Chapter 3 Using GPS Navigation

Introduction

The MC55 includes Global Positioning System (GPS) technology using the SiRF III chipset. GPS technology is based on a worldwide system of GPS satellites orbiting the earth that continuously transmit digital radio signals. These radio signals contain data on the satellites' locations and their exact clock time and are used to determine your location on the earth.

> ⚠️ **WARNING!** **When using the MC55 in a vehicle, it is the user's responsibility to place, secure and use in a manner that will not cause accidents, personal injury or property damage or obstruct their view. It is the responsibility of the driver to operate the vehicle in a safe manner, maintain observation of all driving conditions at all times, and not become distracted by the device to the exclusion of safe driving practices. It is unsafe to operate the controls of the device while driving.**

Software Installation

Third-party GPS navigation software is required. Evaluation software is available from various suppliers. For example; VisualGPS, visit: http://www.visualgps.net/VisualGPSce/

If interested in purchasing GPS navigation software check with the GPS software vendor (before purchasing, downloading, or installing any software) to determine that the application is compatible with the MC55. Refer to the application's user guide for application installation and setup information.

MC55 GPS Setup

The GPS-enabled MC55 uses Microsoft Windows Mobile 6, so the operating system automatically manages access to the GPS receiver to allow multiple programs to simultaneously access GPS data.

Ensure that the following settings are set on the MC55:

1. Tap **Start** > **Settings** > **System** > **External GPS** icon.

2. In the **Programs** tab, select *None* from the **GPS program port** drop-down list.

3. In the **Hardware** tab, select *COM8* in the **GPS hardware port** drop-down list.

4. Select *57600* from the **Baud rate** drop-down list.

5. Tap **ok** to close the **Setting** window.

NOTE If an application error message appears indicating that the COM port cannot be opened, ensure that a free COM port is selected in the **GPS hardware port** drop-down list.

Operation

Acquiring satellite signals may take a few minutes. It is best to be outside and have a clear, unobstructed view of the sky. Without a clear view, acquisition takes much longer and could result in the MC55 being unable to compute the initial position quickly. When operating the device indoors access to the GPS signals may be limited or unavailable.

NOTE When using a GPS navigation application, ensure that the MC55 does not go into suspend mode. If the MC55 suspends then the power to the GPS radio is removed. Upon resume the GPS receiver must reacquire a valid GPS signal, resulting in a a delay of positional information.

GPS Maps on microSD Cards

GPS navigation software vendors may sell maps on microSD cards. If using a microSD card with the GPS navigation software:

1. Remove the Memory Card Cover on the side of the MC55.

2. Insert the microSD card into the slot.

3. Replace the Memory Card Cover.

Answering a Phone Call While Using GPS

If you receive a phone call while using your GPS navigation software:

1. Answer the phone call by pressing the **Answer** button.

2. Once you end the phone call, press the **End Call** button to resume the audio on the GPS software.

NOTE Anytime you are using GPS on the MC55 and you receive a phone call, the audio on the GPS navigation software is muted until you finish the call.

Losing the GPS Signal While in a Vehicle

GPS performance on the MC55 may be affected if the vehicle has thermal glass windows and windshields, which can block the MC55 from receiving a GPS signal from satellites. To improve GPS signal strength, place the MC55 where there is a clear view of the sky. A direct line of sight is required between the MC55 and the GPS satellites to access information from the satellites.

The Global Positioning System (GPS) is a system that allows the user to track their position anywhere on the earth.

Assisted GPS

GPS can be used in stand-alone or Assisted GPS (A-GPS) modes. A Stand-alone GPS receiver downloads data from GPS satellites. It can take several minutes to get a fix. By using GPS Location servers, A-GPS dramatically

improves the performance of the Time To First Fix (TTFF) of GPS receivers by providing them with data that they would ordinarily have to download from the GPS satellites. With the A-GPS data, GPS receivers can operate faster and more reliably.

A-GPS follows the Secure User Plane Location (SUPL) protocol which allows a mobile device to communicate with a location server. Refer to the EMDK Help file for information on setting up SUPL on the MC55.

DRAFT

Chapter 4 Using Bluetooth

Introduction

Bluetooth-equipped devices can communicate without wires, using frequency-hopping spread spectrum (FHSS) radio frequency (RF) to transmit and receive data in the 2.4 GHz Industry Scientific and Medical (ISM) band (802.15.1). Bluetooth wireless technology is specifically designed for short-range (30 feet/10 meters) communication and low power consumption.

MC55s with Bluetooth capabilities can exchange information (e.g., files, appointments, and tasks) with other Bluetooth enabled devices such as phones, printers, access points, and other mobile computers. To use the MC55 as a modem, create a dial-up modem connection between a computer and MC55.

Motorola mobile computers with Bluetooth technology use the StoneStreet Bluetooth stack. To program Bluetooth within the MC55 refer to the Enterprise Mobility Developer Kit (EMDK) Help.

Adaptive Frequency Hopping

Adaptive Frequency Hopping (AFH) is a method of avoiding fixed frequency interferers, and can be used with Bluetooth voice. All devices in the piconet (Bluetooth network) must be AFH-capable in order for AFH to work. There is no AFH when connecting and discovering devices. Avoid making Bluetooth connections and discoveries during critical 802.11b communications. AFH for Bluetooth consists of four main sections:

- Channel Classification - A method of detecting an interference on a channel-by-channel basis, or pre-defined channel mask.

- Link Management - Coordinates and distributes the AFH information to the rest of the Bluetooth network.

- Hop Sequence Modification - Avoids interference by selectively reducing the number of hopping channels.

- Channel Maintenance - A method for periodically re-evaluating the channels.

When AFH is enabled, the Bluetooth radio "hops around" (instead of through) the 802.11b high-rate channels. AFH coexistence allows Motorola mobile computers to operate in any infrastructure.

The Bluetooth radio in this MC55 operates as a Class 2 device power class. The maximum output power is 2.5mW and the expected range is 32.8 feet (10 meters). A definition of ranges based on power class is difficult to obtain due to power and device differences, and whether one measures open space or closed office space.

NOTE   It is not recommended to perform Bluetooth wireless technology inquiry when high rate 802.11b operation is required.

Security

The current Bluetooth specification defines security at the link level. Application-level security is not specified. This allows application developers to define security mechanisms tailored to their specific need. Link-level security occurs between devices, not users, while application-level security can be implemented on a per-user basis. The Bluetooth specification defines security algorithms and procedures needed to authenticate devices, and if needed, encrypt the data flowing on the link between the devices. Device authentication is a mandatory feature of Bluetooth while link encryption is optional.

Pairing of Bluetooth devices is accomplished by creating an initialization key that is used to authenticate the devices and create a link key for them. Entering a common PIN number in the devices being paired generates the initialization key. The PIN number is never sent over the air. By default, the Bluetooth stack responds with no key when a key is requested (it is up to user to respond to the key request event). Authentication of Bluetooth devices is based-upon a challenge-response transaction. Bluetooth allows for a PIN number or passkey that is used to create other 128-bit keys used for security and encryption. The encryption key is derived from the link key used to authenticate the pairing devices. Also worthy of note is the limited range and fast frequency hopping of the Bluetooth radios that makes long-distance eavesdropping difficult.

Recommendations are:

- Perform pairing in a secure environment
- Keep PIN codes private and don't store the PIN codes in the mobile computer
- Implement application-level security.

Turning the Bluetooth Radio Mode On and Off

Turn off the Bluetooth radio to save power or if entering an area with radio restrictions (e.g., an airplane). When the radio is off, other Bluetooth devices cannot see or connect to the MC55. Turn on the Bluetooth radio to exchange information with other Bluetooth devices (within range). Communicate only with Bluetooth radios in close proximity.

> **NOTE** To achieve the best battery life turn off radios not in use.

Disabling Bluetooth

To disable Bluetooth, tap **Bluetooth** icon > **Disable Bluetooth**. The **Bluetooth** icon changes to indicate that Bluetooth is disabled.
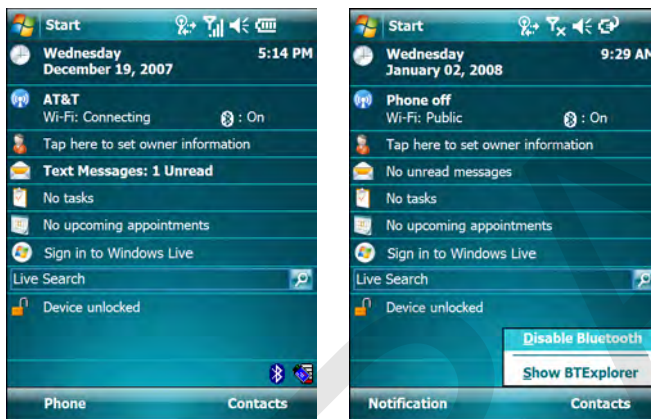
Figure 4-1 *Disable Bluetooth*

Enabling Bluetooth

To enable Bluetooth, tap **Bluetooth** icon > **Enable Bluetooth**. The **Bluetooth** icon changes to indicate that Bluetooth is enabled.

Figure 4-2 *Enable Bluetooth*

Bluetooth Power States

Cold Boot

Performing a cold boot on the MC55 turns off Bluetooth after initialization (which takes a few moments). It is normal to see the **Bluetooth** icon appear and disappear, as well as a wait cursor, when initialization proceeds in all modes.

Warm Boot

Performing a warm boot on the MC55 returns Bluetooth to the last state after initialization.

Suspend

Suspending the MC55 turns off Bluetooth.

> ✓ *NOTE*   If there is an active Bluetooth connection between the MC55 and another Bluetooth device, the MC55 will not suspend.

Resume

When the MC55 resumes, Bluetooth turns on if it was on prior to suspend.

Modes

The BTExplorer application has two modes for managing Bluetooth connections: Wizard Mode and Explorer Mode. The Wizard Mode is for novice Bluetooth users and the Explorer Mode is for experienced Bluetooth users. To switch between modes, select **View** > **Wizard Mode** or **View** > **Explorer Mode**.

Wizard Mode

Wizard Mode provides a simple process for discovering and connecting to Bluetooth devices.

> ✓ *NOTE*   Switching between Wizard Mode and Explorer Mode closes all active connections.

Wizard Mode shows the devices and services in a simple Favorites view created by following the step-by-step wizard.

Explorer Mode

The **Explorer Mode** window is easy to navigate and provides greater control to users familiar with Bluetooth. The menu bar provides quick access to the options and tools used to connect to devices. To access Explorer Mode, tap **View** > **Explorer Mode**.
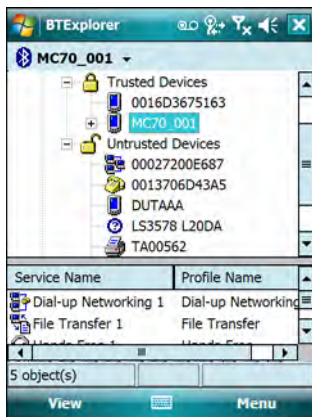
Figure 4-3   *Explorer Mode Window*

You can also use the "tap and hold" technique to view available options. Scroll bars and view options are similar to those on the Windows desktop. The tree structure lists the following sub-items:

- Local Device - This device
- Remote Device - Other Bluetooth devices
  - Trusted Devices - Bonded (paired) Bluetooth devices
  - Untrusted Devices - Discovered devices that are not bonded
- Favorites - Selected services that are set as *Favorite* for quick access.

> ✓ *NOTE* Switching between Wizard Mode and Explorer Mode closes all active connections.

Discovering Bluetooth Device(s)

The MC55 can receive information from discovered devices without bonding. However, once bonded, the MC55 and a bonded device exchange information automatically when you turn the Bluetooth radio on. See *Bonding with Discovered Device(s) on page 4-17* for more information.

To find Bluetooth devices in the area:

1. Ensure that Bluetooth is enabled on both devices.

2. Ensure that the Bluetooth device to discover is in discoverable and connectable modes.

3. Ensure that the require profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

4. Ensure that the two devices are within 30 feet (10 meters) of one another.

5. Tap the **Bluetooth** icon and select **Show BTExplorer**. The **BTExplorer** window appears.

> **NOTE**   If favorite connections have already been created, the **Favorites** screen displays. If no favorite connections have been created, the **New Connection Wizard** screen displays.

6. Tap **Menu** > **New Connection**.The **New Connection Wizard** appears.

Figure 4-4   *BTExplorer Window*

7. Select **Explore Services on Remote Device** or another from the drop-down list and tap **Next**.

    The following actions are available in the drop-down list (actions may vary depending upon configurations):

    • Explore Services on Remote Device

    • Pair with a Remote Device

    • Active Sync via Bluetooth

    • Browse Files on Remote Device

    • Connect to Headset

    • Connect to Internet using Access Point

    • Connect to Internet using Phone/Modem

    • Connect to Personal Area Network

    • Connect to Printer

- Send or Exchange Objects

- Associate Serial Port.

    ✓ *NOTE* If a device discovery action has not been previously performed, a device discovery is automatically initiated. If a device discovery has previously been performed, the device discovery process is skipped, and the previously found list of devices displays. To start a new device discovery, tap and hold in the window and select **Discover Devices** from the pop-up menu.

8. **BTExplorer** searches for Bluetooth devices in the area.
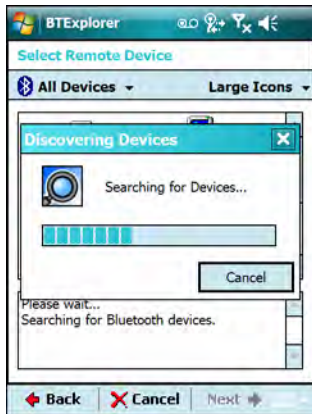
Figure 4-5   *Discover Devices Dialog Box*

    The discovered devices display in the **Select Remote Device** window.
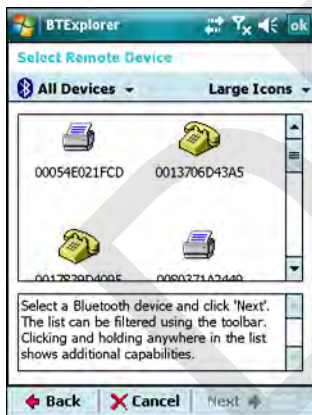
Figure 4-6   *Select Remote Device Window*

9. Select a device from the list and tap **Next**. The MC55 searches for services on the selected Bluetooth device.
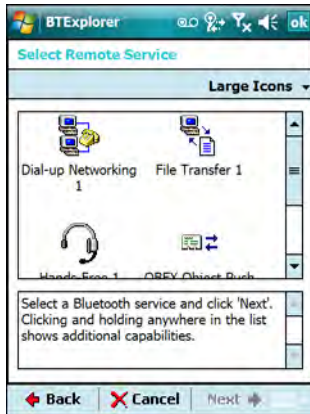
Figure 4-7   *Device Services*

> **NOTE**   If the MC55 discovers a service but the service is not supported, the service icon is grayed-out.

10. Select a service from the list and press **Next**. The **Connection Favorite Options** window appears.

Figure 4-8   *Connection Favorite Options Window*

11. In the **Favorite Name** text box, enter a name for this service that will appear in the **Favorite** window.

12. Tap **Next**. The **Connection Summary** window appears.

13. Tap **Connect** to add the service to the **Favorite** window and connect to the service.

Figure 4-9   *Favorites Window*

Available Services

> **NOTE**   Some devices might not require a PIN. This depends upon the device's authentication.

The MC55 offers the following services:

- File Transfer Services
- Dial-Up Networking Services
- OBEX Object Push Services
- Headset Audio Gateway Services
- Hands-Free Audio Gateway Services
- Serial Port Services
- Personal Area Networking Services
- IrMC Services.

See the following sections for information on these services.

File Transfer Services

> **NOTE**   Shared folders are a security risk.

To transfer files between the MC55 and another Bluetooth enabled device:

1. Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2. Ensure that OBEX File Transfer profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

> **NOTE**   If favorite connections have already been created, the **Favorites** screen displays. If no favorite connections have been created, the **New Connection Wizard** screen displays.

3. Use the **Connection Wizard** to search for a Bluetooth device.

4. Select the device and tap **Next**. The **Select Remote Service** window appears.

5. Tap **Next**. The **Connection Favorite Options** window appears.

6. Tap **Next**. The **Connection Summary** window appears.

7. Tap **Connect**. The remote device's accessible folders appear.

Figure 4-10   *File Transfer Window*

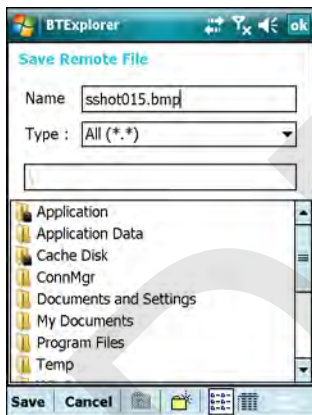**8.** Double-tap the file to copy. The **Save Remote File** window appears.

Figure 4-11   *Save Remote File Window*

9. Tap and hold on the file. A pop-up menu appears.

10. Select the action to perform:

- **New** - create a new file or folder on the remote device
- **Delete** - delete the selected file on the remote device.
- **Get File** - copy the file from the remote device to the MC55.
- **Put File** - copy a file from the MC55 to the remote device.

Creating a New File or Folder

To create a new folder or file on the remote device:

1. Tap and hold on the screen and select **New** > **Folder** or **New** > **File**. The **Create New Folder** or **Create New File** window appears.

2. Enter the name for the new folder or file.

3. Tap **OK** to create the new folder or file on the remote device.

Deleting a File

To delete a file from the remote device:

1. Tap and hold on the file to delete and select **Delete**.

2. In the **Delete Remote Device File** dialog box tap **Yes**.

Getting a File

To copy a file from a remote device:

1. Double-tap or tap and hold on the file and select **Get**. The **Save Remote File** window appears.

2. Navigate to the directory to save the file.

3. Tap **Save**. The file is transferred from the remote device to the MC55.

Copying a File

To copy a file to a remote device:

1. Tap **Action** > **Put**. The **Send Local File** window appears.

2. Navigate to the directory to save the file and select a file.

3. Tap **Open**. The file copies from the MC55 to the remote device.

Connecting to the Internet Using an Access Point

This section explains how to access a Bluetooth-enabled LAN access point (AP) for a network connection. Use Internet Explorer to connect to a server.

1. Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2. Ensure that the **Personal Area Networking** profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

3. Use the **Connection Wizard** to search for a Bluetooth AP.

   ✓ *NOTE* If favorite connections have already been created, the **Favorites** screen displays. If no favorite connections have been created, the **New Connection Wizard** screen displays.

4. Select the **Personal Area Network** or **Network Access** service and select **Connect** from the pop-up menu. The MC55 connects with the access point.

5. Tap **Start** > **Internet Explorer**. The **Internet Explorer** window appears.

6. In the address field, enter an internet address and tap the **Enter** button. The web page loads.

Dial-Up Networking Services

Dial-up networking allows the user to connect a PC or laptop to the MC55 and use the MC55 as a modem to connect to an office network or ISP.

Before setting up dial-up networking, obtain dial-up information and other necessary settings (username, password and domain name, if required) for the office network or ISP. To create a new Bluetooth connection:

1. Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2. Ensure that the **Dial-Up Networking** profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

3. On the PC or laptop, set up Bluetooth according to the manufacturer's instructions.

4. On the PC or laptop Bluetooth software, search for the MC55 and select the Dial-up Networking service.

5. Using dial-up software on the PC or laptop, connect to the MC55.

6. The MC55 phone function dials the ISP number and connects to the ISP.

7. To verify, on the PC or laptop, launch Internet Explorer and open a web site.

Object Exchange Push Services

Object Exchange (OBEX) is a set of protocols that allows sharing objects such as Contacts or pictures using Bluetooth.

To exchange contact information with another Bluetooth enabled device:

1. Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2. Ensure that the **OBEX Object Push** profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

    NOTE   If favorite connections have already been created, the **Favorites** screen displays. If no favorite connections have been created, the **New Connection Wizard** screen displays.

3. Use the **Connection Wizard** to search for a Bluetooth device.

4. Select the device and tap **Next**.

5. Select the **OBEX Object Push** service and select **Connect**. The **OBEX Object Push** window appears.

6. In the **Action** drop-down list, select one of the following options: **Send Contact Information**, **Swap Contact Information**, **Fetch Contact Information**, or **Send a Picture**.

Sending a Contact

To send a contact to another device:

NOTE   Prior to sending a contact, a default contact must be set up before attempting to send a contact.

1. Tap and hold on **OBEX Object Push** and select **Connect**. The **OBEX Object Push** window appears.

Figure 4-12   *OBEX Object Push Window*

2. In the **Action:** drop-down list, select **Send Contact Information**.

3. Tap ... . The **Select Contact Entry** window appears.
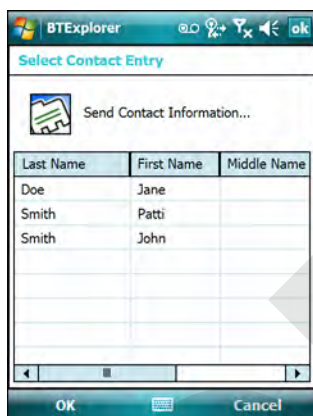

Figure 4-13   *Select Contact Entry Window*

4. Select a contact to send to the other device.

5. Tap **OK**.

6. Tap **OK** to send the contact to the other device and display a confirmation dialog box on the other device to accept the contact. A **Send Contact** dialog appears.

7. Tap **Ok**.

Sending a Picture

To send a picture to another device:

1.   Tap and hold on **OBEX Object Push** and select **Connect**. The **OBEX Object Push** window appears.

Figure 4-14   *OBEX Object Push Window*

2.   In the **Action:** drop-down list, select **Send A Picture**.

3.   Tap   . The **Send Local Picture** window appears.
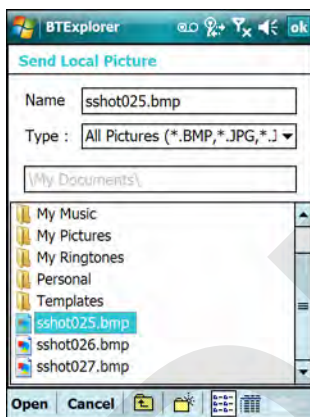
Figure 4-15   *Send Local Picture Window*

4.   Navigate to the picture to send to the other device.

5.   Tap **Open**.

6.   Tap **OK** to send the picture to the other device and display a confirmation dialog box on the other device to accept the picture. A **Send Picture** dialog appears.

7.   Tap **Ok**.

Headset Services

To connect to a Bluetooth headset:

✓   *NOTE*   Bluetooth headsets are device dependant and remember the last device they connected to. If problems occur while connecting to the headset, place the headset in discovery mode. Refer to the headset user manual for more informaion.

1.   Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2. Ensure that the **Headset** profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

3. Use the **Connection Wizard** to search for a Bluetooth headset.

4. Select the device and tap **Next**.

5. Select the **Headset** service name and select **Connect**. The MC55 connects to the headset. Refer to the headset user manual for instructions on communicating with a Bluetooth device.

> ✓ *NOTE* When using a Bluetooth headset with Headset Services, you cannot accept or end a call from the headset. You must accept or end a call on the MC55. Pressing the headset communication button routes the audio to the headset. Pressing the communication button a second time routes the audio back to the MC55.

Hands-free Services

To connect to a Bluetooth headset:

> ✓ *NOTE* Bluetooth headsets are device dependant and remember the last device they connected to. If problems occur while connecting to the headset, place the headset in discovery mode. Refer to the headset user manual for more informaion.

1. Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2. Ensure that the **Hands Free** profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

3. Use the **Connection Wizard** to search for a Bluetooth hands-free headset.

4. Select the hand-free device and tap **Next**.

5. Select the **Hands-free** service name and select **Connect**. The MC55 connects to the headset. Refer to the headset user manual for instructions on communicating with a Bluetooth device.

6. During an active connection, the MC55 cannot go into suspend mode when the Power Button is pressed. A message appears notifying the user.

Headset icon
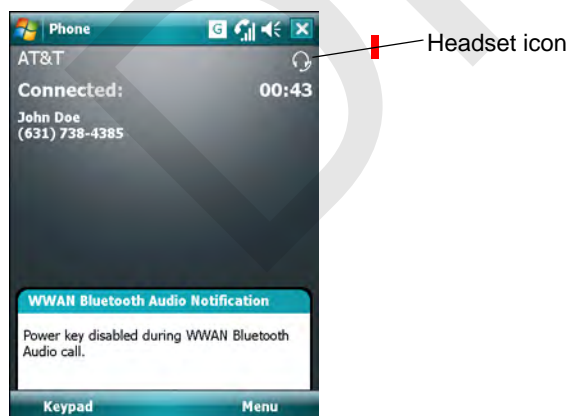
Figure 4-16 *WWAN Bluetooth Audio Notification Dialog Box*

Serial Port Services

Use the wireless Bluetooth serial port connection as you would a physical serial cable connection. Configure the application that will use the connection to the correct serial port.

To establish a serial port connection:

1. Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2. Use the **Connection Wizard** to search for a Bluetooth serial device.

3. Select the device and tap **Next**. The **Connection Favorite Options** window appears.

4. In the **Local COM Port:** drop-down list select a COM port.

5. Tap **Finish**.

ActiveSync Using Serial Port Services

✓ **NOTE**   By default, COM ports COM5, COM9, COM11, COM21, COM22 and COM23 are Bluetooth virtual ports. If an application opens one of these ports, the Bluetooth driver activates and guides you through a Bluetooth connection.

Use the wireless Bluetooth serial port connection for ActiveSync just as you would a physical serial cable connection. You must configure the application that will use the connection to the correct serial port.

To establish an ActiveSync connection:

1. Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2. Ensure that the **ActiveSync** profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

3. Use the **Connection Wizard** to search for a Bluetooth device, such as a PC.

4. Select the device and tap **Next**. The **Connection Favorite Options** window appears.

5. Tap **Connect**. The **Remote Service Connection** window appears.

Figure 4-17   *Remote Service Connection Window*

6. In the **Service Type** drop-down list, select **Active Sync**.

7. Tap **OK**. The MC55 connects the PC and an ActiveSync session begins.

8. Tap **Finish**. The Connection Favorite Options window appears.

9. To end the session, tap the ActiveSync icon in the **Favorite** window and select **Disconnect** from the pop-up window.

Personal Area Network Services

Connect two or more Bluetooth devices to share files, collaborate, or play multi-player games. To establish a Personal Area Network connection:

1.   Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2.   Ensure that the **Personal Area Networking** profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

3.   Use the **Connection Wizard** to search for a Bluetooth device.

4.   Select the device and tap **Next**. The **Connection Favorite Options** window appears.

5.   Tap **Next**. The **Connection Summary** window appears.

6.   Tap **Connect**. The MC55 connects to the Bluetooth device.

IrMC Synchronization Services

IrMC Synchronization is used to synchronize PIM contacts between a remote device and the MC55. To establish an IrMC synchronization:

1.   Ensure the MC55 is discoverable and connectable. See *Device Info Tab on page 4-20*.

2.   Ensure that the **Personal Area Networking** profile is enabled on the MC55. See *Profiles Tab on page 4-29* for more information.

3.   Use the **Connection Wizard** to search for a Bluetooth device.

4.   Select the device and tap **Next**. The **Connection Favorite Options** window appears.

5.   Tap and hold **IrMA Synchronization** and select **Connect** in the pop-up menu.

Bonding with Discovered Device(s)

A bond is a relationship created between the MC55 and another Bluetooth device in order to exchange information in a secure manner. Creating a bond involves entering the same PIN on the two devices. After creating a bond and turning on the Bluetooth radios, the devices recognize the bond and can exchange information without re-entering a PIN.

To bond with a discovered Bluetooth device:

> *NOTE*   If favorite connections have already been created, the **Favorites** screen displays. If no favorite connections have been created, the **New Connection Wizard** screen displays.

1.   Tap the **Bluetooth** icon and select **Show BTExplorer**. The **BTExplorer** window appears.

2.   Tap **Menu** > **New Connection**. The **New Connection Wizard** window appears.

3.   In the drop-down list, select **Pair with Remote Device**.

4.   Tap **Next**. The **Select Remote Device** window appears.

> *NOTE*   Devices discovered previously are listed to save time. To start a new device discovery, tap and hold on the list area and select **Discover Devices** from the pop-up menu.

Figure 4-18 *Select Remote Device Window*

5.   Select a device from the list and tap **Next**. The **PIN Code Request** window appears.
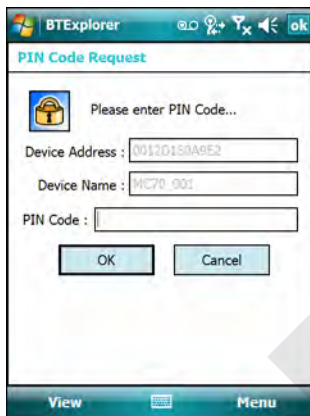

Figure 4-19 *Connection Favorite Options Window*

6.   In the **PIN Code** field, enter the PIN code.
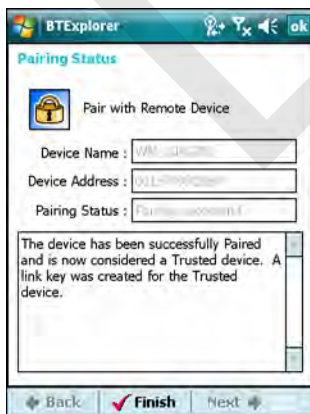
7.   Tap **OK**. The **Pairing Status** window displays.

Figure 4-20 *Pairing Status Window*

8.   Tap **Finish**. The devices are successfully paired. The device name moves to the **Trusted Devices** window.

Deleting a Bonded Device

To delete a device no longer needed:

1. Tap the **Bluetooth** icon and select **Show BTExplorer**. The **BTExplorer** window appears.

2. Tap **Menu** > **Trusted Devices**. The **Trusted Devices** window appears.

3. Tap and hold on the device select **Delete Link Key** in the pop-up menu.

4. A confirmation dialog appears. Tap **Yes**.

Accepting a Bond

When a remote device wants to bond with the MC55, enter a PIN when requested to grant permission.

1. Ensure that the MC55 is set to discoverable and connectable. See *Bluetooth Settings on page 4-20*. When prompted to bond with the remote device the **PIN Code Request** window appears.
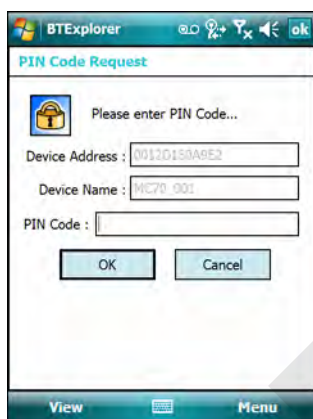
Figure 4-21   *PIN Code Request Window*

2. In the **PIN Code:** text box, enter the same PIN entered on the device requesting the bond. The PIN must be between 1 and 16 characters.

3. In the **Device Name:** text box, edit the name of the device requesting the bond, if desired.

4. Tap **OK** to create the bond. The MC55 can now exchange information with the other device.

Bluetooth Settings

Use the **BTExplorer Settings** window to configure the operation of the **BTExplorer** application. Tap **Menu** > **Settings**. The **BTExplorer Settings** window appears.

Device Info Tab

Use the **Device Info** tab to configure the MC55's Bluetooth connection modes.

Figure 4-22   *BTExplorer Settings - Device Info Tab*

Device Name	Displays the name of the MC55.
Discoverable Mode	Select whether or not the MC55 is discoverable by other Bluetooth devices.
Connectable Mode	Select whether or not the MC55 is connectable by other Bluetooth devices.

Services Tab

Use the **Services** tab to add or delete Bluetooth services.
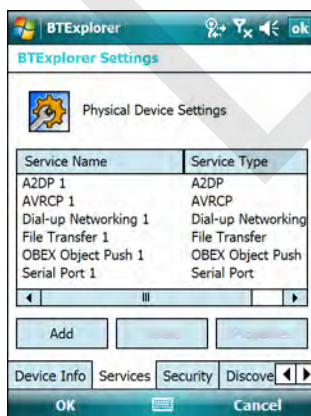
Figure 4-23   *BTExplorer Settings - Services Tab*

To add a service:

1.   Tap **Add**. The **Add Local Service** window displays.
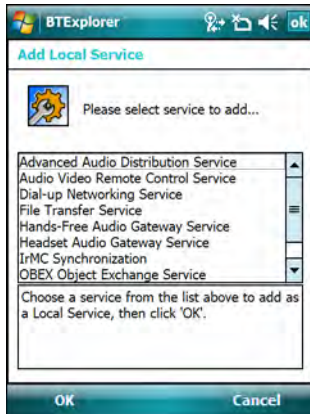
Figure 4-24   *Add Local Service Window*

2.   In the list, select a service to add.

3.   Tap **OK**. The **Edit Local Service** window displays for the selected service.

4.   Select the appropriate information and then tap **OK**. See the following sections for information on the available services.

Dial-Up Networking Service

Dial-up Networking allows other Bluetooth devices to access a dial-up modem.

Figure 4-25   *Add Local Service Window*

Table 4-1

Item	Description
Service Name	Displays the name of the service.
Service Security	Select the type of security from the drop-down list. Options are **None**, **Authenticate**, or **Authenticate/Encrypt**.
Local COM Port	Select the COM port.
Local Baud Rate	Select the communication baud rate.
Local Port Options	Select the port option.

File Transfer Service

File transfer allows other Bluetooth devices to browse files.
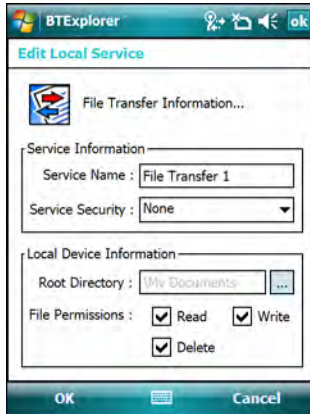
Figure 4-26 *BTExplorer Settings - File Transfer Information*

Table 4-2 *File Transfer Information Data*

Item	Description
Service Name	Displays the name of the service.
Service Security	Select the type of security from the drop-down list. Options are **None**, **Authenticate**, or **Authenticate/Encrypt**.
Root Directory	Select the directory that other Bluetooth devices can access.
File Permissions	Select the file permissions for the selected directory. Check the appropriate box to grant read access, write access, and delete access.

Hands-Free Audio Gateway Service

Hands-Free Service Audio Gateway allows connection to hands-free devices.
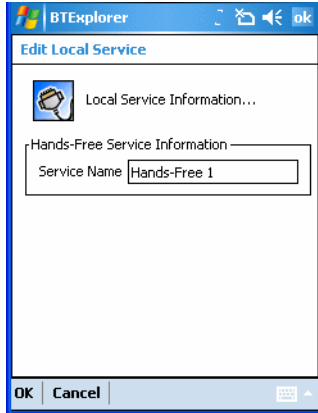
Figure 4-27   *BTExplorer Settings - Hands-Free Audio Gateway*

Table 4-3   *Hands-Free Audio Gateway Data*

item	Description
Service Name	Lists the name of the audio service.

Headset Audio Gateway Service

Headset Service Audio Gateway allows connection to headset devices.
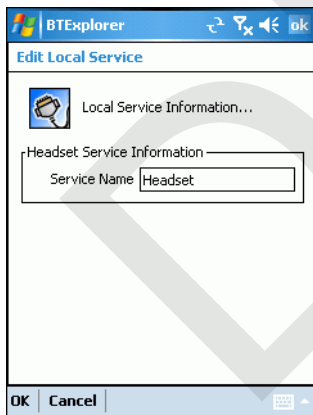
Figure 4-28   *BTExplorer Settings - Headset Audio Gateway*

Table 4-4   *Headset Audio Gateway Data*

Item	Description
Service Name	Lists the name of the audio service.

IrMC Synchronization Service

The IrMC Synchronization service used to synchronize PIM contacts between a remote device and the MC55.
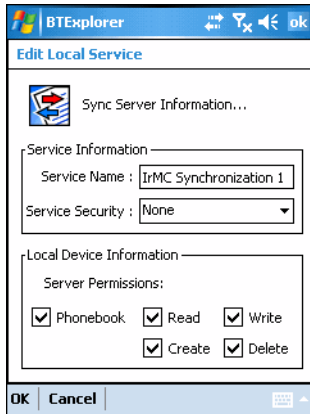
Figure 4-29 *BTExplorer Settings - IrMC Synchronization*

Table 4-5 *IrMC Synchronization Data*

Item	Description
Service Name	Displays the name of the service.
Service Security	Select the type of security from the drop-down list. Options are **None**, **Authenticate**, or **Authenticate/Encrypt**.
Phonebook	Select the **Phonebook** checkbox to allow synchronization with the MC55's contacts.
	Select **Read**, **Write**, **Create** and/or **Delete** to allow phonebook permissions.

OBEX Object Push Service

OBEX Object Push allows other Bluetooth devices to push contacts, business cards, pictures, appointments, and tasks to the MC55.

Figure 4-30   *BTExplorer Settings - OBEX Exchange Information*

Table 4-6   *OBEX Exchange Information Data*

Item	Description
Service Name	Displays the name of the service.
Service Security	Select the type of security from the drop-down list. Options are **None**, **Authenticate**, or **Authenticate/Encrypt**.
Do not allow clients to push objects	Disables clients from pushing objects to the MC55.
Inbox Directory	Select a directory where another Bluetooth device can store files.

Personal Area Networking Service

Personal Area Networking hosts a Personal Area Network which allows communication with other Bluetooth devices.

Figure 4-31   *BTExplorer Settings - Personal Area Networking*

Table 4-7 *Personal Area Networking Data*

Item	Description
Service Name	Displays the name of the service.
Service Security	Select the type of security from the drop-down list. Options are **None**, **Authenticate**, or **Authenticate/Encrypt**.
Support Group Ad-Hoc Networking	Select to enable Ad-Hoc networking.

Serial Port Service

Serial port allows other Bluetooth devices to access COM ports.

Figure 4-32 *BTExplorer Settings - Serial Port Services*

Table 4-8 *Serial Port Services Data*

Item	Description
Service Name	Displays the name of the service.
Service Security	Select the type of security from the drop-down list. Options are **None**, **Authenticate**, or **Authenticate/Encrypt**.
Local COM Port	Select the COM port.
Local Baud Rate	Select the communication baud rate.
Local Port Options	Select the port option.

Security Tab

Security settings allows you to set global security policies for Bluetooth. Note that these settings are only active on local Services that are set to Authenticate or Authenticate/Encryption. You can set authentication on local Services under the Services tab.

To adjust the security settings for an individual service, select the **Services** tab first, then select the individual service, then **Properties**.

Figure 4-33   *BTExplorer Settings - Security Tab*

> **NOTE**   To use PIN Code, select **Authenticate** or **Authenticate/Encrypt** from the Service Security drop-down list on each local service.

Table 4-9   *Security Tab Data*

Item	Description
Use PIN Code (Incoming Connection)	Select for automatic use of the PIN code entered in the **PIN Code** text box. It is recommended not to use this automatic PIN code feature. See *Security on page 4-2* for more information.
PIN Code	Enter the PIN code.
Encrypt Link On All Outgoing Connections	Select to enable or disable encryption on all outgoing connections to other Bluetooth devices.

Discovery Tab

Use the **Discovery** tab to set and modify discovered devices.
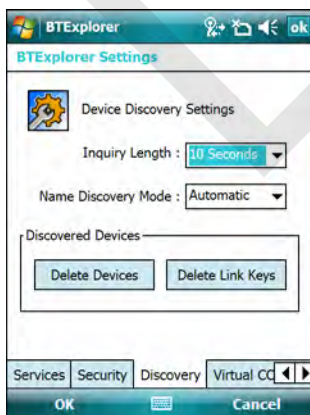
Figure 4-34   *BTExplorer Settings - Discovery Tab*

Table 4-10 *Discovery Tab Data*

Item	Description
Inquiry Length	Sets the amount of time the MC55 takes to discover Bluetooth devices in the area.
Name Discovery Mode	Select either **Automatic** or **Manual** to automatically attempt to discover a Bluetooth device's name after finding the device.
Discovered Devices - Delete Devices	Deletes all discovered devices and link keys from memory.
Discovered Devices - Delete Linked Keys	Removes all pairing from remote Bluetooth devices, and makes them all un-trusted.

Virtual COM Port Tab

Virtual COM Port defines which COM ports BTExplorer attempts to use for virtual COM ports. Check the appropriate checkbox to use the port as a virtual COM port. When finished, choose **Apply** to enforce changes, or **Revert** to restore the original settings.
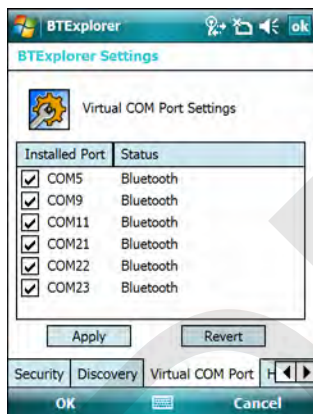
Figure 4-35 *BTExplorer Settings - Virtual COM Port Tab*

Table 4-11 *Virtual COM Port Tab Data*

Item	Description
COM5:Bluetooth	Enable or disable COM Port 5.
COM9:Bluetooth	Enable or disable COM Port 9.
COM11:Bluetooth	Enable or disable COM Port 11.
COM21:Bluetooth	Enable or disable COM Port 21.
COM22:Bluetooth	Enable or disable COM Port 22.
COM23:Bluetooth	Enable or disable COM Port 23.

HID Tab

Use the **HID** tab to select The Human Interface Device Profile programming interface defines the protocols and procedures to be used to implement HID capabilities.

Provides support for devices such as mice, joysticks, keyboards.
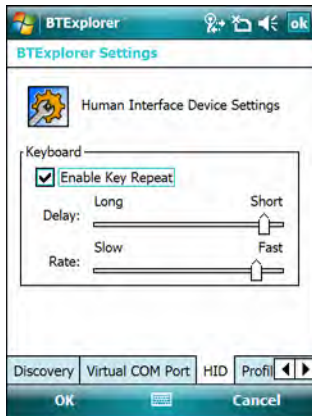
Figure 4-36   *BTExplorer Settings - HID Tab*

Table 4-12   *HID Tab Data*

Item	Description
Enable Key Repeat	Enables key repeat functionality.
Delay	To increase key repeat delay, drag the **Delay** slider to the right. To decrease key repeat delay, drag the **Delay** slider to the left.
Rate	To increase key repeat speed, drag the **Rate** slider to the left. To decrease key repeat speed, drag the **Rate** slider to the right.

Profiles Tab

Use the Profile tab to load or remove Bluetooth services profiles. If a profile is not used, it can be removed to save memory.
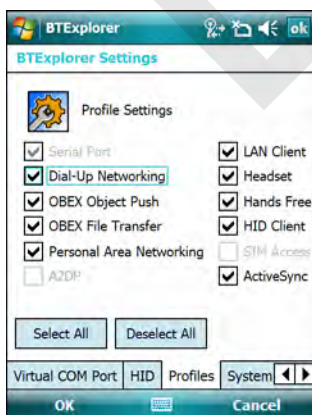
Figure 4-37   *BTExplorer Settings - Profile Tab*

1.   Tap a check box next to the profile to load (activate).

The Serial Port profile is always active and cannot be removed.

2. Tap **Select All** to select all profiles or tap **Deselect All** to deselect all profiles.

3. Tap **Apply** to activate the profiles and then **Close** to exit the application.

System Parameters Tab
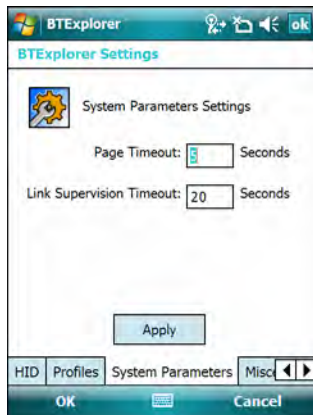
Figure 4-38 *BTExplorer Settings - System Parameters Tab*

Table 4-13 *System Parameters Tab Data*

item	Description
Page Timeout	Sets the amount of time the MC55 searches for a device before moving on the next device.
Link Supervision Timeout	Sets the amount of time that the MC55 will wait for a device to come back into range after it has gone out of range. If the device does not come back into range by the set time, the MC55 drops the connection.

Miscellaneous Tab
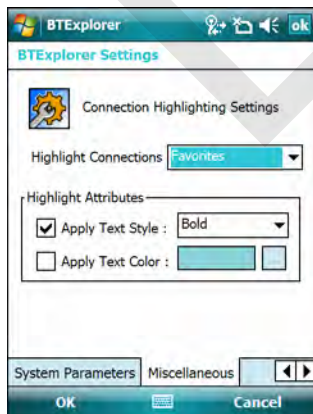
Figure 4-39 *BTExplorer Settings - Miscellaneous Tab*

Table 4-14   *Miscellaneous tab Data*

Item	Description
Highlight Connections	Select the connection type to highlight when connected. In the Wizard Mode, the only options are *Favorites* or *None*. In the Explorer Mode the options are **None**, **Tree View Only**, **List View Only**, or **Tree and List View**.
Apply Text Style	Select the text style to apply to the connection text.
Apply Text Color	Select the text color to apply to the connection text.

Chapter 5 Using the Phone

Introduction

Use the MC55 to make phone calls, set up speed dials, keep track of calls, and send text messages. Your wireless service provider may also provide other services such as voice mail, call forwarding, and caller ID.

Also use the integrated phone to connect to an ISP or work network in order to browse the Web and read e-mail. Connect to the Internet or work network over General Packet Radio Service (GPRS) (MC5504 and MC5574) using Cellular Line, or using the modem specified by the mobile operator. For more information, or to customize the MC55 phone by changing phone settings, see the *MC55 Integrator Guide*.

Accessing the Phone Keypad

✓ *NOTE* Keypads vary depending on services and the state of the phone. For example, place calls on hold and use **Swap** to switch active calls on hold. (See *Conference Calling on page 5-19*.)

Access the keypad regardless of the program in use. Applications on the MC55 can be in use during a call.

Antenna Signal

MC5504/96
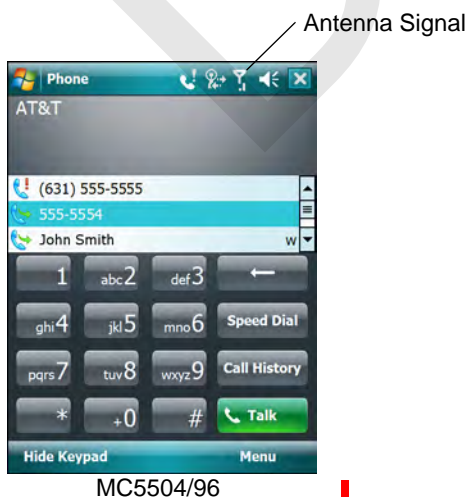
Figure 5-1 *Phone Keypads*

To access the phone keypad tap **Start** > **Phone** or press the green phone key on the MC55's keypad.

To receive calls when the MC55 is suspended, leave the phone radio turned on and ensure the MC55 is set to wake with any key.

Turning the Phone On and Off

Windows Mobile 6 devices include **Wireless Manager**, which provides a simple method of enabling and disabling the phone.

To open **Wireless Manager**, tap the **Connectivity** icon.
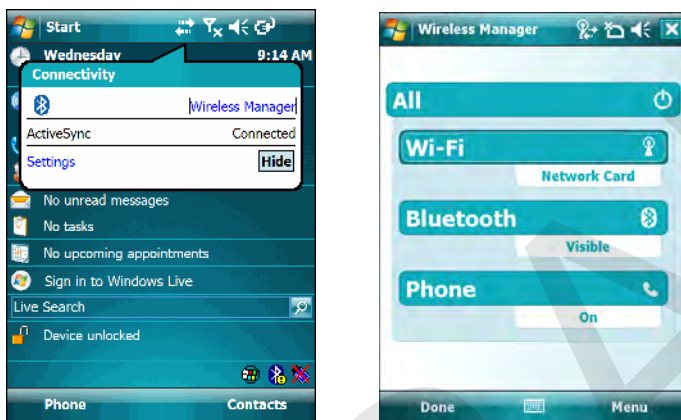
Figure 5-2   *Opening Wireless Manager*

Select **Wireless Manager**. The **Wireless Manager** window appears.

To toggle on or off the phone, tap blue Phone bar.

To configure settings for a connection, tap **Menu** > **Phone Settings**.

NOTE   To receive calls when your device is suspended, leave the phone turned on.

Audio Modes

The MC55 offers three audio modes for use during phone calls:

- **Handset Mode**: Switches audio to the speaker at the top front of the MC55, so you can use the MC55 as a handset. This is the default mode.

- **Speaker Mode**: Use the MC55 as if on speaker phone. Tap the **Speaker On** button to activate this mode. Tap the **Speaker Off** button to switch back to handset mode.

- **Headset Mode**: Connect a wired or Bluetooth headset to automatically switch audio to the headset.

The MC55 defaults to handset mode. When a wired headset is plugged into the MC55 audio connector or a Bluetooth headset is configured for use with the MC55, the earpiece and speakerphone are muted and audio is heard through the headset.

NOTE If the mobile computer goes into suspend mode while using a Bluetooth headset, the headset disconnects from the mobile computer. The mobile computer defaults back to handset mode.

Handset Mode   Speaker Mode   Headset Mode
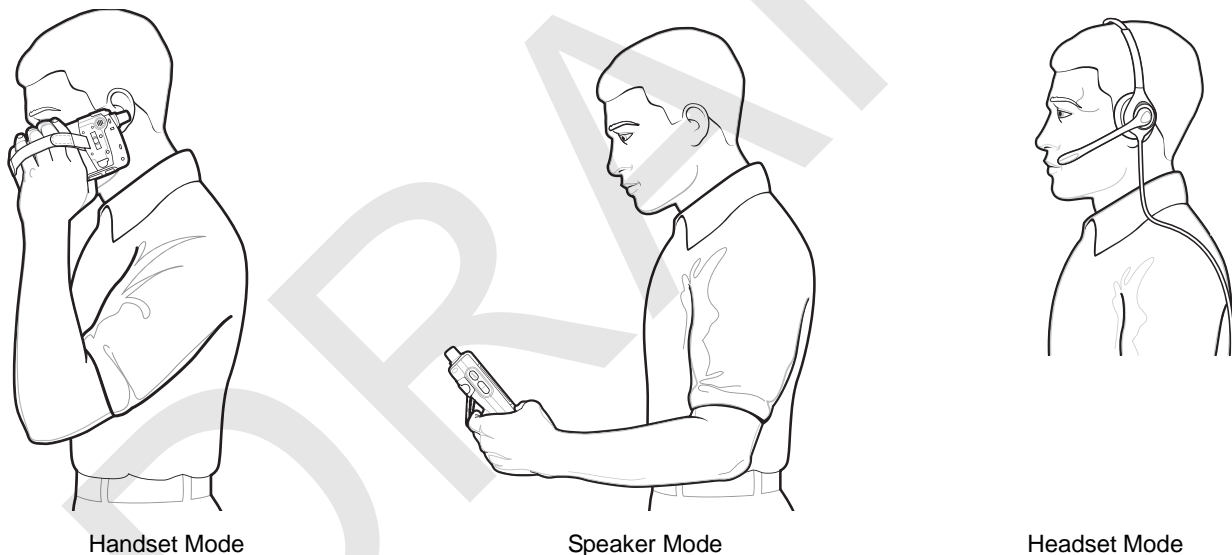
Figure 5-3   *Audio Modes*

Using a Bluetooth Headset

You can use a Bluetooth headset for audio communication when using an audio-enabled application. See *Chapter 4, Using Bluetooth* for information on connecting a Bluetooth headset to the MC55. Set the MC55's volume appropriately before putting the headset on. When a Bluetooth headset is connected the speakerphone is muted.

NOTE Ensure that the Bluetooth headset is set to stay on.

When using a Bluetooth headset, during a call the MC55 power button is disabled and the MC55 will not go into suspend mode. Once the call is completed, the power button functionality is enabled.

Adjusting Audio Volume

Use the Volume Control Slider or the keypad keys to adjust the volume of the ringer when not in a call and the audio volume when in a call.
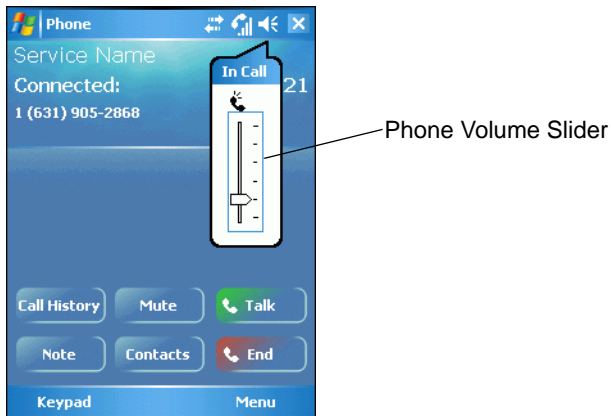
Figure 5-4   *Phone Volume Slider*

To adjust the volume tap the **Speaker** icon in the **Title** bar. Move the slider up or down to adjust the volume.

> *NOTE*   Adjust the conversation phone volume during a call. Adjusting the volume while not in a call affects the ring and notification sound levels.

Making a Call

With the MC55, you can make a call from the phone, contacts, speed dial and call history.

Using the Phone

To make a call using the phone keypad:

1.   Tap **Start** > **Phone** or press the green phone key on the MC55's keypad.

2.   From the **Phone** keypad, tap the number to call.

3.   Tap **Talk**.

4.   Tap **End** to stop dialing or end the call.

> *NOTE*   Alternatively, use the green and red phone keys on the MC55 keypad to dial (green) and end (red) calls.
>
> If you tap a wrong number, tap Delete key to erase each subsequent digit of a number. To erase the entire number, tap and hold the Delete key.

Using Contacts

Use Contacts to make a call without looking up or entering the phone number.

To make a call from Contacts:

1.   Tap **Start** > **Contacts**.

2.   From the contact list, tap and hold the contact name.
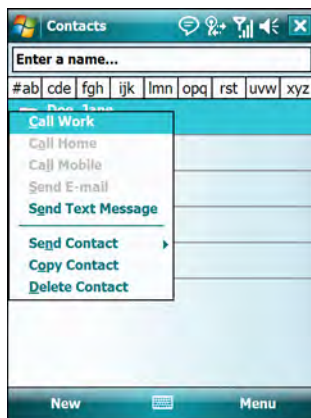
Figure 5-5   *Contacts Menu*

3.   Tap **Call Work**, **Call Home** or **Call Mobile**.

> ✓ **NOTE**   To make a call from an open contact, tap the number to call. See On-Device Help for more information about Contacts.

Using Call History

To make a call using Call History:

1.   Tap **Start** > **Phone** or press the green phone key on the MC55's keypad.

2.   From the Phone keypad, tap **Call History**.
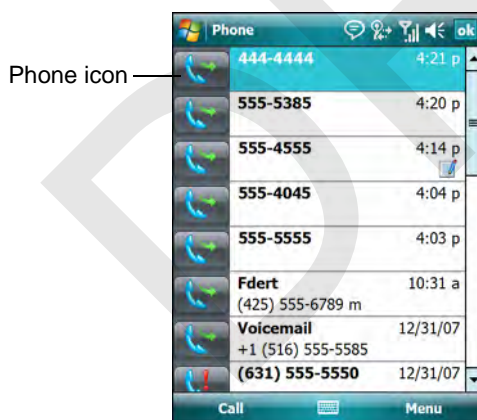
Phone icon

Figure 5-6   *Call History*

3.   Tap the phone icon next to the number to begin dialing and return to the phone keypad.

4.   Tap **End** or press the red phone key on the MC55 keypad to stop dialing or end the call.

Making a Speed Dial Call

Use Speed Dial to call someone saved in the speed dial directory.

To make a speed dial call:

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad.

2. From the Phone keypad, tap and hold the speed dial location number assigned to a contact. (To dial a one-digit speed dial location number, tap and hold the speed dial number. To dial a two-digit speed dial location number, tap the first digit and then tap and hold the second digit.)

    or

    From the Phone keypad, tap **Speed Dial** and tap the speed dial location number of the desired contact in the list.

Speed Dial Location Number
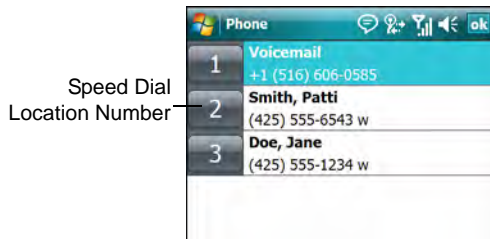
Figure 5-7   *Speed Dial Contact List*

3. To stop dialing or end the call, tap **End** or press the red phone key on the MC55 keypad.

Answering a Call

A dialog box appears on the MC55 when it receives an incoming call. If the phone is set to ring, a ring tone sounds. Answer or ignore the incoming call.

To answer an incoming call tap **Answer** on the **Phone** > **Incoming...** dialog or press the green phone key on the MC55 keypad.
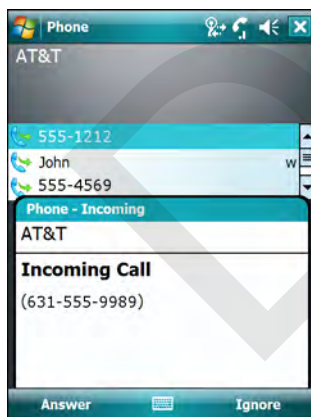
Figure 5-8   *Incoming Call*

To ignore the incoming call tap **Ignore**. This may send the caller to voice mail, depending on the service provider. Otherwise, this presents *Busy* to the calling party.

To end the call tap **End** or press the red phone key on the MC55 keypad.

Incoming Call Features

• If you receive a call while in a call, tap **Wait** to place the call in call waiting.

- You can use other programs on the MC55 during a call. To switch back to Phone, tap **Talk** or tap **Start** > **Phone**. Tap **End** to end the call.

- If a caller isn't in your contact list, create a contact during the call or from Call History by tapping **Menu** > **Save to Contacts**.

- To terminate a call when a second call comes in and answer the waiting call, tap **End** on the Phone keypad to disconnect the active call, then tap **Answer** or press the **Send** key to answer the waiting call.

- To hold the current call and answer a waiting call, tap **Answer** or press the **Send** key to place the current call on hold and answer the incoming call.

- To put a call on hold to call another number or answer an incoming call, tap **Hold**. To move from one call to another, tap **Swap** .

Smart Dialing

Smart Dialing makes it easy to dial a phone number. When you start entering numbers or characters, Smart Dialing automatically searches and sorts the contact entries on the SIM card, in Contacts, and the phone numbers in Call History (including incoming, outgoing, and missed calls). You can then select the desired number or contact from the filtered list to dial.

Open the Phone screen, then tap the keys on the Phone keypad that correspond to the phone number or contact to call. The contact panel lists contacts that match the sequence that you entered.

Smart Dialing starts looking for numbers or contacts that match the sequence entered.

To find a phone number:

- Enter the first one or two digits to find a phone number in Call History.

- Enter the first three digits or more to find a phone number from the saved Contacts and SIM card.

To find a contact name:

- Enter the first letter of a contact's first name or last name. Smart Dialing searches for the letter starting from the first character of a contact name as well as from the character that appears after a space, dash, or underscore in a contact name. For example, if you tap number "2" which is associated with [a, b, c] on the Phone keypad, contact names such as the following will be considered matches: "Smith, Bernard", "Adams, John", "Carlson, Eileen", "Dillon, Albert", "Childs, Larry", "Cooper, Robert" and "Parks, Celine".

- If the matching list is long narrow down the search further by entering another letter. Using the same example above, tap "3" which is associated with (d, e, f), the matching list is narrowed down to the following names: "Smith, Bernard", "Adams, John", and "Parks, Celine".
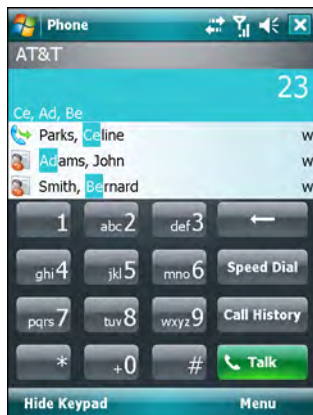
Figure 5-9   *Finding a Contact*

To make a call or send a text message using Smart Dialing:

1.   Begin entering the first few numbers or characters.

2.   In the Smart Dialing panel, use the up and down arrows on the keypad to navigate to the desired contact or phone number.

3.   When the correct contact is selected, press **TALK** to make a voice call.

4.   To send a text message to the selected contact, tap **Menu** > **Send Text Message**.

5.   To call a different phone number associated with the selected contact, tap the contact name and select the phone number to call.

Muting a Call

During a call, you can mute the microphone so you can hear the person on the line but he or she cannot hear conversation from the microphone. This is useful when there is conversation or background noise on your end.

To mute or unmute a call:

1.   Tap **Start** > **Phone** or press the green phone key on the MC55's keypad.

2.   Make a call.

3.   Tap **Mute** on the display to mute the audio. The **Mute** icon appears.
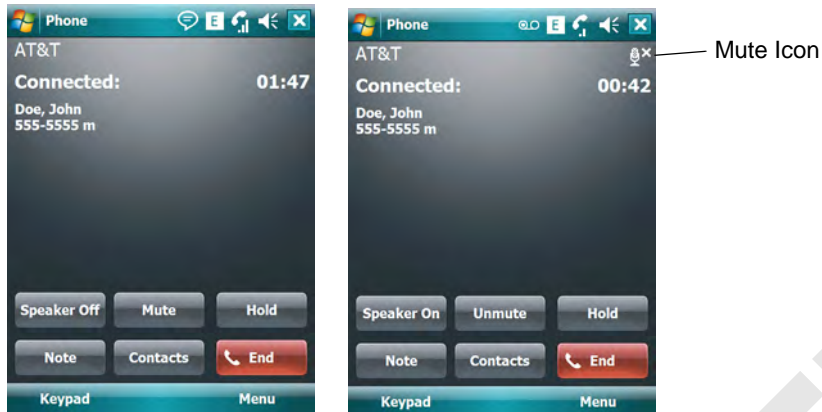
Figure 5-10   *Mute Button and Icon*

Taking Notes

To create a note during a call, tap **Note** on the display, then enter the note. For more information about creating notes see the Windows On-Device Help.

To access a note created during a call:

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad.

2. From the Phone keypad, tap **Call History**.

3. Tap and hold the number or the **Note** icon for the phone call entry containing the note.
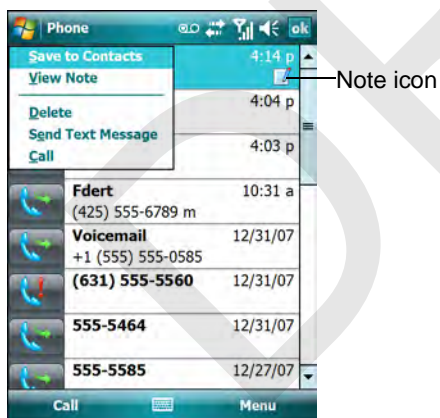
Figure 5-11   *Call History - Notes Menu*

4. Tap **View Note**.
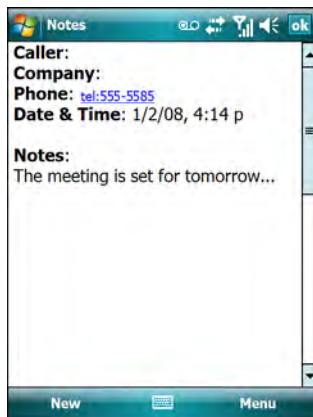
Figure 5-12   *Call History - Notes*

5.   Tap **ok** to exit.

> *NOTE*   Also access notes directly from the Notes application by tapping **Start** > **Notes**.

Using Speed Dial

Create speed dial numbers to dial frequently called numbers with a single tap. Before creating a speed dial entry, ensure the phone number exists in Contacts.

Adding a Speed Dial Entry

To add a speed dial entry from the phone keypad:

1.   Ensure the contact and phone number are in the Contacts list.

2.   Tap **Start** > **Phone** or press the green phone key on the MC55's keypad.

3.   Tap **Start** > **Speed Dial** > **Menu** > **New**.
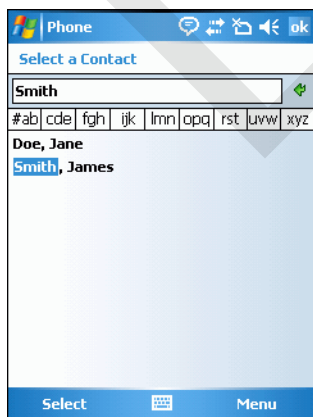
Figure 5-13   *Contacts*

4.   Tap the desired contact name and number in the list.

Figure 5-14   *Speed Dial Contact Location*

5. In the **Location** field, tap the up/down arrows to select an available location to assign as the new speed dial entry. The first speed dial location is reserved for voice mail.

6. Tap **ok** to add the contact to the speed dial list**.**

Figure 5-15   *Speed Dial Contact List*

7. Tap **ok** to exit the **Speed Dial Contact List**.

To add a speed dial entry from the **Contacts** window:

1. Tap **Start** > **Contacts**.
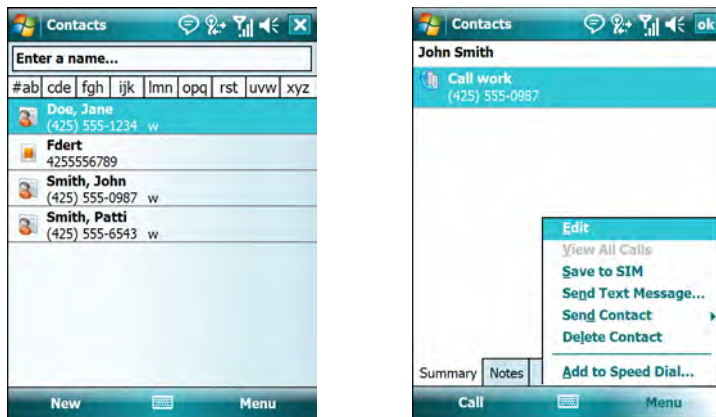
Figure 5-16 *Contacts*

2. Tap a contact name.

3. Tap **Menu** > **Add to Speed Dial**.
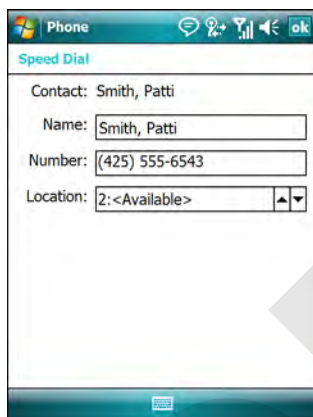
Figure 5-17 *Speed Dial Contact Location*

4. Tap the up/down arrows to select an available location to assign as the new speed dial entry. The first speed dial location is reserved for voice mail.

5. Tap **ok**.

Editing a Speed Dial Entry

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad.

2. Tap **Menu** > **Speed Dial**.
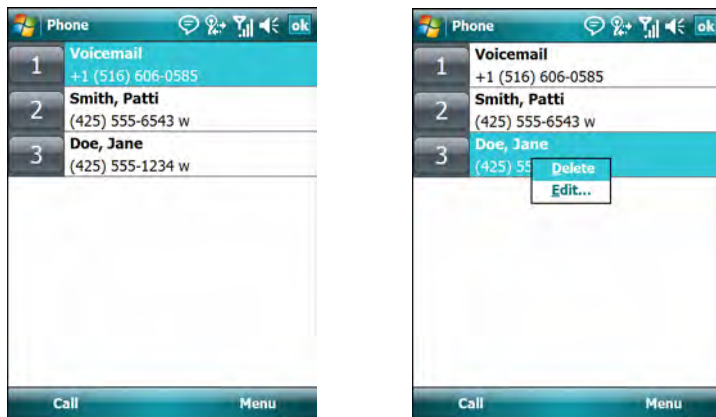
Figure 5-18   *Speed Dial Contact List*

3. Tap and hold the contact name.

4. Tap **Edit...** .

5. Change the name, phone number, or location information.

6. Tap **ok**.

> ✓ *NOTE*   Editing names and phone numbers in **Speed Dial** does not alter contact information in **Contacts** (**Start** > **Contacts**).

Deleting a Speed Dial Entry

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad.

2. Tap **Menu** > **Speed Dial**.

3. Tap and hold the contact name.
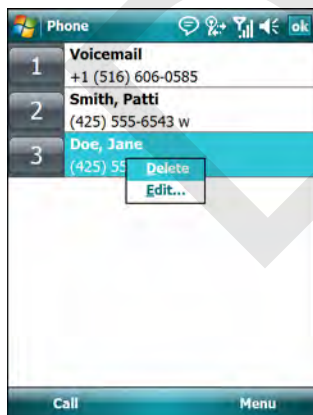
Figure 5-19   *Speed Dial Delete Menu*

4. Tap **Delete**.

5. Tap **Yes** to confirm permanently deleting the speed dial entry.

> ✓ *NOTE*   Deleting names and phone numbers in *Speed Dial* does not delete the contact information in **Contacts** (**Start** > **Contacts**).

Using Call History

Use Call History to call someone who was recently called, or recently called in. Call History provides the time and duration of all incoming, outgoing, and missed calls. It also provides a summary of total calls and easy access to notes taken during a call. Table 4-1 lists the call history icons that appear in the **Call History** window.

Table 5-1 *Call History Icons*

Icon	Description
	This icon appears next to the contact information for all **outgoing** calls.
	This icon appears next to the contact information for all **incoming** calls.
	This icon appears next to the contact information for all **missed** calls.

Managing Call History

Change views, reset the call timer, and delete calls to manage the calls stored in Call History.

Changing the Call History View

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad to display the Phone keypad.

2. From the Phone keypad, tap **Call History**.

3. Tap **Menu** > **Filter** to show the menu.
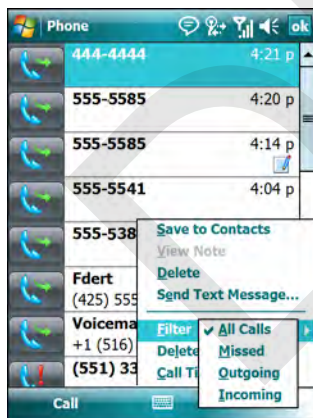
Figure 5-20 *Call History - All Calls/Show Menu*

4. Select a view type from the menu to display only missed calls, outgoing calls, incoming calls, or calls listed alphabetically by caller name.

5. Tap **ok** to exit the **Call History** window.

Resetting the Recent Calls Counter

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad to display the Phone keypad.

2. From the Phone keypad, tap **Call History**.

3.   Tap **Menu**.
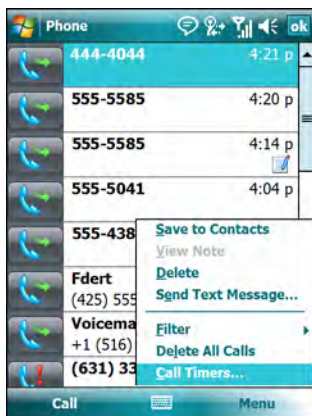
Figure 5-21   *Call History - Tools Menu*
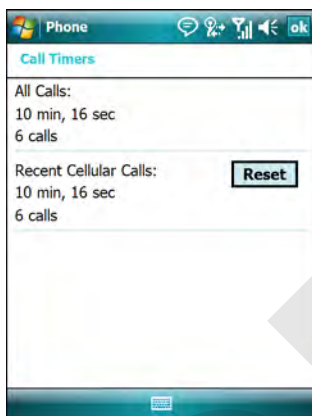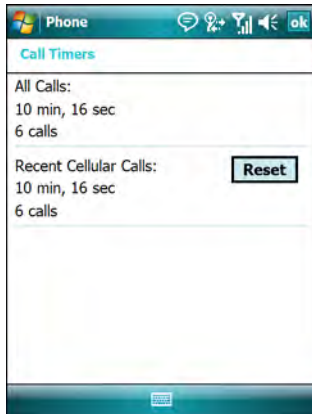
4.   Select **Call Timers...** .

Figure 5-22   *Call History - Call Timers*

5.   Tap **Reset**. (The **All Calls:** counter cannot be reset.)

6.   Tap **ok** to exit the **Call Timers** window.

Deleting Call History Items by Call Date

1.   Tap **Start** > **Phone** or press the green phone key on the MC55's keypad to display the Phone keypad.

2.   From the Phone keypad, tap **Call History**.

3.   Tap **Menu** > **Call Timers...** .

**Figure 5-23** *Call History - Call Timers*

4. In the **Delete call history items older than:** drop-down list select a time period on which to base deletion of stored items.

5. Tap **ok** to exit the **Call Timers** window.

Deleting All Call History Items

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad to display the Phone keypad.

2. From the Phone keypad, tap **Call History**.

3. Tap **Menu**.
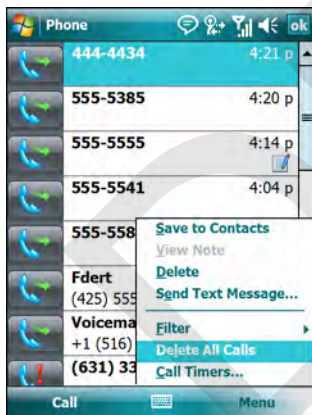
Figure 5-24 *Call History - Tools Menu*

4. Select *Delete all calls*.
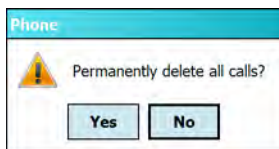
Figure 5-25 *Call History - Delete All Dialog*

5. Tap **Yes**.

6. Tap **ok** to exit the **Call History** window.

Viewing Call Status

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad to display the Phone keypad.

2. From the Phone keypad, tap **Call History**.

3. Tap an entry. The Call Status window appears.
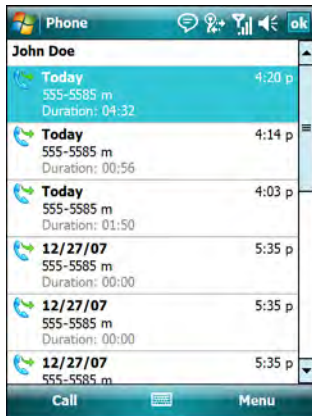
Figure 5-26 *Call History - Detail*

> **NOTE** When more than one call is on the phone line, only the duration of the first call is recorded.

4. Tap **ok** and then **ok** to exit.

Using the Call History Menu

Use the Call History menu to dial voice mail, access the Activation Wizard, save to contacts, view a note, delete a listing, send an SMS, and make a call.

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad to display the Phone keypad.

2. From the Phone keypad, tap **Call History**.

3. Tap and hold an item in the list.
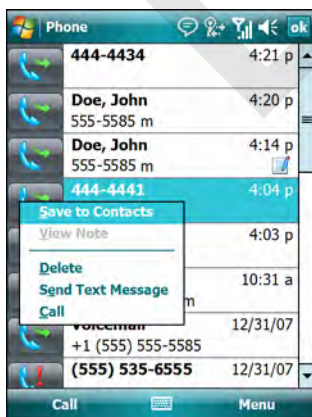
Figure 5-27 *Call History - Menu*

4. Select an applicable item from the menu, as needed.

5. Depending on the item selected, the appropriate window displays. For example, select **Send SMS** to display the **Inbox** window.

6. Tap **ok** to exit the **Call History** window.

Swapping Calls

To move between two or more phone calls:

1. Tap **Start** > **Phone** or press the green phone key on the MC55's keypad to display the Phone keypad.

2. Enter the first phone number and press **Talk**. When the call connects, **Hold** appears on the keypad.
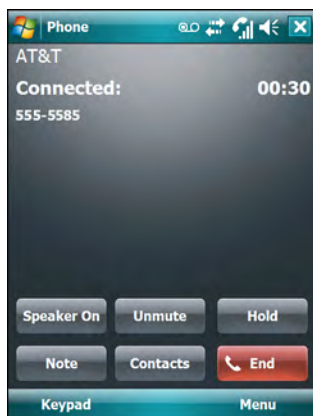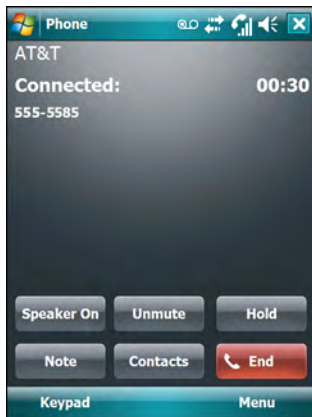
MC5504/96

Figure 5-28 *Call Swapping - Hold*

3. Tap **Hold** on to place the first number on hold.

4. Enter the second number and tap **Talk**.
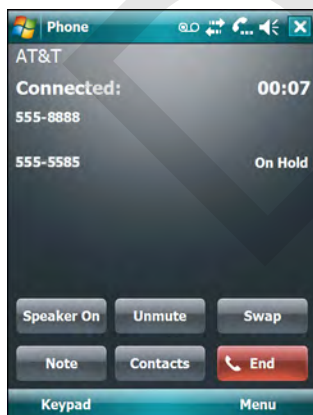
Figure 5-29 *Call Conferencing - Conferencing*

5. Tap **Swap** to move from one call to the other.

6. Tap **End** or press the red phone key on the MC55 keypad to end each call.

Conference Calling

NOTE   Conference Calling may not be available on all services. Please check with your serviice provider for Contference Callling availability.

To create a conference phone session with two or more people and the initiator:

1.   Tap **Start** > **Phone** or press the green phone key on the MC55's keypad to display the Phone keypad.

2.   Enter the first phone number and press **Talk**. When the call connects, **Hold** appears on the keypad.

Figure 5-30   *Call Swapping - Hold*

3.   Tap **Hold** to place the first number on hold.

4.   Enter the second number and tap **Talk.**

5.   Tap **Hold** to place the second number on hold.

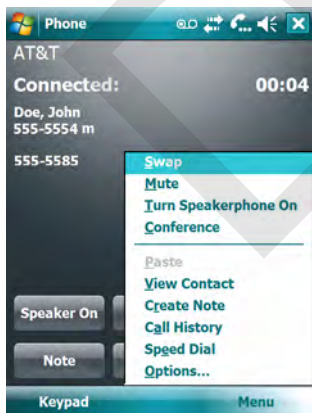6.   Tap **Menu** > **Conference** to place the two numbers in conference mode.

Figure 5-31   *Creating a Conference Call*

7.   Tap **End** or press the red phone key on the MC55 keypad to end the conference call.

NOTE   To speak privately with one party during a conference call, tap **Menu** > **Private**. To include all parties again, tap **Menu** > **Conference**.
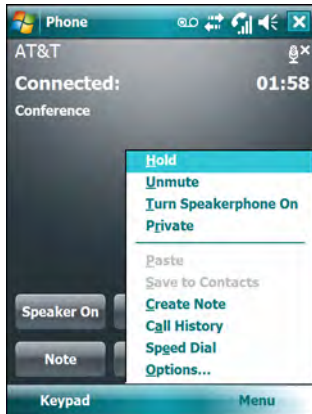
Figure 5-32 *Creating a Private Call*

Text Messaging

Use the **Text Messages** window to send and receive text messages to and from mobile phones. The text can contain words, numbers, or an alphanumeric combination no longer than 160 characters.

Short text messages delivered over mobile networks transmit from the sending MC55, are stored in a central short message center, then forwarded to the destination mobile device. If the recipient is not available, the message is stored and can be sent later.

Viewing Text Messages

To view a text message:

You can view a text message whether the phone is on or off. When the phone is on, you can view a text message from its notification callout. Tap the **text message notification** icon on the navigation bar to display the message.

Text Message Notification Icon

Figure 5-33 *New Text Message Notification*

The Caller Identification feature matches incoming text message numbers with those stored in **Contacts** so you know who is sending you a message. Furthermore, the **New Text Message** dialog box gives you the option to call the sender or save, dismiss, or delete the message.

Figure 5-34   *New Text Message Options*

When the phone function is off, you can still view received text message in Messaging:

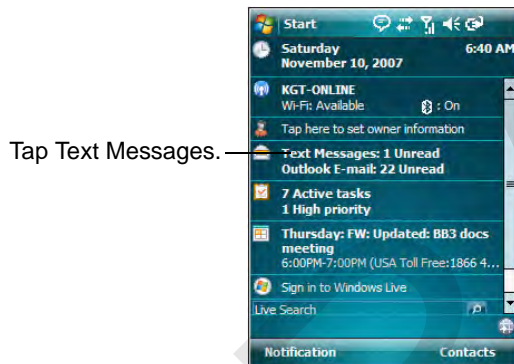1.   Tap **Start > Messaging** > **Text Messages**, or on the Today screen, tap **Text Messages**.

Tap Text Messages.

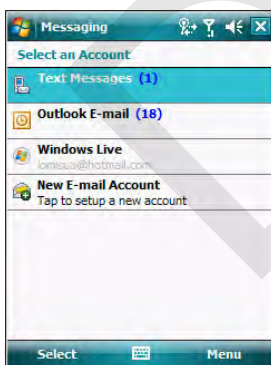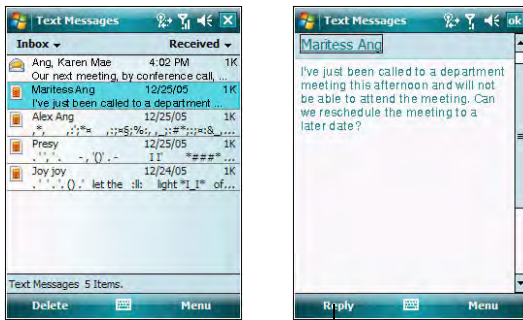**Figure 5-35**   *Text Messaging on Today Screen*

The **Messaging** window appears.

Figure 5-36   *Messaging Window*

2.   In the message list, tap a **Text Messages**.

Tap to reply the message.

Figure 5-37   *Text Messages List*

✓ **NOTE**   If the phone is turned off and you tried to call the sender, send a reply, or forward the message, you are prompted to turn the phone function on.

Sending a Text Message

To create a text message:

1. On the **Phone** screen, select a contact name that you want to send a message to.
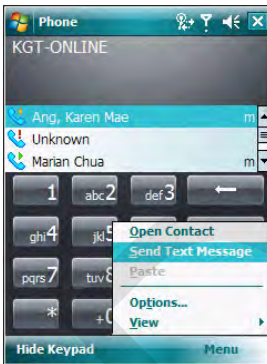
2. Tap **Menu** > **Send Text Message**.

Figure 5-38   *Phone Screen Contact List*
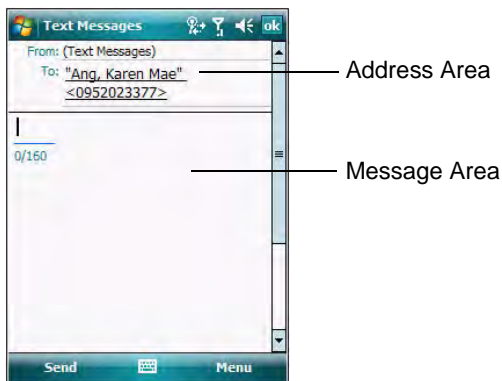
3. Compose your message.

Figure 5-39   *Create Text Message*

- The auto-correct feature automatically fixes common spelling errors as you type so your messages are more accurate.

- The character counter lets you see and control the size of the message as you compose.

- If you want to know if your text message was received, tap **Menu** > **Message Options**, then select the **Request SMS** text message delivery notification check box.
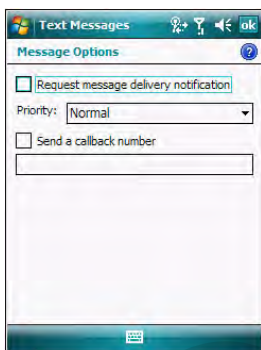

Figure 5-40   *Message Options Window*

4. Tap **Send** when you've finished the message.

    If the phone is turned on, your text message is sent. If it's off, you are prompted to turn on the phone. If you do so, the message is sent; otherwise when you tap **ok**, the message is saved in the **Drafts** folder and sent when the phone is turned on.

    If you are out of coverage area, the message is saved in the **Drafts** folder and sent when you return to a coverage area.

    NOTE   On MC5504 and MC5574 devices, the message remains in the **Drafts** folder and has to be manually re-sent when you return to a coverage area.

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