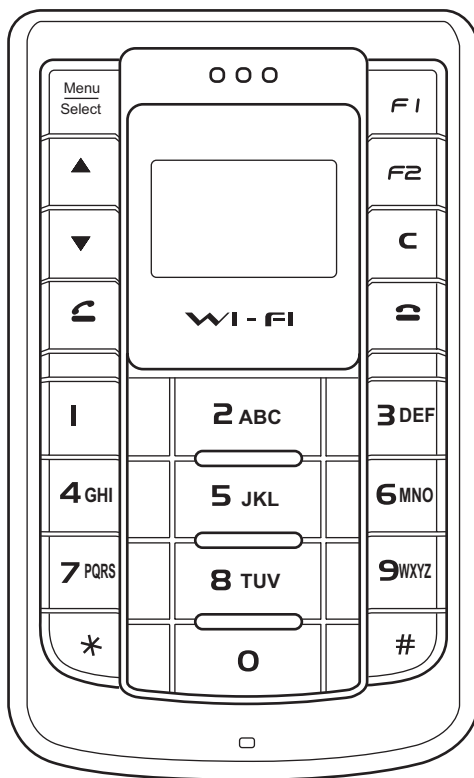


MIP-100



User Manual

TABLE OF CONTENTS



Welcome

Overview of the MIP-100	1
Features	1
Front view	2
Side views	5
Display indicators	7
Package contents	9
Specifications	10
Using the menu	12
Menu map	13

Getting started

Inserting the battery	17
Charging the battery	18
Connecting the wired earphones	19
Turning the phone on/off	19
Locking/unlocking the keypad	19
Entering text	20

Making calls

Making a call	22
Using the keypad to dial	22
Using the phone book to dial	22
Making an international call	23
Adjusting the volume	23
Answering or rejecting a call	23
Redialing a number	24
Speed dialing a number	24
Making an emergency call	24
Call logs	25
Returning a missed call	26
Deleting call logs	26



Call options.....	27
Using the speaker phone.....	27
Putting a call on hold.....	27
Answering/rejecting a waiting call.....	28
Conducting a conference call.....	28
Transferring a call	28
Call waiting.....	29
Call forwarding	29
Call barring	29
Caller ID	30
DTMF.....	30
Prefix dialing	30

Using the phone book

Adding contacts	31
Creating a new entry.....	31
Storing a number	31
Searching for a contact	32
Modifying contact information.....	32
Assigning a speed dial number	33
Deleting contacts.....	33

Setting tones

Selecting a profile	34
Personalizing a profile.....	34
Saving a profile	35

Configuring the settings

General settings	36
Language.....	36
Power saving mode.....	36
Keypad light.....	36
LCD sleep interval.....	37
Backlight	37
Alarm clock.....	37

Wi-Fi settings	38
General settings	38
Profiles	38
VoIP settings	41
General settings	41
Call control	41
Profiles	41
GPRS settings	42
Clock settings	43
Saving settings	43



Viewing the status

Using the status menu	44
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Advanced features

Connecting to the PC	46
Installing the USB drivers and WIM	46
Upgrading the firmware	47
Using WIM	48

Appendix

Additional Information	55
FCC Regulations	55
European regulations	56
RF exposure regulation (SAR)	57



1. WELCOME



Congratulations on your purchase of the MIP-100, a VoIP (Voice over Internet Protocol) phone that also functions as a personal wireless gateway for connecting to wireless networks. Read this user manual carefully to understand how to operate the product and take advantage of its useful features.

Overview of the MIP-100

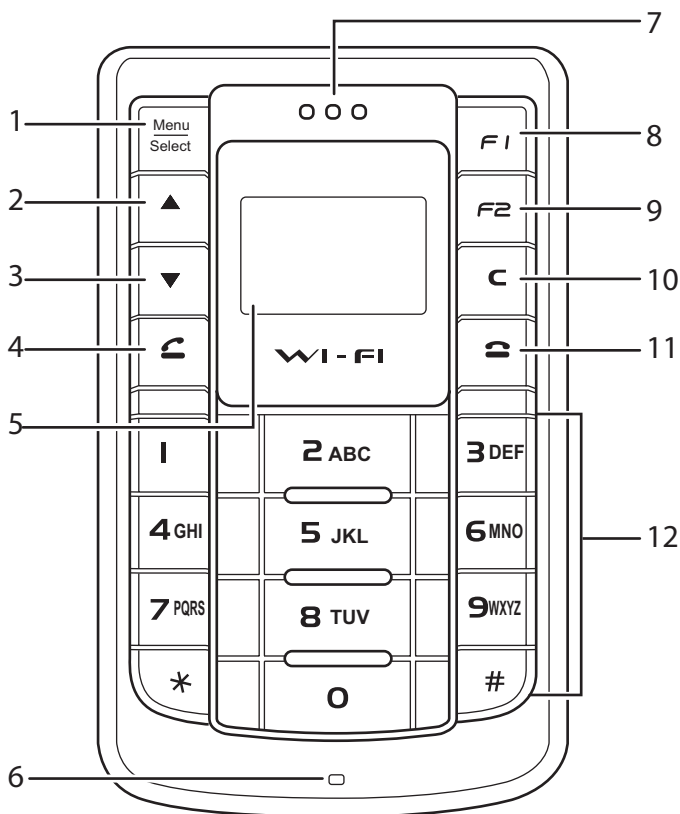
The MIP-100 enables you to make phone calls using VoIP networks. You can also connect to Wi-Fi (802.11b) networks.

Features

- Seamless voice and data communication
- Standalone mode lets you use the MIP-100 as a Wi-Fi phone to make and receive phone calls without using a PDA or portable computer
- USB port to connect to PC or PDA for phone applications and high-speed data transfer
- Mobile extension for IP-PBX IP telephony



Front view



Name		Description
1.	Menu/Select key	Press to access the menu or select an option from the menu.
2.	Up arrow key ▲	• Press to scroll up through menu items. • From standby mode, press to display the phone book.
3.	Down arrow key ▼	Press to scroll down through menu items.



Name		Description
4.	Send/Answer key 	• Press to dial a phone number. • Press to answer an incoming call. • From standby mode, press to display a list of recently dialed numbers.
5.	Display screen	Displays call and status information.
6.	Microphone	For talking during phone calls.
7.	Speaker	For listening to phone calls.
8.	Wi-Fi profiles key	Press to activate stored Wi-Fi profiles as required.
9.	Status key	Press to display the Wi-Fi status, current channel, transfer rate, SSID, Wi-Fi strength, link quality, network mode, enc status, device MAC address, AP MAC address, battery strength, auth status, VoIP strength, or version number.
10.	Clear/Delete key	• Press to cancel your selection and go to the previous menu. • While entering text or numbers, press to erase characters.



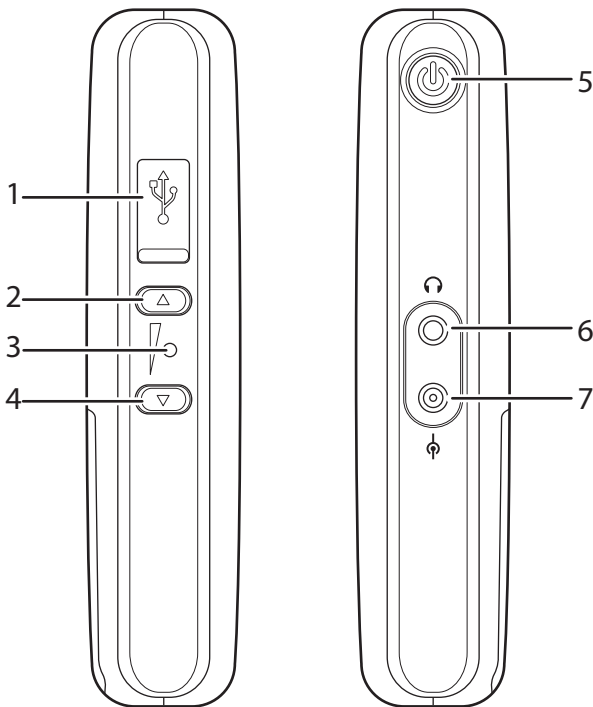
		Name	Description
11.		End/Reject key	• Press to end a call. • Press to reject an incoming call. • In menu mode, press to cancel your selection and return to standby mode.
12.		Alphanumeric keypad	Use these keys to enter phone numbers and text.

Side views



Left view

Right view



Name		Description
1.	USB port	Connect to USB port of your PC using USB cable.
2.	Volume up key	Press to increase the volume.
3.	Reset button	Use a small pointed object such as a pin to reset the MIP-100 if it locks up.
4.	Volume down key	Press to decrease the volume.

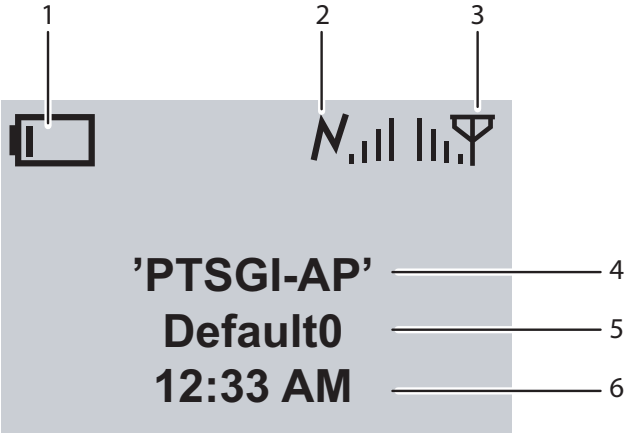


		Name	Description
5.	Power button		Press to turn the MIP-100 on or off.
6.	Earphone socket		Connect the provided ear-phones here.
7.	Power in		Connect the power adapter to this socket to charge the bat-tery.

Display indicators



In standby mode, the MIP-100 screen displays the following icons:

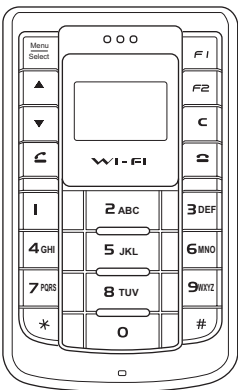


Name		Description
1.	Battery charge	Displays the charge level of the battery. Five bars indicate that the battery is fully charged or has 100% charge.
2.	VoIP band-width	Displays the available bandwidth for VoIP.
3.	Wi-Fi signal strength	Displays the signal strength for Wi-Fi networks available at the current location. Five bars indicate maximum signal strength.
4.	Wi-Fi access point	Displays the name of the Wi-Fi access point.

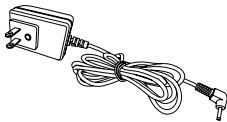


	Name	Description
5.	VoIP profile	Displays the name of the current VoIP profile.
6.	Time	Displays the current time.

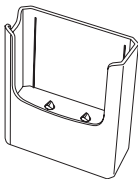
Package contents



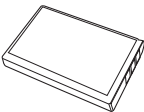
MIP-100



AC adapter



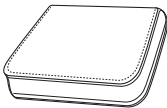
Desktop charger



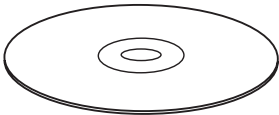
Li-ion battery



Wired headset



Pouch



Utility CD



User manual



Quick start guide



Specifications

Wi-Fi characteristic

- IEEE 802.11b
- Frequency range: 2.4 ~ 2.497 GHz
- Wireless output power: 25mW maximum
- Operating range: Outdoor up to 300m; indoors up to 75m
- Supports infrastructure (public) mode and Ad-hoc mode (optional)
- QoS support TOS/DiffServ

VoIP features

- Codec supported: G.711a, G.711u, G.723.1, G.726, and G.729ab
- Adaptive jitter buffer and echo cancellation
- G.168 echo cancellation
- Silence suppression
- Voice Activity Detection (VAD)
- Comfort Noise Generation (CNG)
- DTMF detection and relay

Network and protocols

- SNMP manager
- DHCP or static configuration option
- Alternate TFTP support
- SIP (RFC 3261) version 2
- SDP (RFC2327)
- RTCP (RFC1890)
- Supports outbound proxy for NAT traversal
- Site survey, trace route (hidden feature), seamless secure roaming, and VLAN support

Security

- IEEE 802.1x authentication: Optional password prompt at power up
- 40 and 128 bit static Wired Equivalent Privacy (WEP)
- Optional phone lock password



Power

- Replaceable and rechargeable 1300 mAH Li-ion battery
- Talk time: 4 hours talk time, 72 hours standby
- AC adapter 100 ~ 240V, 50 ~ 60Hz, 5V 650mA DC output

Calling features

- Caller ID display, call waiting, call forward, Call transfer
- Pre-dialing before sending
- Call mute
- Redial
- Call hold/resume
- Call park
- Conference call

User interface

- Color STN display 96 x 64 RGB pixels with white LED backlight, 4K color resolution, pixel size: 0.219mm x 0.219mm
- Four multi-function soft keys provide easy user operation dynamically
- Keys: Power, Volume, Menu/Select, Send/End, 12 keys dialer pad
- Selection of menu, user profiles, languages, and ring types by soft keys
- Hotkey for keypad lock
- Hotkey for voice mail access, call logs
- Ten configurable speed dial numbers
- Idle/call state-based soft keys
- Local phone book
- Time/date display
- Keypad lock, vibration icon indicators
- RF level and battery gas gauge indication
- Polyphonic ringer, vibrator, and visual display alert
- Pocket PC 2002/2003; Windows-based WIM management and network configuration utility



Physical specifications

- Dimensions (H x W x D): 100mm x 60mm x 22mm
- Weight (with standard battery): 128g
- Built-in speaker, MIC
- Built-in real time clock (RTC) in 12/24-hour format
- USB 2.0 slave
- Jacks for headset and DC charging
- Certifications: FCC, CE, BQB
- Accessories: AC adapter, desktop charger, Li-ion battery, wired headset, pouch, utility CD, user manual, quick start guide

Environmental specifications

- Operating temperature: 32 ~ 113°F (0 ~ 45°C)
- Storage temperature: -22 ~ 140°F (-30 ~ 60°C)
- Relative humidity: 10 ~ 95% (non-condensing)
- Thermal shock: -30°C, 24 hours to +70°C, 24 hours

Using the menu

The MIP-100's menu lets you access the product settings and set up the device according to the network conditions. The menu is set up in a simple and easy-to-understand manner. Follow these steps to access the menu and menu items.

1. In standby mode, press the **Menu/Select** key to access the menu. The first menu option, **Phone Book**, is displayed.
2. Scroll through the main menu options using the ▲ or ▼ arrows keys and press the **Menu/Select** key to view the submenu. For example, scroll to **Messages** and press **Menu/Select** to view text messages.
3. Repeat the previous step to browse through the menu items, submenus and options. For instance, to write a text message, select **Messages** and then **Create New**.

4. To choose a menu setting, press the **Menu/Select** key to save it.



Menu map

- **Phone Book**
 - Search
 - Add
 - Edit
 - Delete
 - Delete One by One
 - Delete All
 - Assign Speed Dial
 - Modify
 - View
 - Delete
- **Call Logs**
 - Missed Calls
 - Received Calls
 - Dialed Calls
 - Recent Calls

The following submenu options are available when you select a number from any of the Call Logs:

- Call
- Delete
- Save
- Delete Recent Calls
 - All
 - Missed Calls
 - Dialed Calls
 - Received Calls



- **Tones**

- General
- Silent
- Meeting
- Outdoor
- Pager

The following submenu options are available for each of the Tones:

- Activate
- Personalize
 - Ringtone
 - Ring Volume
 - Alert Type
 - Key Beep
- Edit Name
- Save to Flash

- **Settings**

- General
 - Language
 - Power saving
 - Keypad Light
 - LCD Sleep Interval
 - Backlight On/Off
 - Help on/off
 - Alarm Clock
- Wi-Fi
 - General
 - Wi-Fi On/Off
 - Wi-Fi Connectivity
 - Profiles
 - Manual
 - Configuration
 - Operating Mode
 - Channel
 - User Name



- Password
 - ESSID
 - Auth. Protocol
 - Encryption
 - Protocol
 - WEP Key
 - Advanced
 - Power Saving
 - RTS/CTS Threshold
 - Frag. Threshold
 - Transfer Rate
 - Use DHCP (If you select No, the following options are available for modification: IP Address, Subnet Mask, Default Gateway, Primary DNS, Alternate DNS)
 - Restore defaults
- Default
 - Activate
 - Personalize
 - Edit Profile Name
- VoIP
 - General
 - VoIP On/Off
 - Stun Server
 - Speaker Volume
 - Microphone Volume
 - Preferred Codec
 - Call control
 - Call Waiting
 - Call Forward
 - When Busy
 - No Reply
 - Unconditional
 - Call Barring
 - Caller ID



- DTMF
- Prefix Dial
- Profiles
 - Default 0-9
 - Activate
 - Personalize
 - User Number
 - Password
 - Registrar
 - Domain Name
 - Outbound Proxy
 - Mail Address
 - Restore Defaults
 - Edit Profile Name
- Clock
 - Set Time
 - Set Date
 - Set Time Format
 - Set Date Format
- Save to Flash
- **Status**
 - Wi-Fi Status
 - Channel
 - Transfer Rate
 - SSID
 - Wi-Fi Strength
 - Link Quality
 - Network Mode
 - Encryption Status
 - Device MAC Address
 - AP MAC Address
 - Battery Strength
 - Auth. Status
 - VoIP Strength
 - Version Number

2. GETTING STARTED

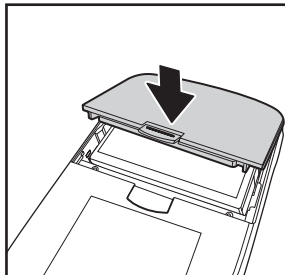
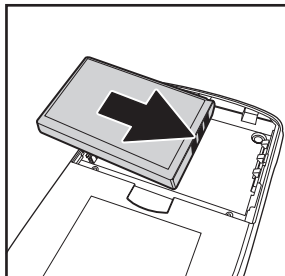
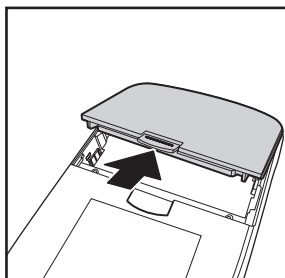
Refer to this section to learn more about setting up the MIP-100 before you start using it.

Inserting the battery

The MIP-100 is equipped with a rechargeable Li-ion battery that can be charged using the supplied battery charger.

To insert the battery, do the following:

1. Push down the tab on the back to remove the battery cover as shown.
2. Place the battery in the battery slot with the metal contacts properly aligned.
3. Replace the back cover as shown and snap into place.

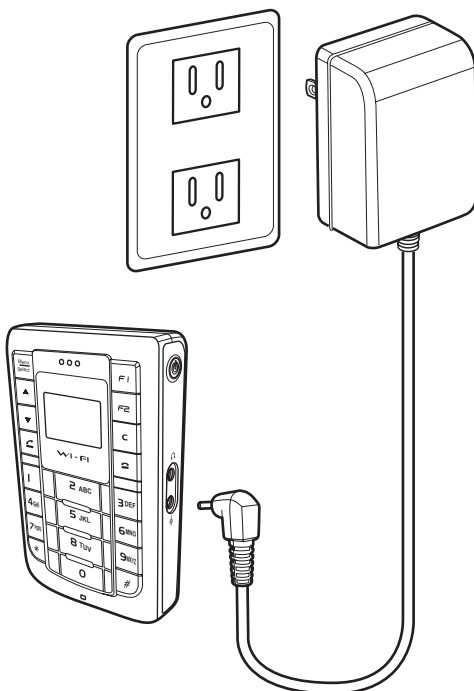




Charging the battery

The MIP-100 is provided with a rechargeable Li-ion battery with 3 hours talk time and 70 hours standby time.

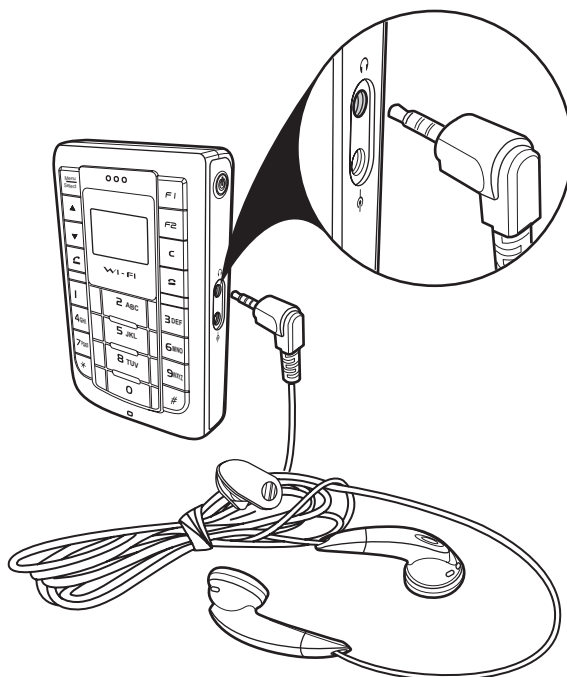
To charge the battery, connect the battery charger to the Power in slot and insert the power connector into a power outlet.



Note: You can also charge the battery using the desktop charger after connecting it to the power outlet. Insert the MIP-100 in the charger making sure that the contacts touch those of the charger.

Connecting the wired earphones

Connect the wired earphones to the earphone jack to enjoy handsfree operation, and answer or place calls with ease.



Turning the phone on/off

Press the **Power** button on the right side of the MIP-100 to turn the device on or off.

Locking/unlocking the keypad

You can lock the keypad to prevent the keys from being pressed accidentally, for example, when your phone is in a bag or in the pocket.





- To lock the keypad, press the **Menu/Select** key and then press the ***** key.
- When the keypad is locked, press the **Menu/Select** key and then press ***** to unlock the keypad.

Entering text

The MIP-100 has an alphanumeric keypad for keying in the numbers you are dialing, typing your text messages, and adding contact information to your phone book. Each key represents a combination of letters and numbers. The following table shows the character representation for the alphanumeric keys:

Key	Characters
1	1 : . - _
2	2 A B C a b c
3	3 D E F d e f
4	4 G H I g h i
5	5 J K L j k l
6	6 M N O m n o
7	7 P Q R S p q r s
8	8 T U V t u v
9	9 W X Y Z w x y z
0	0 [space] ? ! @
*	* +
#	Switch between lower case (abc), upper case (ABC), and numeric (123) characters.

To enter text, follow these guidelines:

1. Enter the numbers and characters as desired from the keypad, using the preceding table for your reference.
2. The characters **123**, **ABC**, or **abc** are displayed at the bottom of the screen indicating the current mode for text entry. To switch between lower case (**abc**), upper case (**ABC**), and numeric (**123**) characters, press the **#** key at any time. The type of text entry changes.
3. Press the **Menu/Select** button when you are done entering text.





3. MAKING CALLS

Now that you are familiar with the MIP-100, you are ready to start making calls and take full benefits of its calling features.

Making a call

The MIP-100 supports VoIP calls. In VoIP mode, the MIP-100 offers voice connectivity to users over the Internet with the help of a VoIP server.

Using the keypad to dial

1. Key in the phone number using the keypad. If you key in an incorrect digit, press the **Clear/Delete (C)** key to delete the character to the left of the cursor.
2. Press the **Send/Answer**  key to call the number.
3. Press the **End/Reject**  key to terminate the call after you finish talking.

Note: You can also end a call by pressing **Menu/Select** and then selecting **End**.

Using the phone book to dial

You can call your contacts using the contact information from the phone book. To make a call to a person from the phone book, do the following:

1. Press the **Menu/Select** key to display the menu.
2. Select **Phone Book**, **Search**, and press the **Menu/Select** key to locate a contact. The **Search** screen is displayed.
3. Key in the first few letters of the name. Press the **Menu/Select** key to search for the contact. A list of names that correspond most closely to your search criteria is displayed.

Note: If the current mode of text entry is set to numeric, you may have to change the text entry mode. See “Entering text” on page 20.



4. Scroll through the list until you find the contact you want to call.
5. Press the **Send/Answer**  key to call the number.
6. Press the **End/Reject**  key to terminate the call after you finish talking.

Making an international call

To dial an international number, you need to know the country code of the international location.

1. Press the * key twice to enter the + character.
2. Key in the country code followed by the phone number.
3. Press the **Send/Answer**  key to call the number.
4. Press the **End/Reject**  key to terminate the call after you finish talking.

Adjusting the volume

While talking on the MIP-100, use the **Volume up/down** keys to increase or decrease the volume according to your preference. You can also adjust the ring tone using the keys when not talking on the phone. For adjusting microphone or speaker volume separately, see “Wi-Fi settings” on page 38.

Answering or rejecting a call

An incoming call is indicated by a ringing tone and a vibration if selected. Choose one of the following options:

- Press the **Send/Answer**  key to answer an incoming call.

- 
- Press the **End/Reject**  key to reject an incoming call. The call is forwarded or transferred if you have activated call forwarding. See “Call forwarding” on page 29.

Redialing a number

To dial a number quickly that you have dialed recently, do the following:

1. Press the **Send/Answer**  key from standby mode. A list of your most recent calls is displayed.
2. Press  and  to scroll through the numbers to select the number you wish to call.
3. Press the **Send/Answer**  key to call the number again.

Speed dialing a number

You can assign a speed dial number from the keypad to the most commonly dialed numbers in your phone book and use that number to dial the number quickly instead of keying in the complete number. See “Assigning a speed dial number” on page 33.

To call a number using speed dialing, do the following:

1. Press the number or hotkey that has been assigned to the phone number from the numeric keypad.
2. Press the **Send/Answer**  key to call the number.
3. Press the **End/Reject**  key to terminate the call.

Note: You can also speed dial a number by pressing and holding down the hotkey.

Making an emergency call

You can make an emergency call to a number that has been set in the SOS numbers setting. You can save up to three emergency numbers using the WIM applica-

tion's configuration feature from your PC or PDA. See "Config. Stat" on page 54.

To make an emergency call, do the following:

1. Press and hold the **Volume up** and **Volume down** keys simultaneously for three seconds.
2. The first SOS number is dialed. If the call is answered, the call gets established and you can have a voice conversation with the called party.

One of the following may take place when a call does not get established:

- If the call remains unanswered by the called party, the second SOS number is dialed. If the second SOS call also remains unanswered, the third SOS number is dialed. If the call to the third number remains unanswered, the emergency call operation is cancelled. Repeat the same procedure to initiate the emergency call again.

Call logs

The MIP-100 stores information about all calls made or received. Your phone keeps lists of the calls you recently received and dialed, even if the calls did not connect. The lists are sorted from newest to oldest entries. The oldest entries are deleted as new entries are added.

Press **Menu/Select** and then select the **Call Logs** menu to view call information. The following calls are listed:

- Missed Calls
- Received Calls
- Dialed Calls
- Recent Calls

Up to 20 calls can be saved for each of the missed, received, and dialed call logs.





The **Recent Calls** list consists of the most recent calls from the missed, received, and dialed call logs. Up to 250 calls can be saved. The recently dialed numbers, received numbers, and missed numbers are indicated by different icons.

Select a call from a call log and press the **Menu/Select** key. Select one of the following options:

- **Call:** call the selected number
- **Delete:** delete the number from the call log.
- **Save:** save the number to your phone book.

Returning a missed call

If you miss a call, it is indicated on the screen. To return a missed call, do one of the following:

- Press the **Menu/Select** key when you see the missed call indication on the screen. The missed call log is displayed. Select the missed call and press the **Send/Answer**  key to call the number.
- Press the **Menu/Select** key and then select **Call Logs, Missed Calls**. Select the missed call and press the **Send/Answer**  key to call the number.

Deleting call logs

You can delete any of the call logs that are not needed. To delete call logs, press **Menu/Select** and then select **Call Logs, Delete Recent Calls**. Choose the type of calls that you want to delete from the following options:

- All
- Missed Calls
- Dialed Calls
- Received Calls

Call options



While a call is in progress, a number of additional options are available. Press the **Menu/Select** key to view these options.

Using the speaker phone

For handsfree operation, you can use the built-in speaker to talk on the phone. Do one of the following to use the speaker phone.

- Press the **Clear/Delete (C)** key to enable the speaker phone. Press the key again to disable the speaker phone.
- While talking on the phone, press **Menu/Select** and then select **Speaker On** from the options. The speaker is enabled. To disable the speaker phone, either terminate the call or press **Menu/Select** and **Speaker Off**.

Putting a call on hold

You may want to put a call on hold temporarily while doing some work or attending to a second incoming or outgoing call. To put a call on hold, do one of the following:

- Press **Menu/Select** and select **Hold**.
- When you receive a second call, press the **Send/Answer**  key to attend to the new call. The first call is automatically put on hold.
- Dial a call using the keypad. The first call is automatically put on hold.



Answering/rejecting a waiting call

If you have enabled call waiting, you can answer a second incoming call while the first one is still in progress. The new incoming call is indicated by a beeping tone.

Press the **Send/Answer**  key to answer the incoming call. Press the **End/Reject**  key to reject the call.

Conducting a conference call

The call waiting and holding functions also help you to conduct a conference call using the MIP-100 as follows:

1. Call the first participant of the conference call as described in “Making a call” on page 22.
2. Put the first participant on hold as described in “Putting a call on hold” on page 27.
3. Call the second participant of the call.
4. Press **Menu/Select** and then select **Conference** to include all participants in the call.
5. Press the **End/Reject**  key to end the call.

Transferring a call

To transfer a call to another phone number, do the following:

1. While a call is in progress, press **Menu/Select** and select **Transfer** from the options.
2. Dial the number to which you want to transfer the call and then press the **End/Reject**  key to hang up and transfer the call.



Call waiting

You can answer a call while you have another call in progress if you activate the call waiting function. To answer the call waiting press the **Send/Answer**  key. The first call is put on hold.

To activate the call waiting function, press **Menu/Select** and then select **Settings, VoIP, Call Control, Call Waiting**, and **Enable**.

Call forwarding

If you do not answer a call or reject a call, the call can be forwarded to a specified number.

To activate the call forwarding feature, do the following:

1. Press **Menu/Select** and then select **Settings, VoIP, Call Control**, and **Call Forward**.
2. Select an option from the following options:
 - **When Busy**: to forward calls when your phone is busy.
 - **No Reply**: to forward calls when you do not answer the phone.
 - **Unconditional**: to forward all incoming numbers.
3. Key in the number to which the selected calls are to be forwarded.

Call barring

You can enable call barring of all incoming or outgoing calls. This may be useful to block all incoming calls when roaming.

To activate call barring, press **Menu/Select** and then select **Settings, VoIP, Call Control**, and **Call Barring**. Select **Incoming** or **Outgoing** calls and then select **On** to enable call barring.



Caller ID

To enable the display of the number when you receive an incoming call, press **Menu/Select** and then select **Settings, VoIP, Call Control, Caller Id**, and **Enable**. The number is displayed on the screen.

DTMF

You can select DTMF (Dual Tone Multi Frequency) for your outgoing calls depending on the type of network being used by the recipient. To select DTMF options, press **Menu/Select** and then select **Settings, VoIP, Call Control, DTMF** to choose from one of the following options:

- **Inband:** Select this option if the person you are calling uses only PSTN networks.
- **Outband:** Select this option if the person you are calling links to a VoIP server.

Prefix dialing

The prefix dial is a useful feature if you dial numbers in an international location frequently. The prefix dial function memorizes the prefix required for dialing the calls and appends them to all outgoing calls. Thus you do not need to key in the prefix every time you make a call.

To activate the prefix dial, press **Menu/Select** and then select **Settings, VoIP, Call Control, Prefix Dial**, and **Enable**. Key in the prefix and press **Menu/Select** to save the prefix.

4. USING THE PHONE BOOK



The phone book is an important component of the MIP-100 for storing contact information about your friends, relatives, and colleagues. This eliminates the need for you to memorize important phone numbers.

Adding contacts

The phone book feature enables you to create new entries for your contacts and edit their contact information. It also enables you to store a number from a missed or received call in your phone book.

Creating a new entry

1. Press **Menu/Select** and then select **Phone Book, Add** to add a new entry to the phone book.
2. Type the name of the new contact. See “Entering text” on page 20.
3. Press **Menu/Select** to save the name.
4. Enter the phone number of the new contact.
5. Press **Menu/Select** to save the number.

Storing a number

To store a number from your received, missed, or dialed call logs, do the following:

1. Select the number you want to store from the call log and press **Menu/Select**. See “Call logs” on page 25.
2. Select **Save** from the options.
3. Key in the name of the new contact and press **Menu/Select**.
4. The selected number is displayed again. Make sure that the number is correct or edit it if required and press **Menu/Select**.



The selected number and corresponding contact name is stored in the phone book.

Searching for a contact

1. Press **Menu/Select** and then select **Phone Book, Search** to start searching for contacts.
2. Key in the first few letters of the contact that you are looking for and press **Menu/Select**.

Phone book entries that closely match your search criteria are displayed. For example, if you key in the letters **SU** while searching, the first phone book entry starting with **SU** and successive entries are displayed. Press **Send/Answer**  to dial the entry or press **Menu/Select** and select an option from **Edit, Delete, or Call** as required.

Modifying contact information

1. Press **Menu/Select** and then select **Phone Book** to view the phone book entries.
2. Scroll through the phone book to select an entry or use **Search** to locate the entry you want to modify.
3. Press **Menu/Select** and select **Edit** to make changes to the phone book entry.
4. Change the name and phone number as required and press **Menu/Select** to save the entry to the phone book.

Assigning a speed dial number



You can use speed dialing to assign a shortcut or hotkey (2 ~ 9) to the phone numbers that you dial most frequently. You can then press the speed dial number to quickly dial a number instead of keying in the entire phone number or searching for the contact number from the phone book. See “Speed dialing a number” on page 24.

1. Press **Menu/Select** and then select **Phone Book** and **Assign Speed Dial**. A list of phone book entries with the speed dialing number assigned to each entry is displayed. The keys that haven't been assigned to a phone number are displayed as **Empty**.
2. Select a hotkey entry and press **Menu/Select, Modify** to change the speed dial key assigned to a number. Press the new speed dial number to assign it to the phone book entry.
3. Select an **Empty** hotkey and press **Menu/Select**. The list of contacts is displayed. Select a contact and press **Menu/Select** to assign a hotkey to that contact. Press the new speed dial number to assign it to the phone book entry.

Note: You can also select **View** to view the hotkey details or **Delete** to delete a hotkey.

Deleting contacts

You can delete all the contacts in the phone book one at a time or all at once as follows:

1. Press **Menu/Select** and then select **Phone Book**.
2. Press **Menu/Select** and then select **Delete**.
3. Select **Delete One by One** to delete entries one at a time.
4. Select **Delete All** to delete all entries.

Note: You can also select an entry from the phone book and press **Menu/Select, Delete** to delete the current entry.



5. SETTING TONES

The MIP-100 has a set of profiles, each customized for different scenarios of usage. For example, you can use the Silent profile when in a movie theatre, the Meeting profile while attending business meetings, or the Outdoor profile when travelling outdoors or in a noisy environment. You can also personalize each profile and change the tone settings to suit your preferences.

Selecting a profile

To select a profile, do the following:

1. Press **Menu/Select** and select **Tones**. A list of the profiles is displayed.
2. Select the profile you want to use and press **Menu/Select**.
3. Select the **Activate** option and press **Menu/Select** to set the profile for the MIP-100.

Personalizing a profile

Each profile has a specific ringtone, ring volume, and alert tone. You can customize your profile and change the various sound tones according to your preferences as follows:

1. Press **Menu/Select** and select **Tones** to display a list of profiles.
2. Select the profile that you want to modify and press **Menu/Select**.
3. Select **Personalize** and press **Menu/Select** to change the profile. The following options can be changed when personalizing:
 - **Ringtone**: change the ringing tone that alerts you when you receive an incoming call.
 - **Ring volume**: adjust the ring tone volume.

- **Alert type:** specify the type of alert for receiving instant messages. For instance, you can choose a combination of vibration and audio to alert you when you receive a message.
 - **Key beep:** enables or disables the tone sounded every time you press a key.
4. Select an option from the list above and use **Menu/Select** to modify each option. When you change the ringtone or the alert type, you can hear the current ringtone or alert tone to help you choose a tone.
 5. Return to previous menu (Actions) and select **Edit Name** to change the name of the current profile. Use the keypad to change the name and press **Menu/Select** when done.

Saving a profile

To save a profile to the MIP-100's internal flash memory, do the following:

1. Press **Menu/Select** and select **Tones** to display a list of profiles.
2. Select the profile that you want to save and press **Menu/Select**.
3. Select **Save to Flash** and press **Menu/Select** to save the profile to the phone's internal memory.





6. CONFIGURING THE SETTINGS

The settings menu provides a number of options to configure the MIP-100, operating mode, network settings, and preferences. Read this section carefully to learn how to configure your phone.

General settings

The general settings provide options to customize the MIP-100 according to your preferences.

Language

Use the language setting to specify the interface language. Press **Menu/Select** and select **Settings, General, Language**. Select the language of your choice from these options: English, Spanish, German, and Chinese.

Power saving mode

The power saving mode prevents excess use of power. Press **Menu/Select** and then select **Settings, General, Power Saving**, and **On** to enable power saving mode.

Note: Power saving mode is only enabled when Wi-Fi mode is disabled.

Keypad light

The keypad lights can be disabled to prevent excess use of power. Press **Menu/Select** and then select **Settings, General, Keypad Light**, and **Off** to disable the keypad lights. The keypad lights are useful when you want to use the phone in the dark.



LCD sleep interval

The LCD can be disabled after a specific time interval to prevent excess use of power. To specify the time interval, press **Menu/Select** and select **Settings, General, LCD Sleep Interval**. Then select the time interval from the time options ranging from 20 seconds through 160 seconds.

Backlight

The LCD screen backlight can be disabled when not in use to conserve power. To disable the backlight, press **Menu/Select**, and select **Settings, General, Backlight On/Off**, and **Off when Inactive**. Alternatively, select the **Always On** option to always keep the backlight enabled.

Alarm clock

The MIP-100 has a real time clock that keeps track of the time and also lets you set an alarm. To set an alarm, press not in use to conserve power. To disable the backlight, press **Menu/Select**, and select **Settings, General**, and **Alarm**. If an alarm has been set before, the previous alarm time setting is displayed. Press **Menu/Select** and choose the **Adjust** option. Use the arrow and **Menu/Select** keys to adjust the time setting. If you want to disable the alarm, select the **Off** option.



Wi-Fi settings

The Wi-Fi settings enable you to set up the MIP-100 for wireless mode. Use this setup to specify and personalize a wireless profile and security settings.

General settings

The general settings for Wi-Fi mode specify the type of wireless connectivity and enable you to turn on Wi-Fi mode. Press **Menu/Select** and choose **Settings, Wi-Fi, General** and choose one of the following options:

- Select **Wi-Fi On/Off** and select **On** to enable Wi-Fi mode.
- Select **Wi-Fi Connectivity** and select **Automatic** to connect to a wireless network in the vicinity automatically. The MIP-100 scans for wireless hotspots automatically. Alternatively, select **Manual** to connect to a wireless network manually. A list of hotspots is displayed. Select a hotspot to connect to the corresponding wireless network.

Profiles

The Wi-Fi profiles are sets of wireless parameters that can be used for different networks. You may want to create separate profiles with different security settings for use in different networks, each of which may have its own security settings. Press **Menu/Select** and choose **Settings, Wi-Fi, and Profiles** to view and modify the profiles.

The MIP-100 provides three **Default** profiles which you can activate and personalize as needed. Select **Default** and then **Personalize** to adjust the settings or **Activate** to activate the profile. You can also use the **Manual** profile to individually set up each parameter needed for wireless setup.

Each profile has the following parameters that can be further set up as desired.

Configuration:

This option provides various options to set up the basic wireless configuration as follows:

- **Operating mode:** specifies the mode of operation for wireless connectivity. Choose **Ad Hoc** to connect to a wireless node or access point directly. Choose **Infrastructure** to become a part of a wireless network.
- **Channel:** specifies the channel to be used for the wireless network. Fourteen channels are available.
- **User Name:** specifies the user name used when signing into a wireless network. Use the keypad to edit the name. See “Entering text” on page 20.
- **Password:** specifies the password for authentication while logging into a network. Use the keypad to edit the name. See “Entering text” on page 20.
- **ESSID (Extended Service Set Identification):** specifies the unique ID assigned to the device for communicating with other wireless devices.
- **Auth. Protocol:** specifies the protocol or communication criteria used for authentication when joining a wireless network. Choose from **Off**, **Sim1 Based**, **Sim2 Based**, **EAP-MD5**, and **EAP-MSCHAPv2**.

Encryption

This specifies the encryption settings to allow entry into an encrypted or secure wireless network. Encryption provides an additional level of security for wireless networks, protecting them from data corruption. The following options are available for modification:

- **Protocol:** specifies the encryption protocol. Select from **Disable**, **64 Bit Open**, **128 Bit Open**, **64 Bit WEP**, and **128 Bit WEP**.
- **WEP Key:** specifies the WEP (Wired Equivalent Privacy) key. Choose from **Key #1** through **Key # 4**.





Advanced

This option enables you to make advanced settings for the wireless mode. The following options are available:

- **Power Saving:** Select the **On** option to enable power saving when the MIP-100 is connected in Wi-Fi mode.
- **RTS/CTS Threshold:** specifies the threshold for RTS and CTS parameters. Key in a numeric value using the keypad.
- **Frag. Threshold:** specifies the fragment threshold. Key in a numeric value using the keypad.
- **Transfer Rate:** specifies the rate at which data transfer takes place. Select Auto to let the MIP-100 to set the transfer rate automatically.
- **Use DHCP:** Select this option to set the DHCP protocol parameters. Select **Yes** if you want to use DHCP and a DHCP server in the network assigns IP addresses dynamically to the device. Select **No** if there is no DHCP server or if you want to assign the IP properties manually. The following parameters have to be set:
 - IP Address
 - Subnet Mask
 - Default Gateway
 - Primary DNS
 - Alternate DNS

Restore Defaults

Choose this option to restore all settings to their default factory values.

VoIP settings



The VoIP settings are provided to set up the VoIP parameters.

General settings

These settings provide the basic setup for VoIP mode. Press **Menu/Select** and select **Settings, VoIP**, and **General** to configure these settings as follows:

- **VoIP On/Off:** enables or disables VoIP mode.
- **Stun Server:** specifies the Stun server for VoIP mode. Key in the server name using the keypad. See “Entering text” on page 20.
- **Speaker Volume:** Adjusts the speaker volume in VoIP mode. Choose from **Level 1** through **Level 10**.
- **Microphone Volume:** Adjusts the microphone volume in VoIP mode. Choose from **Level 1** through **Level 10**.
- **Preferred Codec:** specifies the codec to be used for VoIP calls. Select from **GSM**, **a Law**, **μ Law**, **G726**, **G729**, and **G723.1**.

Call control

The call control options set up the call waiting, call barring, call forwarding, caller ID, DTMF, and prefix dialing options for the phone. See “Call options” on page 27 for details about these options.

Profiles

The MIP-100 provides ten default profiles for the VoIP mode. Select a profile and press **Activate** to make the selected profile active. Press **Personalize** to change the profile settings. Press **Edit Profile Name** to change the profile name.



If you select the **Personalize** option, the following parameters can be modified:

- **User Number:** specifies the number used to make VoIP calls. You must enter a number to be able to make calls.
- **Password:** specifies the password for VoIP authentication.
- **Registrar:** specifies the registrar name for the VoIP mode.
- **Domain Name:** specifies the domain name through which VoIP calls are made.
- **Outbound Proxy:** specifies the proxy server for outward VOIP calls.
- **Mail Address:** specifies the mail address for VoIP mode.
- **Restore Default:** restores all settings to their factory default values.

Note: For more information about VoIP settings, consult your service provider.

GPRS settings

GPRS is a network service that allows you to use your phone for sending and receiving data over an IP network. The GPRS settings enable you to set up the MIP-100 for GPRS mode. Press **Menu/Select** and select **Settings, GPRS** to configure the GPRS settings. The following options are available:

- **Access Point Name:** Key in the name of the access point to be used for GPRS mode.
- **IP Address:** Key in the IP address of the access point to be used for GPRS mode.

Clock settings



The clock settings enable you to set the time and date on the MIP-100. The MIP-100 displays the time on the screen after the LCD sleep interval if the power saving mode is set. If the power saving mode is disabled, the screen remains blank. Press **Menu/Select** and select **Settings**, Clock to view the clock settings. The following options are available:

- **Set Time:** sets the time. Use the arrow keys to move between the hour, minute and AM/PM fields. Use the keypad to key in the time.
- **Set Date:** sets the date. Use the arrow keys to move between the day, month and year fields. Use the keypad to key in the time.
- **Set time format:** specifies the time format. Choose from **12 hours** and **24 hours** format.
- **Set date format:** specifies the date format. Choose from **MMD/DD/YYYY**, **DD/MM/YYYY**, **YYYY/MM/DD**, and **YYYY/DD/MM**.

Saving settings

To save all the changes to the MIP-100's internal flash memory, press **Menu/Select** and then choose **Settings**, **Save to Flash**. All settings are saved.



7. VIEWING THE STATUS

Using the status menu

The **Status** menu enables you to view the status of all the **MIP-100**'s configuration settings at a single glance.

To view the MIP-100's status, press **Menu/Select** and then select **Status**. A list of the configuration settings is displayed. Scroll to the required setting and press **Menu/Select** to view the status of the setting. The following settings are displayed:

- **Wi-Fi Status:** displays the status of the Wi-Fi network.
- **Channel:** displays current Wi-Fi channel. Wi-Fi is available in various frequency bands and in different channels.
- **Transfer Rate:** Displays the rate of data transfer.
- **SSID:** Displays the SSID or identification tag of the device. This is null when you are not connected to a Wi-Fi network. A unique SSID or tag is required for identifying the device in Wi-Fi networks.
- **Wi-Fi Strength:** Displays the strength of the Wi-Fi signal.
- **Link Quality:** Displays the quality of the link.
- **Network Mode:** Displays the networking mode.
- **Enc Status:** Displays the wireless encryption status. If this is **Open**, it means that the connection is not encrypted and is open to all persons accessing it. If it is **Closed**, it means that the encryption has been enabled to prevent unauthorized users from accessing the network.
- **Device MAC Addr:** Displays the MAC address of the MIP-100.
- **AP MAC Address:** Displays the MAC address of the access point in the wireless network.

- **Battery Strength:** Displays current battery strength.
- **Auth Status:** Displays if the communication channel is authenticated or not.
- **VoIP Strength:** Displays the intensity of the available VoIP signal.
- **Version Number:** Displays current firmware version.

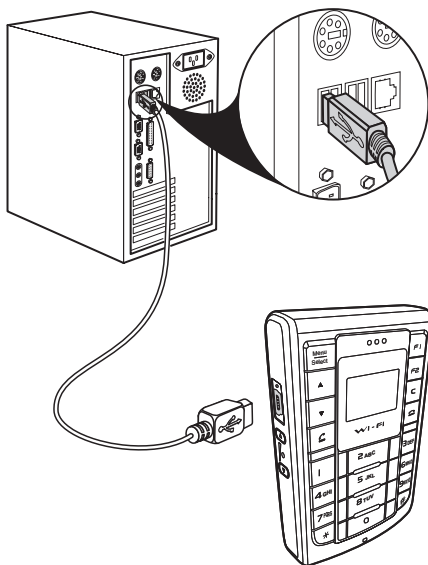


8. ADVANCED FEATURES

You can connect the MIP-100 to your PC using a USB cable and use the device to connect to a wireless network. This section provides details about how to use the MIP-100 with your PC or PDA.

Connecting to the PC

Use a mini USB cable to connect the MIP-100 to the PC as shown.



Installing the USB drivers and WIM

To use the MIP-100 as a USB modem for your PC, you need to install the drivers for the device. When you connect the device to the PC, the PC detects the new hardware and starts the **New Hardware Found Wizard**. Follow the instructions on the screen to locate and install the USB drivers for the MIP-100 on the PC. The

USB driver files can be found on the utility CD provided in your package.



WIM (Wireless in Motion) is an application that helps you configure and use the MIP-100. The utility CD contains two versions of WIM, one for your PC and one for your PDA (Pocket PC only). Select the appropriate version of WIM from the utility CD and double-click **Setup.exe**. Follow the instructions on the screen to install the software. Refer to your PDA documentation for details about installing software on your PDA.

Upgrading the firmware

You can upgrade the firmware of the MIP-100 if required, from the PC using the USB cable. The following files are needed to upgrade the firmware:

- Firmware file called **bundle.bin**
- Firmware application called **uploader_usb.exe**

Follow these instructions to upload the new firmware to the MIP-100:

1. Press the Volume down key before you turn on the MIP-100, and then press the reset key. The phone enters the USB download mode. A message titled **Firmware upgrade (USB)** appears on the screen.
2. Connect the MIP-100 to your PC using the USB cable. If you have not installed the USB drivers on your PC, you are prompted to install them now. See "Installing the USB drivers and WIM" on page 46.
3. Make a note of the COM port number being used for connecting the MIP-100 to the PC. This can be obtained by checking the **Device Manager** under **System** on your PC. The COM port number appears under the **Ports** item.
4. Open the command prompt, type **uploader_usb.exe** COM port number and press **Enter** to start the upload.



The upload status is shown on the screen. Wait till the screen shows **Initializing** before using the phone.

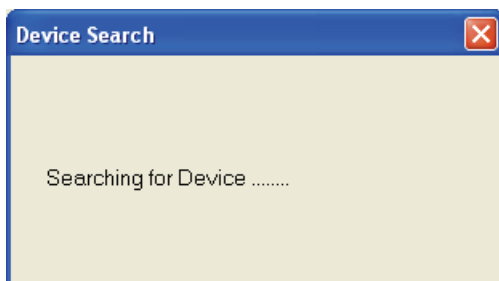
CAUTION: Do not remove the battery, turn off the device, or operate the device while the firmware upgrade is in process.

Using WIM

The WIM application is a useful interface that lets you set up and configure the MIP-100 from your PC or PDA. You can personalize Wi-Fi profiles according to your network specifications. You can also use the application to download ringtones, configure SOS numbers for the phone, and make any setup changes for the phone.

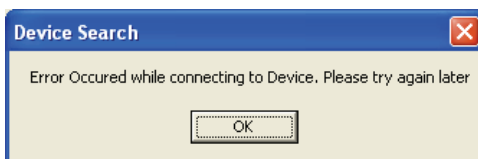
Double-click the WIM icon to start the application from your PC or PDA.

The following screen is displayed when you open the WIM Desktop application.



Please wait for a few seconds while the device is being searched. You can start using the application once the device is found.

If there is a problem connecting to the device the following screen is displayed.



When the device is found, the following screen is displayed.

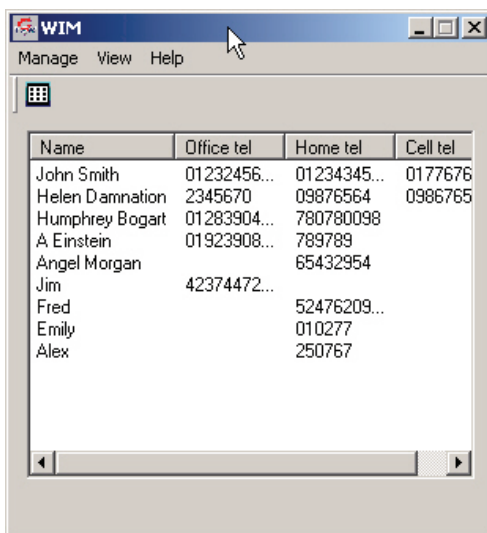


Phone book

Local Phone book

This phonebook is saved on the PC or PPC.

Click '**Phone Book**' on the WIM start screen. The following screen is displayed when you select "**Local contacts**" from the "**View**" menu.

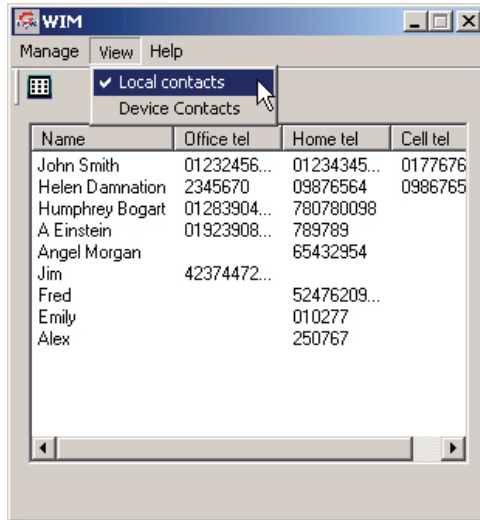


The following options are displayed when you click "Manage" menu:

- **Add contact:** Click 'Add contact' and enter the name, the office number, the home number, and the cell number of the contact and click "Save".
- **Edit:** Click 'Edit' and enter the name, the office number, the home number, and the cell number of the selected contact and click "Save".
- **Delete:** Select the contact to be deleted from the list shown in the screen and click "Delete" to delete the contact.
- **Find:** Click "Find" and enter the name of the contact to be searched. Click the 'Find' button.
- **Copy:** Click "Copy" to copy details of a selected contact.
- **Paste:** Click "Paste" to paste details of a contact that has been copied.

- **Assign ring tone:** Click "Assign ring tone" to assign a ring tone to a selected contact. Assign the ring-tone from those displayed.
- **Dial:** Click "Dial" to call the selected contact.
- **Change local contacts path:**

Click the "**View**" menu. The submenus as shown in the following screen are displayed:



The description of the submenus is as follows:

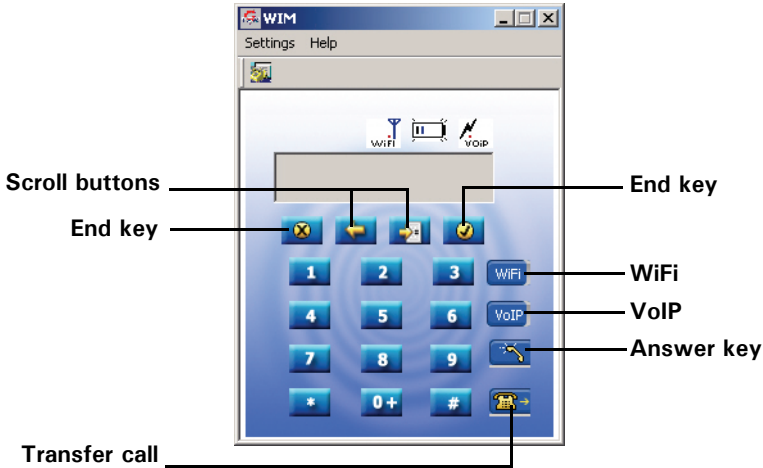
Local contacts: Select this option to view the details of contacts saved in the PC memory.

Device contacts: Select this option to view the details of contacts saved on the device.

Dialer

Click the "Dialer" button on the WIM start screen as shown in Figure 2.

The dialer screen is displayed as follows:



The description of the various keys shown above is given below:

- Scroll keys: Click this key to move the cursor to the previous or the next menu.
- Answer key: Click this key to answer an incoming call or to dial a phone number.
- End key: Click this key to terminate a call or to reject an incoming call.
- Wi-Fi: Click this key to start using Wi-Fi.
- VoIP: Click this key to start using VoIP.

Click the "Settings" menu on the Dialer screen. A list of submenus is displayed as shown below.



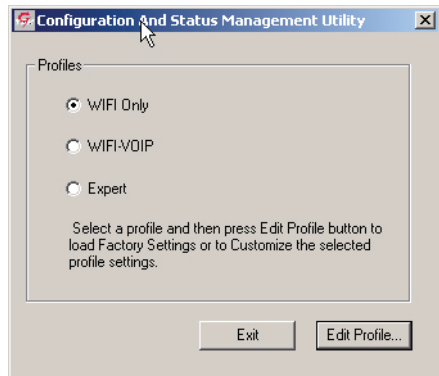
The description of the submenus is as follows:

- **Ringtones:** Select this menu to change the ring tone of PWG-500. You can choose from the given list of ring tones.
- **Skins:** Click the "Skin" submenu to change the color of the dialer screen. There are two skins to chose from.
- **Gain settings:** Select the "Gain settings" option to change the volume of the speakerphone or the microphone.
- **Call log:** Click the "Call log" submenu to view details of dialed calls, missed calls, and received calls.
- **Speed dial:** Click the "Speed dial" submenu to speed dial a preset number.
- **Call answer:** Click the "Call answer" submenu to answer an incoming call.

Config. Stat

To configure WIM, click the **Config.Stat** button.

This displays the WIM configuration utility. Select a profile from the options and click **Edit Profile, Personalize** to modify the profile settings. Alternatively, click **General** to modify the general setup.



When you edit a profile, all the options and settings relevant to the profile are displayed and are available for modification. These options have been described in "Configuring the settings" on page 36.

9. APPENDIX



Additional Information

The use of this equipment may be subject to local rules and regulations. The following rules and regulations may be relevant in some or all areas.

FCC Regulations

This model phone complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

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.

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 or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This EUT is in compliance with SAR for general population uncontrolled exposure limits in ANSI/IEEE C95.1-1999 and has been tested in accordance with the measurement methods and procedures specified in OET Bulletin 65 Supplement C.

European regulations

Products with the CE mark comply with the Radio & Telecommunication Terminal Equipment Directive (1999/5/EEC), the Electromagnetic Compatibility Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) - as amended by Directive 93/68/ECC - issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Standards:

- 1999/5/EEC Radio & Telecommunication Terminal Equipment Directive (R&TTE) EN 301 511

- Specific Absorption Rate (SAR) Standard: EN 50360, EN 50361
- 73/23/EEC Low Voltage Directive (LVD) Standard: EN 60950:2000
- 89/336/EEC Electromagnetic Compatibility (EMC-Directive) Standard: EN301489-1/7
- The manufacturer cannot be held responsible for modifications made by the user and the consequences thereof, which may alter the conformity of the product with the mark.



RF exposure regulation (SAR)

This model phone meets the government's requirements for exposure to radio waves. This phone is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

