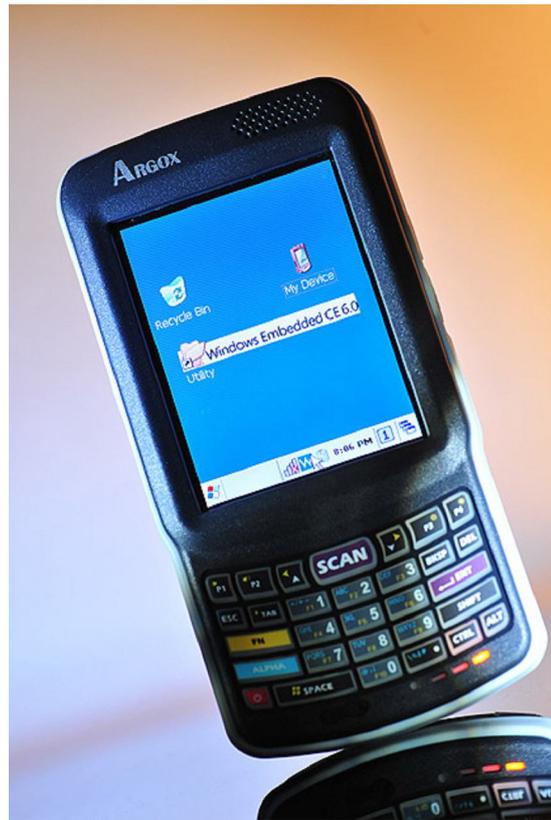


Empower the Bar Code



User's Manual

PT-9XXX-X-X Mobile Computer

(WinCE 6.0 version)

DOC NO. UM-P9005-01

Mar . 2010

Version 1.0

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1. Introduction

Congratulations on purchasing the PT-9XXX-X-X series (PT-90) , a Microsoft Windows®CE Mobile Computer. Its special combination of features makes it perfect for use in a wide range of applications. These features as:

- Microsoft Windows CE. Net operating system
- Robust expansion capability
- Wireless mobility via 802.11b
- Long battery life
- Low Power Transflective type color LCD display
- Backlight keypad

1.1 About this Manual

The chapters contained in this manual are:

Chapter 1: Introduction – Presents general information about the PT-90

Chapter 2: Getting started – Describes basic use of the PT-90

Chapter 3: Operating the Mobile computer – Describes customizing the PT-90

Chapter 4: Scanning

Chapter 5: Useful Utilities

Chapter 6: Software Applications

Chapter 7: Communication – Describes using the PT-90 for different types of communication

Chapter 8: Overview of Microsoft Windows CE 6.0

Chapter 9: Troubleshooting

Chapter 10: Appendix

1.2 User and Product Safety

- Never use strong pressure on the screen or subject it to severe impact, as the LCD panel can crack and possibly cause personal injury. If the LCD panel is broken, never touch the liquid inside, for such contact can irritate the skin.
- Although the PT-90 mobile computer meets IP65 standards for water and dust resistance, avoid prolonged exposure to rain or other concentrated moisture. Conditions exceeding IP65 standards could result in water or other contaminants entering the PT-90.
- Use only the approved AC Adapter with the PT-90. Use of an unapproved AC Adapter could result in electrical problems, or even cause a fire or an electrical shock to the user.
- Be sure that only authorized suppliers are allowed to disassemble and reassemble the device. If the device or parts are damaged due to wrong handling, the product and parts warranty is void.
- Always make back-up copies of all important data. This is easily done using a cable or single cradle (optional) to transfer data to the computer. The manufacturer is not liable for any data damage or data loss caused by deletion or corruption while using this device, or due to a drained battery.
- Lithium-ion battery packs may get hot, explode, ignite and/or cause serious injury if abused. Please follow the safety warnings listed below.

Warnings:

- ◆ Do not place the battery pack in fire or heat the battery.
- ◆ Do not install the battery pack backwards so the polarity is reversed.
- ◆ Do not carry or store battery pack together with metal objects.
- ◆ Do not pierce the battery pack with nails, strike the battery pack with a hammer, step on the battery pack or otherwise subject it to strong impacts or shocks.
- ◆ Do not solder directly onto the battery pack.
- ◆ Do not expose battery pack to liquid, or allow the battery contacts to get wet.
- ◆ Do not disassemble or modify the battery pack. The battery pack contains safety and protection devices, which, if damaged, may cause the battery pack to generate heat, explode or ignite.
- ◆ Do not discharge the battery pack using any device except for the specified device. When it is used in devices other than the specified devices, the battery pack can be damaged or its life expectancy reduced. If the device causes any abnormal current to flow, it may cause the battery pack to become hot, explode or ignite and cause serious injury.
- ◆ In the event the battery pack leaks and fluid gets into the eyes, do not rub the eyes. Rinse well with water and immediately seek medical care. If left untreated, the battery fluid could cause eye damage.

To avoid malfunctions and to ensure years of trouble-free operation, pay attention to the following:

General Use



Do not expose the mobile computer to areas subject to extreme heat such as direct sunlight, near a heater, or in a car – or in areas that are very cold, humid, moist, or dusty.



Do not expose the product to rain or water



Do not subject the product to strong impact, or throw or drop the mobile computer from large heights. Do not allow other mechanical shocks to the product.

Cleaning Instructions



Clean the exterior by wiping it with a soft, dry cloth. Do not use much water.



Do not use thinner, white spirit or other solvents. These can discolor the case and the keys and it has a negative effect on the lifetime of the keys.

Cleaning the Mobile Computer

Clean the scan window periodically for better reading performance, but pay attention to not scratching the window

Cleaning the Cradle

Avoid touching the contacts in the cradle. The contacts must stay as clean as possible to maintain optimal charging capacity. Do not use water when cleaning the cradle. This can cause malfunction of the chargers.

Using the Mobile Computer



Avoid temperature changes. Sudden temperature changes can cause condensation to form on the mobile computer. Using the mobile computer while condensation is present can cause malfunction. Always wait until the condensation clears naturally before attempting operation.



Do not leave the mobile computer in an area where static charge is accumulated or near devices where electromagnetic emission is generated.

Do not place any object on top of the mobile computer. Do not lay the mobile computer face down. Doing so can cause accidental operation of the power key or [ENT] key, which can discharge your batteries or change settings you do not want changed.

Using the Cradle

Do not place any product other than the PT-90 mobile computer in the cradle.

Maintenance



There are no user-serviceable parts inside the mobile computer or the cradle. So do not try to take it apart. The manufacturer will not be liable for any damage caused by customers. In case of a malfunction that can not be solved by the troubleshooting instructions in this manual, please consult our service department.

1.3 Specifications

Performance

OS	Windows Embedded CE 6.0
CPU	MARVELL PXA310 (806 MHz)
RAM	256MB RAM
ROM	256MB

Display

LCD	3.5" Color TFT LCD with touch panel
Resolution	240 x 320

Scanner

Scanner system	Laser scan engine
Readable barcode	Code 11, Code 39, Code 93, Code 128, Codabar, EAN-8, EAN-13, Industrial 2/5, Interleaved 2/5, MSI plessey, UK plessey, Telepen, UPC-A, UPC-E, Matrix 2/5, UPC/EAN General, IATA 2/5, TRI-OPTIC and RSS

Keypad

29 keys /29 keys plus / 44 keys with backlight

Communication Interface

Standard Interface	USB 2.0 and RS-232
Wireless radio Options	WPAN :Bluetooth Class 2, version 2.0 WLAN: 802.11b/g Wi-Fi GPS: SiRF star III(TBD)

Power supply

Main power	Terminal : Rechargeable Li-ion Battery 3900mAH, 3.7Vdc Gun type : Rechargeable Li-ion Battery 4400mAH, 3.7Vdc
Power input	Via cradle or direct charging

* Batteries must be charged at a temperature ranging from 0~+40°C (+32°F to +104°F). At temperatures below 0°C and above +40°C display or battery performance degradation may occur.

Expansion slot

Micro SD card

Physical and Environmental

Operation Temperature	-10~50°C
Storage Temperature	-20~70°C
Battery Charging Temperature	0~40°C
Humidity	Max 80% RH <= 30°C
Weight	Approx. 380 g(battery included)
Drop test	1.8 meters to concrete (Handset) 0.9 meters to concrete (Cradle)
ESD	+/-15kVDC air discharge +/- 8kVDC direct discharge (contact) +/- 8kVDC indirect discharge (H & V)
Sealed standard	IP65

Agency Listing

CE, FCC, BSMI, NCC, CCC, SRRC

Win-CE AP

MS Web Browser(Internet Explorer), Media Player, Microsoft WordPad, Remote Desktop Connection, Transcriber, Windows Explorer

Developing Tools

Argox SDK Microsoft Visual Studio for smart device programming

2. Getting Started

This chapter describes the PT-90 physical characteristics, how to install and charge the batteries, how to remove and replace the strap assembly and how to start the PT-90 for the first time.

2.1 Check the package

Carefully remove all protective material from around the PT-90 and save the shipping container for later storage and shipping.

Depending on the configuration ordered, the PT-90 shipping container may include:

2.1.1 *Compact Package*

- | | | | |
|---|----------------|---|-----------------------|
| v | PT-90 | v | Quick Reference Guide |
| v | Battery pack | v | CD -ROM |
| v | USB Sync cable | v | Thread |
| v | Power supply | v | Stylus |
| v | Hand strap | | |



Figure 2-1 Compact Package

2.1.2 Cadle & Pistol grip Package (Optional)

Cradle Package

v Power supply

v Cradle



Cradle



USB cable

Figure 2-2 Cradle Package

Pistol Package

v pistol-grip

v Li-ion battery 4400mAH



Figure 2-3 Pistol-grip Package

Inspect the package contents for damage. If any item is missing or damaged, please contact the Argox Technical Support Center immediately.

2.2 Detailed View

The pictures below provide information on the PT-90's various buttons, ports and other functions.

2.2.1 *PT-90 Mobile Computer*

Dimensions of the PT-90

159 mm (L) * 80.8mm (W) * 36mm (H)

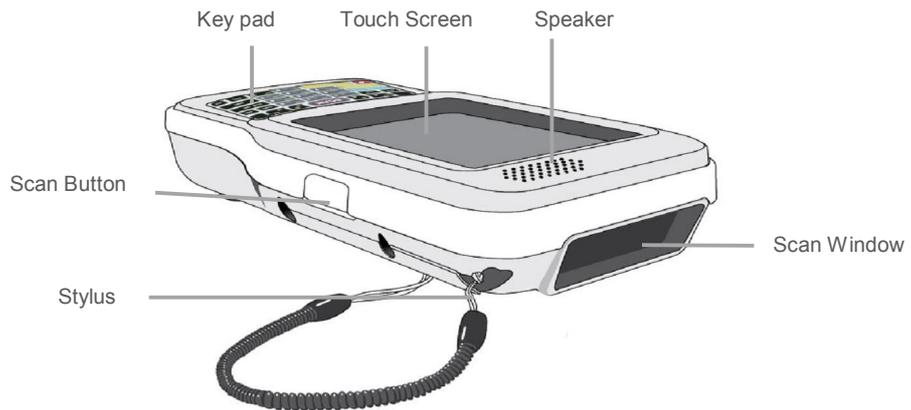


Figure 2-4 The Front of the PT-90

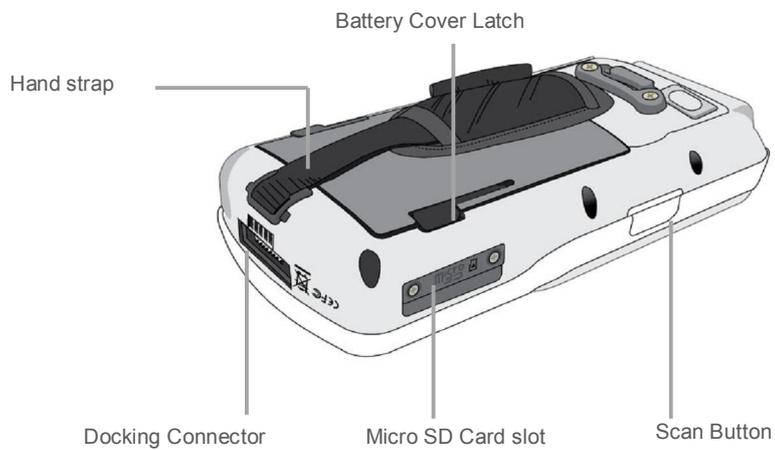


Figure 2-5 The Back of PT-90

2.2.2 Cradle

Dimensions of the CRD-90 Cradle

147mm (L) x 112mm (W) x 83mm (H)

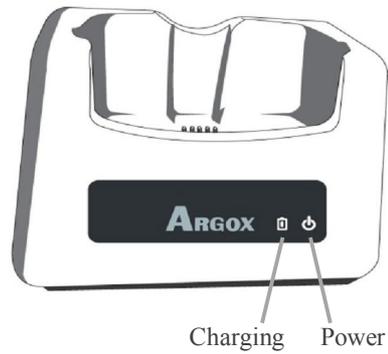


Figure 2-6 The Front of the CRD-90

1. Mobile Computer Slot

Put the mobile computer in the cradle slot for data transmission or charging

2. Power LED Indicator

LED status	Description
Green	Power on (mobile computer not in cradle)

3. Charging LED Indicator

LED status	Description
Red	Charging
Green	Charging complete

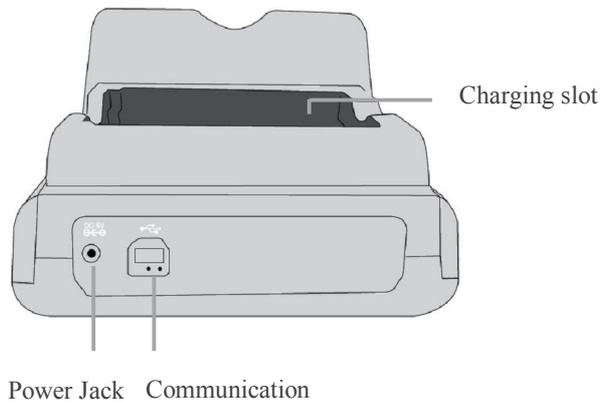


Figure 2-7 The Back of the CRD-90

4. Charging Slot

For charging a spare rechargeable battery pack

5. USB and Charging Connector

Connects the multiple function socket on the mobile computer for data transmission and charging

6. Power Jack

Input for AC adapter

2.3 Installing, Replacing and Charging Batteries

Wrong use of batteries may cause serious damage to the mobile computer or to the cradle. To avoid damage, it is important to follow the instructions.

-
- Caution:**
- λ **Insert a fully-charged battery pack before use of the mobile computer.**
 - λ **Never remove the main batteries while the mobile computer is turned on.**
Doing so may lose data that is not saved in the mobile computer.
 - λ **Use only recommended batteries.**
When other batteries are used, defects or other problems can occur. Before installing (new) batteries, please make sure you are using the recommended batteries.
 - λ **Use the right charger for batteries.**
The rechargeable Li-polymer battery pack from Argox can be charged in the cradle when either it is in the mobile computer or alone in the charging slot in the back of the cradle.
 - λ **The life of a battery pack is limited, and charging a battery pack causes it to gradually lose its ability to maintain a charge. If your battery pack requires frequent charging, it probably means it is time to purchase a new one.**
 - λ **A fully charged backup battery can maintain memory (RAM) contents for about 15 minutes, even when the battery pack is removed.**
 - λ **Strictly follow the instructions for installing, charging, and removing the batteries.**
The products are not warranted for damage, defects, malfunction, or loss of data, resulting from incorrect use of batteries.
-

Required batteries:

The mobile computer needs both main battery and backup battery for operation.

Main Battery

The rechargeable battery pack is for normal operations and data storage. When the battery pack power goes low, immediately charge it or replace it with a charged battery pack.



Backup Battery

The built-in battery is for memory backup.

How to charge the Argox rechargeable battery pack in the cradle

1. Make sure that the Argox rechargeable battery pack is inserted in the mobile computer. When the mobile computer is placed in the cradle, the rechargeable battery pack charges automatically.
2. If you have a spare Argox battery pack, you can replace the empty battery pack with a full battery pack for continuous mobile computer operation. Put the empty battery pack in the charging slot of the cradle. The LED (CHG) on the cradle flashes Red and turns Green when the battery is fully charged.

When to replace or recharge the main battery

There are two conditions that you need to replace the main battery.

1. As soon as possible after the battery indicator  appears on the display.
2. Before using the mobile computer when it has not been used for an extended period.

Notes:

- ◆ **Charging the Main and Backup Batteries for the First Time**
It may take up to 8 hours to fully charge the empty backup battery. The first time charge should be for at least 8 hours to insure a proper charge.
 - ◆ When charging the battery pack, the Power LED on the Mobile computer turns Red. After the battery pack is fully charged, the Power LED turns green.
-

2.3.1 Installing / Replacing the Battery Pack

To remove and install the battery

1. Press and release the **POWER** button to suspend the mobile computer
2. If the Mobile Computer has a hand-strap, detach and loosen the hand-strap
3. Rotate the latches to the open position and remove the battery cover

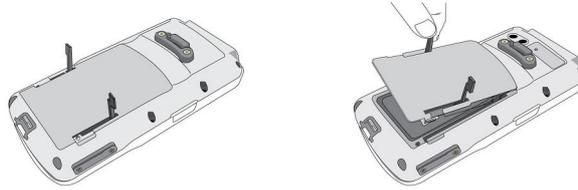


Figure 2-8 Installing / Replacing the Main Battery

4. Align the battery contacts and insert the battery
5. Reassemble the battery cover and Rotate the latches to the closed position

2.3.2 Charging the Battery Pack with a Power Adapter

Using a RS232/Charging Cable or USB/Charging Cable

1. Plug in the RS232/Charging cable or the USB/Charging cable to the PT-90
2. Connect the AC adapter to the cable's power jack and an electrical outlet.



Figure 2-9 Supplying Power

Notes: ♦ When charging the battery pack, the Power LED on the Mobile computer is Red.



♦ When the battery pack is fully charged, the Power LED turns to green.



2.3.3 Charging the Battery Pack with Cradle

a) Leaving the battery pack inside the Mobile computer

1. Connect the power adaptor to a power source
2. Plug in the connector of the power adapter to the Cradle
3. Insert the Mobile computer into the Cradle

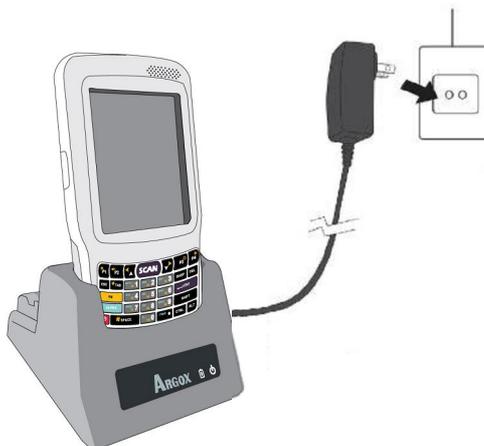


Figure 2-10 Charging with Cradle

Note: ♦ When charging the battery pack, the Power LED on the Mobile computer turns Red. After the battery pack is fully charged, the Mobile Computer Power LED turns green.

b) Placing the spare battery pack into the Cradle's spare battery charging slot

1. Connect the power adaptor to a power source
2. Plug in the connector of the power adapter with Cradle
3. Insert the battery pack into the Cradle's spare battery slot

Note: ♦ When charging the battery pack in the Cradle's spare battery slot, the Cradle charging LED is Red. After the battery pack is fully charged, the LED turns green.

Caution: Do not remove the Battery pack for too long from PT-90 once you have already fully-charged the Battery pack and the backup battery pack and have started to use the PT-90. Otherwise data that is not saved will be lost. Please keep in mind to turn off the power on Mobile computer when changing the main Battery pack.

2.4 Installing in a System

- Notes:**
- ◆ Exercise caution at all times when working with AC-powered equipment.
 - ◆ Turn off your devices before installation.
 - ◆ Because of the special pin-out of the connectors, use the cables supplied by the manufacturer.
 - ◆ Do not modify the cable provided by the manufacturer. If you need a special cable for some cases, contact your supplier to purchase the right cables or technical support.
-

System Connection (Data Communication)

The mobile computers let you link to a host computer through USB and RS-232 cable or the CRD-90 cradle for data communication.

2.4.1 Via USB /RS-232 Cable

The mobile computer connects directly to a host computer via the USB /RS-232 cable.



Figure 2-11 Communication through Cable

2.4.2 Via CRD-90 Cradle

Connected with CRD-90 cradle via USB cable for data transmission



Figure 2-12 Communication through Cradle

3. Operation of the Mobile Computer

3.1 Keypad Description

PT-90 keypad consists of 29 rubber keys including one **SCAN** key. Please refer to the picture below.



29-key

29-key plus

Figure 3-1 Keypad Layout

Key Define	Function
ALPHA	Switches between the number input mode or the character input mode.  Number input mode (default input mode)  English lowercase letter (a~z)  English capitalization (A~Z)
On/ Off	When the unit is off, pressing the Power key turns the unit on. Alternatively, when the unit is on, this key must be pressed and held down for about two seconds in order to turn the unit off.
ESC	Exit and back to the last layer.
TAB	The Tab key is used to toggle between data fields or to place the cursor at pre-determined places in a programming or word processing application.
BKSP	The Backspace key is used to erase previously input characters.
DEL	Delete Key (DEL key is not available in 29key plus.)
ENT	Enter Key
SHIFT	Shift Key
ALT	Alt Key (ALT key is not available in 29key plus.)
SCAN	Trigger scanner, if the scanner enables.
CTRL	Control Key
SPACE	Space Key
P1~P4	User define key or application

3.2 Function Key Description

- The function key  is specially designed for quick access (Hot-key) to some functions. The function key combines with other keys.
-  Press function key once (function single mode). After press function key combination, function single mode switches to normal mode.
-  Press function key twice (function continue mode). After press function key again, function continue mode switches to normal.
- Available function key combinations

Key Define	Function
 + 	Reserve (user define)
 + 	Reserve (user define)
 + 	Reserve (user define)
 + 	Reserve (user define)
 + 	Reserve (user define)
 + 	Reserve (user define)
 + 	Reserve (user define)
 + 	Reserve (user define)
 + 	Reserve (user define)
 + 	Reserve (user define)
 + 	Touch screen calibration
 + 	Volume Down
 + 	Volume Up
 + 	LCD Backlight down
 + 	LCD Backlight up
 + 	Move Left
 + 	Move Right
 + 	Keypad Backlight ON/OFF
 + 	Windows Start Menu

3.3 Install micro SD card into PT-90

1. Open the Micro SD slot cover with a screw driver.
2. Insert a correctly oriented Micro SD card.
3. Close the slot cover and fix two screws.

-
- Note:**
- a. If the micro SD card is inserted incorrectly, the card may be damaged.
 - b. When removing the micro SD card, please press the slot cover to pop it out.
-

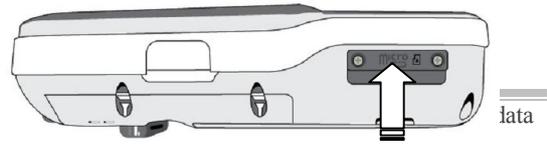


Figure 3-2 Inserting a micro SD Card

3.4 Configuring PT-90 Settings

3.4.1 Calibrating Touch Screen Alignment

Pressing the Power key

The PT-90 welcome screen appears. The Windows CE® screen appears shortly after.



Figure 3-3 Logo

Calibrating the PT-90

This screen can be accessed at any time by pressing the hot key **FN** and **ESC** key. Or by accessing the menus and tab in order of **Start** → **Settings** → **Control Panel** → **Stylus** → **Calibration**.

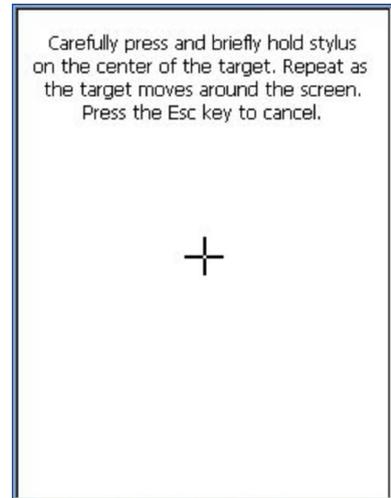


Figure 3-4 Calibration-1

Whenever the response of the touch screen is poor, or the operations executed do not match your tapping on the touch screen, please recalibrate the alignment of the touch screen using the following method.

1. Press the stylus against the center of the target mark “+” as indicated on the screen. The screen shown to the right appears after you press the stylus against the target at five different locations.
2. Press the Execute key or tap anywhere on the touch screen

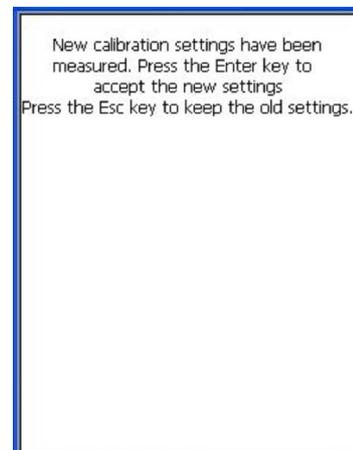


Figure 3-5 Calibration-2

3.4.2 Adjusting Brightness

You can use the following procedures to adjust display brightness to make it easier to read under different lighting conditions.

- Press the **FN** key and then press the **P4** key to adjust brightness for a lighter display. Press the **FN** key and then press the **P3** key to adjust brightness for a darker display.
- To continue making adjustments, press the **FN** key twice to enter function continue mode. Press the **P3** or **P4** key to adjust brightness. After finish setting, press the **FN** key to exit function continue mode.
- Brightness settings are also made by accessing the menu and tab in order of **Start** → **Settings** → **Control Panel** → **Timeout&Brightness**.

3.4.3 Muting Sound

You can use the following procedures to adjust sound to make it easier to hear under different working conditions.

- Press the **FN** key and then press the **P2** key to adjust for a louder sound. Press the **FN** key and then press the **P1** key to adjust for a softer sound.
- To continue making adjustments, press the **FN** key twice to enter function continue mode. Press the **P1** or **P2** key to adjust sound. After finish setting, press the **FN** key to exit function continue mode.
- Sound settings are also be made by accessing the menu and tab in order of **Start** → **Settings** → **Control Panel** → **Volume & Sounds**

3.4.4 Using the Stylus

The stylus is located next to hand-strap on the rear of the PT-90 as illustrated in *Figure 2-4* The Front of the PT-90 (page 8). The stylus functions the same as a mouse on a PC. Use the stylus to:

- Navigate the display, select menu items and open optional applications.
- Tap the characters on the soft keyboard panel
- Hold the stylus on the screen and drag across the screen to select a list of multiple items.

Caution: Never use a pen, pencil, or other sharp object on the display to avoid damaging the touch screen.

3.5 Entering Information

To enter information:

- Use the keypad
- Use the keyboard input panel (soft keyboard) to enter text.
- Scan bar code data into data fields.
- Use left /right side key
- Use Microsoft ActiveSync to synchronize or copy information from the host computer to the PT-90. For more information on ActiveSync, refer to Chapter 7.

3.5.1 Entering Information Using a Keypad

The alphanumeric keypads produce the 26-character alphabet (A-Z), numbers (0-9), function keys and assorted characters. The keypads default characters/functions are printed white.

3.5.2 Entering Information Using the Keyboard Input Panel

Use the keyboard input panel (soft keyboard) to enter information in any program. To launch the keyboard input panel, press the button on the taskbar. Tap a key to enter a value. Tap a keyboard input panel button to display or hide the keyboard input panel.



Figure 3-6 Soft Keyboard

3.5.3 Entering Data via the Bar Code Scanner

The sample bar code scanner application scans data into data fields in the same way data is entered via the keypad.

3.6 Power Management

3.6.1 *Power Status Indication*

Checking main and Backup Battery Status

Enter “Power Properties”

If the above mentioned **Plug** or **Battery** icon is displayed, double tap this icon to bring up the **Power Properties** screen.

Or, select **Settings** → **Control Panel** from the **Start** menu and then double tap the **Power** icon to display **Power Properties**.



Figure 3-7 Control Panel

To Check Battery Status:

The battery menu item shows the status of the main and backup batteries.

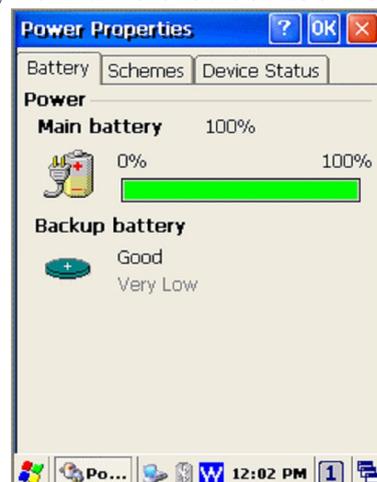


Figure 3-8 Power Properties

Five different icons are displayed on the status bar to indicate the on-board power status.

Icon	Description
No icon:	Indicates there is no external power supply to the PT-90 but the battery power status is good.
“Plug”  :	Shows external power is in use. The PT-90 is either plugged-in via the DC 5V/3A power adapter or in the cradle.
“Charging”  :	Indicates that the battery is charging.
“Battery Low”  :	Shows there is no external power supply, the battery charge is low.
“Battery Very low”  :	Indicates the battery is very low. Stop operation and charge the PT-90 immediately.

You must charge the battery when the **Battery Very Low** icon is displayed.

If the **Battery Very Low** icons still show after charging, please contact Argox Technical Support.

3.6.2 *Saving Battery Power*

Automatic shut-down of the PT-90

The PT-90 enters idle mode when there is no task or if all tasks are waiting for input. In default setting, the PT-90 automatically turns itself off if idle for 9 (1+3+5) minutes and when there is no external charging power. Press the **Power** button to return the PT-90 to the same point at the time of automatic shutdown.

In Power Properties, select **Schemes**. Customize automatic shut off time by tapping the arrow to select from a list of time periods. The available time periods for battery power are 1, 2, 3, 4, 5, 10, 30 minutes and never.

Activate this function when the PT-90 is plugged into the power adapter or placed in its cradle by tapping the check box and then tapping the arrow to select from a list of time periods. The available time periods for AC power are 1, 2, 5, 10, 15, 30 minutes and never.

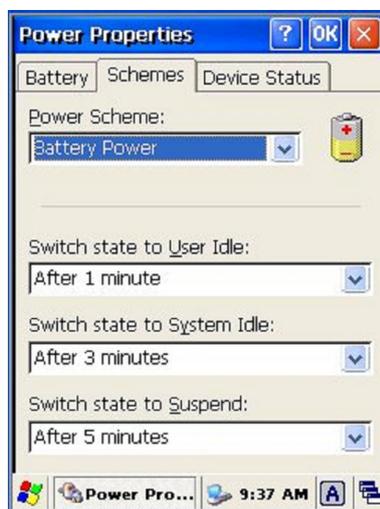


Figure 3-9 Power Properties-2

Backlight Setting

Because the power consumption of the LCD backlight is high, turn off the backlight function when it is not necessary. If a backlight is required, set “automatically turn off the back-light.”

To change the backlight setting, select **Start** → **Settings** → **Control Panel**, and then double tap the **Timeout&Brightness** icon.



Figure 3-10 Bcklight Setting

Timeout setting:

Tap the check box off to always turn on backlight. Tap the check box on to toggle automatically turning off backlight. Available timeout for battery power are 15 seconds, 30 seconds, 1 minute, 2 minutes and 5 minutes. Available timeout for AC power are 15 seconds, 30 seconds, 1 minute, 2 minutes, 5 minutes, 10 minutes, 15 minutes and 30 minutes.

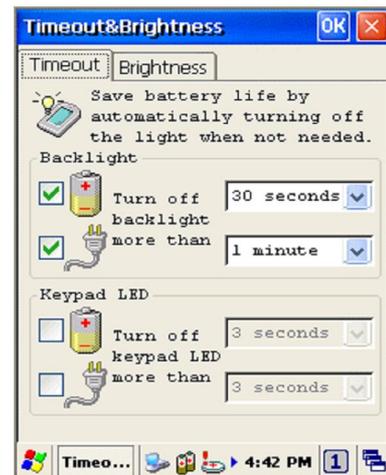


Figure 3-11 Timeout Setting

Brightness setting:

Adjust the brightness setting for backlight. Available brightness for battery and AC power are Off, Micro, Fine, Normal and Super.

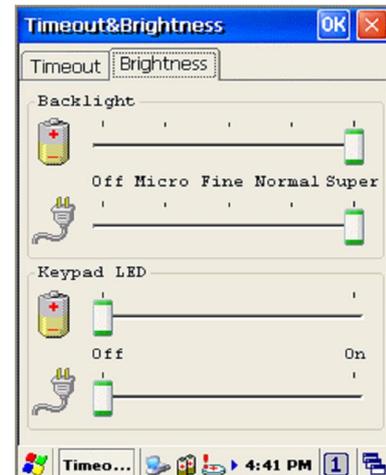


Figure 3-12 Brightness Setting

3.6.3 Suspend Mode

The PT-90 will go into suspend mode when it is idle for a period of time. Customize the idle duration using the Power control panel (refer to Figure **Schemes** Tab). Suspend mode appears just like you have turned the unit off. Press the  key to suspend the PT-90. Press the  key again for the PT-90 to resume its previous state.

Use the Battery Power control panel to set the duration to switch to Suspend mode when the system uses battery power. This saves battery power when the PT-90 is not in use.

Entering Suspend Mode:

The following puts the PT-90 in suspend mode:

- Press  key while the unit is on.
- The duration timer for **Switch state to Suspend** expires, which indicates that there has been no use for a specified of time.
- The battery pack discharges completely.
- Tap **Start → Suspend**



Figure 3-13 Suspend Mode

Tap here to set the PT-90 into suspend mode

3.6.4 Resume

Press  key to suspend or resume (wake up)

Waking the PT-90

The default wakeup conditions define what actions wakeup the PT-90. These setting are configurable and the factory default settings are subject to change / update.

Status	Description	Condition for Wakeup
Power Off	When the PT-90 is set to suspend mode by pressing  , this action wakes the PT-90.	Press  button
Auto Off	When the PT-90 enters suspend mode by automatic power-off, this action wakes the PT-90.	Press  button

3.7 Resetting the PT-90

If the PT-90 stops responding to the system, you may need to rest it. There are three ways to reset - warm boot, cold boot and clean boot.

A warm boot and cold boot restart the PT-90, but all data that have not saved will get lost. All data in flash will be preserved.

A clean boot will erase all flash data including all the applications and the data files. In addition it returns formats, preferences and other settings to the factory default setting.

3.7.1 Performing a Warm Boot

To perform a warm boot to correct the computer when an application stop responding to the system.

Caution: The RAM will be reinitialized.

To perform a warm boot:

1. Press **Reset** button. Do not hold down any other keys or buttons.
2. PT-90 initializes the logo screen appears for about a minute.

3.7.2 Performing a Cold Boot

A cold boot restarts the PT-90 and all un-saved data will get lost. Only perform a cold boot if a warm boot does not solve the problem.

Caution: The RAM will be reinitialized.

To perform a cold boot:

1. Press the **Reset** and  keys together. Do not hold down any other keys or buttons.
2. PT-90 initializes the logo screen appears for about a minute

3.7.3 Performing a Clean Boot

Perform a warm boot first. If the PT-90 still does not respond, perform a cold boot.

Perform a clean boot only if you want to reset PT-90 to factory default setting.

	Warm boot	Cold boot	Clean boot
Registry	Preserved	Preserved	Factory default
Flash Disk	Preserved	Preserved	Clean disk
RAM data	Reinitialized	Reinitialized	Reinitialized
RTC	Preserved	Clean	Clean

Caution: All data will be lost. The Utility programs are also lost. We recommend that copy 90Utility.cab to micro SD and insert into PT90, before perform a clean boot. After clean boot, OS will install 90Utility.cab automatically from micro SD.

To perform a clean boot in OS:

1. To perform a clean boot, select **Start** → **Settings** → **Control Panel**, and then double tap the **System Information** icon.
2. Tap the **Format partition** check box in **Clean boot** page and press **Setting** to start clean boot.
3. The PT-90 logo window appears.
4. Reset to factory default setting.

To perform a clean boot using hotkey:

1. Cold boot and press hot key (**UP+ DOWN+SHIFT**).
2. PT-90 initializes the logo screen appears

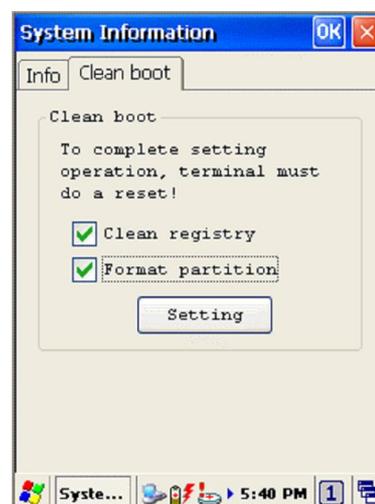


Figure 3-14 Clean Boot

for about a minute.

3.8 Flash Storage

Flash memory is a re-writable location in which to store up to 256MB of programs and data files. The benefit of this feature is that files and programs saved in Flash Memory are unaffected by the PT-90's power status.

Note: The Flash storage memory persists for warm/cold reset conditions. We strongly recommend that perform a clean reset only if you want to reset factory default setting.

3.8.1 Flash Disk Location

All storage disk is stored in Flash Disk in PT-90

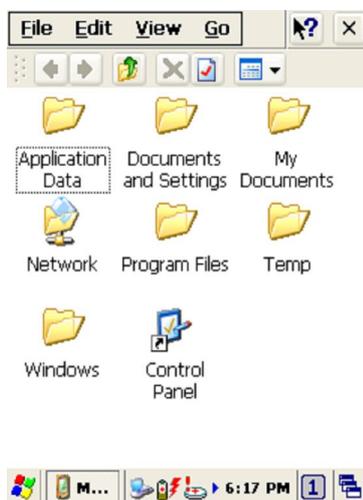


Figure 3-15 My Device

3.8.2 Flash Disk Size

The size of the Flash Disk varies depending on the size of the system firmware.

- Select **Start** → **Settings** → **Control Panel**, and then double tap the **Storage Manager** icon.
- The capacity is the total Flash Disk size.



Figure 3-16 Flash Size

3.9 Bluetooth Setting

1. Please enable Bluetooth first like *Figure 3-17*.



Figure 3-17 Enable Bluetooth

2. After enable Bluetooth, please select **Show BT** like *figure 3-18*

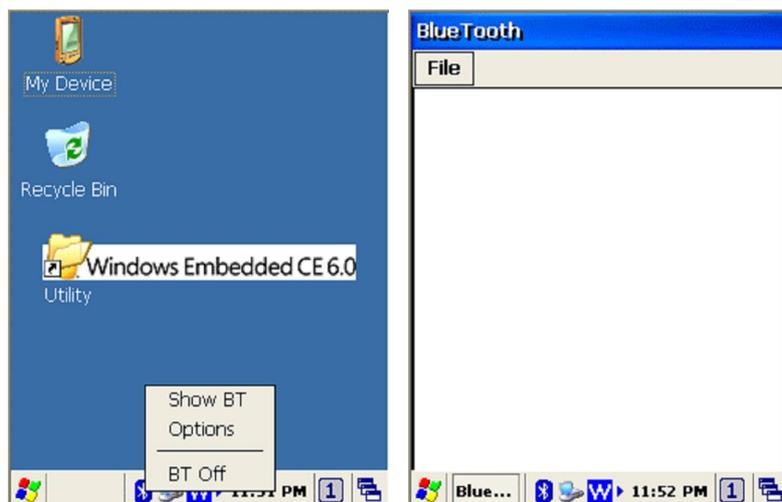
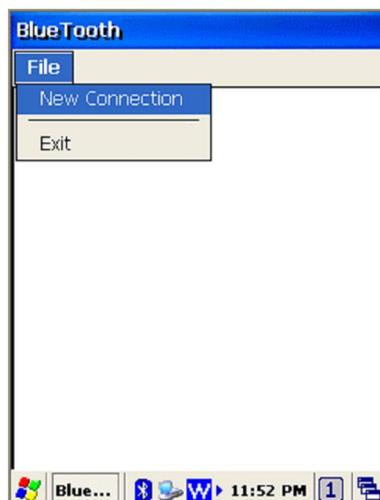


Figure 3-18 Show BT

3. On Bluetooth manager screen, select **File** → **New Connection** like *Figure 3-19*.



- Bluetooth has four functions to choose like *Figure 3-20*.

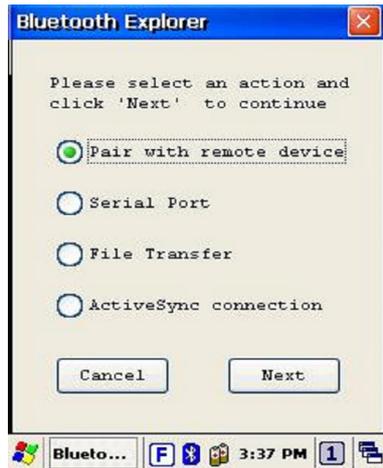


Figure 3-20 Bluetooth Explorer

- First function is Pair with remote device, after press next button. It will start to search devices. Select a device and press Pair button; it needs to enter Bluetooth **PIN code** like *Figure 3-21*.



Figure 3-21 Bluetooth Pairing

- After PT-90 check pin code with device. PT-90 will appear a pop window and show **Success** message like *Figure 3-22*.



Figure 3-22 Bluetooth Pairing-1

7. Second function is **Serial Port** which communication with device via com port like

Figure 3-23.



Figure 3-23 Bluetooth Explorer

8. After press **Next** button, it will start to search device like Figure3-24.

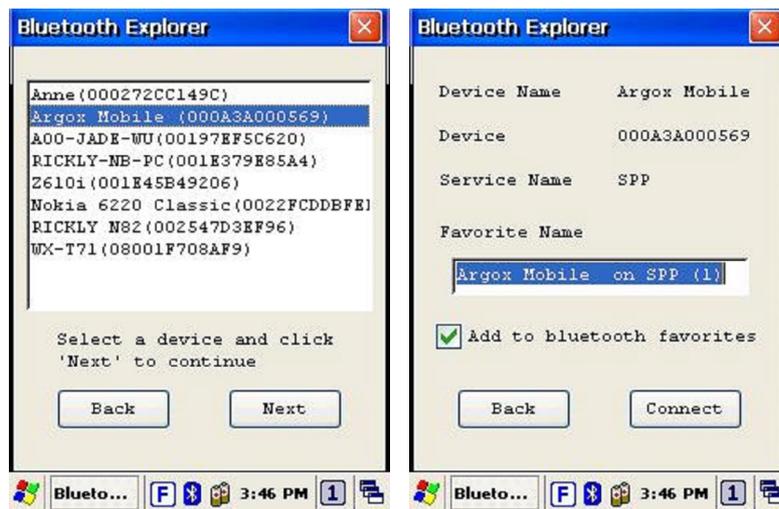


Figure 3-24 Bluetooth Serial Port

9. After press **Connect** button, it will appear a connection with SPP mode like Figure 3-25.

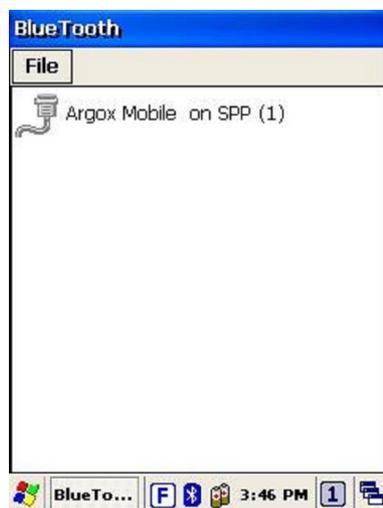


Figure 3-25 Bluetooth Serial Port

10. Third function is File Transfer like *Figure 3-26*



Figure 3-26 Bluetooth Explorer

11. After press **Next** button, it will start to search device and it needs to enter **PIN code** like *Figure 3-27*



Figure 3-27 Bluetooth File Transfer-1

12. After checking pin code with the connect device. PT90 will enter FTP mode like *Figure 3-28*.

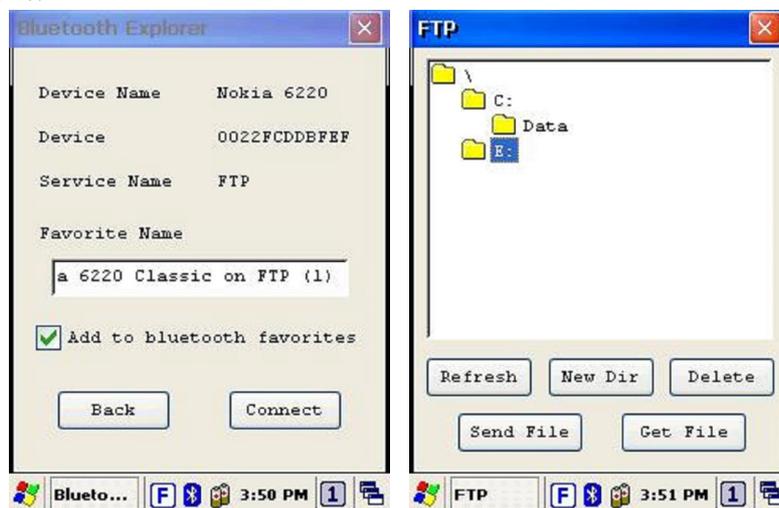


Figure 3-28 Bluetooth File Transfer-2

13. On Bluetooth manager screen, it will add a FTP connection like *Figure 3-29*.

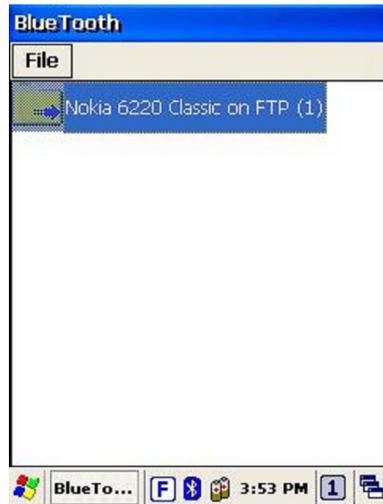


Figure 3-29 Bluetooth File Transfer-3

14. The latest function is **ActiveSync connection**. The function can connect with computer via ActiveSync like *Figure 3-30*.



Figure 3-30 Bluetooth Explorer

15. After press **Next** button, it will start to search device like *Figure 3-31*.

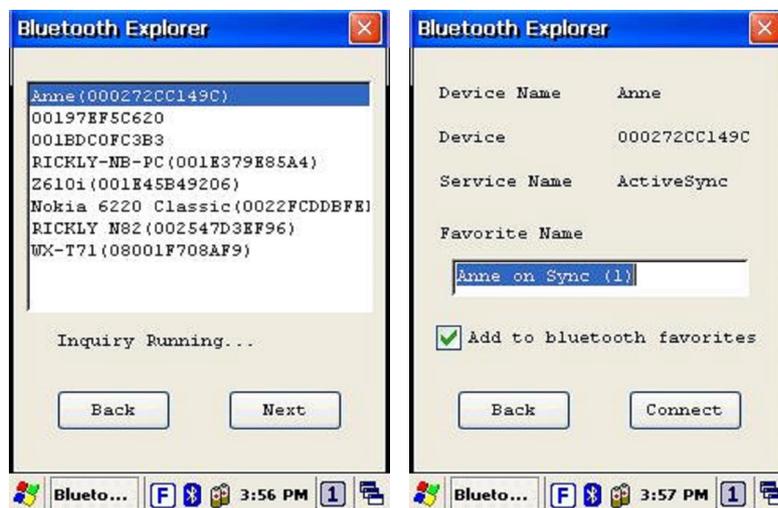


Figure 3-31 Bluetooth ActiveSync

-
16. PT-90 will add a ActiveSync connection on Bluetooth manager screen. It will synchronize with computer like *Figure 3-32*.



Figure 3-32 Bluetooth ActiveSync

3.10 WLAN Setting

1. After enable WLAN setting, a POP window appears as below. *Figure 3-33*

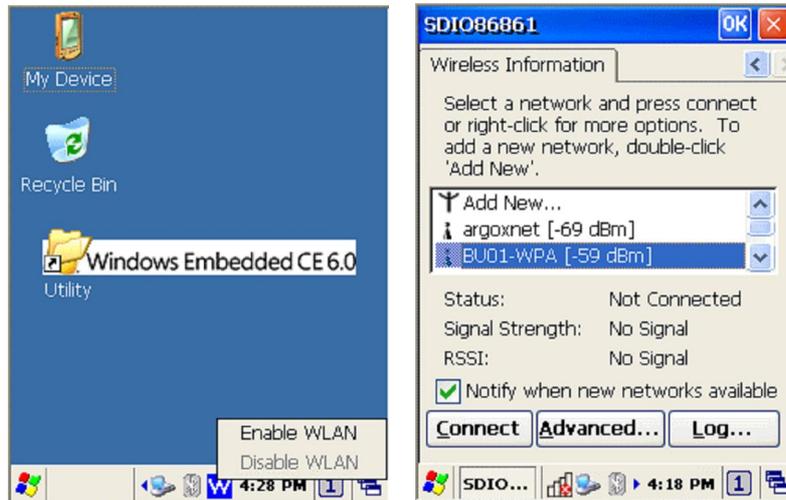


Figure 3-33 WLAN setting

2. If the above window doesn't show, try to double click the **Wireless** icon on the screen bottom.
3. Select new connection and press **Connect** button or double click the new connection, **BU01-WPA** for instance; it will appear the configuration window (*Figure 3-34*). Then user can set wireless **Encryption** on this window.



Figure 3-34 Wireless Properties

4. After setting, press **OK** to connect to AP server (wireless AP server must setup completely before connection). WiFi connection can work now.
5. Wireless icon

Icon	Description
	Not Connected
	Signal Strength

4. Scanning

The PT-90 has an integrated laser scanner that reads all major bar code labels with excellent performance. The trigger key is located in the middle of the unit. There are also two side-keys to trigger scanner. Press trigger key to activate the laser scanner.

4.1 Scan Configuration

When it is necessary to change the default barcode symbology for a different application, use **Scan Configuration** to change default symbology, place delimiter characters behind scanned data, and save the settings.

Run this program from **Desktop**→ **Utility**→ **Scan Configuration.exe** which is also accessible via **Start**→ **Settings**→ **Control Panel**→ **Scan Configuration**.

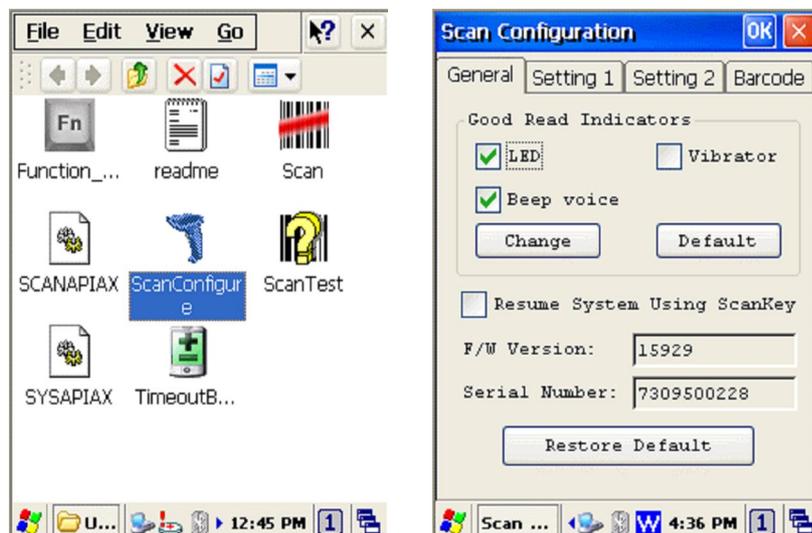


Figure 4-1 Scan Configuration -1

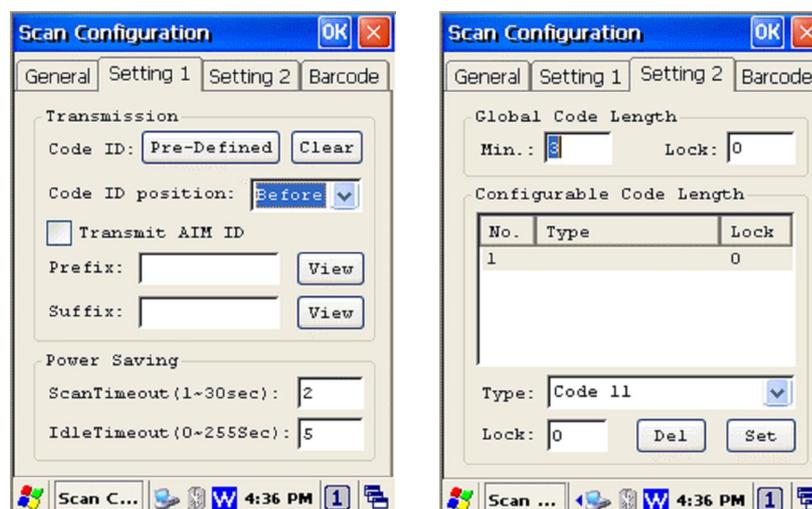


Figure 4-2 Scan Configuration -2