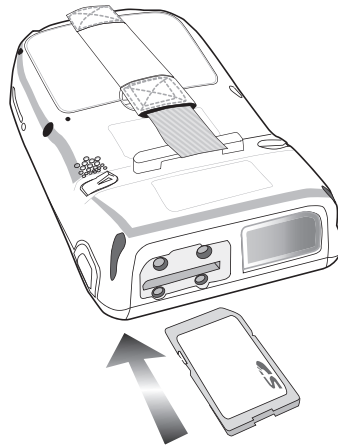
The PA600's expansion slot is compatible with a range of SD and MMC storage cards, which are primarily used to backup or transfer files and data. The expansion slot also supports SDIO cards for additional connectivity options.

### Inserting a Storage Card

1. Remove the SD Compartment Cover by rotating the screws counterclockwise with a screwdriver as shown below:



2. Insert the SD Card with the notched end facing up and into the slot as shown below:



3. Replace the SD Compartment Cover with the four compartment screws.

### **Removing a Storage Card**

1. Remove the SD Compartment Cover by rotating the screws counterclockwise with a screwdriver.
2. Press the card in, and release. The card should automatically release.
3. Remove the SD Card from the slot.
4. Replace the SD compartment cover and the four compartment screws.

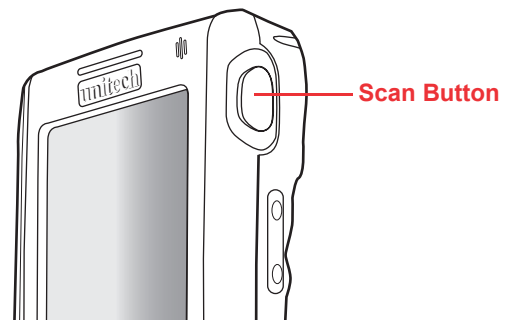
## Using the Laser Scanner

---

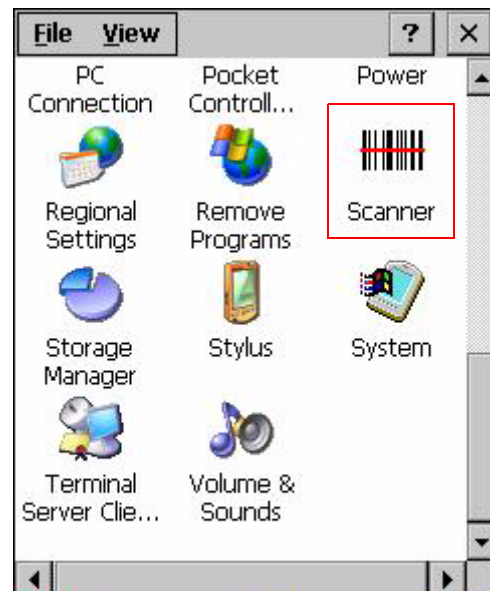
The PA600 has an integrated laser scanner that reads all major bar code labels.

**NOTE:** Reading software must be enabled in order to operate the scanner. This can be a user loaded application or a preload utility such as Scanner Settings and Scan2Key.

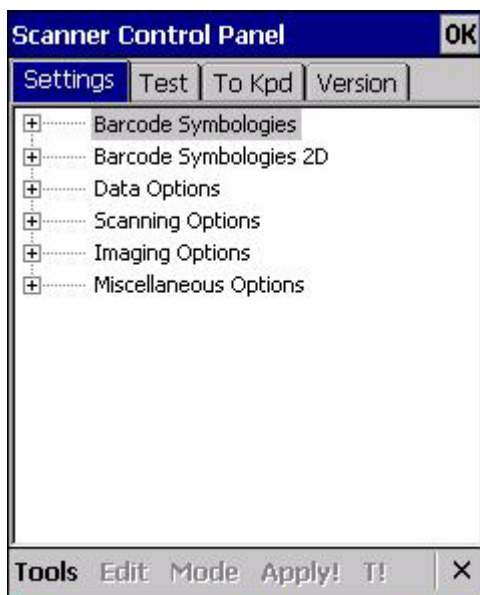
Test the PA600's bar code scanner through the following:



1. To launch the Scanner Settings, tap **Start** → **Settings** → **Control Panel** → double-tap **Scanner**.

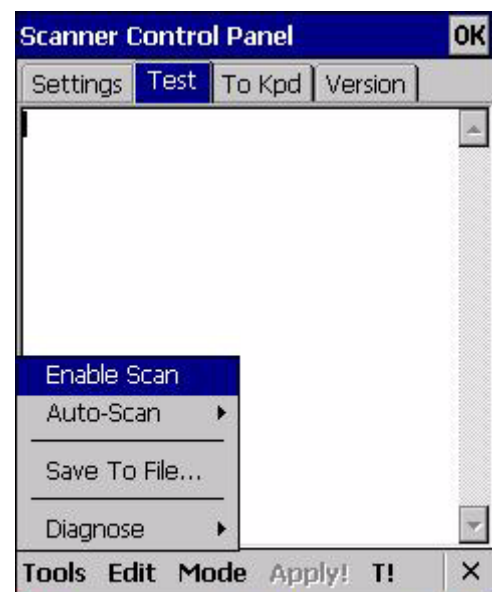


2. The Scanner Control Panel opens.



In the Scanner Control Panel screen, it is possible to configure bar code scanner parameters such as enabling or disabling bar code symbologies, set data transmission options, configure magnetic and proximity reading options and set power management options.

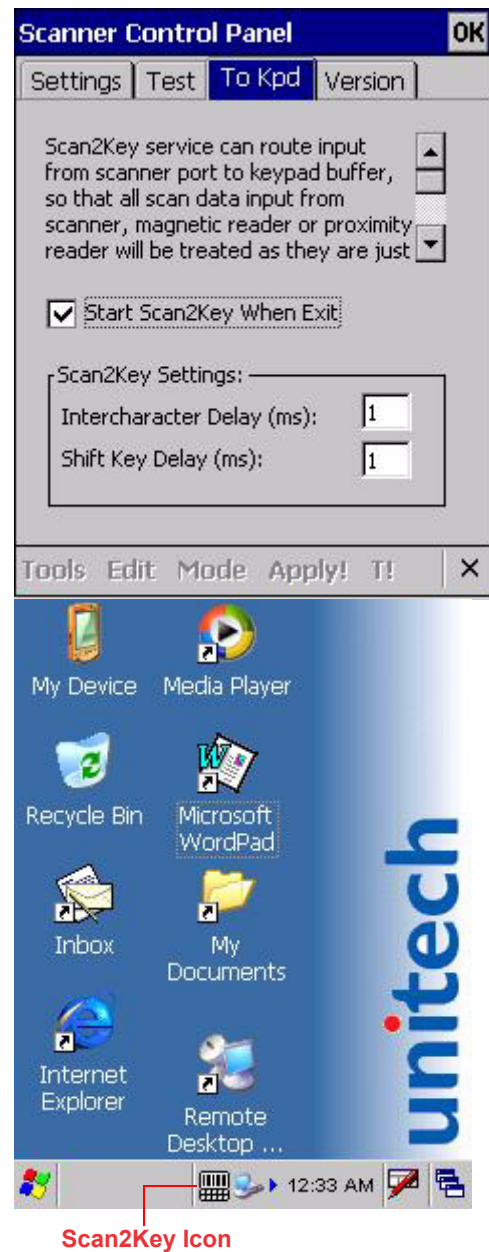
3. To test the bar code scanner, tap the **Test** tab.
4. Tap **Tools** → **Enable Scan**.
5. To perform an auto-scan, tap **Tools** → **Auto Scan** → **Start Auto-Scan**.
6. Input an interval. The default value is three seconds. Tap **Start**. The laser scans every three seconds and the bar code automatically scans.
7. To stop the auto-scan, tap **Tools** → **Auto-Scan** → **Stop Auto-Scan**.



8. Enable **Scan2Key.exe** to enable the scanner outside of the test tab. This can be done under the **To Kpd** tab.

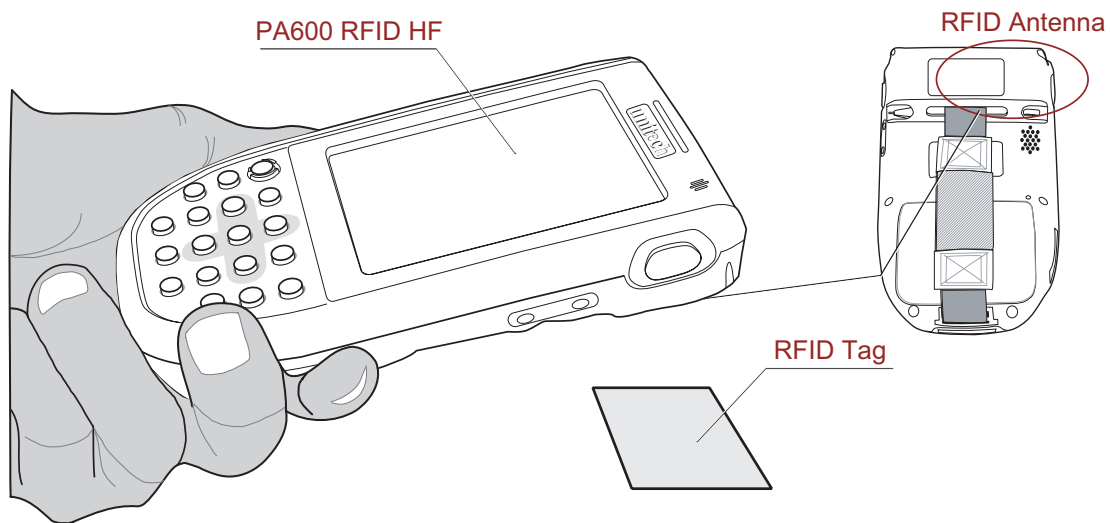
Check the box labeled **Start Scan2Key When Exit**. Tap **OK**.

9. The scanner is enabled and each bar code scan will be directed to the keypad buffer, once the Scan2Key icon appears on the PA600's taskbar.



## Using the RFID HF Reader

The PA600 has a built-in RFID High Frequency Reader that allows users to read various types of RFID cards. The RFID scanning area is shown below:

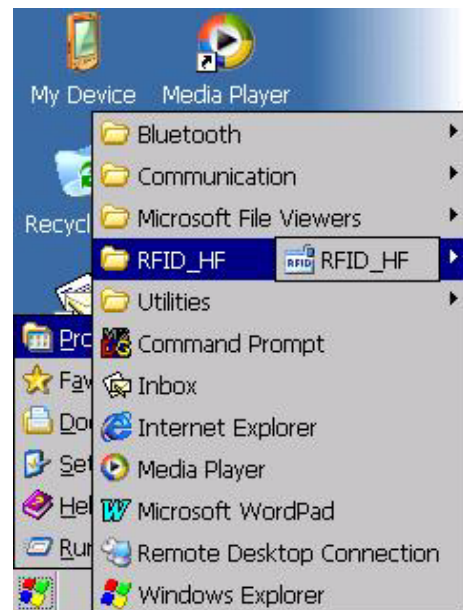


Execute an RFID card reading with the PA600 through the following:

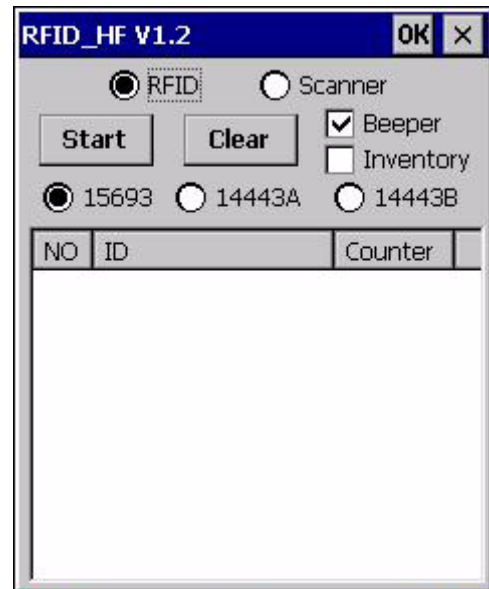
Bring an RFID tag near the PA600's RFID antenna. The RFID demo program is pre-installed in the PA600.

Launch the RFID demo program through the following:

1. Tap **Start** → **Programs** → **RFID\_HF** → **RFID\_HF**.

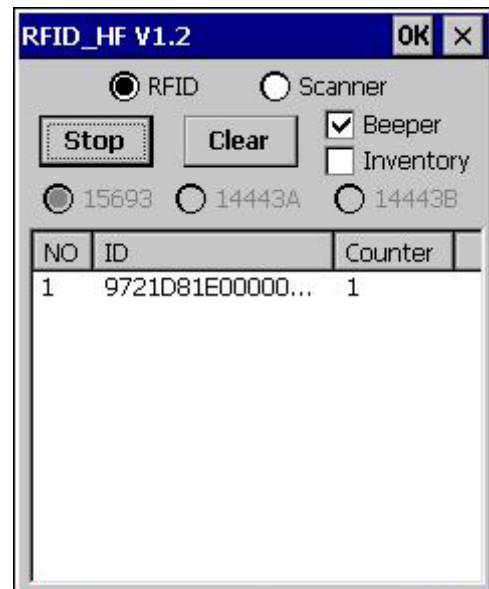


2. Select a card type: **15693**, **14443A** or **14443B**. Tap **Start** to activate the RFID reader.



3. Bring a tag close to the RFID antenna. The tag is read into the field.

Select the **Beeper** check box to enable a beeping sound when an RFID tag is read. Select the **Inventory** check box to limit an RFID tag to be read once.



4. Tap **Stop**, to stop the RFID tag readings.

## Getting Connected

### Establishing Device-PC Connection

---

#### Installing Microsoft ActiveSync

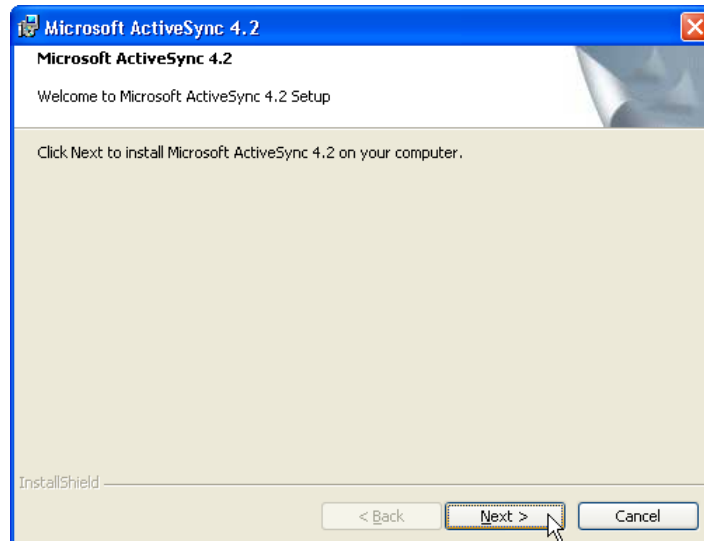
Microsoft ActiveSync must be installed on the computer in order to exchange information between the computer and the PA600. Microsoft ActiveSync is already installed on the PA600. Use the PA600's USB Charging Cable or the docking station to connect the PA600 with a computer.

**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 PA600 Rugged Enterprise PDA requires Microsoft ActiveSync version 4.2 or higher.

Install Microsoft ActiveSync on the computer through the following:

1. Close any open programs, including those that run during startup, and disable any antivirus software.
2. Download the ActiveSync software from the Microsoft ActiveSync Download page at: <http://www.microsoft.com/windowsmobile/en-us/help/synchronize/activesync45.mspx>
3. Browse the location of the downloaded file, and double-click it.  
The installation wizard begins.

4. Click **Next**.



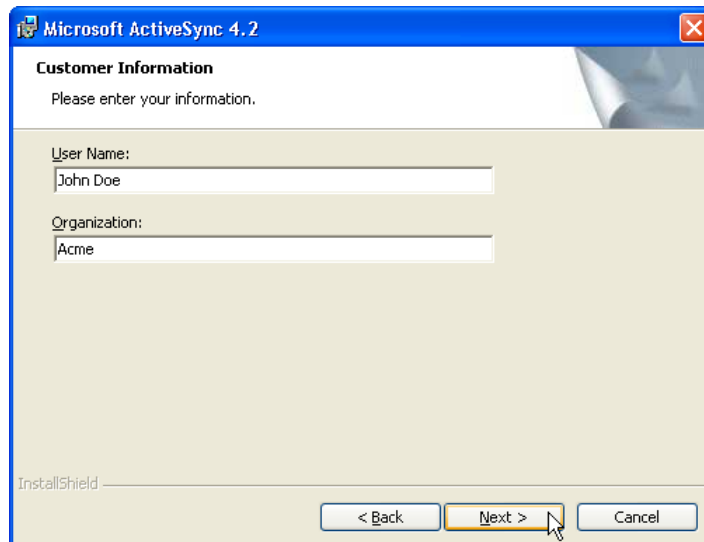
The End User License Agreement (EULA) appears.



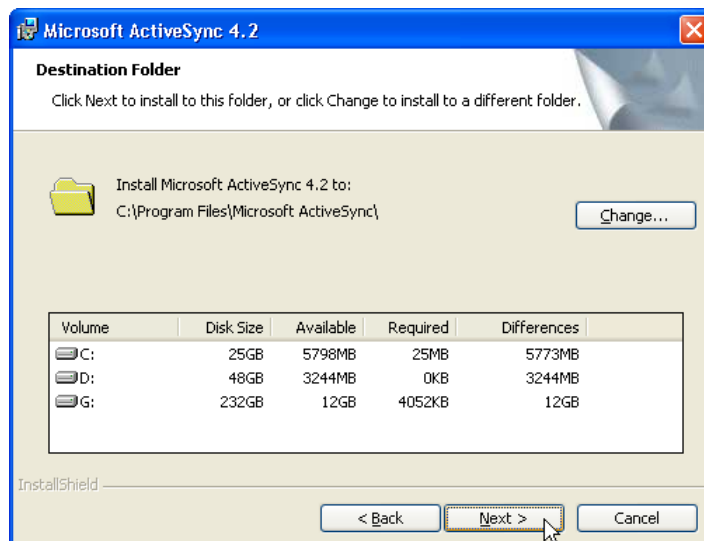
5. Accept the license agreement terms and click **Next**.



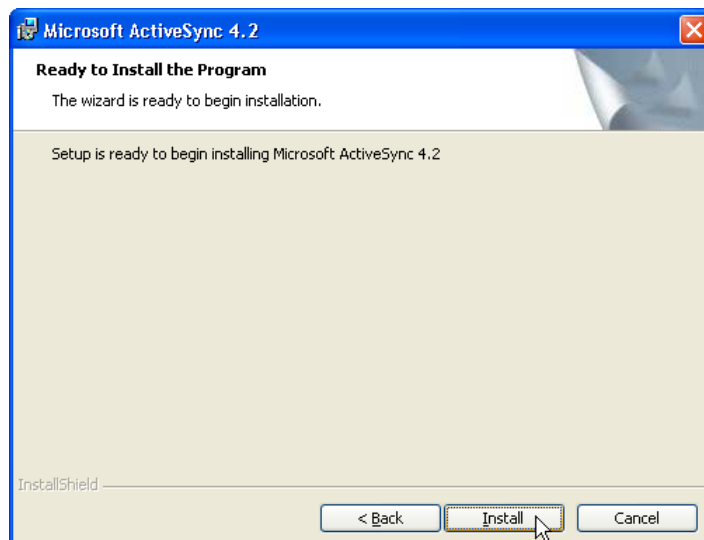
Fill out the information fields.



6. Type the user name and organization and click **Next**.  
Select the folder destination.

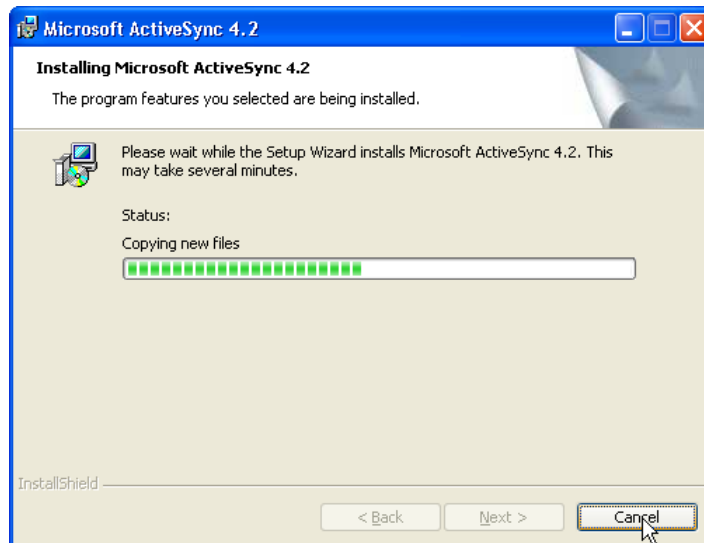


7. Select a drive to install the program and click **Next**.  
The installation wizard gathers all the information it needs to install Microsoft ActiveSync and prompts users to begin the installation.

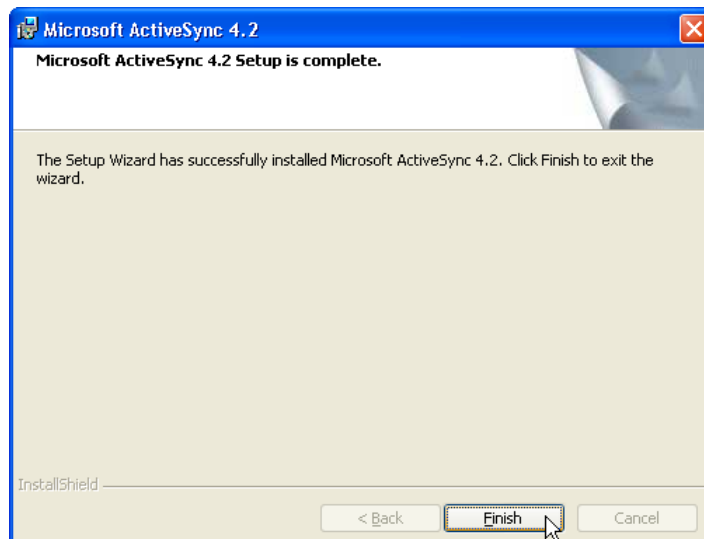


8. Click **Install**.


The program begins the installation.



After the program finishes installing, the following screen appears.



9. Click **Finish**.

Restart the computer after installing Microsoft ActiveSync. The Microsoft ActiveSync icon  appears in the computer's system tray and the Connection Wizard automatically starts. For details on how to use Microsoft ActiveSync on the computer, start Microsoft ActiveSync then click **Help** → **Microsoft ActiveSync Help**.

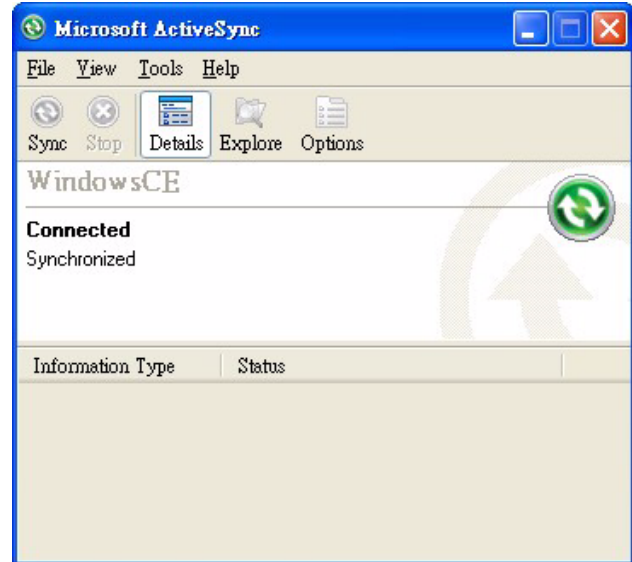
### Connecting the Device to the Computer

1. After Microsoft ActiveSync installs, connect the USB Charging Cable to the Universal Connector on the bottom of the device. If necessary, connect an Adapter. Refer to *Connecting the PA600 to a PC* on page 10.
2. Plug the other end of the USB Charging Cable into the computer's USB Port.
3. Start the PA600.
4. Microsoft ActiveSync starts automatically and configures the USB Port to work with the PA600. The New Partnership setup wizard automatically starts.

**NOTE:** If Microsoft ActiveSync doesn't start automatically, click **Start** → **Programs** → **ActiveSync**.

**NOTE:** If a message appears indicating that it is unable to detect a connection, click **Cancel** and manually configure the communication settings on the PC by clicking **MAS** → **File** → **Connection Setting** → **Connect Device**.

5. Follow the onscreen instructions.
6. The Microsoft ActiveSync window appears once the configuration process is complete.



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

**NOTE:** A PC can partner with multiple PA600's. But, a PA600 can only partner with up to two computers.

## Synchronizing with the Computer

Synchronization occurs according to the options setup in Microsoft ActiveSync via the computer. Accepting the default (On Connect) synchronization option in the Microsoft ActiveSync Setup Wizard enables users to simply connect the PA600 to the desktop computer and synchronization will automatically occur.

If the On Connect feature in Microsoft ActiveSync is not selected, start Microsoft ActiveSync through either of the following:

- On the computer, double-click **My Computer** → **Mobile Devices** folder.
- Connect the USB Cable between the computer and PA600.

### Connection Options

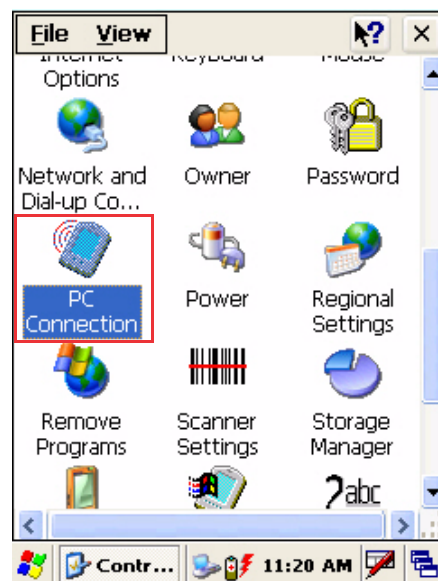
Set remote synchronization with the computer through following connection options:

- USB connection.
- Bluetooth connection.
- Wi-Fi connection.

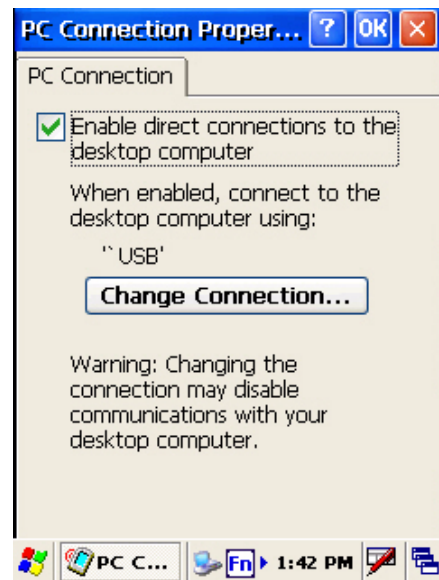
#### USB Connection

Synchronize the computer via a USB connection through the following:

1. Connect the PA600 to a computer using the USB Charging Cable.
2. Initiate the connection by tapping **Start** → **Settings** → **Control Panel** → double-tap **PC Connection**.



3. Check **Enable direct connections to the desktop computer**.
4. Tap **OK**.



5. Tap **Start** → **Programs** → **Communication** → **PC Link**. The USB Status window appears. Tap **Hide** to hide the window. Tap **Cancel** to disconnect.

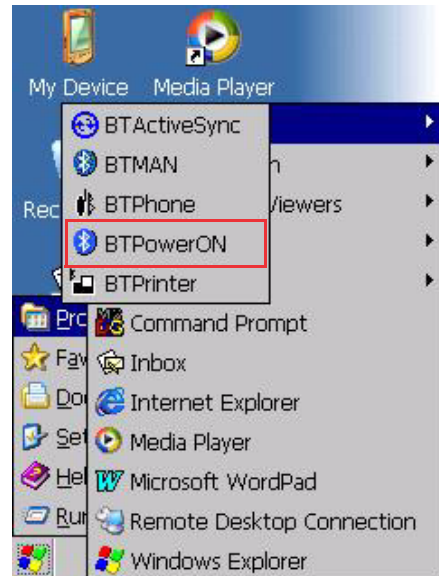


### Bluetooth Connection

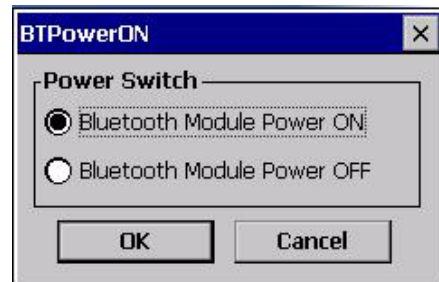
The PA600 is equipped with Bluetooth wireless technology that can synchronize information with a computer equipped with a Bluetooth adapter or access point. Bluetooth wireless technology communicates with the computer whenever it is within range.

Setup a Bluetooth connection through the following:

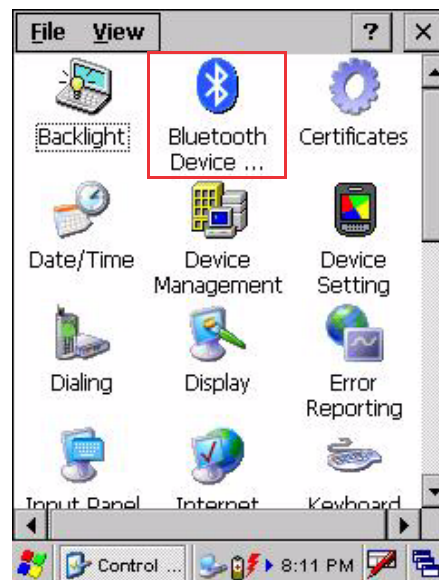
1. Tap **Start** → **Programs** → **Bluetooth** → **BTPowerON**.



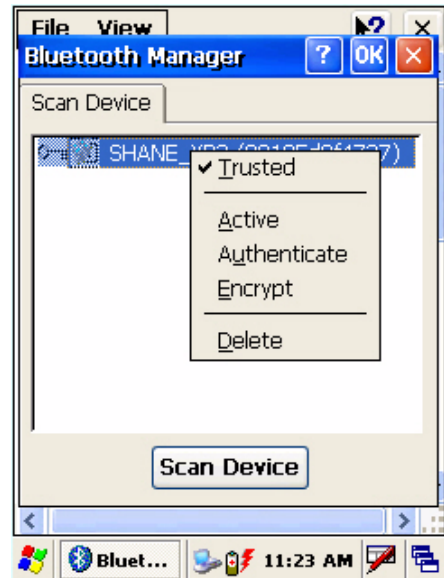
2. Check **Bluetooth Module Power On**.  
Tab **OK**.



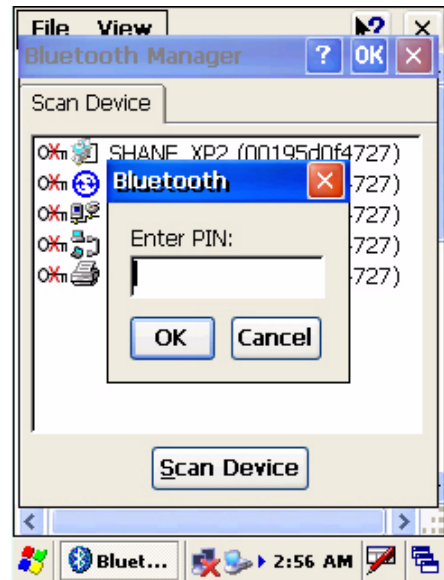
3. Tap **Start** → **Settings** → **Control Panel** → double-tap **Bluetooth Device Properties**.



4. Tab **Scan Device**. Choose a device from the list and select **Trusted**.



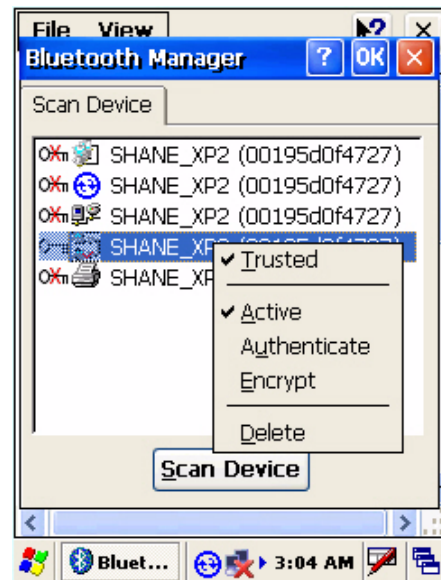
5. Users are prompted for a passkey. Enter the Passkey.



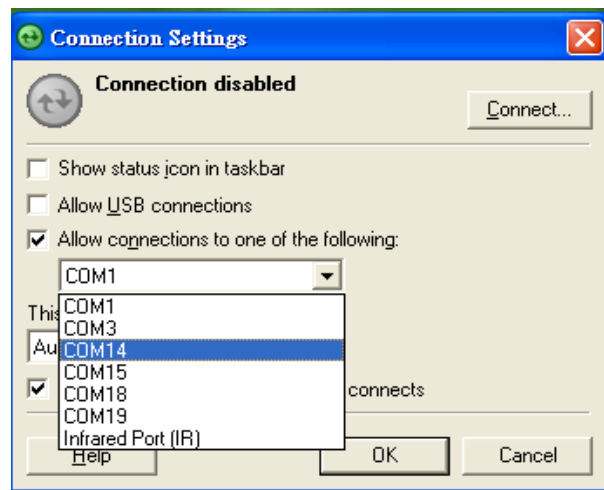
6. On the PC screen, enter the Bluetooth PIN Code Request. Enter the same Bluetooth PIN Code that was entered in the last step.



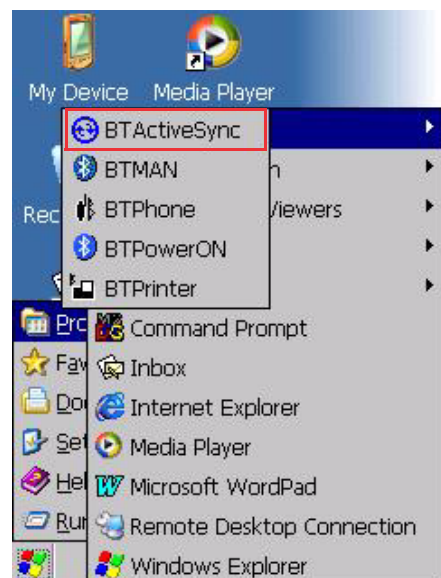
- On the PA600 select a device from the list and select **Active**.



- On the PC, double-click **Microsoft ActiveSync**. Click **File** → **Connection Settings**. Select a BT COM port, and click **OK**.



- On the PA600, tap **Start** → **Programs** → **Bluetooth** → **BTActiveSync**.





10. The BTActiveSync icon appears on the taskbar. Tap the icon, and the Bluetooth ActiveSync window appears.

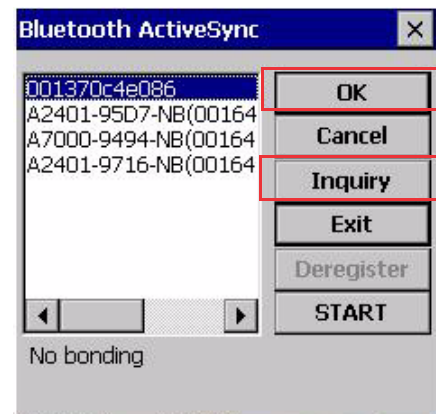


BTActiveSync Icon

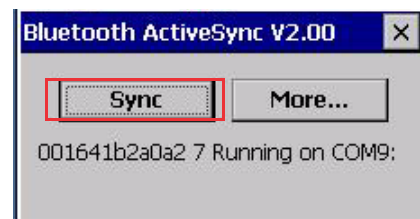
11. Tap **More**.



12. Tap **Inquiry**, select the desired Bluetooth device to sync. Tap **OK**.



13. Tap the BTActiveSync icon again. Tap **Sync**. Bluetooth ActiveSync begins.



## Wi-Fi Connection

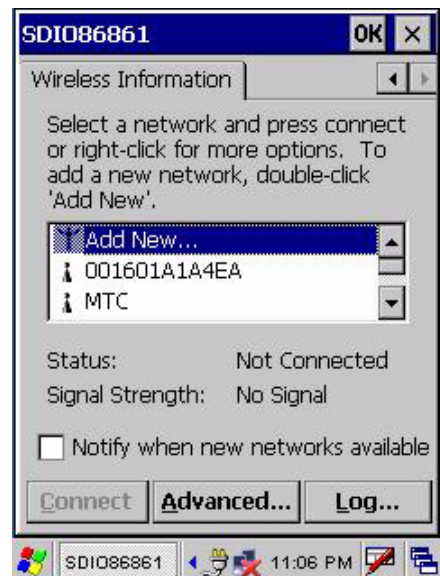
Unitech terminals come with a built-in RF facility. Setup an RF facility through the following:

1. Double-tap the **RF** icon on the taskbar.

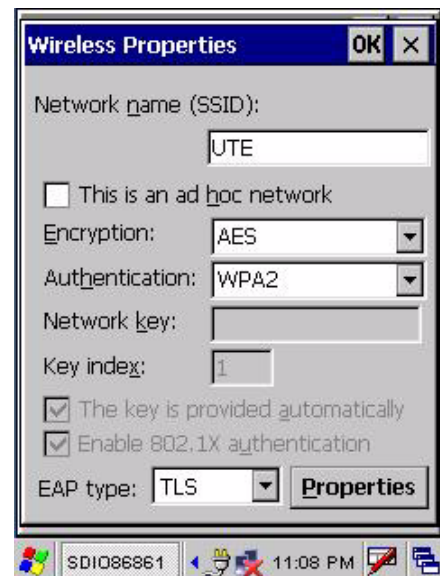


RF Icon

2. Under the Wireless Information tab, double-tap **Add New....**



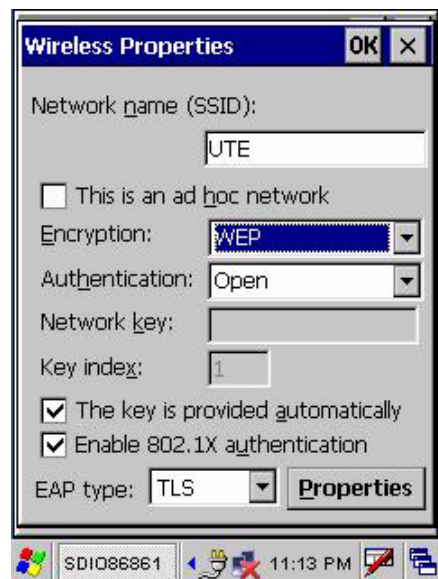
3. Enter the SSID. For example, UTE.



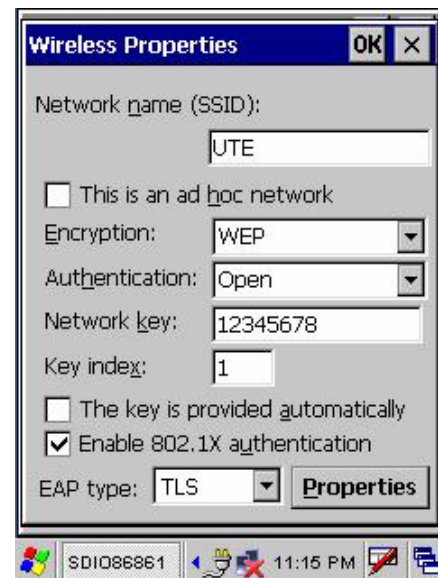
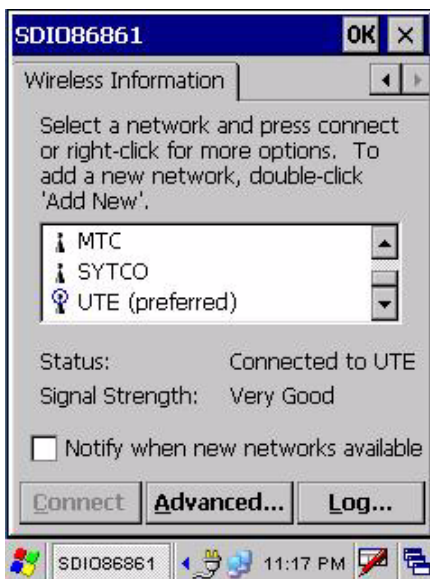
4. Select **Open**, in the **Authentication**: drop down menu.



5. Select **WEP**, in the **Encryption**: drop down menu.



6. Uncheck **The key is provided automatically**. Enter the Network Key. Tap **OK**. Start to search for an RF signal once the network is connected.



## Synchronizing Information

Every file created on the PA600 is stored in the My Document/PA600 My Document folder (only if the device name is PA600). View files by double-clicking the PA600 My Documents icon on the computer.

The PA600 files are automatically synchronized in the My Documents folder on the computer, but only if the file synchronization is enabled. (Unless a different name is chosen for the PA600.)

### Synchronization Options

Synchronization options can modify, including when and what gets synchronized. In the Mobile Device window on the PC, click **Tools** → **Sync Options**.

For every type of information, synchronization can slow down by restricting the amount of synchronized data. To do this, select a service and click **Settings**. After enabling a service, close and reopen Microsoft ActiveSync.

### Use Microsoft ActiveSync to Exchange Files

Use Microsoft ActiveSync to exchange information from the PA600 to the computer and vice versa. Information changes made in one location will not impact information in the other. Synchronize the information to automatically update information on both the PA600 and the computer.

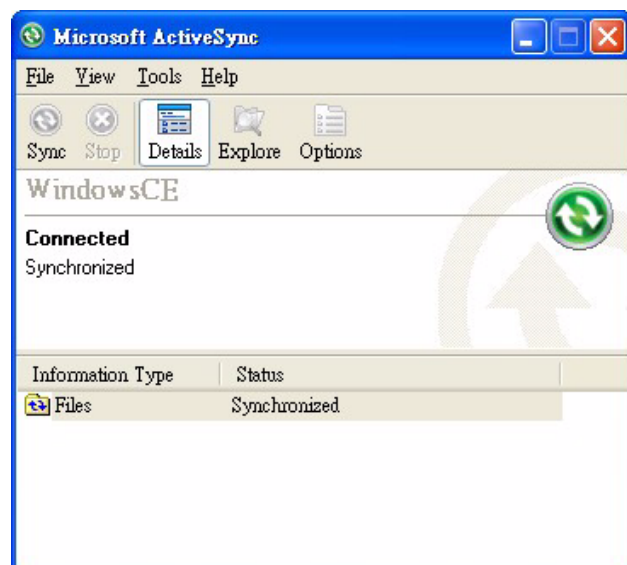
It is possible to copy two types of information to the PA600: Files and Pocket Access Windows CE Store information.

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

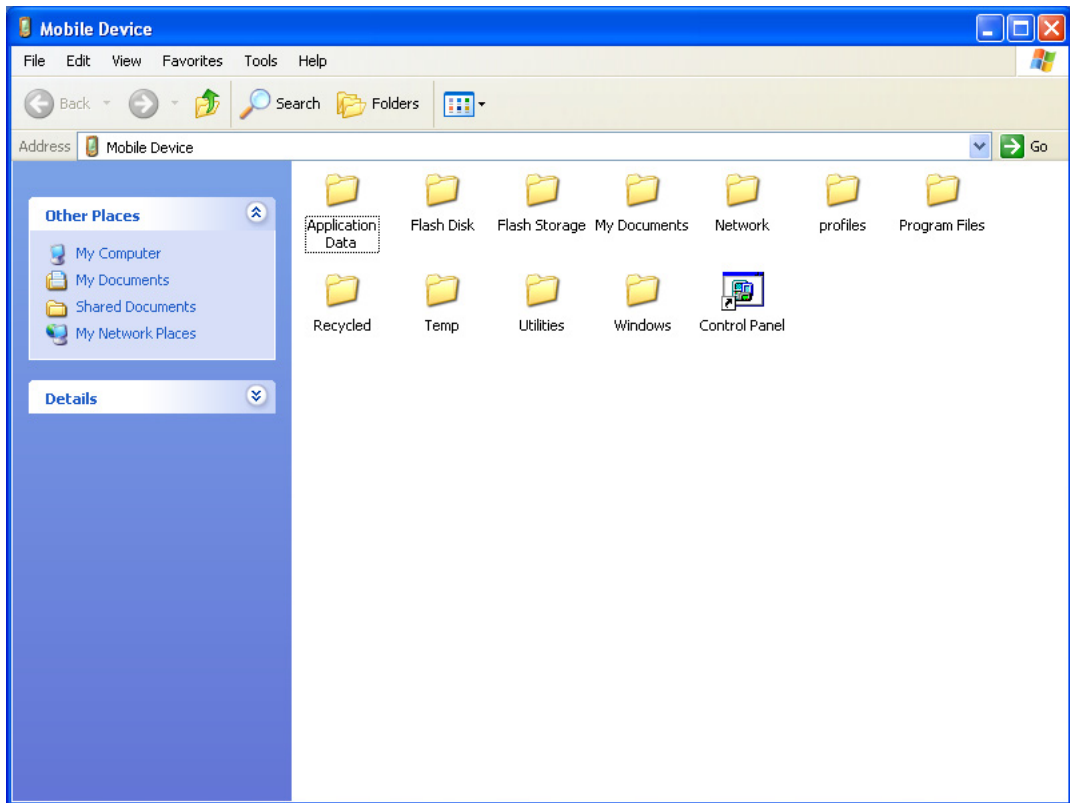
**NOTE:** Files created on the computer may need to convert via Microsoft ActiveSync, so that they can be viewed and edited on the PA600 and vice versa.

Copy files through the following:

1. Connect the PA600 to a computer.
2. In Microsoft ActiveSync on the computer, click **Explore**



Windows Explorer opens the PA600's Mobile Device window.



3. Locate the desired file to copy on the PA600 or computer.
4. Do one of the following:
  - To copy the file to the PA600, right-click the file and click **Copy**. Place the cursor in the desired folder for the device, 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 computer folder, right click, then click **Paste**.

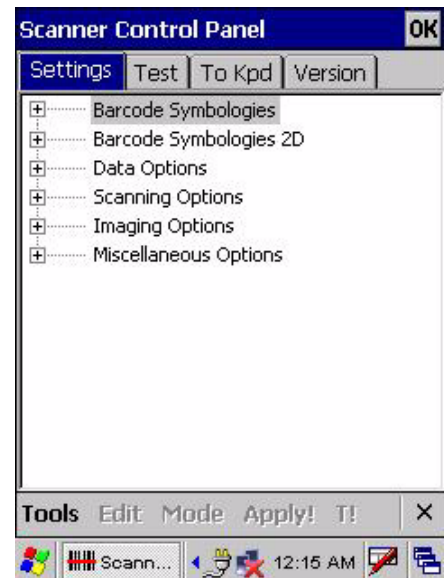
## Bar Code Scanner Programs

### Scanner Setting

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 the default symbology, place delimiter characters behind scanned data and save scanner settings.

Tap **Start** → **Settings** → **Control Panel** → **Scanner**.  
The Scanner Control Panel appears.

**NOTE:** Alternatively, Press **Func** and **7** to access the Scanner Control Panel.



### Scan2Key

User's can populate bar code scan data into any program of choice with the Scan2Key application. Scan2Key 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 will move from the scanner port to any waiting (active/focused) text editor such as MS Mobile Word or a text box application.

## Bar Code Symbologies (1D Bar Code)

Bar Code Symbology	Enable/Disable	Check Char/Digit verification	Transmit Check Char/digit	Max/Min Length	Other
Codabar	YES	YES	YES	YES	Transmit STSP, STSP Caps
Code 128	YES			YES	
Code 39	YES	YES	YES	YES	For ASCII, Transmit Start & Stop Bits
Code 93	YES			YES	
EAN 128	YES			YES	Transmit GS
Interleaved 2 of 5	YES	YES	YES	YES	
JAN/EAN/UPC	YES		YES	YES	Transmit Short Check Char/Digit, Transmit UPCA Check Char/Digit, Transmit UPCA Number, Transmit UPCE Check Char/Digit, Transmit UPCE Number, Convert UPCE to UPCA, Zero Expansion
RSS	YES			YES	RSS Expanded, RSS Stacked, RSS Limited, RSS14, RSS14 Stacked

## Bar Code Symbologies (2D Bar Code)

Bar Code Symbology	Enable/Disable	Check Char/Digit verification	Transmit Check Char/digit	Max/Min Length	Other
Composite	YES			YES	UPC Composite, RSS Composite, Only linear Code, EAN 128 EM Mode
Data Matrix	YES			YES	Rectangle, Negative
MaxiCode	YES			YES	Mode 0 ~ 5, Not Only Primary
PDF-417	YES			YES	
Postal Code	YES			YES	Australian post, Japan post, KIX, Planet, Postnet, Royal Mail, UPU, USPS4CB, Decode Postnet with B and B' Fields, Issue Zero FCC Australia Post Codes
QR Code	YES			YES	Negative

# Chapter 5

## Advanced Settings

### Adjusting Settings

Adjust the PA600 settings to accommodate personal work habits through the following:

To access Settings, tap **Start** → **Settings** → **Control Panel**.



The **Control Panel** screen appears where users can adjust the backlight, auto power off timer, system volume and processor speed. In addition, users can assign button functions, configure menus, enter owner information and setup connections.





# Checking Main and Backup Battery Status

Check the main and backup battery status through the following:

1. Access the Properties Window through the following:
  - The Plug or Battery icon appears on the PA600's taskbar when the device is charging, or when the Battery reaches below 10 percent capacity. Double-tap the icon to access the Power Properties window.



Battery Icon

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

**NOTE:** Alternatively, press **Func** and **8** to access the Power Properties window.

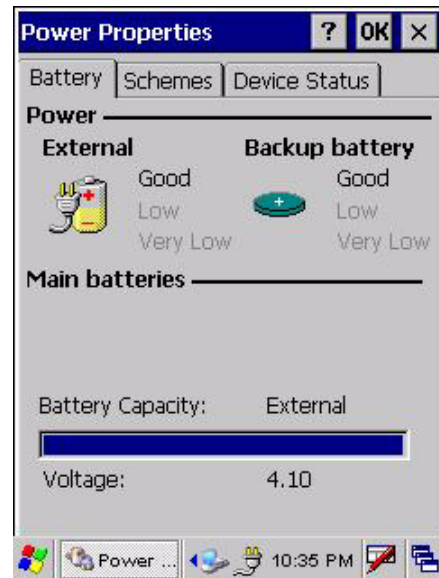


The Power Properties window appears.

2. The Battery tab displays the **External** (Main) and **Backup** battery capacity status.

For example, the screenshot on the right shows both batteries are in “Good” condition.

**NOTE:** Charge the Backup Battery when it reaches “Low” or “Very Low” battery status. If the battery does not accept a charge, contact Unitech Technical Support.



## Extending Battery Life

Extend the PA600’s battery life by doing either of the following:

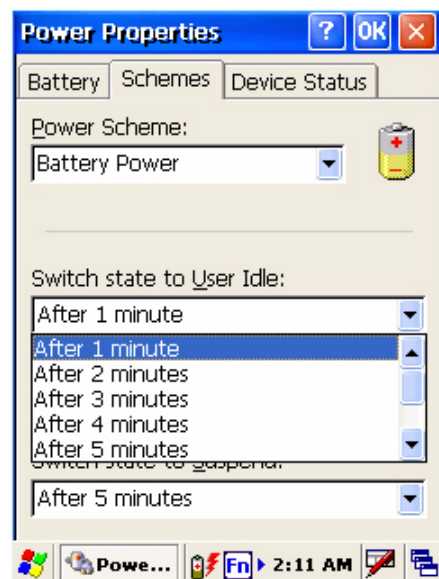
- Change the automatic power settings.
- Minimize backlight use.

### Changing the Automatic Power Settings

The PA600 enters idle mode when there is no task, or all tasks are waiting for input. In the default setting, the PA600 automatically turns off when it remains idle for three minutes without an external power source. Pressing the power button returns the PA600 to the same point at the time of automatic shutdown.

Change the automatic power settings through the following:

1. In the Power Properties window tap the **Schemes** tab.
2. Tap the arrows from the drop down menus to select time periods for **Switch state to User Idle:**, **Switch state to System Idle:** or **Switch state to Suspend:**. The available time periods are 1, 2, 3, 4, 5, 10, 30 minutes and never.
3. This function can also activate when the PA600 is plugged into the AC Adapter or placed in its docking station. Select **AC Power** from the **Power Scheme:** drop down menu, and select a time period from the drop down menus. The available time periods are 1, 2, 5, 10, 15, 30 minutes and never.



## Adjusting Backlight Setting

The PA600's LCD backlight consumes a large amount of battery power, only use this function if it is necessary.

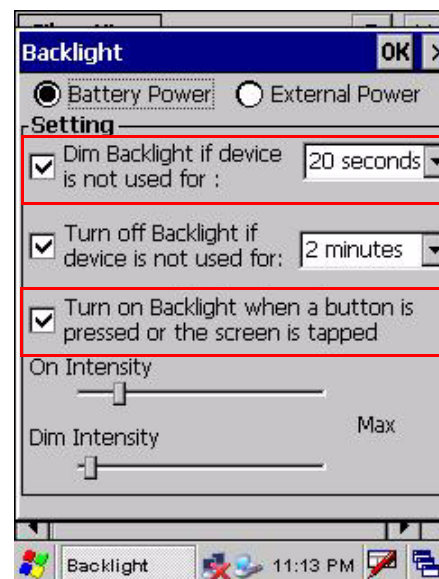
If a backlight is required, set "automatically turn off the backlight" function.

Change the backlight settings through the following:

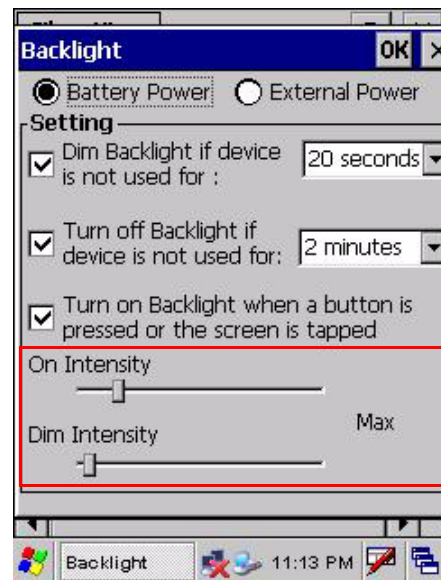
1. Tap **Start** → **Settings** → **Control Panel**.
2. Double-tap **Backlight**, and the Backlight screen appears.



3. Do any of the following:
  - Select **Battery Power**, tap the **Dim Backlight if device is not used for**: check box and select the amount of time from the drop down menu before the backlight dims while running in battery power mode.
  - Select **External Power**, tap the **Dim Backlight if device is not used for**: check box and select the amount of time from the drop down menu before the backlight dims while running in external power mode.
  - Tap the **Turn on Backlight when...** check-box to activate the backlight when the keypad is pressed or the screen is tapped.



- To set the intensity, tap and drag the slider to set the backlight **On Intensity** and **Dim Intensity**.



## Viewing Flash Memory Files

The Flash Storage folder is a rewritable location for programs or data files. The benefit of this feature is that files and programs saved in Flash Storage are unaffected by the PA600 power status.

Access Flash Memory files through the following:

1. On the PA600, double-tap **My Device**, double-tap **Flash Storage**.

Transfer files to the Device's Flash Memory through the following:

1. Connect the PA600 to the computer. See *Synchronizing with the Computer* on page 29.
2. In Microsoft ActiveSync window on the computer, click **Explore**. To copy the file to the PA600, right-click the file and click **Copy**. Place the cursor in the PA600's flash storage folder, right-click, and click **Paste**.

## Performing a hardware reset

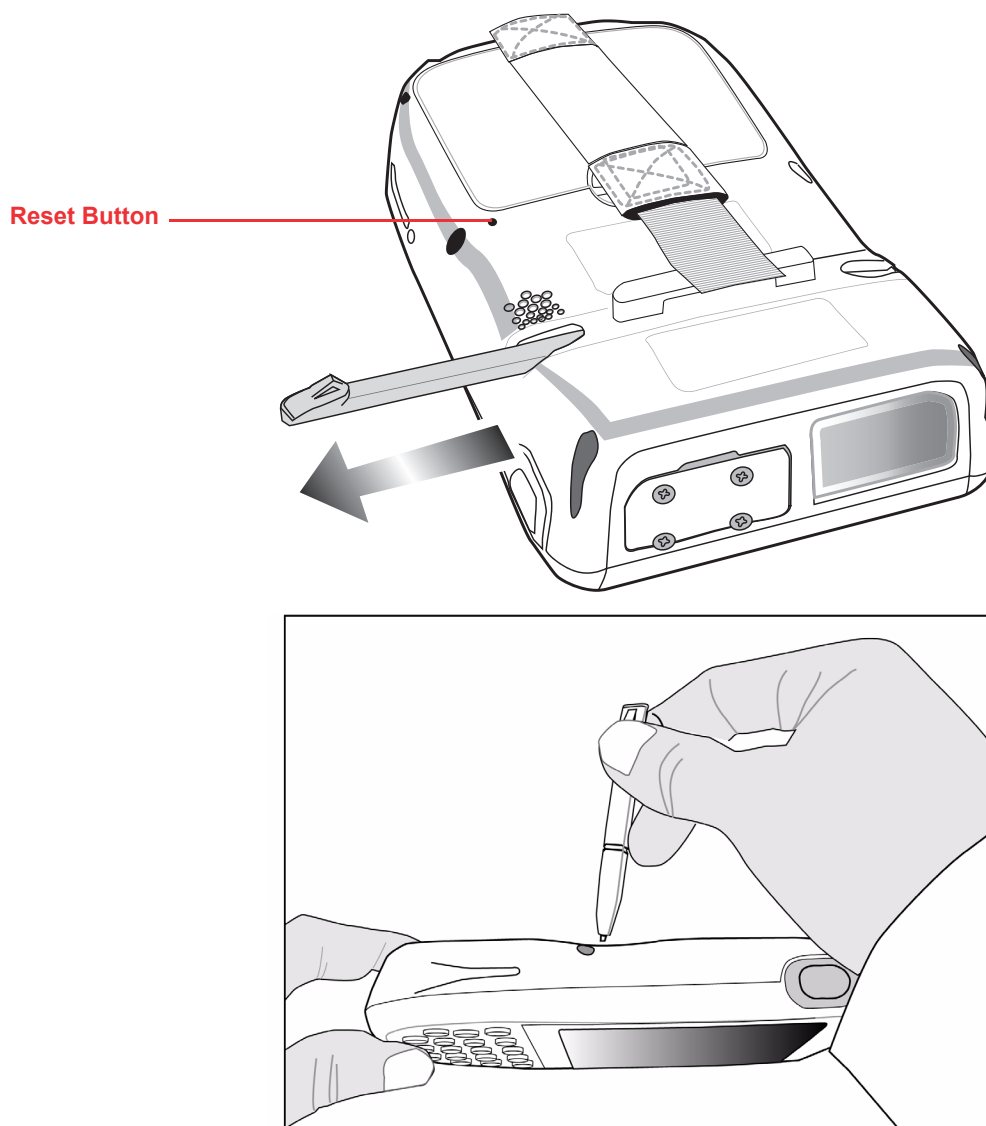
---

Perform a reset if the PA600 freezes (i.e., no longer responds).

### Performing a Warm Boot

A Warm Boot allows the PA600 to get a fresh start, similar to rebooting a computer. This will restart the PA600 and adjust memory allocation. All records and entries are retained after a Warm Boot. However, unsaved data in open programs may be lost in some cases.

1. Remove the stylus from its holder.
2. Lightly press the tip of the Stylus into the Reset Button on the PA600's back panel.



### Performing a Cold Boot

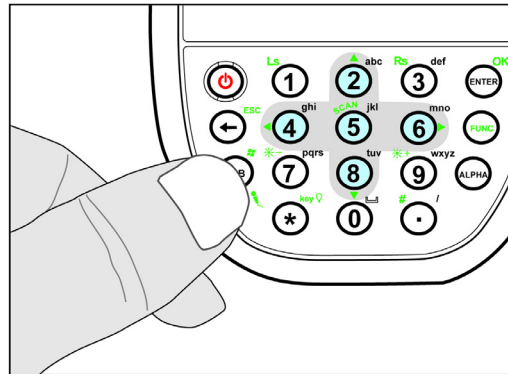
A cold boot cuts off power from the PA600, erasing all records and entries, deleting all added programs, and restoring the PA600 to default factory settings.

Data and time settings are not retained in a cold boot while formats, preferences and other settings restore to their default factory settings. Not even data stored in Flash Storage is retained.

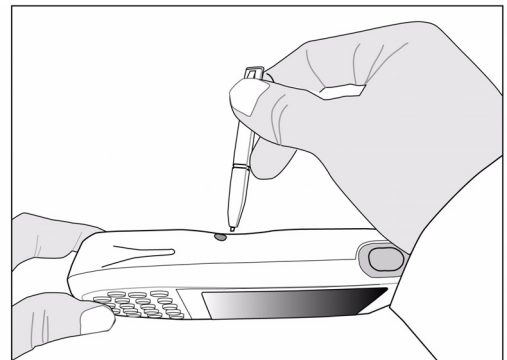
**NOTE:** Only perform a hard reset unless a soft reset does not correct the problem. Data can restore through the next Microsoft ActiveSync operation, or it can transfer from a storage card.

Perform a cold boot through the following:

1. Press and hold the **FUNC** and **TAB**.



2. While holding **FUNC** and **TAB**, insert the tip of the Stylus into the Reset Button on the PA600's back panel. Press and hold the Reset Button until the Unitech logo appears onscreen. Wait five seconds and then release **FUNC** and **TAB**.



**NOTE:** The system returns to the default settings. All registry settings and all files (including hidden files) return to their original factory defaults.

## System Specification

Processor/Memory	CPU	520Mhz Intel PXA270
	Memory	SDRAM: 128 MB Flash ROM: 320 MB
OS	Windows CE 5.0 Professional Plus	
Keypad	18-Key (Including Numeric Key, Alpha Key and Function Key)	
Display	240 x 320 Pixel QVGA, Color Transflective TFT, with Touch-screen & Backlight	
Scanner	2D Bar Code Scanner	
RFID HF reader	HF 13.56Mhz ISO 15693, ISO 14443A/B	
Indicator	LED, Vibration	
Communication	USB Host & Client 802.11b/g Bluetooth 1.2 Bluetooth Supports Bluetooth Printer, Bluetooth Modem, Bluetooth ActiveSync	
Audio	MIC, Speaker, Headset Connector, Receiver	
Expansion Slot	SDIO Slot	
Power Source	Main	3.7V 2200mAH Lithium-Ion Battery Pack
	Backup	Rechargeable Ni-MH Backup Battery
Enclosure	Weight	11.1 oz. (315g) with Battery
	Dimension	5.8"L x 1.3"H x 3.3"W (149.5mmL x 35.5mmH x 85mmW)
Environmental	Operating Temperature	14° F - 122° F (-10° C - 50° C)
	Storage Temperature	-4° F - 140° F (-20° C - 60° C)
	Charging Temperature	50° F - 133° F (10° C - 45° C)
	Relative Humidity	5% - 95% (non-condensing)
	Drop Test to Concrete	4'
	Environmental Sealing	IP64 Antimicrobial Casting/Protection
Models	RFID HF + 802.11b/g + BT	
	802.11b/g + BT	
Certification	CE, FCC, BSMI, VCCI, CCC, RoHS Compliant	
Accessories	Battery Charger, Desktop Cradle, Modem Cradle, Multi-bay, Holster	
Software	Unitech Software Development Kit Oracle Database Lite Wave Link Avalanche Microsoft BizTalk Server 2006 R2	

**Appendix****Worldwide Support**

<b>Region</b>	<b>Web site</b>
Global Operation Center	<a href="http://www.unitech-adc.com">www.unitech-adc.com</a>
Unitech Taiwan	<a href="http://adc-utt.unitech.com.tw">adc-utt.unitech.com.tw</a>
Unitech Asia Pacific & Middle	<a href="http://www.unitech-utp.com.tw">www.unitech-utp.com.tw</a>
Unitech China	<a href="http://www.ute.com.cn">www.ute.com.cn</a>
Unitech Japan	<a href="http://www.unitech-japan.co.jp">www.unitech-japan.co.jp</a>
Unitech America	<a href="http://www.ute.com">www.ute.com</a>
Unitech Latin America	<a href="http://latin.ute.com">latin.ute.com</a>
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