STM-7700™ Windows Mobile
USER MANUAL

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- Users must read the **PRECAUTIONS** before using the product.

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Proper Handling of the Device

To insure the smooth and safe usage of this product, read carefully the instructions detailed in this manual.

Using accessories other than those recommended and/or included in this product can cause accidents and product failures. Shinheung Precision Co. Ltd. Will not be responsible for such accidents and/or failures.

Bringing this product to unauthorized repair or service centers/shops will void the warranty. Please contact the manufacturer for any repair and maintenance needs.

Counterfeit mobile phone

This product is identified through its unique phone number (ESN: Electronic Serial Number). Illegally reproducing or changing this unique number is a criminal act under Article 347, and is punishable with less than 10 years of imprisonment or a fine of less than KRW 20 million. In addition, this illegal act voids the warrant of this product.

Wireless/Radio Equipment Inspection and Registration

- This product is inspected by and registered with the Ministry of Information & Communication.
- This product can not be modified that could cause changes in its performance that infringes on the conditions of the registration.

Proper Handling of the Device

- Avoid eye contact with the Barcode scanner. It can cause eye damage.
- Do not remove the battery while device is ON.
- Use only the specified battery charger. Using other chargers can cause damage to the battery and/or be a fire hazard.
- Do not make modifications to this product. This could cause fire, damage, electric shock, or serious injuries to users.
- Do not use this product near gas and other flammable liquid. This could cause explosion.
- Avoid using this product during lightning and thunder storms.
- Keep this product out of reach of children and animals.
- In places where wireless/radio communication is restricted (air flights, near medical equipments, or similar places), follow the instructions provided for by the authorities of such places.
- Do not leave this product in areas with high temperature and/or extreme temperature changes. Do not expose this product to direct sunlight. (Exposing this product to high temperature for long periods could cause explosion.)
- Avoid using this product in areas with high moisture level. Do not submerge this product under water.
- When subjecting this product to search equipment (x-ray machines) in airports, it is advisable to be aware of what is happening.

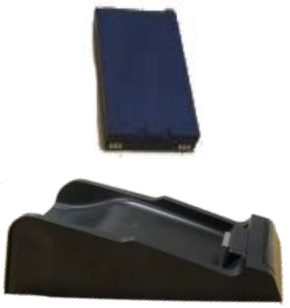
I

Before using the device...

I -1 Product Configuration

1) Basic product configuration

STM-7700
Main device



Battery &
Cradle

Power cord
& Adapter

2) Additional Product Configuration

Stylus Pen
& Connection Wire

USB Cable

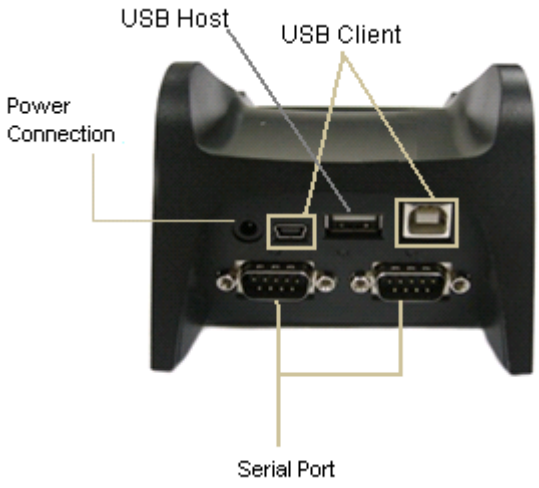
Printer
Thermal Paper

Specifications (Device)

1) Mobile Device Description

Specifications (Cradle)

2) Cradle Device Description



Charging the Battery

1) Charging the battery from the device

   Open the battery cover at the back of the device and place the battery into it. Place the device on the cradle and connect the power adapter with cord to the cradle to charge the battery.

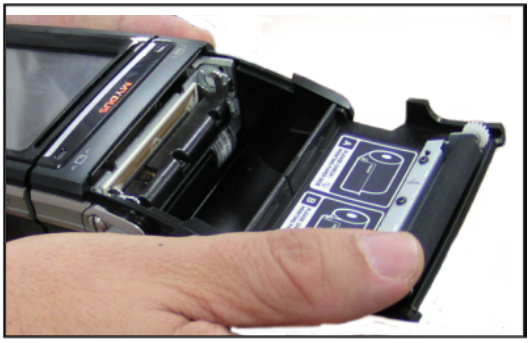
2) Separately charging the battery

   To charge the battery separately from the device, place the battery on the bottom of the cradle.

Caution : Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions

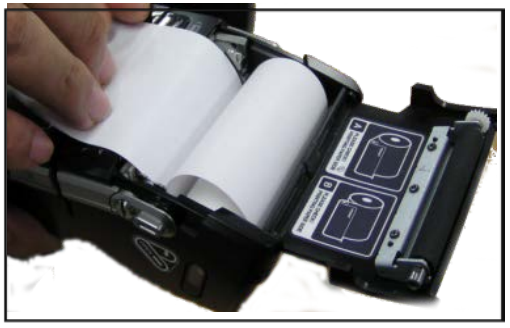
I -4 Replacing printer supplies – Thermal Paper

1) Open the printer cover by pressing down the printer cover lever that is found at the right side of the device.



2) Place the printer thermal roll paper into the printer as indicated by the picture instruction then close the printer cover.

Use thermal roll papers that conforms to the prescribed dimensions (2″).



Initialization

1) When the system does not response you may need to initialize the device by inserting the stylus into the reset hole found at the bottom of the device.

2) When initializing the device all files will be deleted/lost and all running programs will be terminated.

Backup all important files with the use of Micro SD cards before initialization (reset).

Ⅱ Getting Started

Ⅱ-1 Power On

- Insert the battery into the device, press and hold the PWR button until the device is powered ON.
- When the device is powered ON, pressing the PWR button again turns OFF the device.

If the device does not turn ON, check the battery for proper charging.

[Insert the battery]

Power On

▶ *Initial Setup or Reset*

The first time you power on your device or every system reset, it displays the Windows Mobile® screen which guides you through a series of startup procedures.

1. From the initial startup screen tap the screen using the stylus.

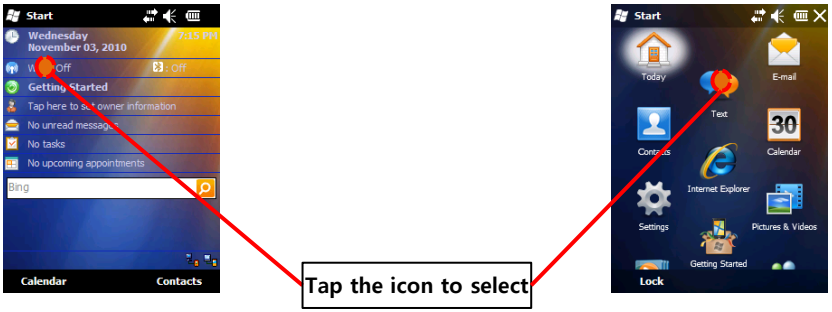
2. From the align screen, use your stylus to calibrate the touch accuracy of the screen by both accurately and firmly tapping the center of each target (crosshair). Repeat this process for every target that appears until completed.

Ⅱ-2 How to use the stylus pen

This section describes the basic use of the stylus pen in running or moving programs on the touch screen.

Only use stylus pen that comes with this product or recommended by Shinheung Precision. *Other stylus pen can damage this product.*

Tap: Selects an item (program) to run by tapping the stylus pen over the item's icon on the screen.



Scroll: Moving the stylus pen scrolls the page.

Screen description

▶ **Status Icon**

The task bar that you normally find at the top of the screen is similar to that of the PC Windows. The icons displayed on the task bar indicates the status of the application and/or device it represents.

Icon	Icon Description
	Battery Charge Level – Shows your current battery charge level. (Icon shown is fully charged.)
	Low battery – Shows your current battery charge level is low.
	Battery Charging – *Shows the device is* connected to a power cable and is currently being charged.
	Windows Start – Provides access to the Windows Menu page.
OK	***OK*** – Tap to accept and save the current page settings, and then exit.
X	***Cancel/Exit*** – Tap to leave the current page without storing any changes.
	Speaker On – Your device's speaker is active. Tap this icon to access the onscreen Volume slider and adjust the volume level.
	Silence All – Your device has the ringer deactivated and the vibrate option unchecked (disabled). No sound is made by the device.
	Bluetooth Enabled – The Bluetooth technology is active and enabled.

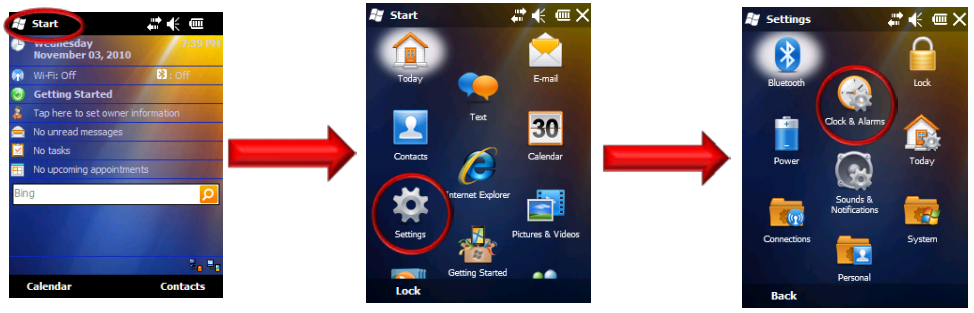
Screen description

Icon	Icon Description
	Bluetooth Visible – The Bluetooth technology is active and the device is visible.
	Bluetooth Connected – The Bluetooth technology is active and communicating (paired) with a target Bluetooth device.
	Wi-Fi Inactive – Your Wi-Fi connection is inactive.
	Wi-Fi Active – Your Wi-Fi connection is active and communicating.

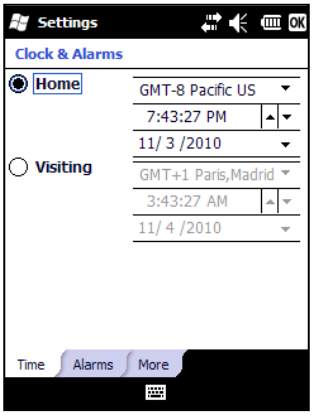
▶ Set the date and time

Setting the date and time on your device makes sure that your calendar and alarm alerts will be accurate.

1. Tap **Start**, tap **Settings** (you may need to scroll the page), and then tap **Clock & Alarms** (you may need to scroll the page).



2. On the **Time** tab, select the correct time zone and set the date and time.



Notes: *During synchronization, the time on your device is updated with the time on your computer.*

▶ Set up language and regional settings

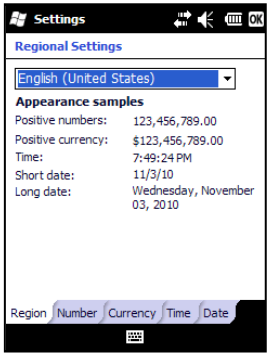
Regional settings specify the style in which numbers, currency, dates, and times are displayed.

1. Tap **Start**, tap **Settings** (you may need to scroll the page), tap **System** (you may need to scroll the page), and then tap **Regional Settings** (you may need to scroll the page).

2. On the **Region** tab, select your language and region. The region you select determines which options are selected by default on these other tabs: **Number**, **Currency**, **Time**, and **Date**.

3. To change other settings, tap a tab and make the changes you want.

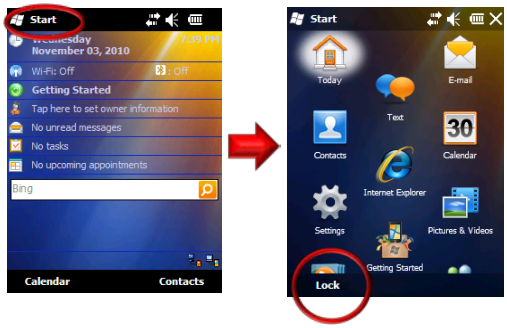
4. Tap **OK**.



Locking and unlocking the device

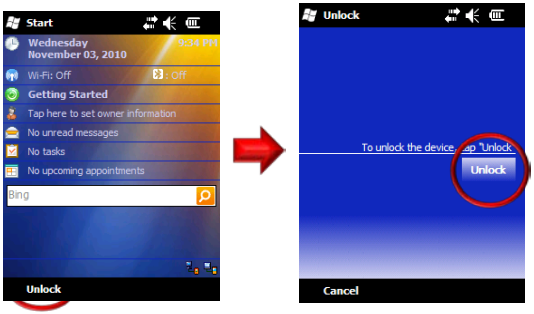
▶ Locking Your Device

1. Tap **Start**, tap **Lock** *(left softkey).*



▶ Unlocking Your Device

1. Tap **Unlock** (left softkey).
2. Tap **Unlock** button.



Manage battery life

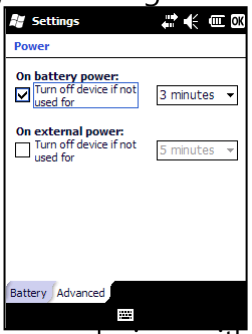
▶ Manage Battery Life

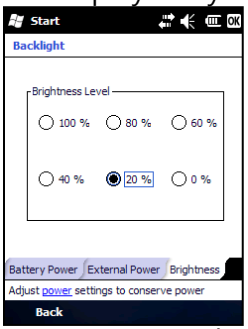
No matter how big your device's battery is, you'll want to get the most from it. Get tips here.

▶ Make the battery last longer

You can do several things to make the battery in your device last longer:

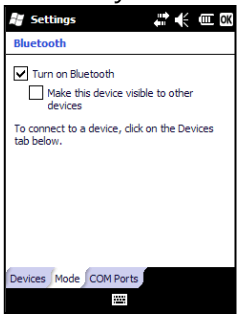
1. Adjust power-management settings to decrease screen brightness and also how long the backlight and screen displays stay on.





2. Synchronize your device with your computer less frequently (for example, once every hour or two, instead of once every five minutes).

3. Turn off Bluetooth (if available on your device).



Manage battery life

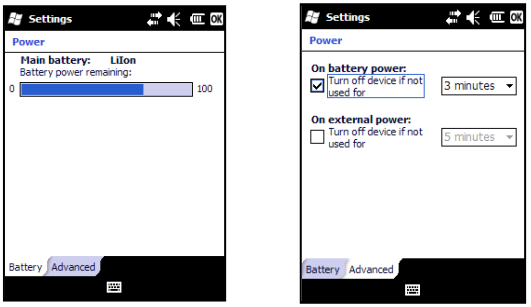
▶ Change power-management settings

You can use the Power screen to check the battery's remaining power and to adjust settings that extend battery life. For example, setting brief backlight and display time outs will extend battery life.

1. Tap **Start** > **Settings** > **Power**.

2. Tap the **Advanced** tab.

3. Select the check box for each condition where you want the device to turn off automatically. Then select the time interval.



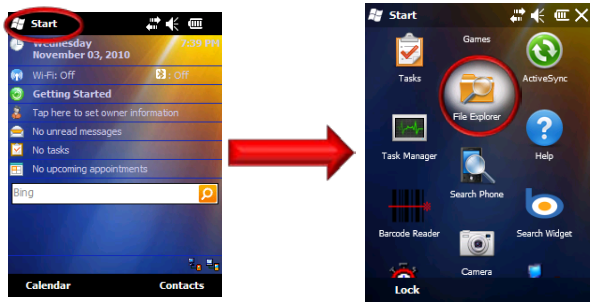
Ⅲ Use File Explorer

Ⅲ-1 Run and use the File Explorer

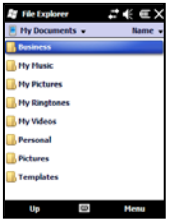
▶ Explore files and folders

You can browse the contents of folders on your device. The highest-level folder is named My Device and resembles the My Computer folder on a computer. The My Device folder contains the My Documents, Program Files, Temp, and Windows folders, among others.

1. Tap **Start** > **File Explorer** (you may need to scroll the page).



2. Tap the folder list (labeled **My Documents** by default) and tap the folder that you want to explore. To find the folder that you want, you may have to tap a folder from the folder list, or one listed in the main window.



3. Do any of the following:

   - To open an item, tap it.
   - To select multiple items, tap and drag.
   - To cut, copy, rename, delete, beam, or send an item as an e-mail attachment quickly, tap and hold the item, and then tap a command.

Note: *The contents of a folder can be sorted by name, date, size, or type by tapping the* ***Sort By*** *list. The default is to sort by name.*

IV Terminal settings, how to optimize ...

Background Image

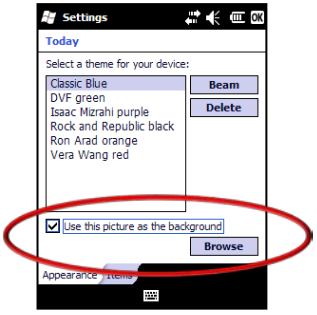
▶ **Select a background image for the Today screen**

You can add a favorite picture or other image to your device and use it as a background image for your Today screen display. Be aware that background pictures can make it harder to read text on the Today screen.

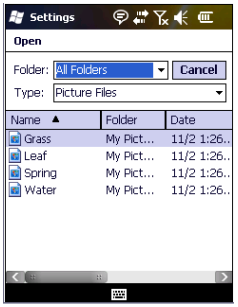
Note #1: *When you use the camera to take a picture, you can tap* ***Menu*** *>* ***Set as Today Background****. When you do this, you can select the degree of transparency you want when the picture is used as a background image.*

1. Tap **Start** > **Settings** > **Today**.

2. Select the **Use this picture as the background** check box and tap **Browse** to view a list of your picture files.



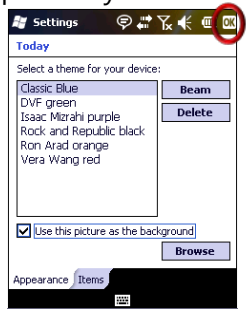
Background Image



3. In **Folder**, select the folder that contains the picture you want to use.

4. In **Type**, select the file type of the picture.

5. Tap the file name of the picture you want to use.



6. Tap **OK**.

Note #2: *To revert to the default background, tap* ***Start*** *>* ***Settings*** *>* ***Today****. Under* ***Select a theme for your device****, tap* ***Windows Default****. Clear the* ***Use this picture as the background*** *check box, and then tap* ***OK****.*

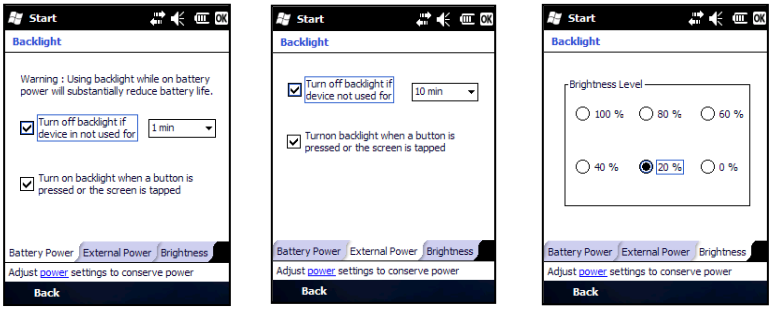
Note #3: *When you use the camera to take a picture, you can tap* ***Menu*** *>* ***Set as Today Background****. When you do this, you can select the degree of transparency you want when the picture is used as a background image.*

Brightness

Adjust power-management settings to decrease screen brightness and also how long the backlight and screen displays stay on.

1. Tap **Start** > **Settings** > **System** > **Backlight**.

2. In the Battery Power and External Power Tabs, specify how long the backlight will stay on. Also specify if pressing a button or tapping the screen turns on the backlight.



3. In the Brightness Tab, set the brightness level of the backlight when "On Battery" and on external power source ("On Power").

4. When you are done, tap on the [OK] button to accept/save the changes made on the window.

Volume and Sounds

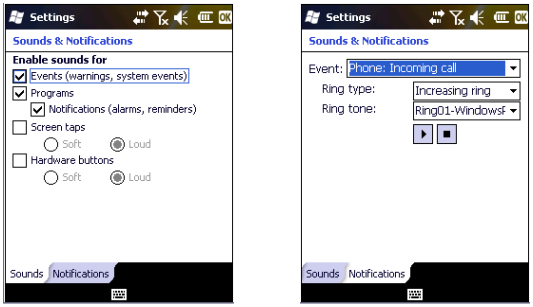
▶ Set up sounds

You can set up sounds on your device and associate them with events. These include incoming calls, reminders, new e-mail messages, new text messages, new voice messages, and warnings. Each event can have a distinctive sound to help you identify the event by its sound.

1. Tap **Start**, tap **Settings**, and then tap **Sounds & Notifications.**

2. On the **Sounds** tab, select the check box for each type of item for which you want to enable a sound.

3. On the **Notifications** tab, in **Event**, tap an event name and select how you want to be notified by selecting the appropriate Ring Type and Tone.

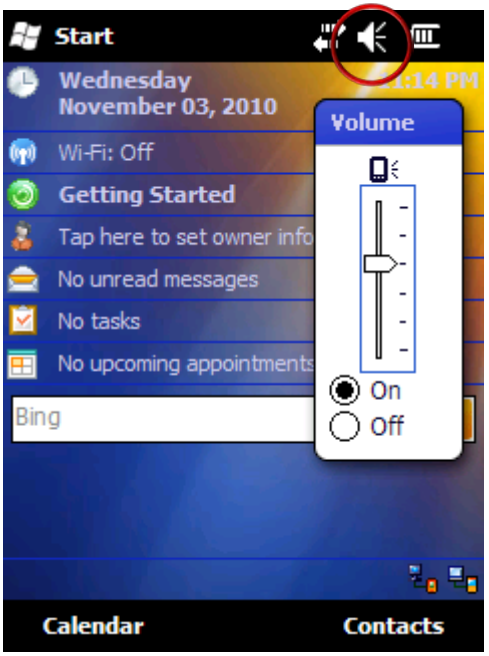


Note: *Turning off sounds helps to conserve battery power.*

Volume and Sounds

▶ Set up volume

Tap the *Speaker On* icon ( ) to access the onscreen Volume slider and adjust the volume level.



Screen

If the screen do not respond to touches made on it or the touches are off-point, the touch screen is needed to be calibrated to set the touch points properly.

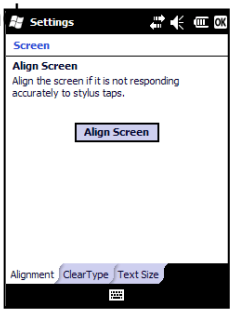
1. Tap **Start** > **Settings** > **System** > **Screen.**

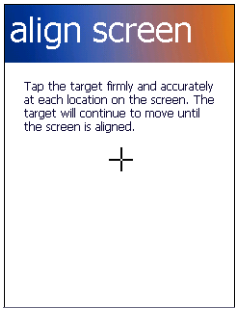
2. Set/configure the touch points in the **General** Tab.

3. Tap on the **Align Screen** button to start calibrating the touch points.

4. Using the stylus pen, tap the target (┼) firmly and accurately at each location on the screen. The target will continue to move until the screen is aligned. When the target disappears, tap the screen once to complete the calibration process.

5. When you are done, tap on the **OK** button to accept/save the changes made on the win





Bluetooth

▶ Bluetooth Connections

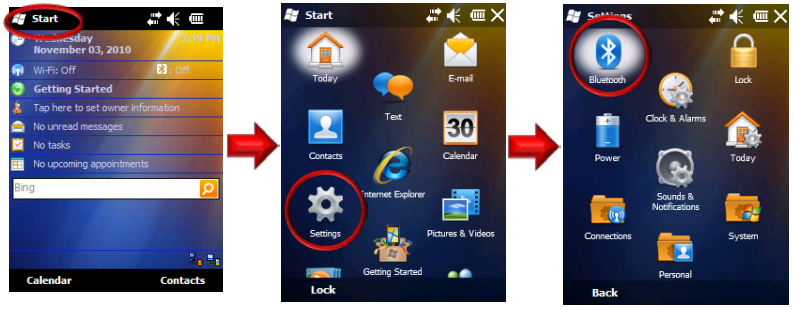
You can connect your device to other Bluetooth-enabled accessories and devices, such as headsets, GPS devices, mobile phones, and computers. Bluetooth beams information, letting your device communicate with other devices.

▶ Turn Bluetooth on or off

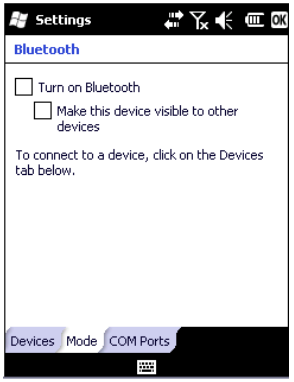
If the wireless carrier enables Bluetooth on your device, you can establish a Bluetooth partnership with other Bluetooth-enabled devices and access other Bluetooth services.

After you turn it on, Bluetooth will be turned on every time that you turn on your device. If you want, you can turn off Bluetooth manually. After you turn it off, Bluetooth stays turned off until you turn it on again.

1. Tap **Start** > **Settings** > **Bluetooth**.



2. Tap the **Mode** tab.



3. Select or clear the **Turn on Bluetooth** check box.

4. Tap **OK**.

Note #1: *When you turn your device on, it can detect other devices that use Bluetooth, but other devices will be unable to detect your device unless you have set your device to be visible to other devices.*

Note #2: *You can also turn Bluetooth on or off using* ***Wireless Manager****.*

Bluetooth

▶ Make your device visible to other devices

If Bluetooth is enabled on your device and you turn it on, you can detect and connect to other nearby Bluetooth-enabled devices and services. On your device, you must set Bluetooth to visible to enable other Bluetooth devices to detect it and to establish Bluetooth partnerships.

For improved security, leave your device set to invisible unless you are establishing new partnerships, and turn off visibility after partnerships have been established.

1. Tap **Start** > **Settings** > **Bluetooth**.

2. Tap the **Mode** tab.

3. Select the **Turn on Bluetooth** check box, and then select the **Make this device visible to other devices** check box.

4. Tap **OK**.

Note : *If you no longer want your device to be visible, clear the* ***Make this device visible to other devices*** *check box.*

Bluetooth

▶ Set up a Bluetooth accessory

You can use Bluetooth-enabled accessories such as headsets, stereo headsets, car kits, and Global Positioning System (GPS) devices with your device by creating a Bluetooth partnership between your device and the Bluetooth accessory.

1. Turn on your device and the accessory and position them within several feet of one another.
2. Tap **Start** > **Settings** > **Bluetooth**.
3. Tap the **Devices** tab.
4. Tap **Add new device**. Your device searches for other Bluetooth-enabled devices and displays them in a list.
5. Tap the name of the Bluetooth-enabled accessory, and then tap **Next**.
6. In the **Passcode** field, enter the passcode for the accessory. A passcode is a numbers-only password that helps to increase security. You can find the passcode in the manufacturer's documentation. Tap **Next**.
7. Tap **OK**.

Bluetooth

▶ Set up a Bluetooth partnership

If the wireless carrier enables Bluetooth on your device, you can establish a Bluetooth partnership with other Bluetooth-enabled devices.

After you have created a Bluetooth partnership, the two devices will automatically reconnect when in range unless you turn off Bluetooth, move your device out of range, or delete the partnership.

1. Make sure both Bluetooth devices are set to **Visible** and are within range.
2. Tap **Start** > **Settings** > **Bluetooth**.
3. Tap the **Devices** tab.
4. Tap **Add new device**. Your device searches for other Bluetooth-enabled devices and displays them in a list.
5. Scroll to the device that you want to add and tap **Next.**
6. Enter a passcode if you want one and tap **Next**. A passcode is a numbers-only password that helps to increase security. The same passcode must be entered on the device accepting the partnership.
7. Enter the display name that you want, and then tap **Finish**.

▶ Accept a Bluetooth partnership

If the wireless carrier enables Bluetooth on your device, you can establish a Bluetooth partnership with other Bluetooth-enabled devices.

1. Make sure both Bluetooth devices are set to **Visible** and are within range.
2. When you are prompted to accept a Bluetooth partnership with another device, tap **Yes**.
3. When you are prompted, enter a passcode (a numbers-only password) if you want to use one, and then tap **Next**. Using a passcode helps improve security. If a passcode is required on the device requesting the partnership, you must both use the same passcode.
4. Enter a display name to identify the partner device, and then tap **Finish**.

▶ Delete a Bluetooth partnership

You can delete a Bluetooth partnership that you previously established with another Bluetooth-enabled device.

1. Tap **Start** > **Settings** > **Bluetooth**.
2. Tap the **Devices** tab.
3. Tap and hold the device partnership until you see a menu, and then tap **Delete**.
4. Tap **Yes** to confirm.

▶ **Rename a Bluetooth partnership**

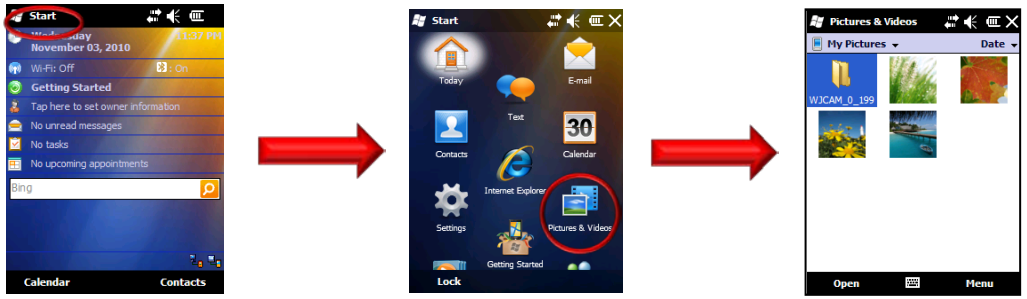
If you have multiple Bluetooth partnerships on your device, you can give each partnership a unique name to identify it, such as My PC or Bob's Phone.

1. Tap **Start** > **Settings** > **Bluetooth**.
2. Scroll to the device that you want to rename, tap and hold the device name until you see a menu, and then tap **Edit**.
3. In the **Display Name** field, enter a new name for the device, and then tap **Save**.
4. Tap **OK**.

Pictures and Video

▶ Pictures and Videos

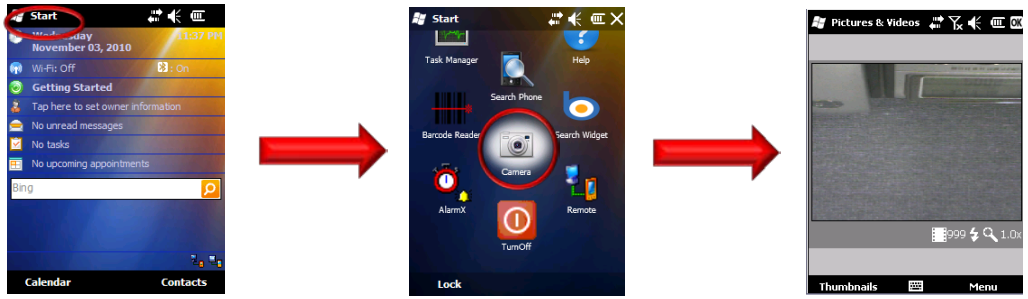
Let your device capture and display those vacation photos and video. This can be accomplish by tapping on **Start**, and then **Pictures & Videos.**



▶ Easily capture, find, view, and manage pictures and videos on your device

1. Activate the Camera Application

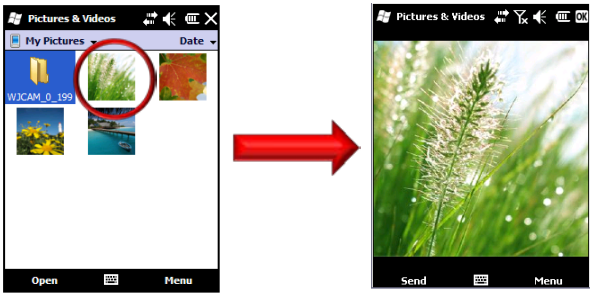
Capture pictures and video with the camera application. This can be accomplish by tapping on **Start**, and then **Camera**.



2. View a photo

a. The **Pictures & Videos** folder displays thumbnails of your saved photos.

b. Tap the photo you want to view. The photo will become larger to fit the screen.



3. Play a video clip

a. The **Pictures & Videos** folder displays thumbnails of your saved photos and videos.

b. Tap the video you want to play. The video starts to play in the media player.

c. To return to the **Pictures & Videos** folder, close the media player.

4. View a slide show

a. From **Pictures & Videos** folder, tap **Menu** > **Play Slide Show**.

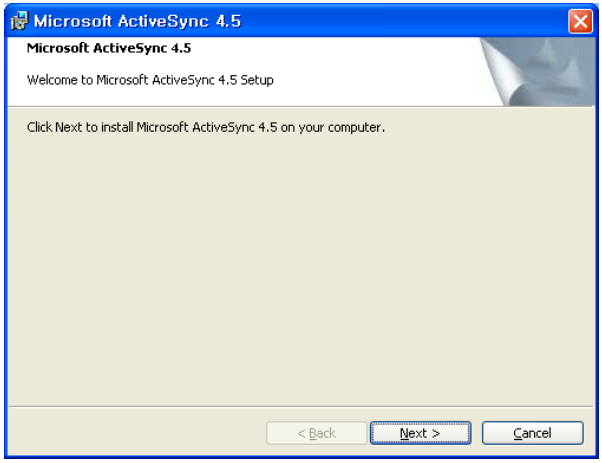
b. To end the slide show, tap the screen and then tap the **close** icon.

V PC connection

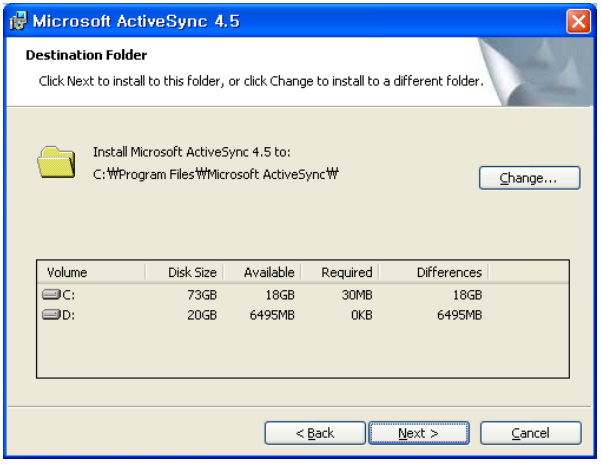
Using Microsoft ActiveSync, you can synchronize the information on your personal computer with information on your STM-8800. Synchronization compares the data on your PDA with your personal computer and updates both devices with the most recent information. To establish a partnership with a PC, you need to install Microsoft ActiveSync on your PC. You can download ActiveSync at www.microsoft.com/korea.

V-1 Microsoft ActiveSync installation

1. Download and run the Active Sync installation program. Please click the [Next] button if you are ready to Set-up ActiveSync.

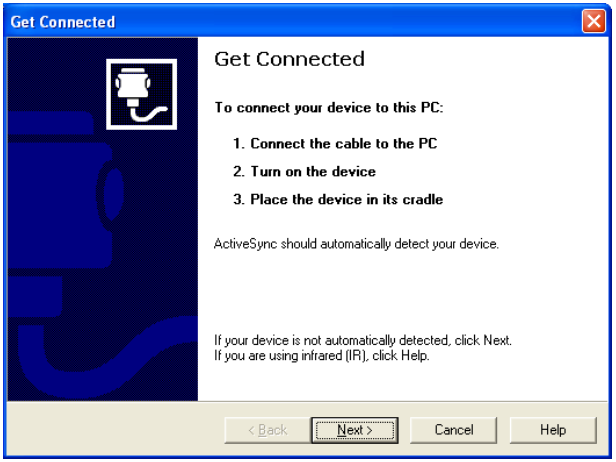


2. You're prompted to select the installation folder for ActiveSync. Click the [Next] button to install ActiveSync to the default folder, or click the [Change] button to select a different destination for the program.



Microsoft ActiveSync installation

3. Click on the [Next] button.



4. ActiveSync installation is finished. Please turn on and put the STM-8800 unit on to the cradle with USB cable connected to the PC. (use USB 2.0 or higher)

V-2 Connect to a PC to install the program

▶ **Using ActiveSync for program installation**

▷ **Using the Installation programs (Setup.exe or Install.exe)**

1. Download the installation program to the PC or insert the installation CD in the PC's CD drive.

2. Connect the Mobile Device to the PC via ActiveSync.

3. Locate for and double-click on the installation program (Setup.exe or Install.exe) on the PC.

4. Files will be automatically copied to the Mobile Device through ActiveSync.

▷ **Using the *.cab files**

1. Download the installation program to the PC or insert the installation CD in the PC's CD drive.

2. Connect the Mobile Device to the PC via ActiveSync.

3. Using ActiveSync's Explore function in the PC, copy and paste the *.cab files to any folder (My Documents/Program Files) in the Mobile Device.

4. From the Mobile Device, double-click on the copied *.cab file. This process will install the program to the Mobile Device.

-**Reference**-

1) Always consult the Read Me file or other related documents to verify if all required files are copied.

2) Consult the ActiveSync Help for more information on how to copy files using the ActiveSync.

VI Appendix

VI-1

Troubleshooting

The following are the common problems encountered while using the Mobile Device.

▶ Troubleshooting

Included in this chapter are solutions to the common problem listed herein.

▷ Problem Analysis and Solution

Q1. The device would not turn ON even when connected to external power source.

First, make sure that the external power source has the correct voltage. If it does have the correct voltage, make sure that the battery power is not fully drained. Fully drained batteries can cause power, even from external sources, to be temporarily interrupted. (Prevent batteries from being fully drained by regularly charging it.)

Q2. Battery Power consumption is too fast.

Turning OFF the backlight when the Mobile Device is not being used (no touch screen action, tap and scroll, is made) after a specified period of time saves battery life. See section about Manage Battery Life.

Another way to conserve battery power is by dimming down the backlight. This could be set in the Brightness window by sliding the horizontal scroll bar towards the left. See section about Brightness.

For the Battery Power Scheme, switching the Mobile Device state to suspend after a specified period of time really saves the battery power. This can be configured in the Power Properties window Schemes tab. Specify the length of idle time before the Mobile device switches to the state of suspend. See section about Manage Battery Life.

Q3. Mobile Device automatically turns OFF.

Make sure that you never run out of power. As soon as you see the dialog box informing you that "the main battery power is very low" you must charge the battery immediately. Continued use of the Mobile Device even after being informed of the battery power level can cause battery failure.

To conserve Battery Power consumption, switching the Mobile Device state to suspend after a specified period of time is advisable. This can be configured in the Power Properties window Schemes tab. Specify the length of idle time before the Mobile device switches to the state of suspend. See section about Manage Battery Life.

Q4. The Mobile Device would not Turn-ON.

When the Mobile Devices' battery power is fully drained, the device will not power ON. Connect the Mobile Device to an External Power source to charge the battery. If in case the Mobile Device could still not be powered ON after recharging the battery, try performing a hard reset.

For more information about Hard Reset, .see "VII-2 – Initialize to factory default" section of this manual.

Q5. Touchscreen - Stylus action does not result to the desired action.

You may need to recalibrate the touchscreen using the Screen Properties window Align Screen function.

For more information, .see "IV – Terminal Settings, how to optimize" section of this manual.

Q6. Cannot access the contents of the SD card inserted into the device.

Make sure that the Micro SD card is inserted properly in the slot allotted for it. Using the File Explorer, see if a folder called "Storage Card" is present. Access the contents of the SD card from this folder.

Q7. Data lost.

If the Mobile Device's Battery power runs out, all information may be lost except for those information, data and programs that are present when the Mobile Device was delivered.

It is advisable to periodically backup the Mobile Device and keep the backup file in the PC or copy important files/information to the PC and/or Micros SD cards where it could be recovered at a later time to minimize, if not prevent, data lost.

If the solutions provided for each problem does not resolve it, perform a system reset (as described on Initialization section) or initialize the device back to the factory default (as described on VI-2, Initialize to Factory default).

For other concerns, please contact our customer service center.

VI-1 Troubleshooting

▷ **Mobile Device – PC Connectivity and Synchronization Issues**

Solution to problems when connecting the Mobile Device to the PC through the cradle or otherwise.

For an updated information on other issues, see the PC's ActiveSync help or visit Microsoft's website for mobile phones (www.microsoft.com/windows/embedded/ce.net).

- Find out if you need to install the correct PC ActiveSync version.
- Make sure that the Mobile Device is turned ON.
- Make sure that the USB cable is properly connected to the connectors on both the PC and the Mobile Device/Cradle.
- If the Mobile Device is connected to the PC using the USB cable, make sure that ActiveSync is configured for this type of connection. Verify this setting in ActiveSync's Connection Settings window (File > Connection Settings ...). Make sure that the option "Allow USB connection" is checked.
- Connections between the Mobile Device and PC using USB cable needs the PC's ActiveSync program. Consult the ActiveSync Help for more information.
- Before restarting the PC, it is advisable to disconnect the Mobile Device from the PC first.
- Please connect one Mobile Device at a time to a PC.

VI-2 Initialize to factory default

▶ **Initializing the Mobile Device back to the factory default settings (Hard Reset)**

There are many possible reasons why the Mobile Device has to be reinitialize back to the factory default setting, like, when the device would not respond even after performing a reset or the user forgets the password set on the system. This process is called "Hard Reset." When performing hard reset, all information in the RAM (files, system settings, installed programs) will be cleared.

To insure the safety/integrity of the information, make a backup or make a copy of it in the SD card before performing a hard reset. Restore the information after the hard reset process to recover the information.

As said earlier, all information stored in the Mobile Device's RAM will be cleared after performing a hard reset. However, it is possible to recover information backed up to the PC, SD card or the Web folder

To perform a Hard Reset:

1. Remove the Mobile Device form the cradle.
2. Perform the following depending on the power state of the device:
   - When the device is powered on, while holding down the [Left-Down]-[Right-S] buttons, poke the reset key using the Stylus pen.
   - When the device is powered off, while holding down the [Left-Down]-[Right-S] buttons, press the [power on] button.
3. Wait until the Mobile Device re-starts.

Terminal maintenance

▶ **Information on the Mobile Device Maintenance**

To be able to extend the life cycle of the Mobile Device, please consider the following advices:

- Before cleaning the touchscreen, power off the Mobile Device.
- Use small amount of glass cleaner on a soft cloth when cleaning the touchscreen.
- Do not spray the glass cleaner directly on the touchscreen.
- Use cotton swabs or soft cloths when cleaning the battery/charging terminals.
- Using chemicals in cleaning can damage the exterior of the Mobile Device.
- Extended usage can heat up the Mobile Device. This is not advisable.

VI-4 Product specifications

SECTION	SPECIFICATION
Processor	Samsung S3C6410 800MHz
OS	Microsoft Windows Mobile 6.5/ CE.net 5.0
Memory	512MB NAND Flash MEMORY 256MB Mobile DDR SDRAM
Display	240x320 3.5' TFT-LCD with Touch Screen, 260k Color
Communication	WLAN (802.11a/b/g) GPRS , WCDMA S-GPS(SiRF Ⅲ) Bluetooth 2.0 Class 2 (Profile: SPP)
Printer	2-inch Thermal Printer (Speed 80mm/sec)
MSR	Triple Track support (Bi-directional)
IC Card	IC Card reader with 4 SAM, EMV Level II Certified
Scanner	ID Barcode Laser Scanner/ 2D Imager(Option)
Camera	2.0 Mega Pixel/ 5.0 Mega Pixel(Option)
RFID	13.56MHz HF RFID
Battery	Li-Ion Rechargeable battery cell 2000 mA x 2
Expansion	Micro SD Card slot / Audio Jack USB Client for synchronization
Indicator	2 Colors and 2 LEDs
Key	3 Functional keys, 12 Numeric keys, Power, Mode, Enter Back Space, TAB , Up, Down, Printer, Scanner
Cradle	USB Host/ Client (Mini B / Standard B), DC Jack 2 D-SUB Serial Port with 9 pins, Battery Charging Slot

Others

※ Certification Information

1. Name of Device: Wireless Data Device
2. Model:**STM-7700**
3. Certification Information: KCC, FCC, CE, CCC Certifications
4. Certified for: Shinheung Precision Co., Ltd.
5. Manufacturer (Country of Origin): Shinheung Precision Co., Ltd. (Korea)

Instructions to users

The Mobile Device has been certified to emit acceptable amount of electromagnetic wave. However, the manufacturer strongly advise that users should still exert a high level of care when using the Mobile Device.

Since the Mobile Device is using the wireless technology, the security of information cannot be guaranteed by the manufacturer. Users should take necessary precautions to safeguard their information.

Environmental factors, 3rd party application programs and accessories, and other related concerns may affect the performance of the Mobile Device. This is beyond the control of the manufacture and thus excluded in the Mobile Device's warranty/guaranty statements.

※ Contents of this manual (options, model, version, images) may vary from the actual Mobile Device.

ShinHeung Precision Co.,Ltd.

Shinheung Precision Co., Ltd.
7rd Floor JEI Platz Bldg., Gasan-dong
Geumcheon-gu, 153-792 Seoul, Republic of Korea
TEL: 02) 6749-4700 FAX: 02) 6749-4699

FCC NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference i n a residential installation. This equipment generates, uses and can radiate radio frequen cy energy and, if not installed and used in accordance with the instructions, may cause h armful interference to radio communications. However, there is no guarantee that interfe rence will not occur in a particular installation. If this equipment does cause harmful inter ference to radio or television reception, which can be determined by turning the equipm ent off and on, the user is encouraged to try to correct the interference by one of the fo llowing measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiv er is connected.
Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsi ble for compliance could void the user's authority to operate this equipment. This devic e complies with Part 15 of the FCC Rules. Operation is subject to the following two cond itions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may ca use undesired operation.

IMPORTANT NOTE
FCC RF Radiation Exposure Statement:
This equipment complies with FCC RF radiation exposure limits set forth for an uncontro lled environment. This equipment should be installed and operated with a minimum dista nce of 20 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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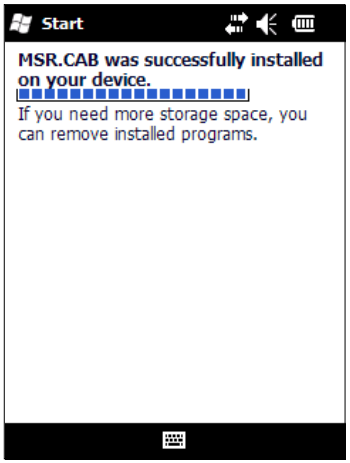
Precision Co.,Ltd.

VII Device Test

MSR

1. Development Environment

DLL for STM-7700 Magnetic Strip Reader (MSR) is available.
To incorporate MSR in the application, use keyboard emulation feature of the STM-7700 MSR module.



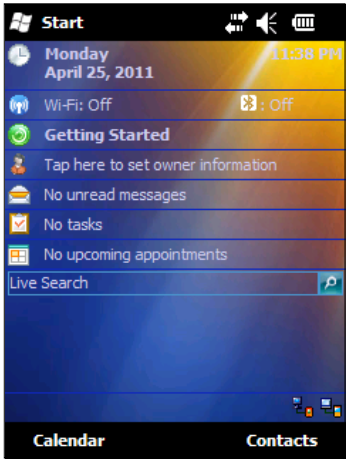
2. Installing STM-7700 MSR Utility

Copy **MSR Utility.cab** to the device
Run **MSR Utility.cab** from the device

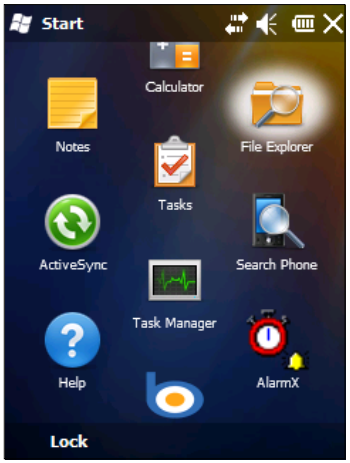
3. How to setup STM-7700 MSR Keyboard Emulation Feature

1) Access **MSR Utility**:

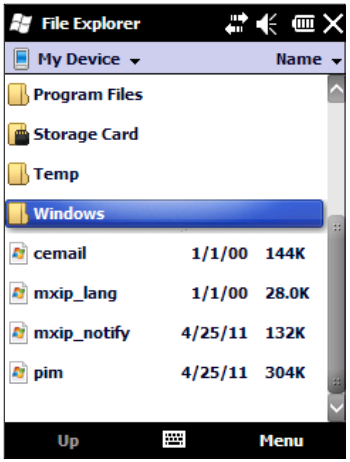
① Installing the **MSR Utility.cab** places the **MSR_Setting.exe** in the device's [**Windows**] folder. Use File Explorer to access it.
② Tap [**Start**].



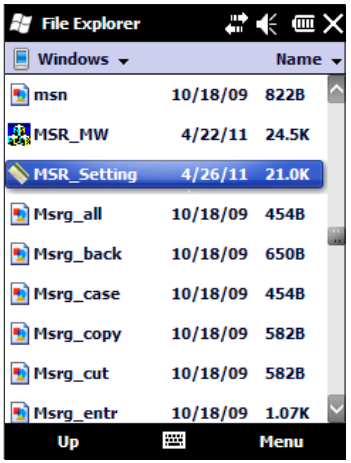
③ Locate for and tap [**File Explorer**] icon.



④ Go to the [**Windows**] folder.



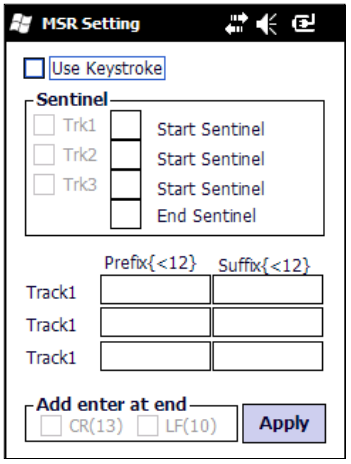
⑤ Locate for and tap [**MSR_Setting**] application.



2) The **MSR Setting** Windows

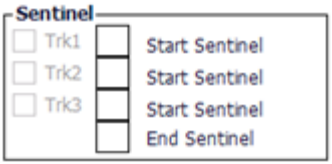
① In the [**MSR Setting**] window,
place a check mark on the [**Use Keystroke**] field.

② Tap on the [**Apply**] button to save the setting.

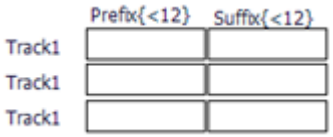


4. Other MSR Setting Options

1) Sentinel – Set the character identifying each MSR track and end.



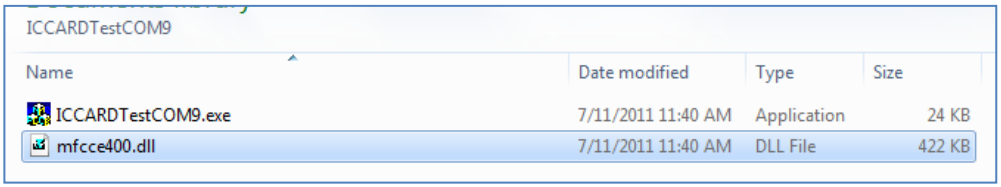
2) Prefix / Suffix – Set the characters at the start (prefix) and end (suffix) of each track.



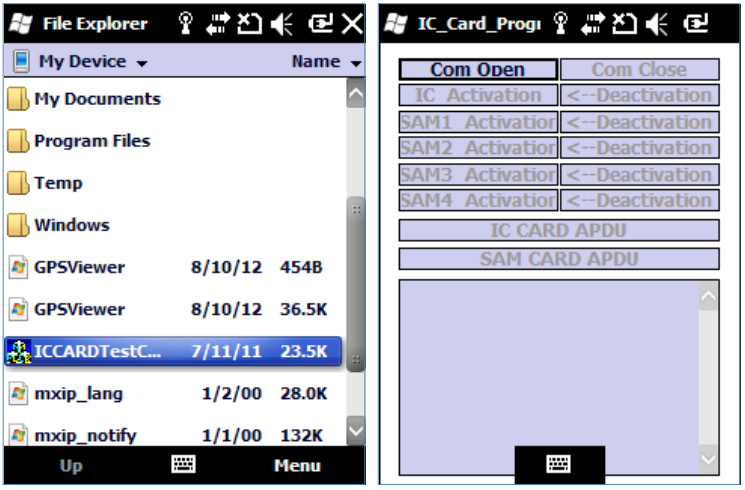
3) End character (Carriage Return / Line Feed) – Set the last End character to either a carriage return or a line feed.

1. Installing STM-7700 IC-Card Test Utility

1) Copy **ICCARDTestCOM9.exe** and **mfcce400.dll** to the device



2) Run **ICCARDTestCOM9.exe** from the device



1. How to perform test on the STM-7700 IC-Card reader.

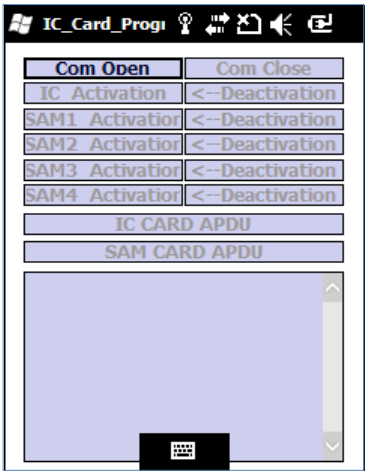
1) Insert IC-Cards (SIM/SAM) on to the various slots available:

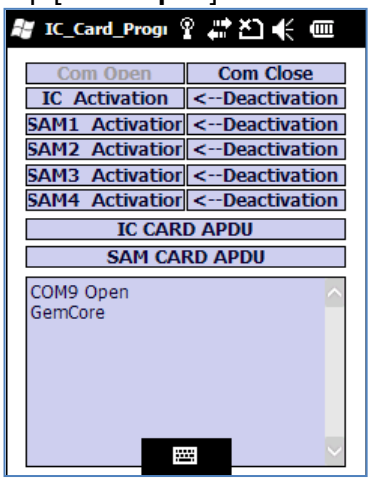
① IC Card slot is located between the LCD display and MSR slot. Inset IC Card with contact points facing you.

② Four (4) additional SAM card slots are available inside the battery bay. Insert IC (SAM) Cards with contact points facing upward.

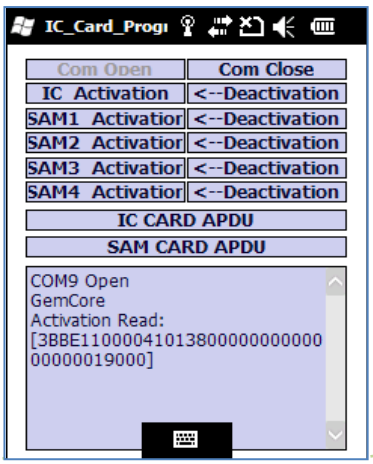
1) The **IC Card Test** application:

① In the [**IC Card Test**] window, tap [**Com Open**] button.

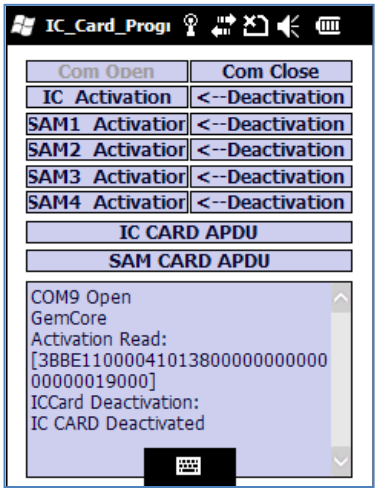




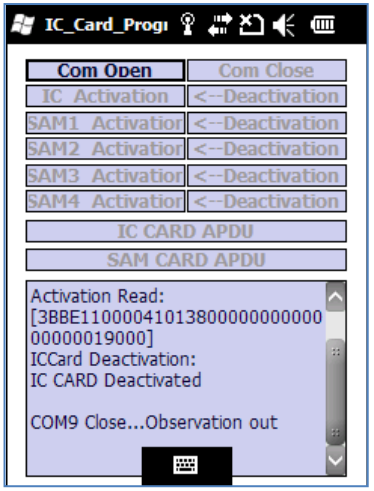
② Tap appropriate button (**IC/SAM1/SAM2/SAM3/SAM4 Activation**) to test each cards that are inserted in the appropriate slots.



③ Tap corresponding **[<--Deactivation]** button to deactivate card slot.



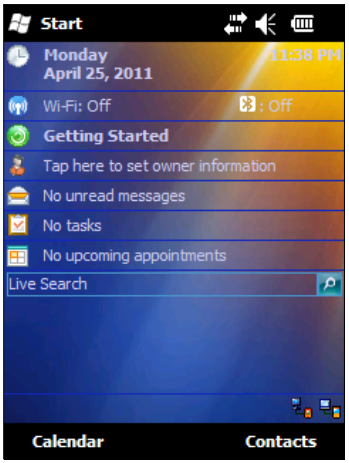
④ Tap [**Com Close**] button to close the COM port.



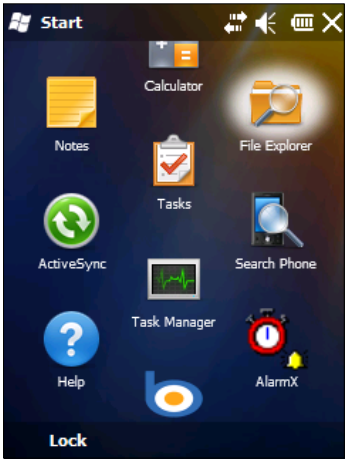
1. How to Test STM-7700 Pinter

1) Access Printer Test Application

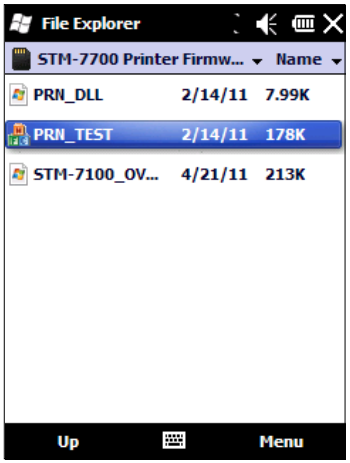
① Tap [Start]



② Locate for and tap [**File Explorer**] Icon

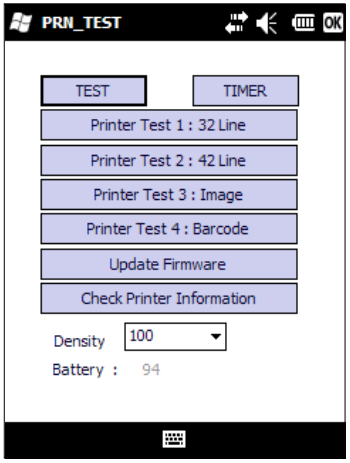


③ Locate for and tap [**PRN_TEST**] application.



2) The **PRN_TEST** window:

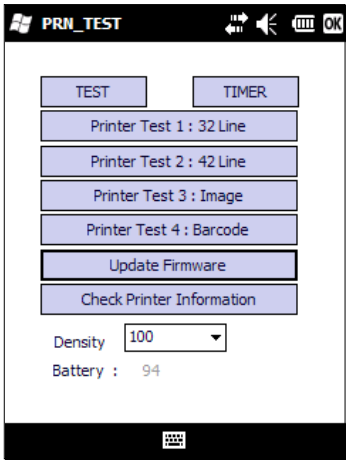
① In the [**PRN_TEST**] window, tap on the [**TEST**] button.
② Printer will start printing test.
Wait for it to finish and check out any error messages that will appear on the screen.



2. Other Printer Test Options

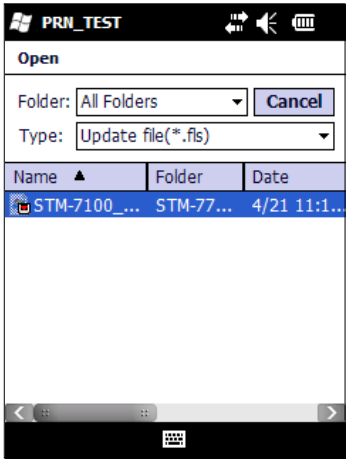
1) Update Firmware – Use this button to load printer firmware one to the device

① Tap on the [Update Firmware] button



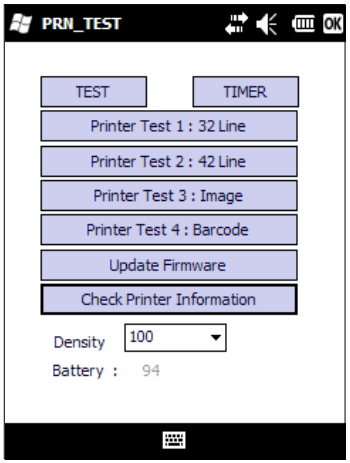
② Locate for and select the firmware file you wanted to load by tapping on the file name

③ Wait for the firmware to finish loading



2) Check Printer Information
- Printout printer information

① Tap on the [Check Printer **Information**] button



② Printer information will be printed out. Make sure that the printer has a paper.

1. Make sure that the SIM card is inserted into the device.
2. Power ON the device.
3. Configure the **APN address** - In Windows Mobile 6, the "Extra dial-string modem commands" box has been removed, making it difficult to add a modem string to send to the GPRS module. We could, however, configure this using two (2) methods:

1) METHOD #1 – The following work-around involves editing the registry on your device, and you do so at your own risk!

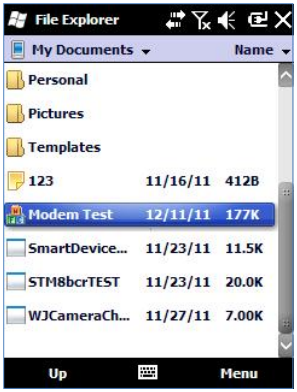
① Install a registry editor.
② Edit the following part of the registry:
HKEY_LOCAL_MACHINE\Drivers\Unimodem\Init
③ Add a new string to that part of the registry using
[Edit] > [New] > [Stringvalue]
④ Carefully enter the string you want to send to your mobile,
as per the screenshot below,
e.g: **AT+CGDCONT =1,"IP","<*apn.address*>"**

 # note :
The String may need to have <cr> at the end of it to work.

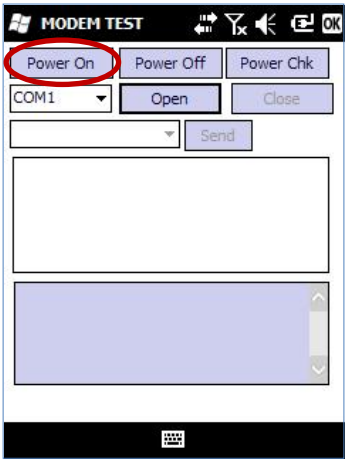
⑤ Press OK to close the dialog
⑥ Click on the green star in the menu to save the setting
⑦ Reset your Windows Mobile.
(***Source:*** ***http://www.filesaveas.com/gprsconnect.html***)

2) ***METHOD #2*** - You could use a terminal emulation program to enter the APN information. The procedure below uses MODEM_TEST application.

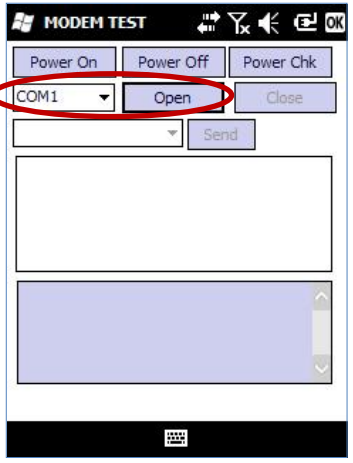
① Copy the Modem_Test.exe application to the device
② Run the Modem_Test.exe program



③ Click on the [Power On] button.

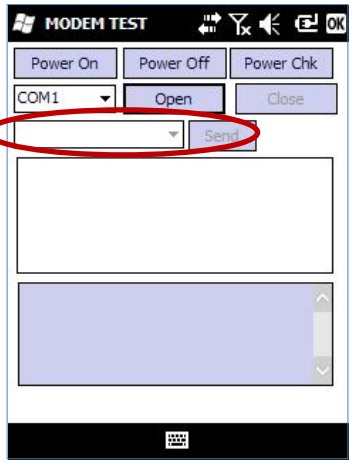


④ Select COM1 and click [Open] button.



⑤ AT Command sequence using the MODEM_TEST.exe program.

√ On the field reserved for AT commands, perform the following:
- Type AT
- Press [Send] button and wait until the “OK” message displays
- Type AT+cgdcont=1,”IP”, ”< *apn.address* >”

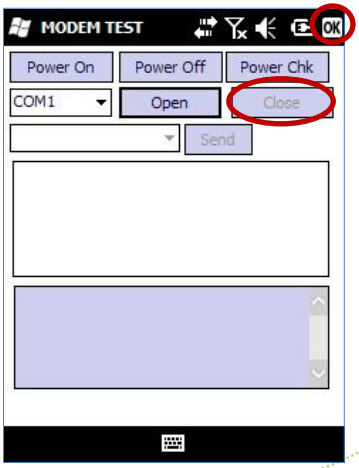


NOTE: Make sure that “IP” is in uppercase and ”<*apn.address* >” is the APN address information provided by the telecommunication service provider.

- Press [Send] button and wait until the “OK” message displays
- Type AT&w
- Press [Send] button and wait until the “OK” message displays

.

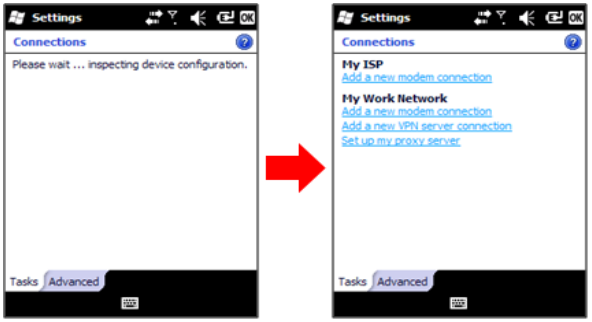
⑥ Click on the [Close] Button
⑦ Exit the MODEM_TEST.exe Program



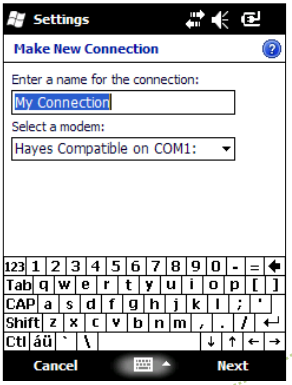
4. Make new Connection

1) Tap [Start] > [Setting] > [Connections] > [Connections]

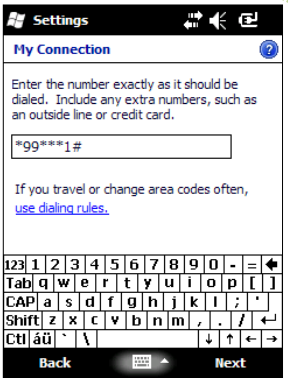
2) The Connection Settings window should appear. Tap [Add a new modem connection].



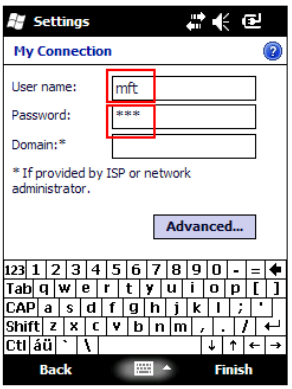
3) Enter a name for the connection. Select the [Hayes Compatible on COM1:] modem.



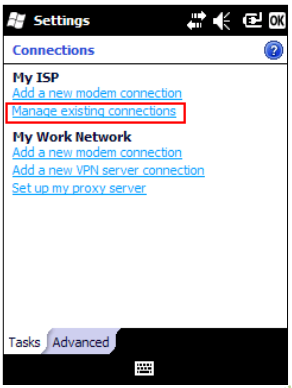
4) Enter the number exactly as it should be dialed (see screen shot below).



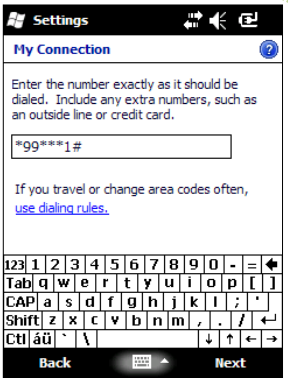
5) Enter the username and password provided by the telecommunication service provider.
Then tap on the [finish] button to complete the new modem connection configuration.



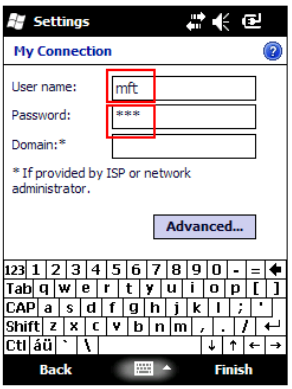
6) The Connection Settings window should appear.
Tap [Manage existing connections].



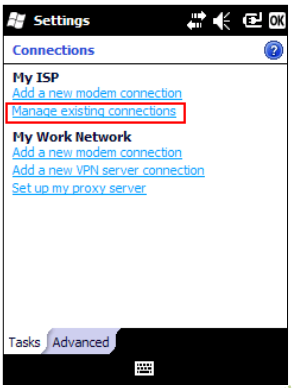
4) Enter the number exactly as it should be dialed (see screen shot below).



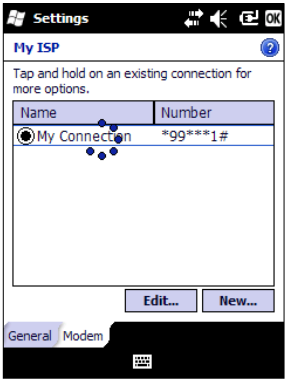
5) Enter the username and password provided by the telecommunication service provider.
Then tap on the [finish] button to complete the new modem connection configuration.



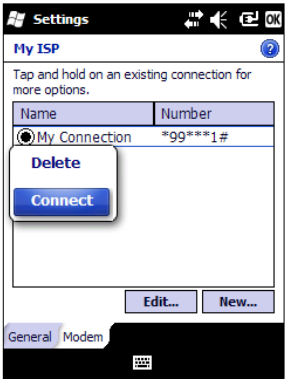
6) The Connection Settings window should appear.
Tap [Manage existing connections].



7) Tap and hold on the desired connection to display connection options.



8) From the connection options menu, select [Connect].



Ⅶ-5 GPS

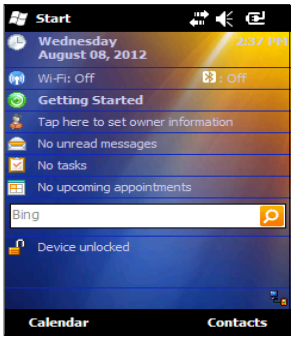
1. Development Environment

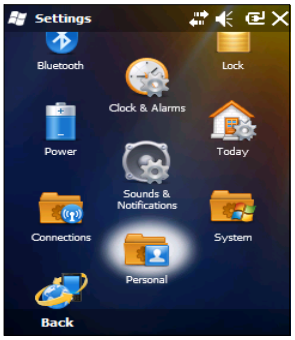
1) To incorporate MSR in the application, use keyboard emulation feature of the STM-7700 BCR module.

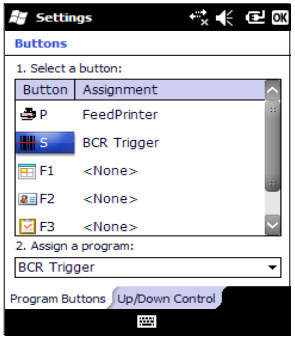
2. How to setup STM-7700 BCR Keyboard Emulation Feature

1) Access **Buttons Settings Utility**:

① Tap [**Start**] - [**Settings**] - [**Personal**] - [**Buttons**].

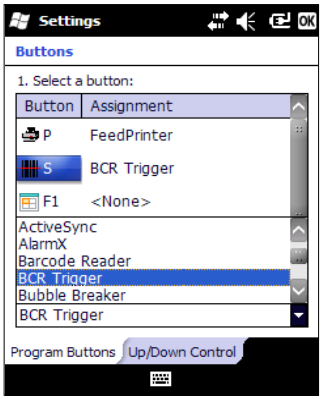


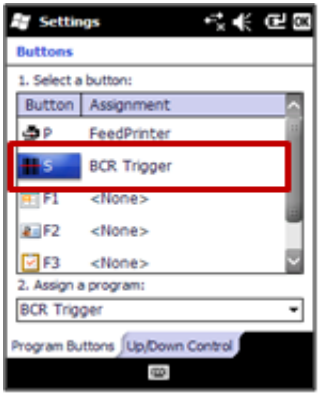




② Locate for and tap [**S**] button.

③ Make sure to assign [**BCR Trigger**] to this button.





2) Tap [**OK**]

3. How to test STM-7700 BCR

1) After activating Keyboard Emulation feature,
you can use any application that accepts keyboard input
(like notepad) to test the BCR.

Windows Mobile Device Wi-Fi Configuration
***http://technet.microsoft.com/en-us/library/dd361764.aspx* 2/9/2009**

Wi-Fi wirelessly connects a device to the Internet through access points that can be up to 30 meters away. Wireless access points may be provided by your service provider, your employer, coffee shops, airports, and other gathering places. Your device must wirelessly connect to these access points—or "hotspots"—before you can use your device to connect to the Internet.

The procedures in this article show you how to enable or disable Wi-Fi on your Windows Mobile device. It will also offer other optional configuration steps that may assist with your MDM 2008 SP1 wireless deployment, including the following:

- Enabling or disabling Wi-Fi
- Setting up a Wi-Fi connection
- Editing a Wi-Fi connection
- Deleting a Wi-Fi connection
- Changing Wi-Fi settings
- Adjusting Wi-Fi power mode settings

Important:
With most devices, Wi-Fi is turned off when you first start your device. To minimize drain on the battery, Wi-Fi is turned off automatically every time that you turn off your device. You must turn it on when you want to use it.

 # To enable or disable Wi-Fi

1. Choose **Start**, choose **Settings**, choose the **Connections** tab, and then choose **Wireless Manager**.
2. Choose the **Wi-Fi** button. If it is turned off, the button will appear as a lighter color and display an icon marked with an "X".
3. Choose **Done**.

 # To set up a Wi-Fi connection

1. Choose **Start**, choose **Settings**, choose the **Connections** tab, and then choose **Wireless Manager**.
2. Scroll to **Wi-Fi** and press **ENTER**. The device will detect available **Wi-Fi** networks.
3. Select the network you want to connect to, and then choose **OK**.
4. Select **Internet** or **Work**, and then choose **Connect**.

< Note: >

If you select a secure network, you may have to enter a network key that is provided by the network administrator.

 # To edit a Wi-Fi connection

1. Choose **Start**, choose **Settings**, choose the **Connections** tab, and then choose **Wireless Manager**.
2. Choose **Menu**, and then choose **Wi-Fi Settings**.
3. Scroll to the connection that you want to edit, choose **Menu**, and then choose **Edit**.
4. Make changes as needed, and then choose **Finish**.

 # delete a Wi-Fi connection

1. Choose **Start**, choose **Settings**, choose the **Connections** tab, and then choose **Wireless Manager**.
2. Choose **Menu**, and then choose **Wi-Fi Settings**.
3. Scroll to the connection that you want to delete, choose **Menu**, and then choose **Remove Settings**.

To change Wi-Fi settings

1. Choose **Start**, choose **Settings**, choose the **Connections** tab, and then choose **Wireless Manager**.
2. Choose **Menu**, choose **Wi-Fi Settings**, and then choose the **Wireless** tab.
3. Scroll to the connection that has the settings that you want to change, choose **Menu**, and then choose **Edit**.
4. Change any of the following information:
   - In **Network name**, enter a name for the connection.
   - In **Connects to**, select **The Internet** or **Work**.
   - If the network is a hidden network, which means that it does not broadcast its Service Set Identifier (SSID), select **This is a hidden network**.
   - If you want to connect directly to another device or computer, and not to a network through an access point, select **This is a device to device (ad-hoc) connection**.
5. Choose **NEXT**
6. On the **Configure Network Authentication** screen, do the following:
   - Select the authentication and data encryption methods.
   - Enter the network key information or select the **The key is automatically provided** check box.
     If it is necessary, ask the network administrator for authentication, encryption, and network key information.
7. Choose **Next**.
8. Select or clear the **Use IEEE 802.1X network access control** check box.
9. To use Extensible Authentication Protocol (EAP) or smart card authentication, make the selections appropriate to your choice of authentication.
10. Choose **Finish**.

To change Wi-Fi settings

1. Choose **Start**, choose **Settings**, choose the **Connections** tab, and then choose **Wireless Manager**.
2. Choose **Menu**, choose **Wi-Fi Settings**, and then choose the **Wireless** tab.
3. Scroll to the connection that has the settings that you want to change, choose **Menu**, and then choose **Edit**.
4. Change any of the following information:
   - In **Network name**, enter a name for the connection.
   - In **Connects to**, select **The Internet** or **Work**.
   - If the network is a hidden network, which means that it does not broadcast its Service Set Identifier (SSID), select **This is a hidden network**.
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   - Enter the network key information or select the **The key is automatically provided** check box. If it is necessary, ask the network administrator for authentication, encryption, and network key information.
7. Choose **Next**.
8. Select or clear the **Use IEEE 802.1X network access control** check box.
9. To use Extensible Authentication Protocol (EAP) or smart card authentication, make the selections appropriate to your choice of authentication.
10. Choose **Finish**.

To adjust Wi-Fi power mode settings

1. Choose **Start**, choose **Settings**, tap the Connections tab, and then choose **Wireless LAN**.
2. Choose the **Power Mode** tab.
3. On the **Best Performance-Best Battery** scale, do one of the following:
   - To conserve more battery power, drag the slider toward the **Best Battery** setting. Dragging the slider toward the **Best Battery** setting reduces signal performance.
   - To improve signal performance, drag the slider toward the **Best Performance** setting. Dragging the slider toward the **Best Performance** setting consumes more power and shortens battery life.

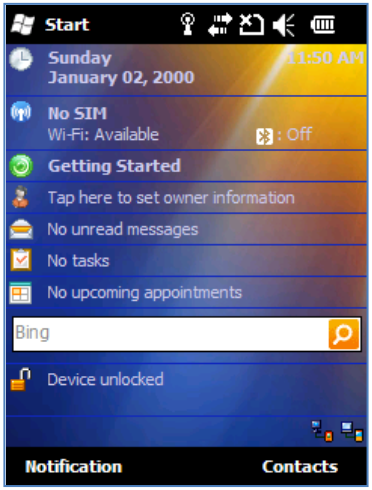
< Note: >

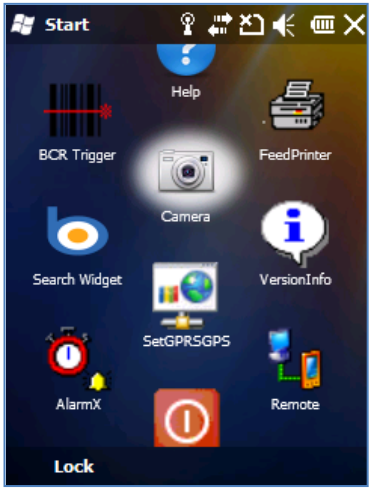
By default, the Wi-Fi power mode is set to the best compromise between battery conservation and signal performance. You can change this by conserving more battery power or improving signal performance.

4. Choose **OK**.

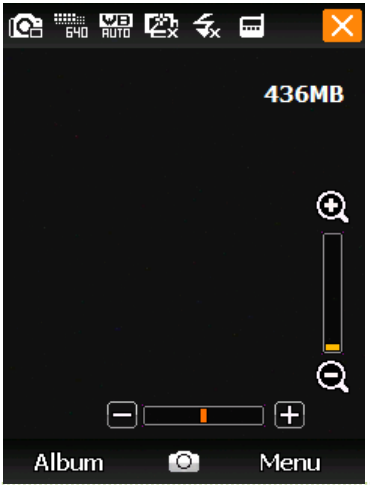
1. Activating STM-7700 Camera

1) Tap [**Start**] and locate for the [**Camera**] icon.





2) Tap [**Camera**] icon



2. How to Capture iamge

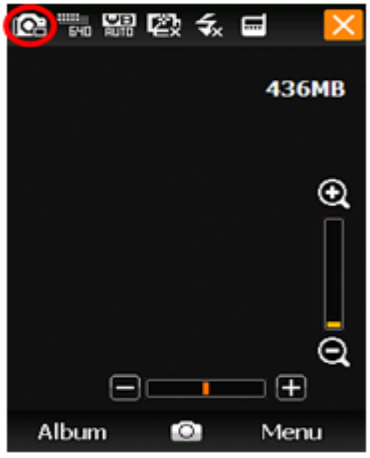
1) Focus the image that you want to capture.
2) Use [ ] to adjust brightness

3) Use [ ] to zoom the image in or out.

4) Tap [ ] icon located at the bottom of the screen.
5) Select either to [**SAVE**] or [**CANCEL**].

3. How to Change camera mode

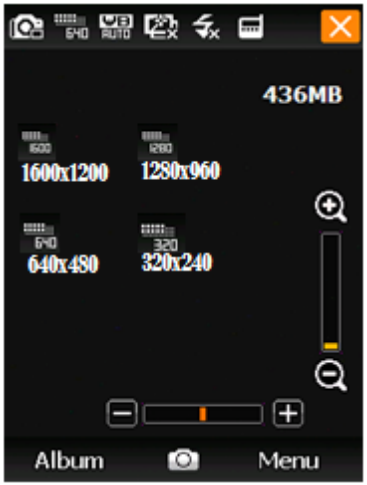
1) Tap [ ] icon
2) Select between [**SINGLESHOT**] or [**MULTISHOT**] mode



4. How to Change camera image size

1) Tap [ ] or [ ] or [ ] or [ ] icon.

2) Select between [SINGLE SHOT] or [MULTI SHOT] mode



Body-worn Operation

This device was tested for typical body-worn operations with the back of the device kept 0 cm between the user's body and the back of the device.

To comply with FCC RF exposure requirements, a minimum separation distance of 0 cm must be maintained between the user's body and the back of the device.

Third-party belt-clips, holsters, and similar accessories containing metallic components may not be used. Body–worn accessories that cannot maintain 0 cm separation distance between the user's body and the back of the device, and have not been tested for typical body-worn operations may not comply with FCC RF exposure limits and should be avoided.

FCC NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.