

Attaching and Detaching the Main Battery

➤ Battery Detachment

These image as below has shown the bottom of device
Please slide the battery latch to the right (Direction to **UNLOCK**), and then lift the main battery to detach the main battery after grapping the gap of battery on the bottom.



Battery Latch



Both Side of the Gap
For detachment

➤ Battery Attachment

Please put the top of the battery into the above gap of device and then, push the bottom of battery into the below gap of device and then, slide the lever to right (Direction to **LOCK**).



Above gap for
Attachment
/ Top of the battery



Charging the Battery

You have to charge it through dedicated adapter which is provided when you bought. Red light is lit on LED when it starts to charge. It will be changed into green light in case of full charging.

➤ Connecting the Adapter

1. Plug the adapter cable to 220V socket.
2. Connect adapter DC cable with "Power Connecting Jack"
3. LED will be changed when the red light is lit on the LED



◆ Caution:

You must use provided adapter with device. Otherwise your device might be damaged.

Power ON / OFF

In case that there is window screen as below or you don't use the system in the status of running other program, the device is able to enter the low-power mode (Sleep mode). If you want to use it again, please press the <POWER> button.



ICON Mark: Show the present state of system.

Start Button: Activate the start menu and then, execute a program.

➤ Power –ON/OFF by <Power> button



Power Button

Power-OFF:

1. When the system is in booting status, press <Power> button for 2~3 seconds, then the screen will be turned off and enter the low-power mode (sleep mode).

Power-ON:

1. When the system is in off status, press <Power> button just a moment, then screen will be turned on and start the system.
2. System will automatically be turned on if it is connected with USB cable for ActiveSync

● NOTE:

If there was a tiny battery gauge remained despite of power-off, the data of RAM will be saved, and these programs will be recovered in case of power-on. If both main battery and backup battery are in the discharge state, the RAM data will disappear, and the system will be re-starting if the power is charged again.

➤ Automatic Power-OFF

The device will be automatically entered to low-power mode (Sleep mode) if user does not use it for the designated time. User can change the designated time at the control panel and power as below. If user sets proper time-out, the device can be protected from the situation of power-on without user and battery can be prolonged.

[START BUTTON] -> [SETTINGS] -> [POWER] -> [ADVANCED]



Icon for POWER Indication



- User can enter the above screen in case of double clicking the icon of <Power indication>
- System can be turned on in case of low-power mode by pushing the <POWER> button



➤ Turn Off the Device in Case of Discharging the Battery

If the system cannot be used by electric discharge, it will be automatically entered into low-power mode (sleep mode). In this case, user have to charge the main battery or connect the adaptor with the adaptor connecting jack of main body, then press the <Power> button to turn on the system since it won't be turned on despite of pressing the <POWER> button.

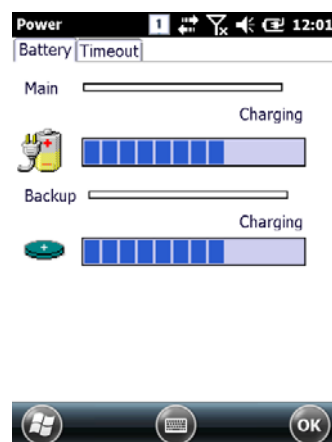
Checking Battery Gauge

● NOTE:

Using time for battery will be influenced by way of use, surrounding environment. In general, you can use the device from 6 hours to 12 hours after 2200 mA battery is fully charged.

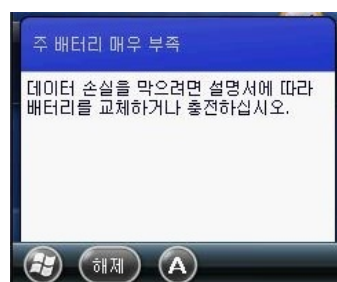
➤ Checking the Gauge Remained

[START] -> [SETTINGS] -> [POWER] -> [BATTERY]



➤ Caution for Low Battery

If the system is unavailable for low-battery, caution screen for lack of battery will be came out. In this situation, please turn off the device by pushing <POWER> button and then charge as soon as possible.



Back-up Battery

Back-up battery is used for protecting the RAM data in case of discharging the main battery

◆ CAUTION:

RAM data will be disappeared if both main and back-up battery completely discharge. Activated RAM data will be disappeared at the running program and the system will restart in case of inputting the power instead of recovering.

Changing the Battery

You need to purchase a new battery if existing battery got damaged or reached to its life

■ CAUTION!

Please discard the expired battery at the designated location

2. System Reset

Please do restart the system when the application doesn't work properly or system receives no response

2.1 SOFT RESET

In need of Soft reset,

There is a Hang-up, which means that the system receives no response in case of running the program. When user encounters Hang-up, please do reset the system for recovering the device. Please note that warm reset can make the program terminate and clear the using memory. But it doesn't influence on installed program and data etc.

[Process of Soft Reset]

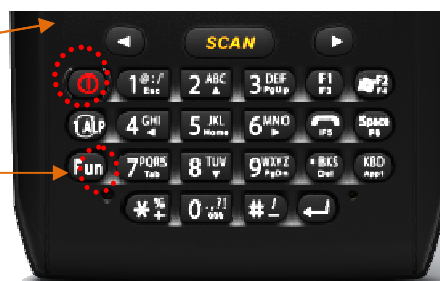
Please press the Reset button which is located on the device with stylus pen for a moment. The system will be restarted after turning off the screen just a moment automatically.

[Result of Soft Reset]

- System will be restarted.
- OS will be restarted.
- Screen will be reshown after 10 seconds
- Adjusted registry information, copied file and installed program will be remained

POWER
BUTTON

RESET
BUTTON



2.2 HARD RESET

In need of Hard reset

Hard reset which is called cold reset can be used for initializing the hardware completely. Registry value, copied file and installed program can be remained originally even though user uses the hard reset, but please note that time/date will be initialized. Therefore, please do reset the time if user uses the hard reset

Please use hard reset if it is impossible to recover the system despite of soft reset

[Process of Hard Reset]

Please press the Power button and reset button with stylus pen simultaneously and then, unhand those buttons.

[Result of Hard Reset]

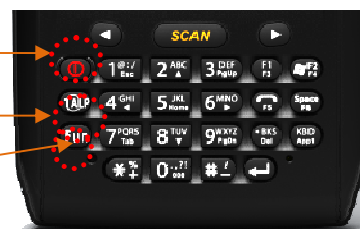
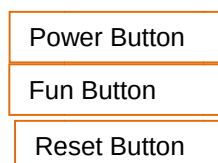
- System will be restarted.
- OS will be restarted.
- Screen will be reshown
- There are setting screen of time / date and user have to reset the setting of time and date.

2.3 Initializing the System

Please use [Boot Menu] when user encounters below situation

1. When user wants to recover the adjusted registry information back again.
2. When user wants to initialize the storage space inside the "My Computer"
3. When user wants to initialize the storage space inside the "Flash Disk"
4. When user wants to make system a comeback as the state of beginning

Press <Fun> button and press <RESET> button simultaneously



[Boot Menu] is came out at the screen after 2 ~ 3 seconds as below

[Boot Menu]	
1. SD Image Update	
2. Clean On Exit (No)	
3. Factory Reset	
0. Exit	

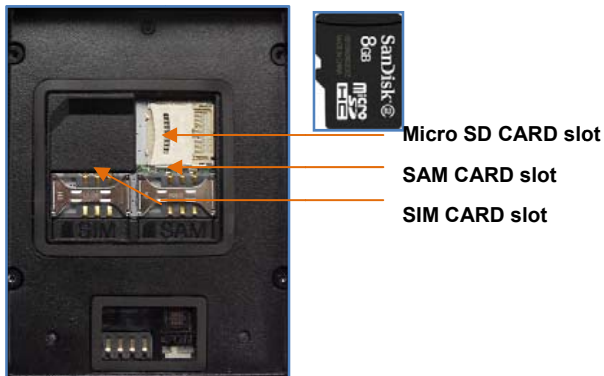
- Enter the left screen even if user double clicks the <Power> icon
- System will be turned on if user push the Power button even though device has been entered into the sleep mode by automatic power off

[[Boot Menu] Initial Screen

- **SD Image Update**
Update the image (boot, OS) by SD Card
- **Clean On Exit**
Function for recovery of My device, registry as a state of beginning
- **Factory Reset**
Function for recovery of My device, registry, Flash Folder as a state of beginning
- **Exit**
Boot Menu Termination

3. Use of Micro SD, SIM, SAM CARD

Below image shows the back side of device when separating the main battery from device
There are 1EA SIM Card Slot, 3EA SAM Card Slot and 1EA Micro SD Card Slot.



3.1 Installing Micro SD CARD



Do unlock the Micro SD CARD by sliding the card slot cover right side



Lift the slot cover up



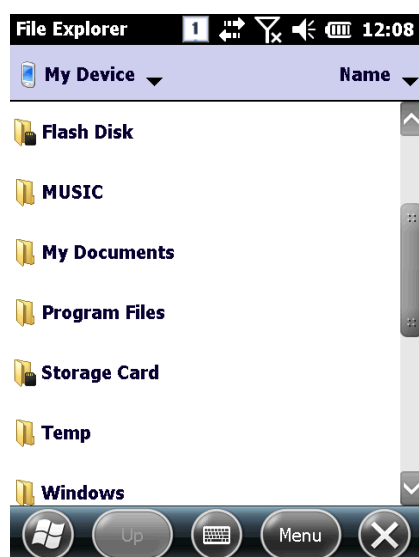
Put the SD memory on the slot and then, shut the cover up



Do lock the slot cover by sliding it to left side and then, turn on the device after equipping the battery

SD MMC CARD folder will be shown if user implements the file explorer after inserting the Micro SD memory card as below image

[START] -> [File Explorer]



3.2 Installing SIM CARD and SAM CARD

Below image shows the state of equipping the SAM CARD and SAM CARD with device.
Please do insert it in accordance with card shape and edge shape



4. Individual Environment Setting

4.1 Phone Password Setting

User can set a limitation on use of phone by setting with password for USIM card for prevention from stranger's use

[PINSetting Method]

[START] -> [SETTINGS] -> [PERSONEL] -> [PHONE] -> [SECURITY]

Use of Password

Password Change

Please select the "Require PIN when phone is used" when using password and then, input the 4-digit password at the password input screen and then, press <Enter> Button



◆ Caution:

- PIN Code is set with '0000' to protect USIM card information
It can be changed by user's preference
- PUK Code is USIM unlock code, in case that user continuously enters incorrect PIN in 3 times (8 Digit)
This code is marked on envelop or body in case of purchasing USIM CARD Please note the USIM card would be impossible to use when user continuously enters incorrect password in 10 times

4.2 User Information

User can set up the his/her information (Name, Corporation, Address, E-mail) & Memo

[User Information Setting Method]

[START] -> [SETTINGS] -> [PERSONNEL] -> [IDENTIFICATION]

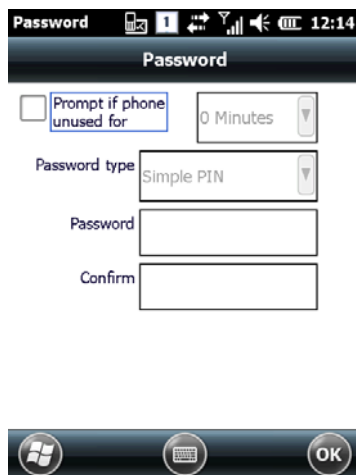


4.3 LOCK

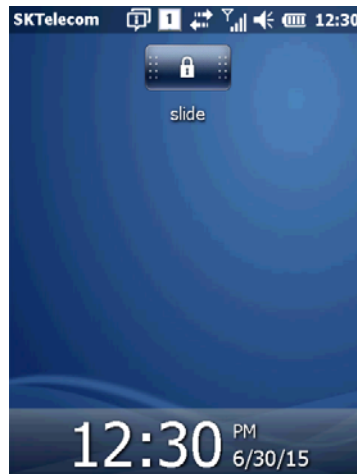
User can set up the device as lock status for protecting data from device
Device is converted with lock status for a predetermined time and user has to input the password for unlocking the device.

[Lock Setting Method]

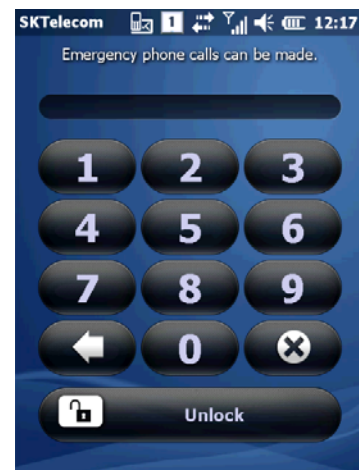
[START] -> [SETTINGS] -> [LOCK]



LOCK SETTING SCREEN



LOCK SCREEN



PASSWORD INPUT
SCREEN

5. System Configuration

5.1 Memory

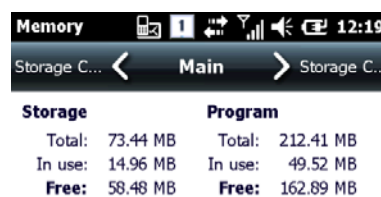
User can verify the volume of memory

[Memory Checking Method]

[START] -> [SETTINGS] -> [SYSTEM] -> [MEMORY]

Main Memory: User can verify the remained and used volume

Storage Card: User can verify the volume of SD card and Flash section



Storage	Program
Total: 73.44 MB	Total: 212.41 MB
In use: 14.96 MB	In use: 49.52 MB
Free: 58.48 MB	Free: 162.89 MB

5.2 Task Manger

User can verify the volume of running program list and memory

[Task Manager Method]

[START] -> [SETTINGS] -> [SYSTEM] -> [TASK MANAGER]

User can make device stop by selecting the running program at the list



[Find large files using storage memory.](#)

Application	Mem	CPU
ActiveSync	628K	0 %
Task Manager	88.0K	5 %

5.3 Program Removal

Program list will be marked on the screen without basic program

[Program Removal Method]

[START] -> [SETTING] -> [SYSTEM] -> [PROGRAM REMOVAL]

User can remove the program by selecting the program at the list



Remove

Programs in storage memory:

ATID DemoApps_20150306a
SOTI Pocket Controller Enterprise
ATID _SDK_WM_20150306b

Remove

Total storage memory available: 59816K

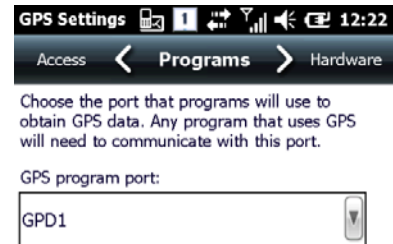
5.4 GPS

User can set up the GPS port inside of device

[GPS Setting Method]

[START] -> [SETTINGS] -> [SYSTEM] -> [GPS]

No need to do other set-up since there is basic GPS port which is already used



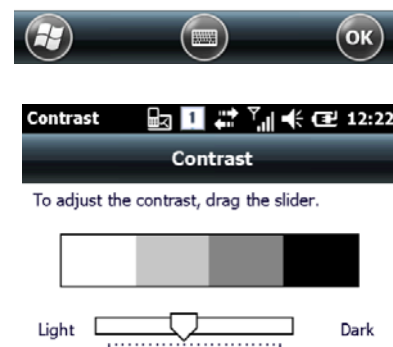
5.5 Brightness Setting

At the beginning, brightness is set up with around 70 %

[Brightness Setting Method]

[START] -> [SETTINGS] -> [SYSTEM] -> [CONTRAST]

Brightness: User can control the screen brightness



5.6 Brightness On/Off Setting

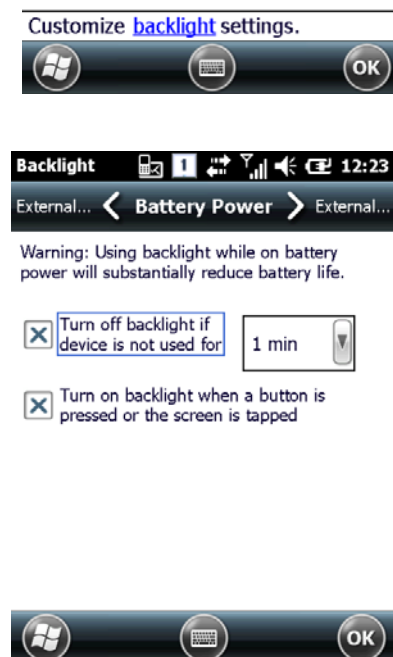
It can be adjusted by user's preference since it has influenced on battery consumption

Time out for screen off can be set up with user's preference

[START] -> [SETTINGS] -> [SYSTEM] -> [BACKLIGHT]

Battery Power: Turn Off/On backlight if device uses battery power

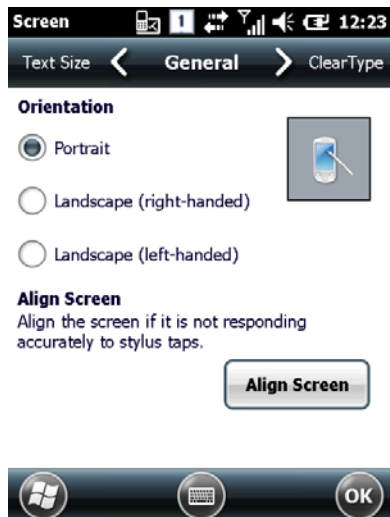
External Power: Turn Off/On backlight if device uses external power



5.7 Screen Adjustment

Please readjust the coordinate correction value in case that user uses the device at the beginning or for long period if the screen point cannot be selected by stylus pen.

[Start] -> [Settings] -> [System] -> [Screen] -> [Align Screen]



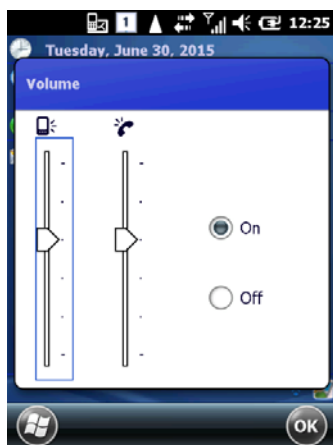
align screen

Using a stylus, tap the target firmly and accurately at each location on the screen. The target will continue to move until the screen is aligned.



5.8 Volume Settings

User can set up the volume



Volume Setting Icon



- User can adjust the volume using left side button (Hardware)

5.9 Sound & Notification Setting

User can set up the vibration, sounds and notification ON/OFF

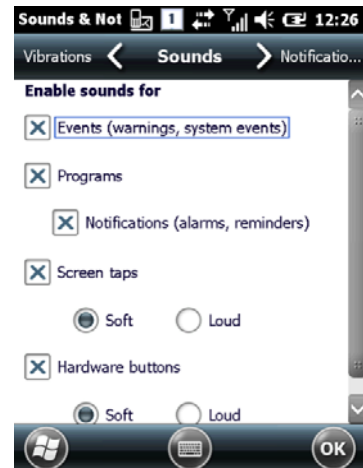
[Alarm & Sound Setting Method]

[Start] → [Settings] → [Sound & Notification]

Vibration: Vibration Amplitude settings

Sounds: Sound event settings

Notification: Ringtone settings



5.10 Clock & Alarms Setting

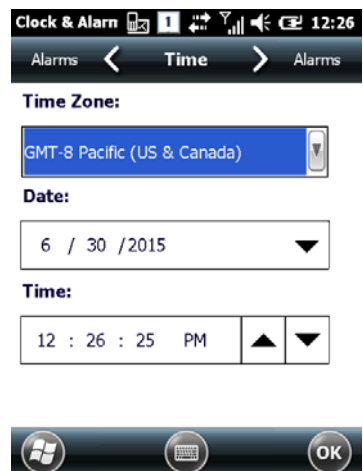
User can set up the time, date and alarms

[Clock & Alarm Setting Method]

[Start] → [Settings] → [Clock & Alarms]

Time: Date and Time settings.

Alarms: Alarm settings.



5.11 Wireless Manager

User can turn on/off the Bluetooth, WiFi, phone function

[Wireless Manager Setting Method]

[Start] -> [Settings] -> [Connection] -> [Wireless Manager]

All: WiFi, Bluetooth, phone function can be turned on/off simultaneously
Separate Selection: WiFi, Bluetooth, phone function can be turned on/off separately



- It can be differently expressed by option



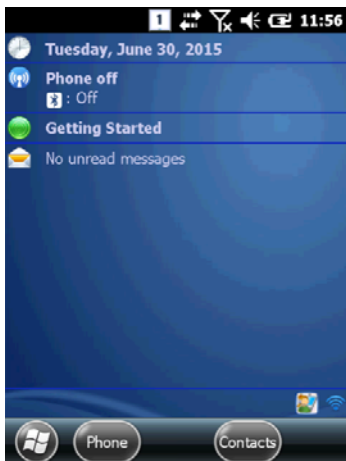
6. Use of Keypad

Using the keypad, characters, numbers, alphabets etc. can be easily typed in the handheld device. Also, using the <Fun> together, keypad can be used in different ways.

6.1 Use of Keypad

Please press the <1 ALP> button as below step if user wants to change the input language

It will be converted in the order of [Number] -> [Small Letter] -> [Capital Letter]



If user clicks icon on the task bar, input mode will be converted

6.2 Data Input

Number Keypad mode: Press the <1 ALP> button or input language icon on the task bar to change the number keypad mode

Letter Keypad mode: Press the <1 ALP> button or input language icon on the task bar to change the small or capital letter and then, input the word you want. There is 2~3 word or symbol in a button. First word can be putted into the device at one time, second word can be putted into the device at two times simultaneously, third one can be putted into the device at the three times to push simultaneously.

6.3 Device Configuration & Function Execution Using keypad

<Fun>If the keypad button is pressed together with <Fun>, functions that are preset in advance will be performed.

Fun + Button	Description
<Esc>	It is able to cancel the selected command and movement & state of program.
Left side of <↑>, <↓>	It uses for sound control
<3>, <9>	It uses for page UP / DOWN.
<2>, <4>, <5>, <6>, <8>	Key button for right and left and top and bottom.
<Del>	It deletes the letter behind the cursor
<7>	It can be used Tab button
<*>, <0>, <#>	It inputs the + sign, 000 sign and –sign.
<F3>, <F4>	It uses for function button

7. Use of Stylus

User is able to use stylus pen that has same function with computer mouse and it can be used in connection with hand strap hole located on back bottom side of PDA.



Use of Stylus

- Setting Direction of Screen Display
- Selection of letter on the soft keypad
- Applied program on the main screen or task bar
- Selection of button, field and tap at the applied program and dialog box

◆ CAUTION:

There is a danger of getting damaged if you use any other sharp objects except for provided stylus pen since it is very sensitive one

8. ActiveSync

Using the ActiveSync, the handheld device can connect to PC for data transfer, copy, installation, and move etc. via synchronizing the device with PC.

8.1 Microsoft ActiveSync Installation

Microsoft **Windows CE**. Download the latest version and install it on PC.

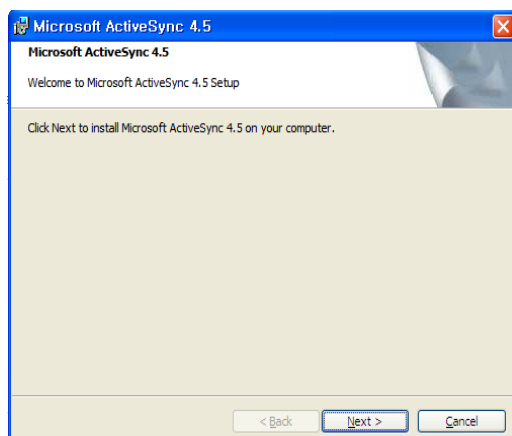
ActiveSync: Windows XP

Windows Mobile Device Center 6.1 (64bit) : Windows XP or later version

Download link: <http://www.microsoft.com/downloads/>.

◆ Caution:

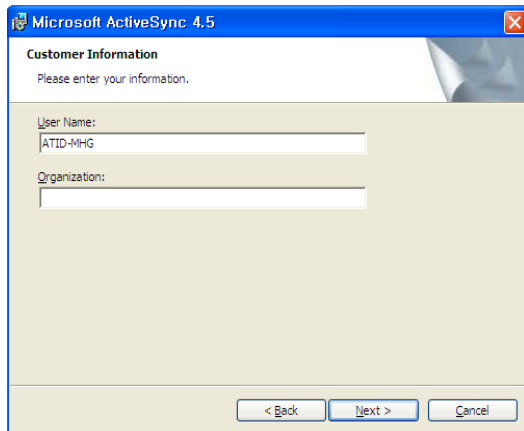
To synchronize via ActiveSync, Microsoft ActiveSync 3.7 or later version must be used.



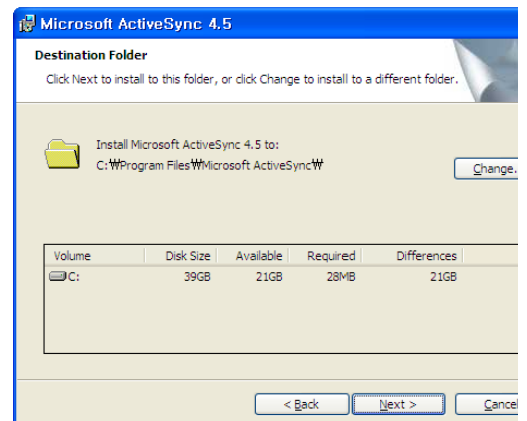
Click on the Next.



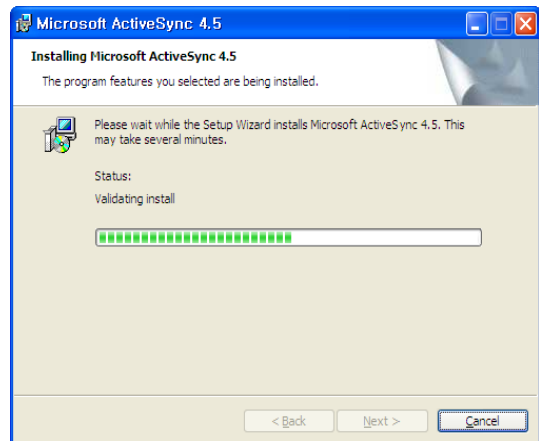
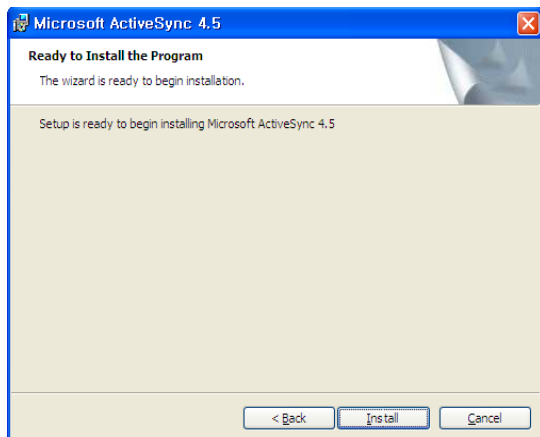
Click on Agree and then Next to continue.



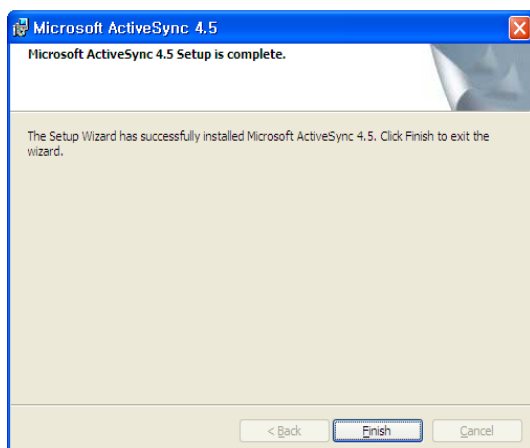
Enter the user name and company and click Next.



Choose the installation directory and click Next.



Click on ActiveSync button to continue.



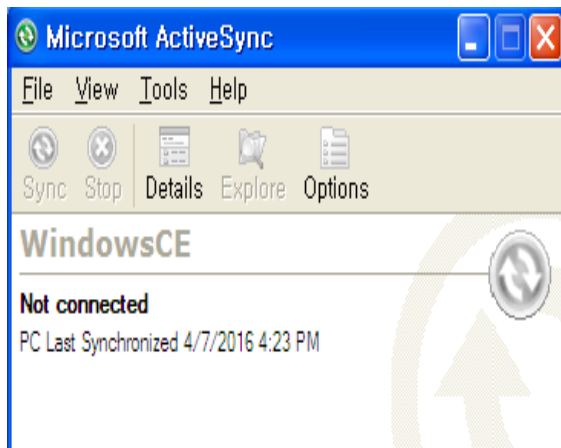
Click Finish to complete the installation.

8.2 Connection settings for PC

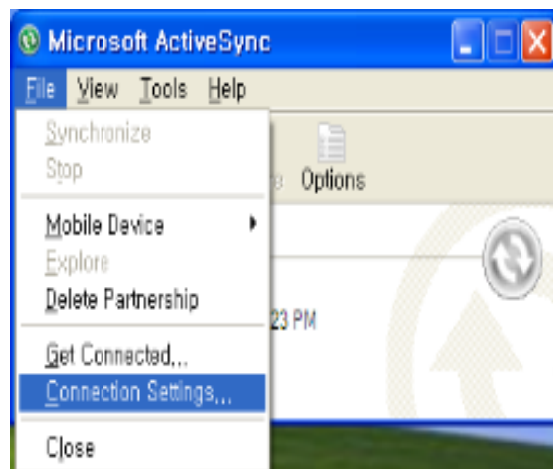
PC settings

[Start] -> [Program]-> [Microsoft ActiveSync]

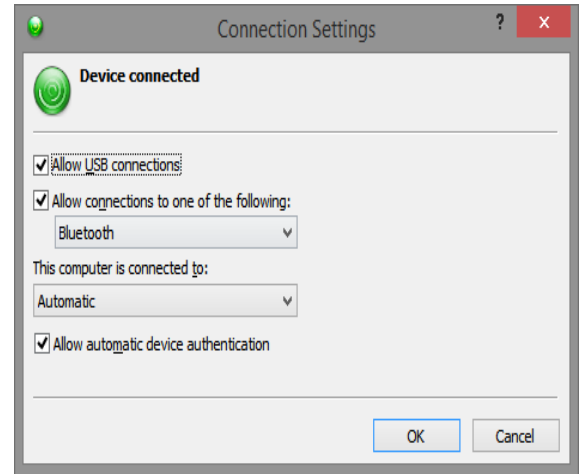
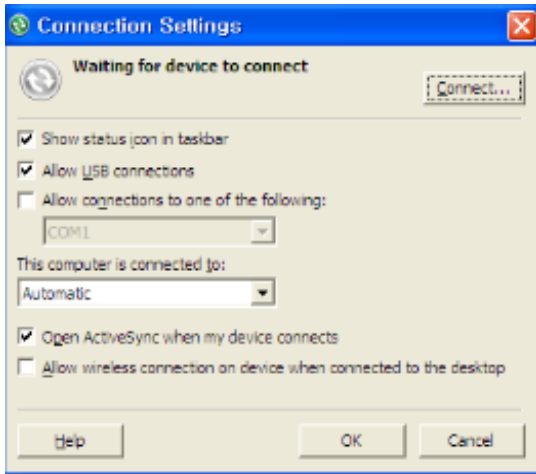
<Windows XP< Win7 / Vista >



ActiveSync program screen.



Click on the Connection settings.



After checking on Allow USB Sync cable connection, click OK to continue.

8.3 Data Transfer

Connect to PC via USB.



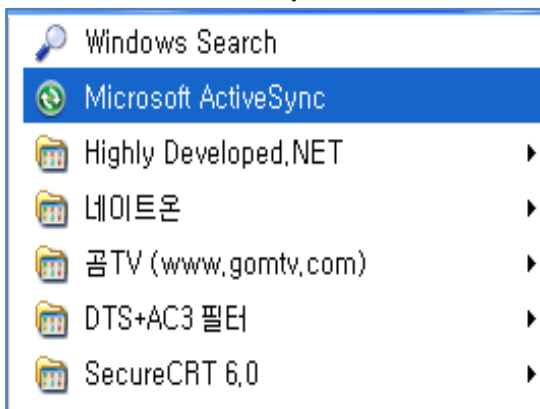
Connected state



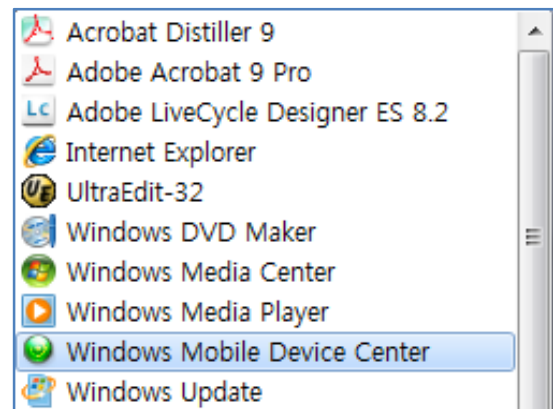
Disconnected state

Can check on the ActiveSync connection status in task bar.

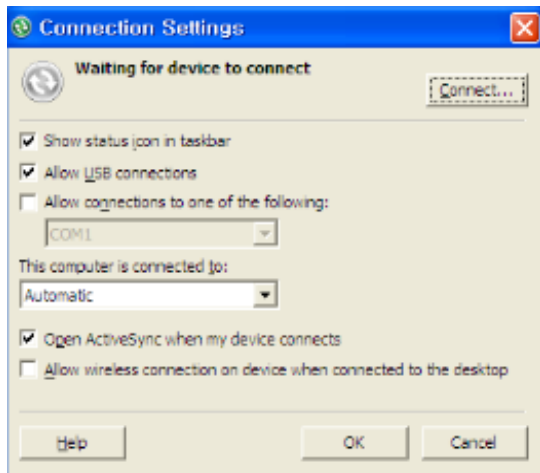
< Windows Xp>< Win7 / Vista >



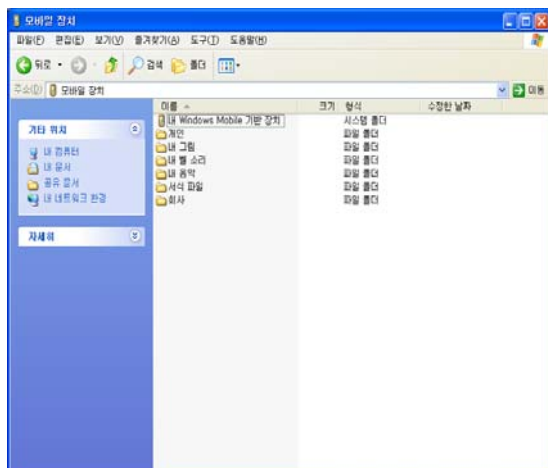
Go to Start – Program – Microsoft ActiveSync.



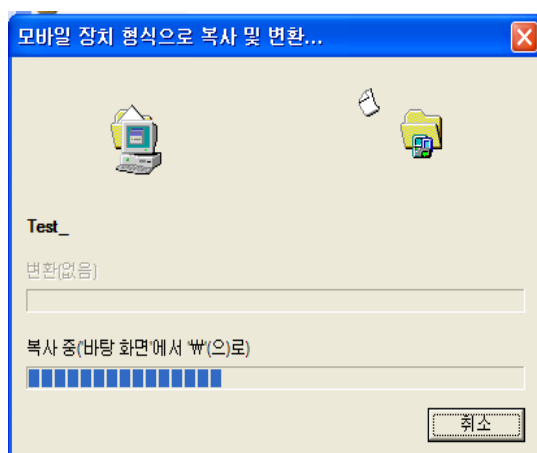
Go to Start – Program – Windows Mobile Device Center.



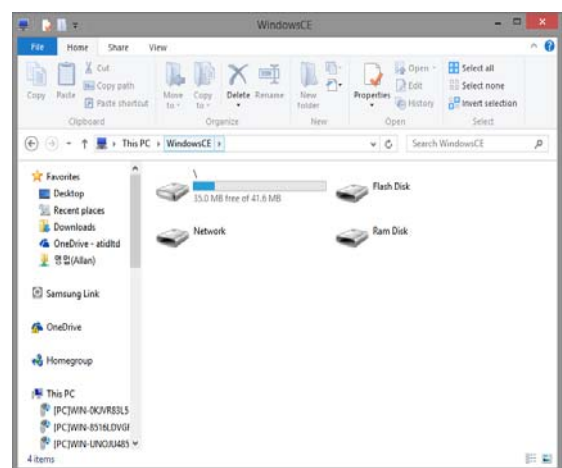
When ActiveSync is connected, click on the explorer menu.



File/Directory screen.



When ActiveSync is connected, click on the device search icon.



Data transfer screen.

Chapter 4. Optional Module

This chapter shows various option module which can be equipped in AT870N. Please refer to the explanation of optional module.

Option Module for AT870N

AT870N provides below option types with user in accordance with use of purpose. Please do check this option types before buying AT870N since its option is specification for AT870N.

Option types for AT870N

- 1) Barcode Reader
 - 1D Laser Barcode Scanner
 - 2D Imager Barcode Scanner
- 2) Wireless LAN – 801.11 a/ b/g
- 3) Bluetooth
- 4) UHF 900 M – Gen 2 Full Function
ISO18000 6C (Only Tag UID Reader)
- 5) RF 13.56 – Mifare, ISO15693
- 6) GPS Module
- 7) Phone
- 8) Camera

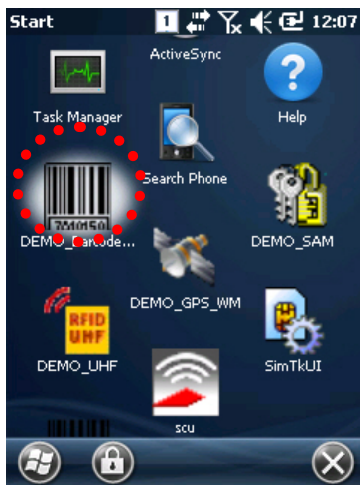
1. Using 1D or 2D Barcode Scanner

AT870N can be equipped with 1D & 2D barcode scanner.



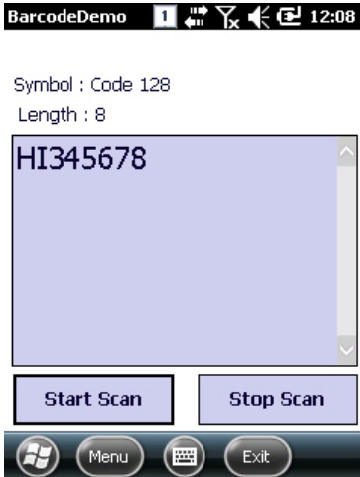
1.1 Barcode Reading

Read barcodes or set decoding option using the Barcode scanner.



Run Application

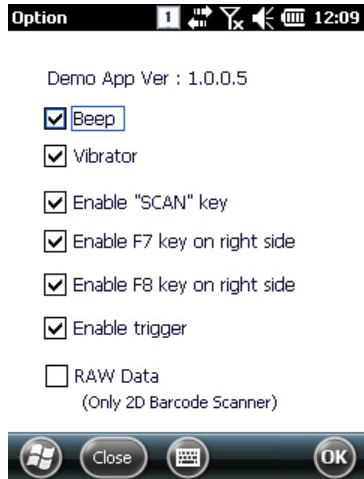
- [Start Button] -> Run [DEMO_BarcodeScan]



Main Window

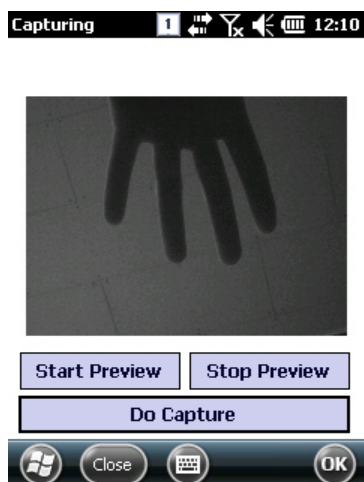
- Start Scan: Start barcode scanning.
- Stop Scan: Stop barcode scanning.
- Symbol: Type name of the read barcode
- Length: Length of the read barcode
- Menu: Application Menu pop-up.
- Exit: Exit application.

- SymbologyConfig : Decoding option settings.



Option window

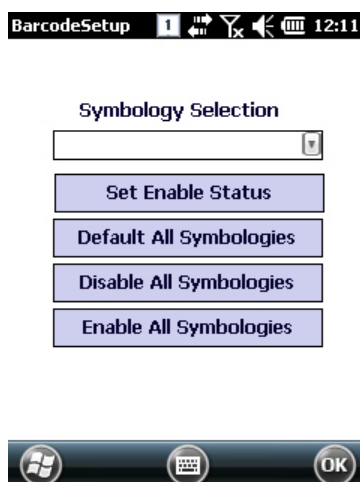
- Beep: When the scan is successful, beep sound is made.
- Vibrator: When the scan is successful, vibrator works.
- Enable "SCAN" key: "SCAN" key setting.
- Enable F7 key on right side: F7 key setting.
- Enable F8 key on right side: F9 key setting
- Enable trigger: Gun Trigger key setting
- RAW Data: Scan results are displayed in raw data format.
Only supported in 2D scanner.



Capturing window

- Start Preview: Preview started with 2D scanner
- Stop Preview: Preview stopped
- Do Capture: Save the captured screen

- the specific barcode type
- Set Enable/Disable Status: Symbologies
 - Default All Symbologies : setting
 - Disable All Symbologies :
 - Enable All Symbologies :



SymbologyConfig window

- SymbologySelection: Set up

Enable or Disable status of All

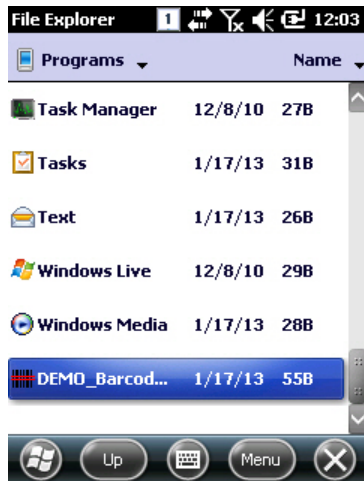
Set All Symbology as default

Disable All Symbology
Enable All Symbology

1.2 Setting Barcode Emulator

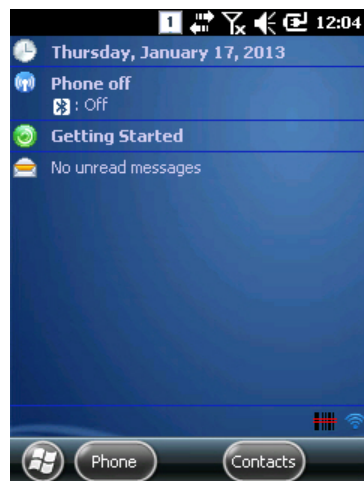
Can input the read barcode values (Notes, Internet Explorer...) where the cursors are located.
Sets the barcode value input method, scan button, scan sound etc. using Barcode Emulator program.

When opening the Barcode Emulator, if other Barcode programs are being run, please close the program first to run the Barcode Emulator.



Opening Application

- [Start Button] -> [File Explorer] -> [My Device] -> [Program Files]
-> [ATID_DemoApps] -> BarcodeEmulatorWM.exe



Running Application.

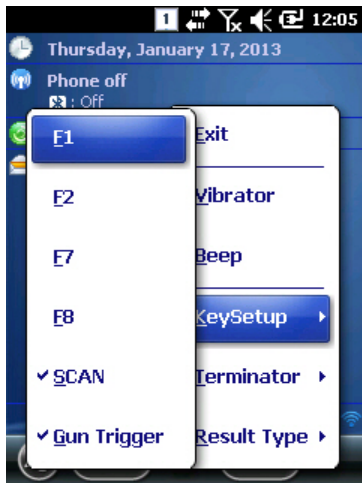
- When running the application, barcode scan icon is created at the bottom-right corner of the screen. And Barcode scan is enabled.

- By clicking on the Barcode Icon, Main Menu pops up and the settings can be changed.



Emulator Main Menu

- Exit: Exit Application
- Vibrator: When the scan is successful, vibrator works
- Beep: When the scan is successful, beep sound is made
- Key Setup: Sets Barcode scan keys
- Terminator: Selects the special character to be added to the barcode values
- Result Type: Selects the output type of the Barcode value



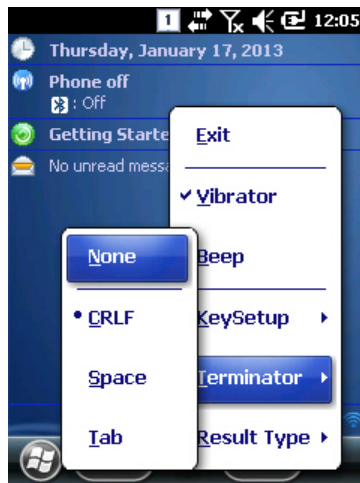
Key Setup

Below keys can be selected together.

- F1: Starts the scanning when F1 button is pressed
- F2: Starts the scanning when F2 button is pressed
- F7: Starts the scanning when F7 button is pressed
- F8: Starts the scanning when F8 button is pressed
- SCAN: Starts the scanning when SCAN button is pressed
- Gun Trigger: Starts the scanning when Gun Trigger is pressed

characters to the scanned
Select one of the below

- None: No Terminator used.
- CRLF: CarriageReturn/LineFeed added at the end of the values.
- Space: Space added at the end of the scanned values.
- Tab: Tab character added at the end of the scanned values.

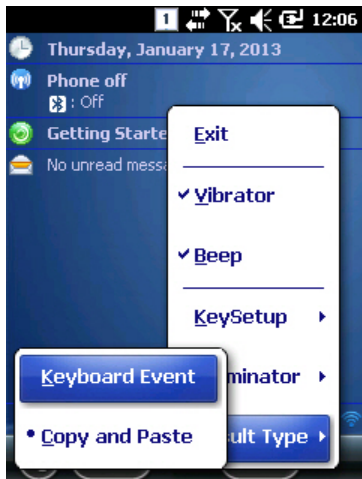


Terminator

Settings for adding special values.

CRLF: CarriageReturn/LineFeed scanned

end of the scanned values.
the end of the scanned values.



Result Type

Sets the how the barcode result is displayed
Select one of the below type.

- Keyboard Event: Displays the Barcode results via using Keyboard Event.
- Copy and Paste: Copy onto the Clipboard and paste to the screen.

CAUTION!

Do not use it to human eyes directly since laser beam is harmful to health.

1.3 Barcode Scanning

1. Remove the protect film in front of the scanner.
2. Run **BarcodeDemo**.
3. Point the scan beam to center of the barcode.
 - Adjust the distance in accordance with the barcode size.
 - The beam will automatically be stopped if the pointer deviates from the barcode for 5 seconds.

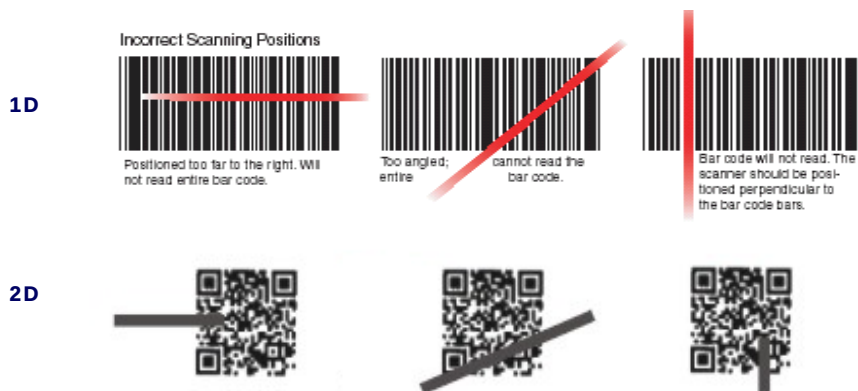
[Correct way to read the barcode]

1. Please bring it close to barcode in case of smaller barcode. This device can read the barcode in range of 40~300mm. If you have failure to read the barcode, please do check the angle and range.
2. Laser beam will be shown up as a clear red line when using it at the barcode



[Wrong way to read the barcode]

1. Laser beam have to be crossed in the barcode
2. If laser beam partly will be shown up on the barcode, it doesn't work well.



2. WiFi

2.1 WiFi On /Off

WiFi is turned off before its dispatch. Turn on the WiFi to use the WiFi.

[Settings]

[Start] -> [Setting] -> [System] -> [WiFi Power]

Off: Turn off WiFi.

On: Turn on WiFi.



2.2 WiFi function On /Off

WiFi function can be set On/Off.
First, WiFi power needs to be on.

[Settings]

[Start] -> [Setting] -> [System] -> [WiFi Power]



Wi-Fi Off, turns off WiFi function

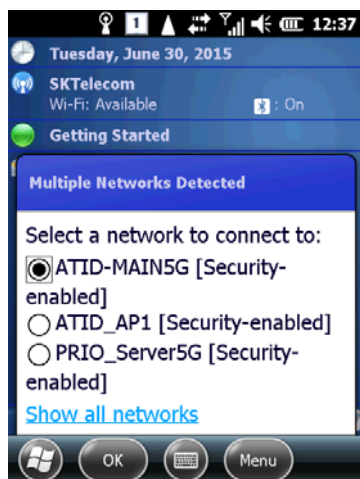


Wi-Fi On, turns on WiFi function

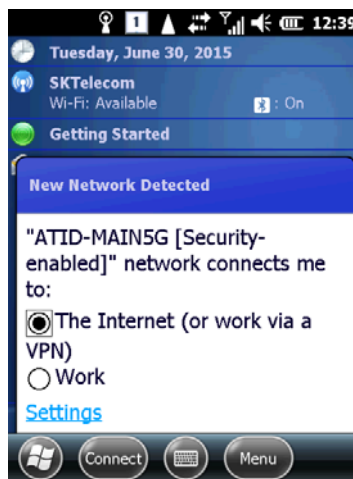
2.3 Connecting to WiFi AP

1. How to connect to AP (1)

When you turn on WiFi, AP list is displayed automatically.



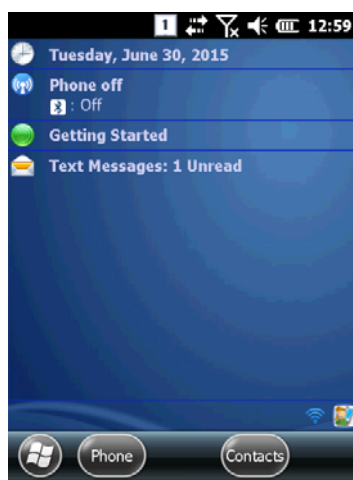
Select the AP for connection, then Click Ok.



Click Connect



Enter the network key.

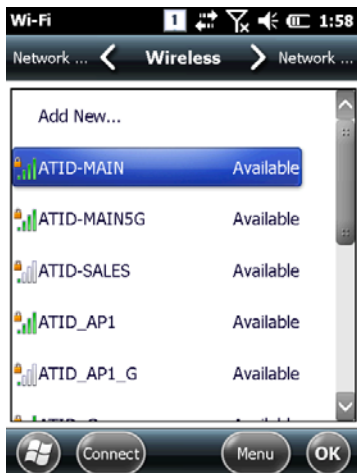


AP connection completed.

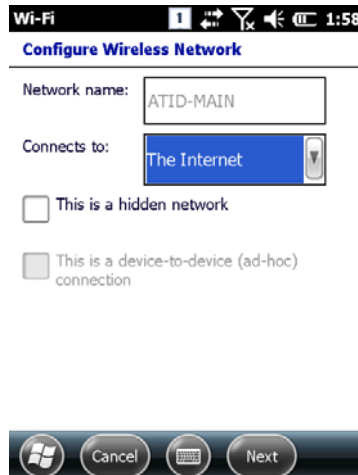
2. How to connect to AP (2)

Connecting to AP via Wireless Network Configuration.

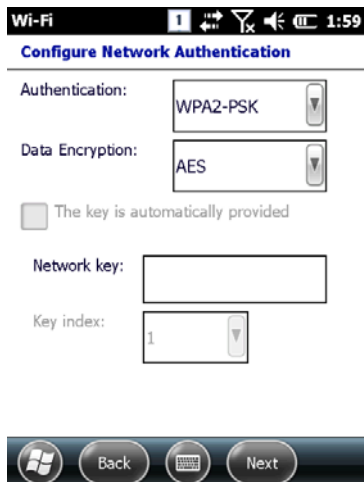
[Start] -> [Setting] -> [Connection] -> [Network card]



Select the network from the AP list.



Click Next.



Click Finish



Connecting to AP.

3. Bluetooth

AT870N of Windows Mobile is designed to be able to use Bluetooth Stack Service. The following part of the guide describes about Paring and Disconnection of Bluetooth. In addition, Mobile Printer SPR-R203 of Bixolon is used for test demonstration.

** Pairing is possible with total of 6 devices, but COM port allocation of COM2 and COM7 is maximum limit.

3.1 Bluetooth On/Off

1. Bluetooth Power On/Off

[How to Turn on/Off]

[Start] -> [Setting] -> [Bluetooth] -> [Mode]

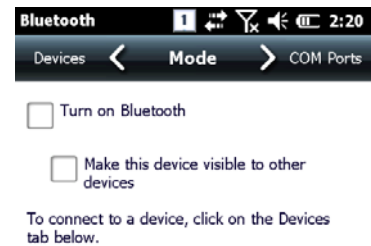
Turning on Bluetooth

: Click on the checkbox to turn on Bluetooth.

- Checked: Bluetooth On
- Not Checked: Bluetooth Off

Click

Click



Allowing other devices to search for the handheld.

: Click on the checkbox to make the handheld visible to other devices.

- Checked: Allow other devices to search for AT870N Bluetooth.
- Not Checked: Does not allow other devices to search for AT870N Bluetooth.



3.2 Bluetooth Pairing

Bluetooth power must be on before the pairing.

[How to Pair]

[Start] -> [Setting] -> [Bluetooth] -> [Devices]



Click on Add to search for the possible Bluetooth pairing devices.



Select the Pairing device from the list and click Next.

* In some cases, the devices might require to enter the PIN code before pairing.

