User Manual for

Winmate 3.7" Rugged Handheld

(R03TACH-RTS1)

Winmate Communication INC.

Revision History

Version	Description	Date	Author
1.0	First Released	28.07.2011	Shin Ku

IMPORTANT SAFETY INSTRUCTIONS

Please read these instructions carefully before using the product and save for later reference.

Follow all warnings and instructions marked on the product.

Unplug this product from the wall outlet before cleaning. Clean the product with a damp soft cloth. Do not use liquid or aerosol cleaners as it may cause permanent damage to the screen.

Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.

This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

Do not allow anything to rest on the power cord.   Do not locate this product where persons will walk on the cord.

Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock.   Never spill liquid of any kind on the product.

Do not attempt to service this product by yourself, as opening or removing covers may expose you to dangerous voltage points or other risks and will void the warranty. Refer all servicing to qualified service personnel.

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

When the power cord or plug is damaged or frayed.

If liquid has been spilled into the product.

If rainy or water has been exposed to the product.

If the product does not operate normally that the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.

If the product has been dropped or the cabinet has been damaged.

If the product exhibited a distinct change in the performance, that indicates a need for service.

Copyright Notice

Copyright © 2008 Winmate Communication Inc., ALL RIGHTS RESERVED. No part of this document may be reproduced, copied, translated, or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the prior written permission of the original manufacturer.

Trademark Acknowledgement

Brand and product names are trademarks or registered trademarks of their respective owners.

Disclaimer

Winmate Communication Inc. reserves the right to make any product changes without notice, including circuits and/or software described or contained in this manual in order to improve design and/or performance. Winmate Communication assumes no responsibility or liability for the use of the described product(s), conveys no license or title under any patent, copyright, or masks work rights to these products, and makes no representations or warranties that these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. Applications that are described in this manual are for illustration purposes only. Winmate Communication Inc. makes no representation or warranty that such application will be suitable for the specified use without further testing or modification.

Warranty

Winmate warrants that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, Winmate will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in it's original packaging to obtain warranty service.

If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W08Axxxxxxxx means October of year 2008.

Customer Service

We provide service guide for any problem as follow steps：First, visit the website at http://www.winmate.com.tw   to find the update information about the product. Second, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance. You may have the following information ready before you call：

➢ Product serial number
➢ Peripheral attachments
➢ Software (OS, version, application software, etc.)
➢ Description of complete problem
➢ The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call or e-mail us.

Notice

1. Do not touch the LCD panel surface with sharp or hard objects.
2. Do not use abrasive cleaners, waxes or solvents for cleaning, use only a dry or damp, soft cloth.
3. Use only with a high quality, safety-approved, AC/DC power adapter.

Safety Precautions

- **Warning!**
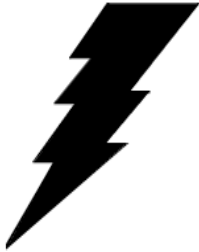
Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

- **Caution!**

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

Packaging List

This product is shipped with the items list below. Please make sure that all are in your package.

Item	Description	Note
Default Packing Accessories		
1	1 piece of Rugged Handheld Users Manual.	
2	1 piece of CD for System Driver Utility.	
3	1 piece of 5V Adapter w/ Standard Power Cord. **(Euro / U.S. Std type, 1.8m)**	
4	1 piece of Stylus	
5	1 piece of hand strap	

Table of Contents

Chapter 1   Getting Started

This chapter shows users the first step to use this rugged handheld including an overview of the whole device and an accessory installation guide.

1.1 Rugged Handheld Overview

Front Components

A. Light Sensor
B. Touch Screen
C. LED Indicator
D. Keypad

LED Indicator
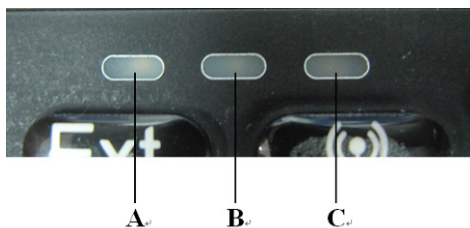
A. External Function LED
B. Wireless Function LED
C. Power Status LED

Keypad

A. Function
B. External
C. Camera
D. Wi-Fi/ Bluetooth
E. Enter
F. Home
G. Phone (by project)
H. Power

For more operation instruction, please see Chapter 2 "Navigating the screen"

Back Components

A. Flash
B. Camera
C. Hand Belt Fixing Hole
D. Speaker
E. Stylus
F. Battery Latch Handle

Bottom Connectors

A. DC Jack
B. DC Dock
C. Mini USB
D. RS232

(Optional) With Barcode Reader

A. Barcode Reader

1.2   Inserting the SIM Card and Battery

A.   Lift the latch handle of the battery cover and turn it to unlock position. Then, open the cover from the device.
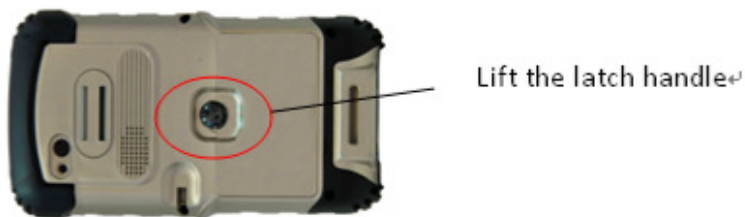
B.   **(Optional)** Users who need phone function need to install the SIM card provided by mobile operator. With the SIM card chip side facing up, insert the card fully into the bottom slot.

C.   **(Optional)** Users who need to extend memory should install the SD card. With the SD card chip side facing up, insert the card fully into the upper slot.
D.   The first way to install the battery is to attach the upper side of the battery to battery connector and then lower the bottom side to fit into the compartment.

Attach the upper side of
the battery to battery

E.   Recover the battery cover and secure the latch by turning it to lock position.

1.3 Charging the battery

Before beginning

Make sure the battery is correctly installed in the device.

1. Plug the DC cord of the AC adapter into the power connector of the device.

2. Plug the female end of the AC power cord into the AC adapter and the male end into an electrical outlet

3. The charge indicator glows in amber when charging is in progress. Do not disconnect your device from AC power until the battery is fully charged, as indicated by the amber indicator turning into green. This will take a couple of hours.

When the battery charge level is too low for operation, the device switches itself.

1.4 Performing the Initial Startup

When turning on your device for the very first time, you will be guided through a setup process.

A.   Make sure that your device is either connected to AC power or the battery has power.

B.   Press the power button to turn on your device.
     The backlight of the keypad will light up and, after a few seconds, the setup screen appears.

C.   Follow the on-screen instructions to complete the setup wizard.

D.   **(Optional)** For phone function only:

   ●   If a SIM card has been inserted and the mobile phone network operator has set the PIN, you will be prompted to enter the PIN. Enter the PIN and tap Enter.
   ●   If a SIM card has not been inserted yet, a message of an invalid or missing SIM card will appear on the screen. You can tap Cancel to continue the startup procedure.

E.   After the setup is completed, user can now use the device.

Chapter 2 Basic Operations

2.1 Navigating around the Screen

There are three ways for users navigating on the screen:

➢ Using Touch screen

The device comes equipped with a stylus—a pointing tool that looks like a pen. The stylus is used to select objects on the touch screen It is convenient for users to take it from the back of the device.

To choose an icon, open a file, launch an applet or open a folder:
• Double-tap on the appropriate icon.

➢ Using Keypad

The table below shows functions of each key. Some of the keys have different functions when they are under different situations.

Key Name	Function
Power	Power ON/OFF
Home	Exit program, back to desktop
Enter	Normal: Confirm
	When Camera enable: take photos
	When Phone enable: Send /End
Wireless	Wireless enable/disable
Camera	Camera enable/disable
Phone	Phone enable/disable
Ext.	External module enable/disable
Fn	Enable/disable orange key function
1	Fn disable: 1
	Fn enable: Brightness -
2	Fn disable: 2
	Fn enable: Up

3		Fn disable: 3 def
		Fn enable: Brightness +
4		Fn disable: 4 ghi
		Fn enable: Left
5		Fn disable: 5 jkl
		Fn enable: None
6		Fn disable: 6 mno
		Fn enable: Right
7		Fn disable: 7 pqrs
		Fn enable: Volume -
8		Fn disable: 8 tuv
		Fn enable: Down
9		Fn disable: 9wxyz
		Fn enable: Volume +
0		Fn disable: 0 __
		Fn enable: None
*		Fn disable: *
		Fn enable: None
#		Fn disable: #
		Fn enable: None

Chapter 3   Using Windows CE 6.0

3.1 Start Menu

When this device boots up, the default startup desktop (Windows Classic Shell) is displayed.

Any applications stored in the Startup folder start up immediately.

To access desktop icons:

• Double-tap on the icon to open a window or, in the case of an application icon,
   launch an application.

On the keyboard:

• Use the arrow keys to highlight the icon and press [ENTER] to launch the highlighted icon.

3.1.1 The Desktop

The icons displayed in the startup desktop operate in much the same way as those displayed on any standard PC desktop that is running Windows.

14
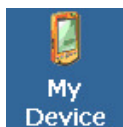
My Device

Choosing this icon displays the contents of your device.

Recycle Bin

This option temporarily stores items that were deleted, allowing you to either permanently delete or restore these items.

Internet Explorer

Choosing this icon launches Internet Explorer—a standard Windows Embedded CE version. Keep in mind that your supervisor will need to set up access using the Internet Options and the Network and Dial-up Connections icons in the Control Panel.

Microsoft WordPad

WordPad is a basic word processor used to create, edit, and print .rtf, .doc, and .txt files.
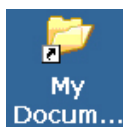
My Documents

The My Documents folder is a standard location for storing user-created files. The folder is located under the root of the hard drive on which Windows is installed.

3.1.2 Start Programs

The *Start Menu* lists the operations you can access and work with. It is available from the startup desktop or from within any application.

• To display the menu, tap on the *Start Menu*.

3.1.2.1 Run

Choosing the *Run* option from the *Start Menu* displays a dialog box in which you can enter the name of the program, folder or document you want to open or launch.
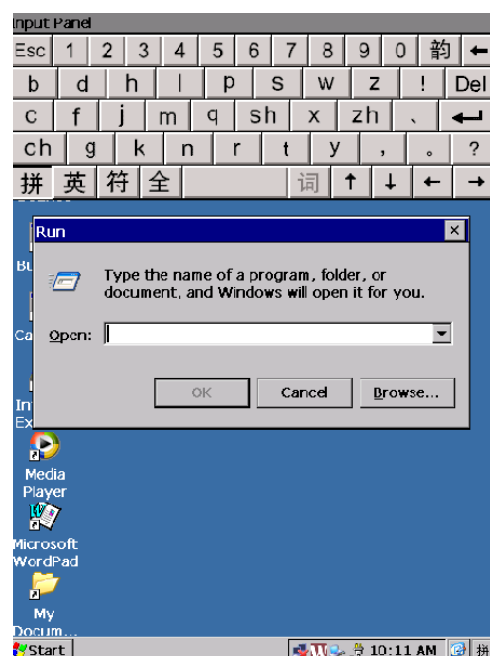
3.1.2.2 Setting

The **Settings** sub-menu includes the following settings: Control Panel, Network and Dial-up Connections and Taskbar and Start Menu.

Control Panel

The *Control Panel* contains applets used to configure hardware, the operating system and the shell.

Network and Dial-Up Connections

The *Network and Dial-up Connections* window allows you to configure the handheld network interfaces or execute an existing configuration.

Taskbar and Start Menu

The *Taskbar and Start Menu* option displays a dialog box in which you can customize the taskbar, choosing which options will be displayed.

3.1.2.3 Documents

3.1.2.4 Favorites

Favorites include the web links that users save for convenience.

3.1.2.5 Programs

Choose **Programs** to display a sub-menu of options. The programs displayed will be those residents in the *Windows\Programs* folder of the computer.

This sub-menu allows you to choose *Command Prompt*, *Internet Explorer, Media Player, mGPSCmd,* installed applications (e.g., Microsoft WordPad), *Serial_Port_Test*, or *Windows Explorer*.

Command Prompt
Command Prompt is used to access the DOS command prompt. At the prompt, you can type DOS commands such as *dir* to display all the directories in the drive.

Internet Explorer
3.7" Handheld is equipped with Microsoft Internet Explorer for Windows Embedded CE. You can access the *Internet Options* icon through the *Start Menu* under *Settings>Control Panel* or by double-tapping on the desktop icon *My Device* and then, double-tapping on the *Control Panel* icon.

Media Player
The installed Media Player can play video files.

mGPSCmd
You can start to use GPS applications via mGPSCmd. Refer to "GPS" section on page 30

for additional details about this option.

Microsoft WordPad

WordPad is a basic word processor used to create, edit, and print *.rtf*, *.doc*, and *.txt* files.

Serial_Port_Test

Serial_Port_Test is an access to using Barcode Reader and RFID in the device.

Windows Explorer

The Windows Explorer installed on your 3.7" Handheld is consistent with all Windows Embedded CE devices.

3.1.3 Taskbar

The taskbar at the bottom of the screen displays a variety of system status indicators, including the Input Panel button if you have chosen to show that option in the *Taskbar and Start Menu* settings.

The taskbar changes dynamically, and only those icons that are applicable are displayed. For example, if a radio is not installed in your device, the radio signal icon is not displayed in the taskbar.

Battery

The battery shaped icon displayed in the taskbar provides quick access to the charge state of the battery. Tapping on the icon once will show the percentage charge left in the battery.

Light Sensor

The light sensor will show the value of light sensor.

Wireless LAN

This icon displayed in the taskbar represents the installed *Wireless LAN*.

Time

This icon shows current time.

Handwriting

ShungPin IM 3D (for MSPY3)

CHT IM

3.1.4 Keypad

3.1.4.1 Function Key

Function Key is used to facilitate to apply more functions for users. After function key is pressed, some keys have different functions from number functions. For example, the specific keys can be used to adjust brightness and volume. When function key is activated, there is a mark shown in top right as below.

3.1.4.2 ESC/ EXT

The ESC/ EXT key is used to enable Barcode reader/ RFID function.

3.1.4.3 Wireless LAN

When taping Wireless LAN key, the window showing Wi-Fi information will appear.

3.1.4.4 Camera

The Camera key can activate camera function.

3.1.4.5 Enter

Users can confirm their actions by pressing the Enter key

3.1.4.6 Home

Home key is a shortcut to show start screen.

3.1.4.7 Backlight-

Backlight- can be activated after users press Fn [Fn] key.

Step: [Fn] > [1☼-]
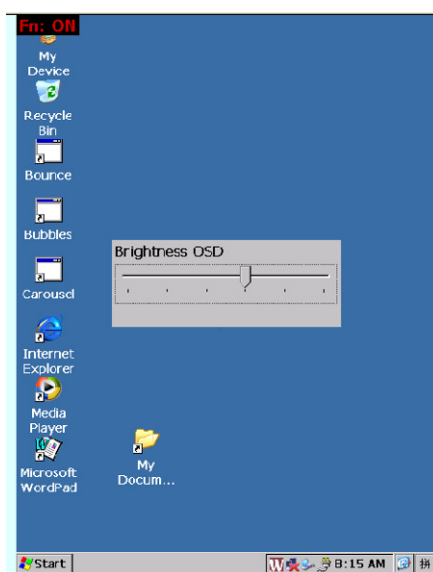
Brightness has been decreased.

3.1.4.8 Backlight+

Backlight+ can be activated after users press Fn [Fn] key.

Step: [Fn] > [3☼+]
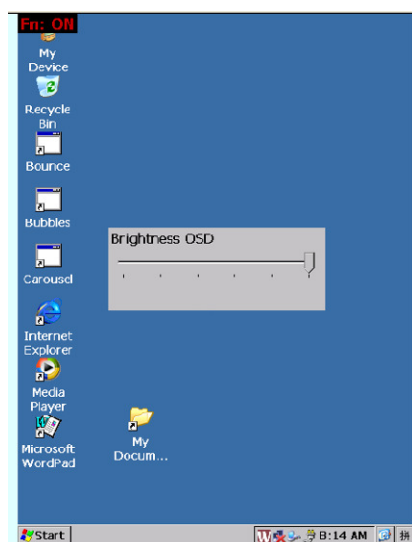
Brightness has been increased.

3.1.4.9 Sounds-
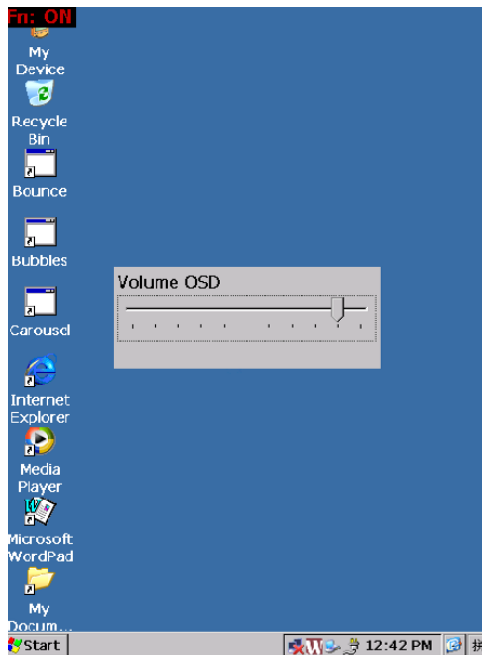
Sound- can be activated after users press Fn [Fn] key.

Step: [Fn] > [7 ◁))]
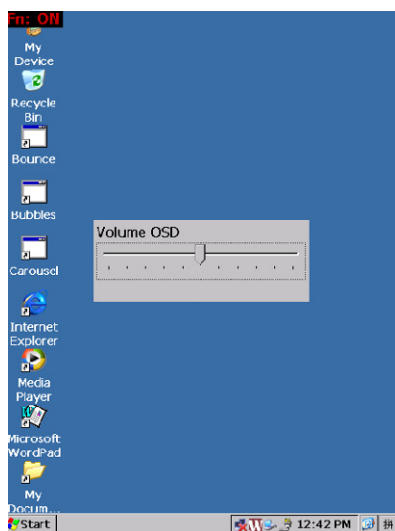
3.1.4.10 Sounds+

Sound- can be activated after users press Fn [Fn] key.

Step: [Fn] > [9 📢]

3.1.4.11 Power

To turn on and turn off the device

3.2 Device

3.2.1 Wi-Fi Function

The *Wi-Fi* application is used to configure the 3.7" Handheld 802.11b/g radio for one or more wireless network profiles. A network profile contains settings for SSID (Service Set Identifier) and security options.

3.2.1.1 How to activate and inactivate Wi-Fi

When the device boots up, the Wi-Fi screen is automatically displayed. In addition,

users can press Wireless LAN key to start the same function.

The *Wi-Fi* screen is displayed.

Tap "Wireless Information" tab

This tab displays existing networks to which you can connect, and it allows you to add a new network or modify the settings for an existing network.
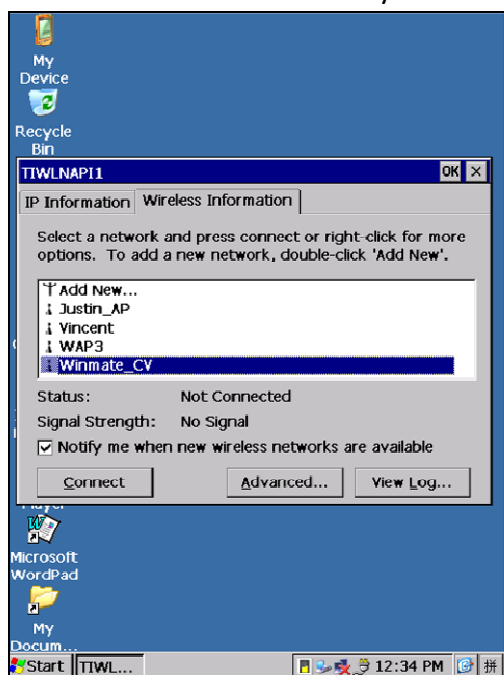
• **Connect** button: To force connection to a specific, existing network, highlight the network to which you want to connect, and tap on the **Connect** button and a "*Wireless Network Properties*" tap jumps.

Wireless Network Properties
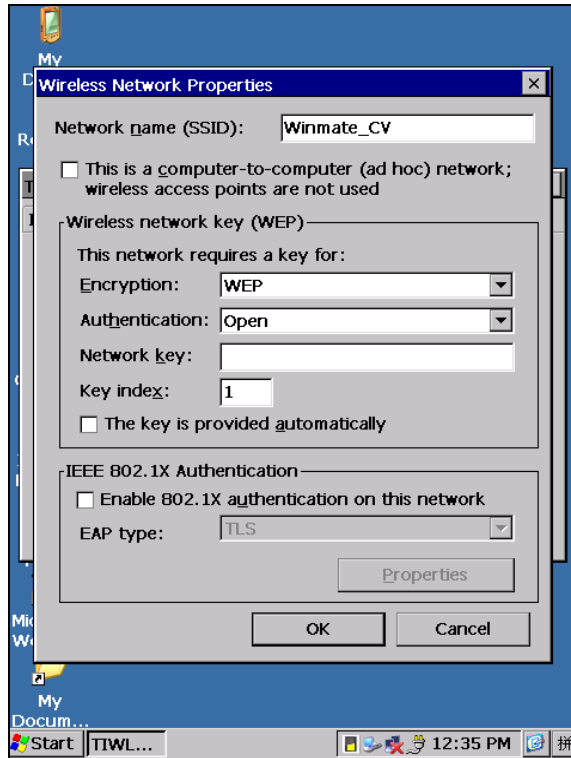
• **Ad Hoc And Infrastructure:** If you are using an *Infrastructure* network—one in which the handhelds must pass data through an access point—leave the checkbox next to *This is an ad hoc network* blank.

If you are using an *Ad Hoc* network—a network in which the handhelds pass data directly to other Ad Hoc devices without an access point—add a checkmark in the checkbox next to *This is an ad hoc network* to enable Ad Hoc.

• **Encryption:** *WEP* (Wired-Equivalent Privacy) encryption prevents others from accidentally accessing your network. If you are not using encryption, you can choose *Disabled* from the drop-down encryption menu. Otherwise, leave this field as is. *AES* (Advanced Encryption Standard) is a standard for protecting data through encryption.

AES supports key sizes of 128 bits, 192 bits and 256 bits and will serve as a replacement for the Data Encryption Standard (DES), which has a key size of 56 bits. In addition to the increased security that comes with larger key sizes, the AES algorithm is a symmetrical block cipher that can encrypt (encipher) and decrypt (decipher) information.

28

• **Authentication:** 802.11 support several subtypes of network authentication services:

Open, Shared, WPA, and *WPA-PSK*. Under *Open* authentication, any wireless station can request authentication. The station that needs to authenticate with another wireless station sends an authentication management frame that contains the identity of the sending station. The receiving station then sends back a frame that indicates whether it recognizes the identity of the sending station.

Under *Shared* authentication, each wireless station is assumed to have received a secret shared key over a secure channel that is independent from the 802.11 wireless network communications channel.
Under *WPA* and *WPA-PSK* authentication, the use of 802.1x authentication is required.

For wireless networks *without* a Remote Authentication Dial-In User Service (RADIUS) infrastructure, WPA supports the use of a preshared key. For wireless networks *with* a RADIUS infrastructure, Extensible Authentication Protocol (EAP) and RADIUS is supported.

• **Network Key:** This text box is used to specify a 5 or 13 ASCII character sequence or an equivalent 10 or 26 Hexadecimal digit sequence that matches the active WEP key on the access point.

To assign a *Network key*, highlight **The key is provided automatically**, and *uncheck* the checkbox to disable this option.

• **Enable 802.1x authentication:** *802.1X* is the IEEE standard that offers additional security for local area networks. It provides authentication for user devices attached to an Ethernet network, whether wired or wireless. A security protocol packet such as TLS or MD5 encapsulated in an *EAP* is used in conjunction with the 802.1X standard to authenticate users at the MAC layer. Available EAPs are listed in the drop-down menu next to the *EAP* option.

To activate 802.1X, highlight **802.1x authentication**, and check the checkbox.

• **EAP Type (Extensible Authentication Protocol):** This drop-down menu lists the EAP types available on your system. The items in this drop-down menu will vary

depending on your network setup. Keep in mind also that some authentication protocols require that you select a Certificate. By selecting the *Properties* button, you will be able to select a *Certificate*. "Certificates" on page 88 provides a website that outlines how to create certificates for your network.

• **Saving and exiting the radio setup:** Once you have completed the configuration, press [ENTER], or tap on OK.
The connection you created will be listed in the *Wireless Information* tab as a preferred network. The radio will search for the SSID and compare the WEP and authentication information you specified. If there is a match between the hand-held settings and the access point settings, the hand-held will communicate on the network through the access point.

When there is no available or suitable network

• To add a new configuration, tap on the **Add New** button. A blank *Wireless Properties* dialog box is displayed.
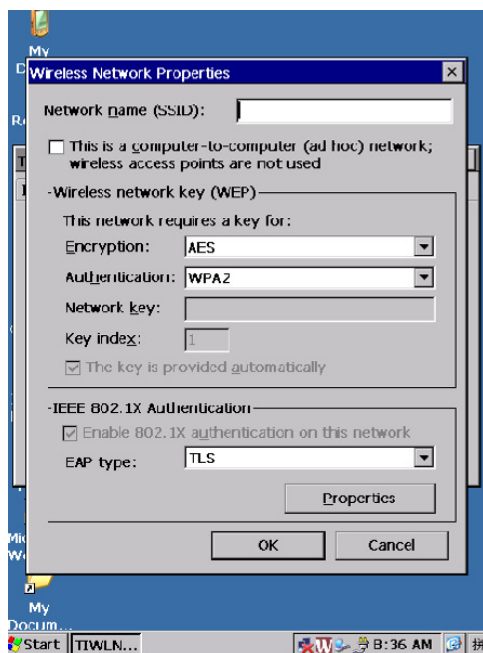
• Type the appropriate SSID (Service Set Identifier) in the **Network name (SSID):** dialog box. The *Network name* field can contain a maximum of 32 characters. The name assigned here is listed as a preferred network.

3.2.1.2 Check IP Information/ Wireless Information
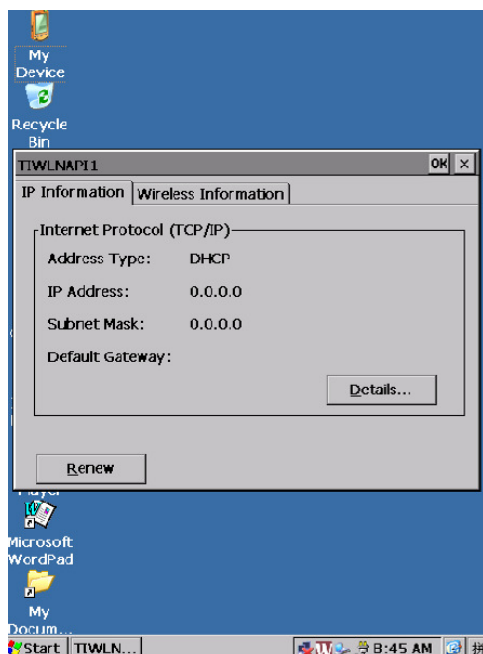
3.2.1.3 Advanced settings

To display the *Advanced Wireless Settings* dialog box:

• Tap on the *Advanced* button in the Wireless Information tab.

This window lists the available preferred networks.

Rearranging Preferred Networks

3.7" Handheld attempts to connect with the networks listed in this dialog box in sequence, beginning at the top of the list. If you need to rearrange this list of networks—move networks up and down in the list:

• Tap in the *Networks List*, and highlight the **network** that you want to move up or down in the list.

• To move the highlighted item in the list upward or downward, tap on the **Up** or **Down** button.

Deleting A Preferred Network

To delete a network from this list:

• In the *preferred networks* list, highlight the **network** you want to remove.

• Tap on the **Delete** button.

Changing Network Properties

To change the properties of an existing preferred network:

• Highlight the **network** that you want to modify.

• Tap on the **Properties** button.

• Make any necessary changes in the *Wireless Properties* dialog box and press **[ENTER]** to save the changes.

3.2.1.4 View Log
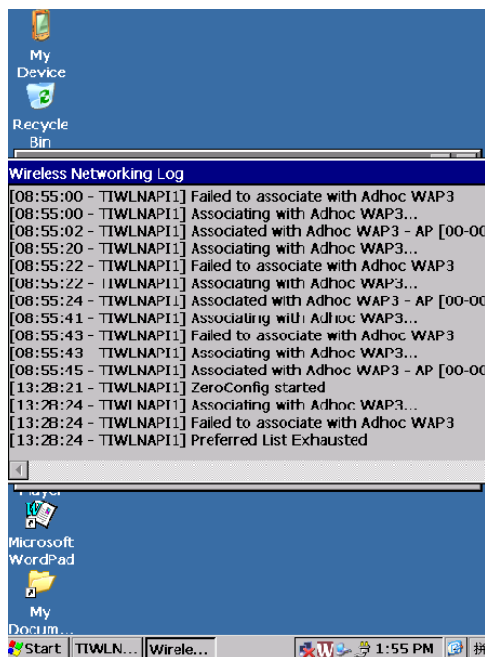
3.2.1.5 IP Address setting

To assign an *IP address* for your device:

Tap on **Start>Settings>Network and Dial-up Connections**. Tap on the **radio icon** for which you want to assign an IP address—in the sample screen below, the icon is labeled *TIWLNAPI1.*

The *Wireless Statistics* screen is displayed.
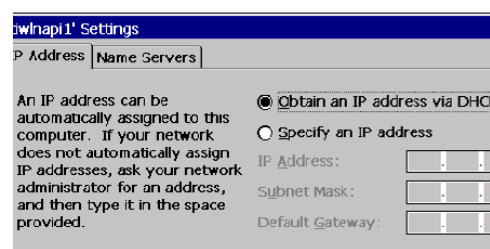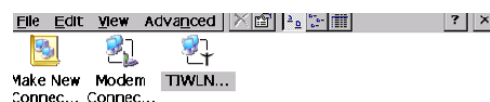
Tap on the radio button next to **Specify an IP address** to select it.

• Type an **IP, Subnet Mask** and **Default Gateway** address in the appropriate fields. Press **[ENTER]** to save your information.

3.2.1.6 Name Servers

● In the *TIWLNAPI1 IP Information* tab, tap on the **Configure** button.
● Tap on the **Name Servers** tab.
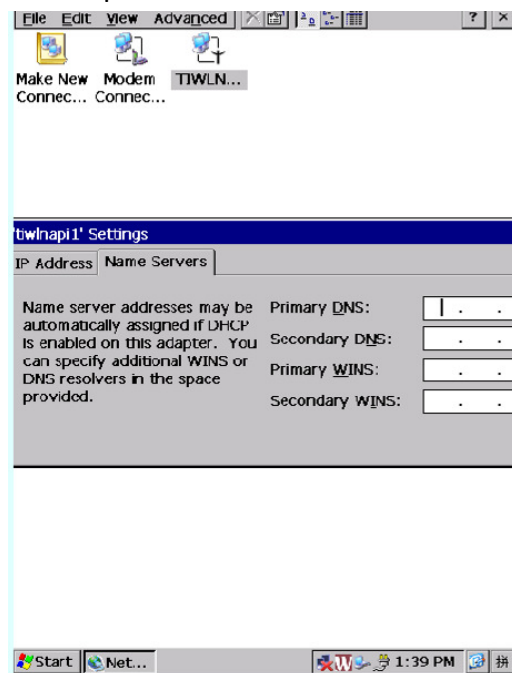
The DNS and WINS fields in the *Name Servers* tab allow you to specify additional WINS and DNS resolvers. The format for these fields is ###.###.###.###.

3.2.2 Bluetooth

Bluetooth is a global standard for wireless connectivity for digital devices and is intended for Personal Area Networks (PAN). The technology is based on a short-range radio link that operates in the ISM band at 2.4 GHz. When two *Bluetooth*-equipped devices come within a
10 metre range of each other, they can establish a connection. Because *Bluetooth* utilizes a radio-based link, it does not require a line-of-sight connection in order to communicate.

3.2.2.1 How to activate and inactivate Bluetooth

Start> Settings> Control Panel> Bluetooth Device Properties
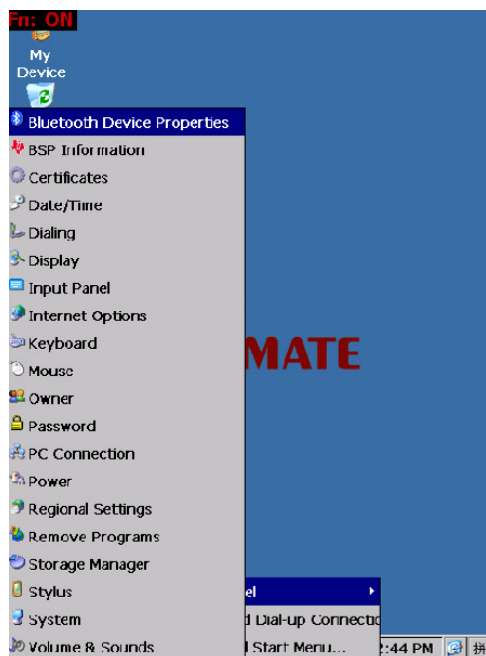
The Bluetooth Manager screen displays.
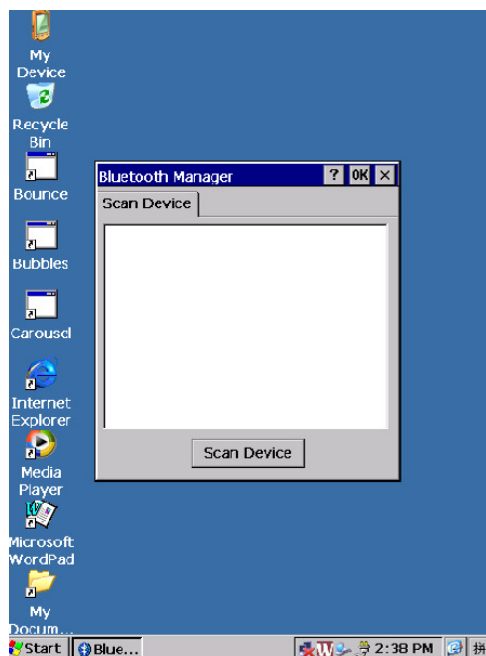
In this tab, users can discover and display *Bluetooth* devices.

Discovering and Removing Devices

Scan discovers *Bluetooth* devices in range of your device and lists them in this tab.

Any existing devices previously discovered and listed will also be displayed.

Clear removes all *Bluetooth* devices listed except those with currently paired and
connected services.

3.2.2.2 Trusted and Active Device

Tap the selected item twice and a trusted window appears.
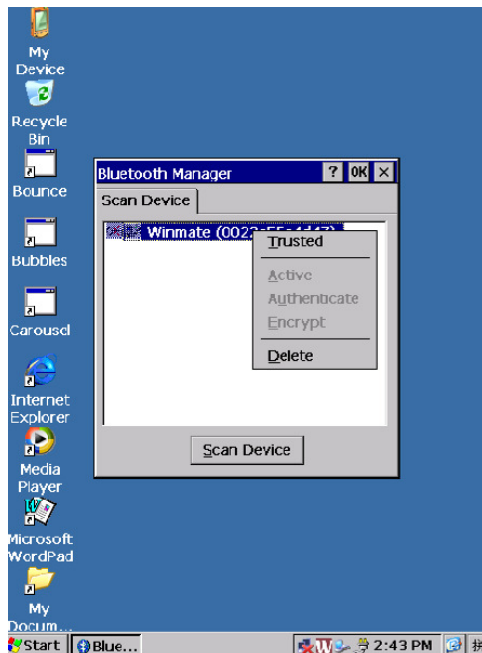
Tap "Trusted" and a confirmation window jumps.
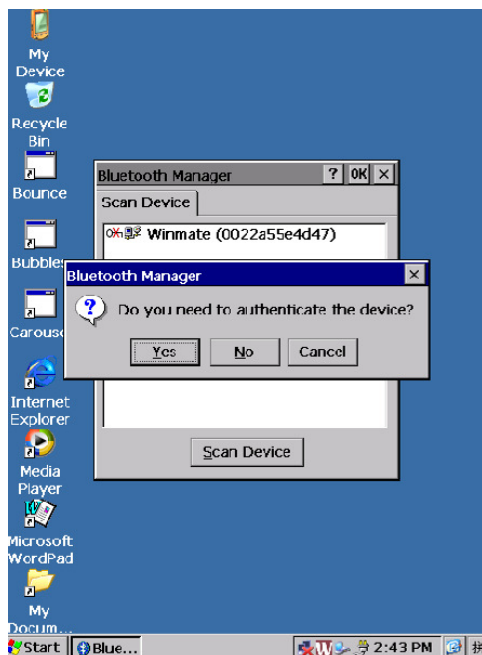
Enter your customized PIN
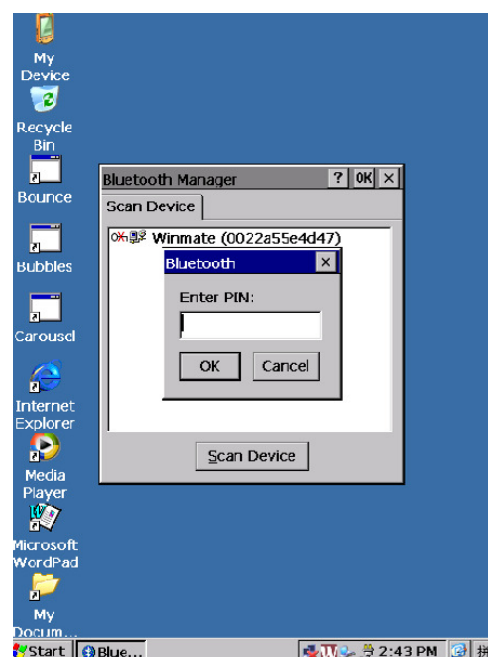
When the other device accepts the match invitation and enters the right PIN, the Bluetooth is activated.
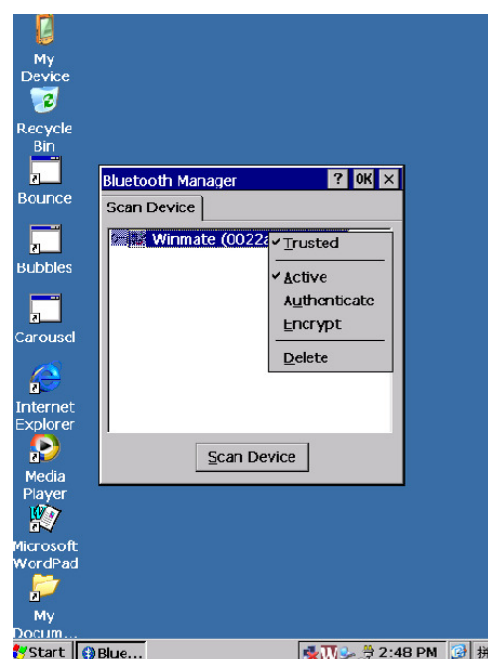
3.2.3 GPS

This applet allows you to define how the GPS module operates. You can determine when the GPS module is powered and operating, and choose from a set of GPS profiles built into the modem.

3.2.3.1 How to activate and inactivate GPS

Tap on Start>Programs>mGPSCmd
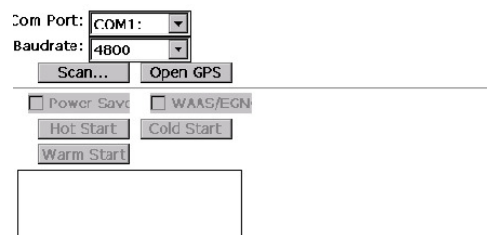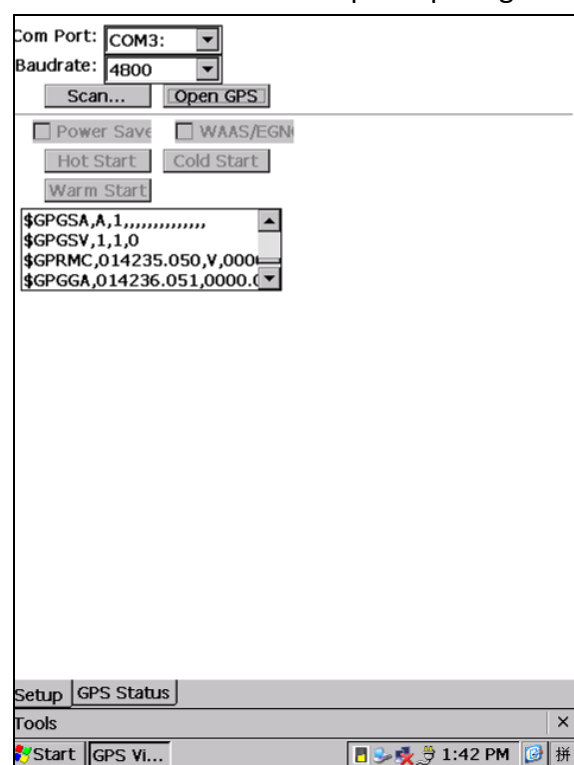
3.2.3.2 GPS Setting

Choose "COM3" for Com Port and "4800" for Baudrate
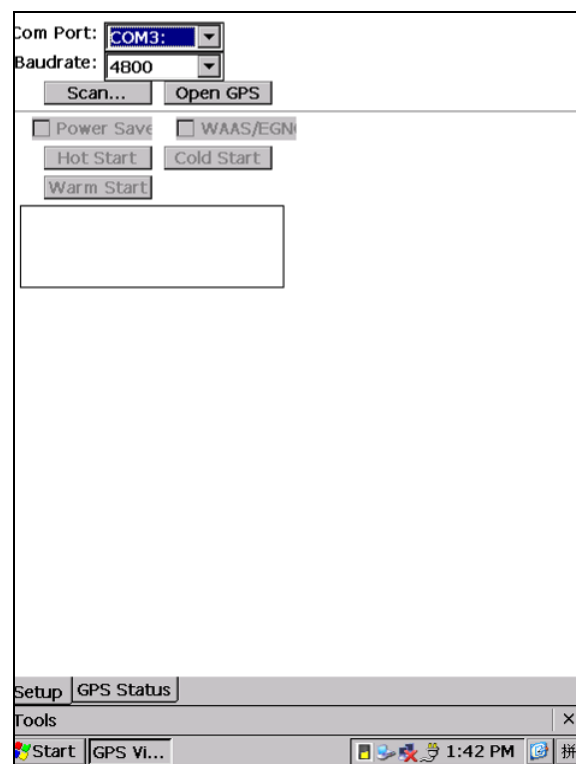
Click "Open GPS" and GPS values will start to be read.
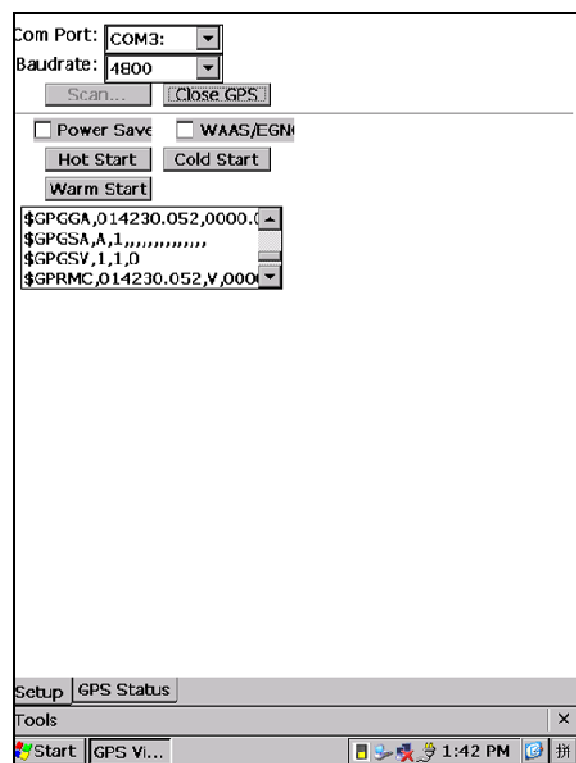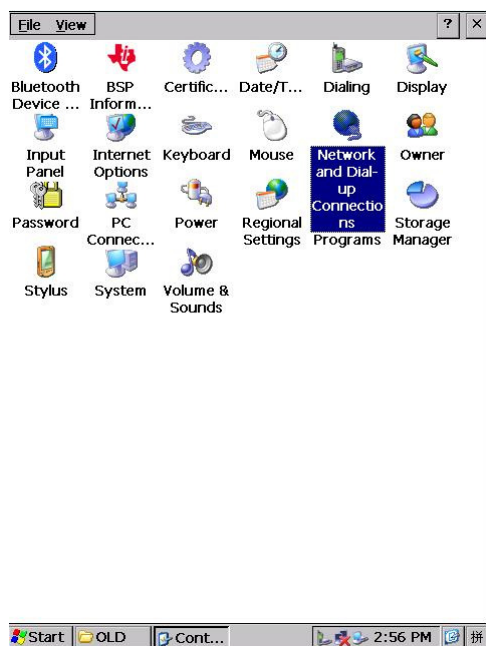
Click" Close GPS" to end up computing

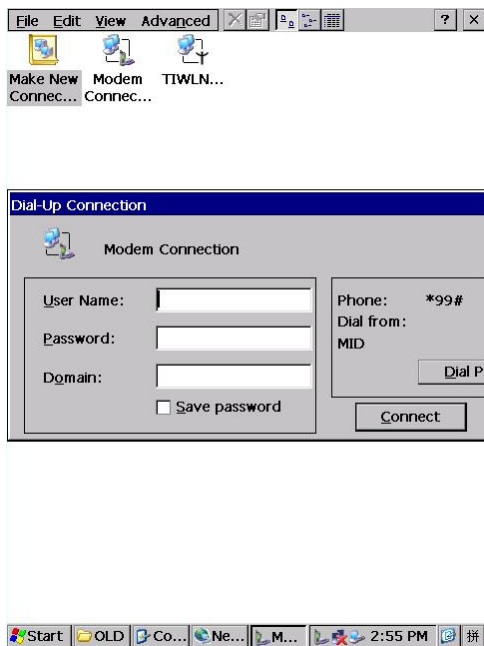
3.2.3.3   Check GPS status
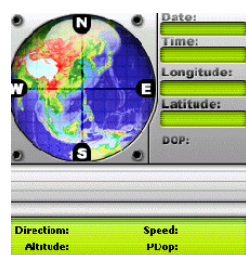
3.2.4 3G Module

3.2.4.1 How to activate and inactivate 3G module

Tap on Start> Settings> Control Panel> Network and Dial-up Connection
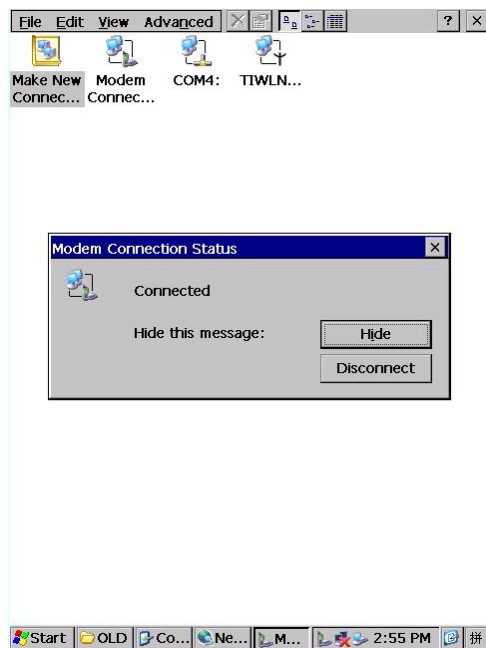

Tap on Start> Settings> Network and Dial-Up Connections
Select "Modem Connection" icon
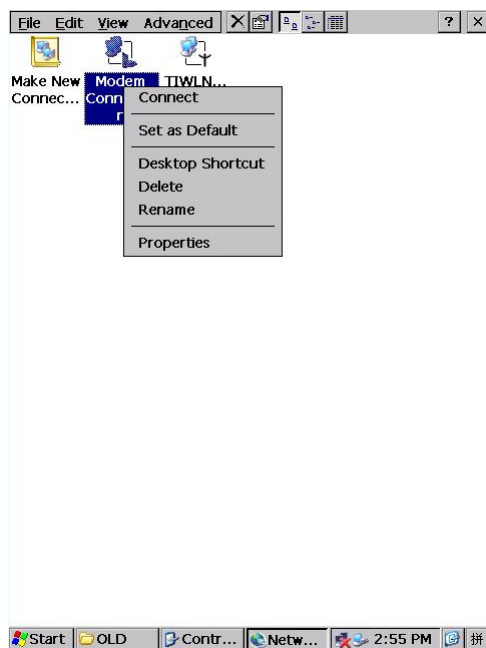
3.2.4.2 Make new connection

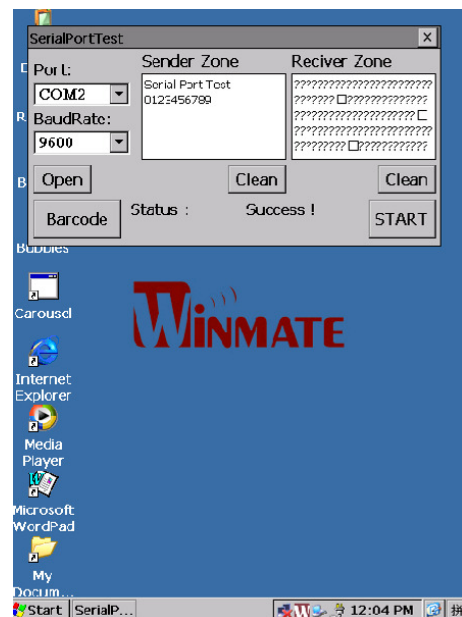### 3.2.4.3 Modem dial-up connection

3.2.5 RFID (Optional)

Tap on *Start> Programs> Serial_Port_Test*

Click "Open" tab to start calculating and the value will be in Receiver Zone.

3.2.6 Barcode Reader (Optional)

Tap on *Start> Programs> Serial_Port_Test*

Click "Barcode" tab to start calculating and the value will be in Receiver Zone.