## User's Manual



# 2-line Communication System

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## **Table of Contents**

Safety Instructions	
General Safety Instructions	
Product Safety Instructions	
Battery Safety Instructions	
Regulatory Information	
Congratulations Equipment Checklist	
Handset Features	1 1
Basic Handset Features	
Additional Handset Features	
Base Features	1
Basic Base Station Features	
Additional Base Station Features	
Administrator Features	1
Getting Started	2
Base Station Installation	2
Handset and Charger Installation	
Basic Operations	2
Making a Telephone Call	2
Making an Intercom Call to Base Station	2
Making an Intercom Call to another Handset	2
Redial	2
Receiving a Telephone Call	2
Receiving an Intercom Call	
Ending a Call	2
Adjusting Receiver (Earpiece) Voice Volume	2
Placing a Call On Hold	2
Mute	
Do Not Disturb (Silent Ring)	
Key Guard	. 2
Battery Recharge and Replacement	2
Advanced Operations	2
Handset Registration	
Handset Group Subscription	
Call Transfer	
3-Way Conferencing	
Call Forwarding	
Auto-Attendant (AA)	
Call Waiting (integrated w/ system)	3
AA Configuration by Administrator	3
Phonebook Operations	
Menu Operations	
Voicemail Operations	
Volocitian Operations	4

Technical Specifications	.43
Federal Communications Commission (FCC) Statement	
Federal Communications Commission (FCC) Statement	. 44

#### Safety Instructions

Caution: Your wireless telephone gives you freedom and flexibility to stay in touch while you move around. However, the safe and responsible use of the phone depends entirely on you. When using your phone equipment, safety instructions should be followed to avoid the risk of fire, electric shock, injury to person, and damage to property.

## **General Safety Instructions**

- 1. When using your wireless phone, ensure your safety and the safety of others:
  - a. Always watch where you are walking and standing.
  - b. Don't let a phone call distract you from working safely.
- 2. In an emergency:
  - a. If an emergency occurs, dial the emergency phone number. Remember: if you are in an area where your phone does not have a clear signal from the base, it is highly probable that the call may not go through. Locate the nearest landline telephone or other communications device to call for help.
  - Emergency calls may not automatically provide emergency personnel with your name, phone number or location. Tell the operator
    - i) Your name and phone number
    - ii) The nature of the emergency
    - iii) Whether police, fire, or medical assistance is needed
    - The exact location of the emergency, including address, cross streets, mileposts or landmarks.
- 3. Notice to Hearing Aid Users: This phone system is compatible with inductively coupled hearing aids.
- 4. Notice to Cardiac Pacemaker Users: Preliminary studies done by the US FDA and others have shown that, although interference to the implanted cardiac pacemaker may occur when operating very closely, wireless telephones "do not seem to pose a significant problem for pacemaker wearers." However, until more is known, FDA suggests that people with pacemakers may want to take precautions when using or carrying a wireless telephone to ensure that there is ample distance between the telephone and the pacemaker. Do not

carry the handset in a breast pocket. If you have any reason to suspect that interference is taking place, turn off your handset immediately.

## **Product Safety Instructions**

- Read and understand all instructions.
- 2. Follow all warnings and instructions including those marked on the product.
- Changes or modifications to this product not expressively approved by the manufacturer will void the warranty and the FCC authorization to operate the equipment. Use only manufacturer provided accessories.
- 4. Do not use the telephone near water. Never spill liquid of any kind on this product.
- Unplug the product from the wall telephone jack and power outlet before cleaning. Do not use liquid or aerosol cleaners. Use damp cloth for cleaning.
- Do not place this product on an unstable cart, stand or table. The product may fall and cause personal injury or damage to the product or other property. Place the base station and the charger on hard, flat surfaces.
- 7. Power Outage:
  In the event of a power outage, your handset charger will not recharge the handset battery, and the base station will not allow you to make an outgoing call or take an incoming call. Both the charger and the base station require electricity for operation. You should have a telephone that does not require electricity available for use during power outage, or have a temporary backup power supply.
- 8. Slots or openings in the product's housing are provided for ventilation. These openings must not be blocked or covered. Placing the product on a bed, carpeting, or other similar surface may block these openings and should be avoided. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
- Never push objects of any kind into this product through housing slots/openings as they may damage the product, touch dangerous voltage points or short out parts that could result in fire, electric shock, or injury.

- 10. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
- 11. Do not overload wall power outlets and extension cords as this may result in fire or electric shock.
- 12. To avoid electric shock or burn, do not disassemble this product. Send this product to an authorized service center when service or repair work is required. Call Customer Service for locations near you. Opening or removing covers may expose you to dangerous voltages, electrical currents or other risks. Incorrect reassembling of the product may cause electric shock when the product is subsequently used.
- 13. Avoid using the product during a storm. There may be a risk of electric shock from lightning.
- 14. Do not place the product where persons can step, trip, or fall on the product.
- 15. Do not place conductive objects over or near the antenna.
- 16. Do not use the product to report a gas leak while in the vicinity of the leak.
- 17. Do not install the base station or the handset charger near microwave ovens, radios, TV sets, speakers, or other electrical equipment. These appliances may cause interference to the product or experience interference from the product.
- 18. Unplug the base station or the charger adaptor from the wall power outlet and refer servicing to an authorized service center under the following conditions:
  - a. If liquid had been spilled into the product.
  - b. When the power supply cord or plug is damaged or frayed.
  - c. If the product has been exposed to rain or water.
  - d. If the product does not operate normally by following the operating instructions.
  - e. If the product has been dropped or housing has been damaged.
  - f. If the product shows a distinct change in performance.

## **Battery Safety Instructions**

1. Use only manufacturer approved Lithium Ion

- (Li-lon) rechargeable batteries and charger. Do not use other types of rechargeable batteries or non-rechargeable batteries. The batteries could short-circuit, and the battery enclosure may be damaged causing a hazardous condition.
- 2. Follow the charging instruction in this manual and instruction labels and markings in the handset and charger compartments.
- 3. Battery must be recycled or disposed of properly. Do not dispose the battery in a fire. The cells may explode.
- 4. Do not dispose of the battery in municipal waste. Check with local codes for disposal instructions.
- Exercise care in handling the batteries in order not to shortcircuit the battery with conductive materials such as rings, bracelets, keys, pocketknife, and coins. The battery or conductive material may overheat and cause burn or fire.
- 6. Do not expose batteries to rain or water.
- 7. Do not open or mutilate the battery. Released electrolyte is corrosive and may cause injury to eyes or skin. The electrolyte may be toxic if swallowed.
- 8. During charging, the battery heats up. This is normal and is not dangerous.

## **Regulatory Information**

EP-236

FCC ID: ????????

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.

Privacy of communications may not be ensured when using this phone.

- The term "IC:" before the radio certification number only signifies that Industry of Canada technical specifications were met.
- 2. This telephone system complies with rules of the FCC Part 68 and Canadian IC/DOC CS-03. On the bottom of the base station is a label that contains, among other information, the FCC Registration Number, Ringer Equivalence Number (REN) and the Universal Service Order Code, which is RJ-11C in the U.S. or CA-11A in Canada. Your telephone company may ask you for this information.
- 3. The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all devices ring when your telephone number is called. In most, but not all, areas the sum of the REN's of all devices connected to one line should not exceed 5.0. To be certain of the number of devices you may connect to your phone line, you should contact you local telephone company for the maximum REN in your area.
- 4. If your telephone equipment causes problems to the telephone network, the telephone company may ask you to disconnect your phone system from the line until the problem has been corrected. Consult with your local phone company for your rights if this happens.
- Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your telephone system. Consult with your local phone company for your rights if this happens.

- 6. This telephone system may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.
- 7. This telephone system has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of the FCC Rules and RSS210 of the DOC Rules. These limits are designed to provide reasonable protection against harmful interference in a general public installation. Operations of these devices may still encounter interference from/to nearby TV's, VCR's, radios, computers, or other electronic devices. To minimize or prevent such interference, the telephone system should not be placed or operated near other electronic devices. If interference occurs, moving the base station and the handset farther away from them will often reduce or eliminate the interference.
- 8. However, there is no guarantee that interference will not occur in a particular installation. If this telephone system does cause interference to other electronic devices, which can be determined by turning the system off and on, the user is encouraged to try to correct the interference by one or several of the following measures:
  - a. Increase the space separation between the handset or base station and the device that is experiencing interference. We recommend at least 20 feet between the system and other electronic devices.
  - b. Connect the base station to a power outlet on a circuit separate from that used by the device experiencing interference.
  - Consult the dealer or an experienced electronic technician for help.
- 9. This equipment is a transmitter which produces RF energy. The limits on human exposure to radio emission are set by FCC, this equipment complies with those limits. The use of any accessories that have not been approved is a violation of FCC rules.

#### Congratulations

You have purchased an exceptional business communications tool from a leading telephone system manufacturer.

The EnGenius EP-236 2-line Telephone System is ideal for the small office/business and home office users. The EP-236 is the **longest range, 2.4 GHz multi-line telephone and 2-way radio communications system** providing users unparallel mobility and flexibility.

With sophisticated digital signal processing and high quality hardware designs, the EP-236 provides long-range telephone connections and 2-way handset-to-handset communications in a wide variety of business settings from multi-level office buildings, factories, hotels/resorts, convention facilities, warehouses, farms, business complexes, construction sites, and other demanding business environments.

The unique 2-way radio feature allows handsets to communicate with each other as digital, full-duplex 2-way radios. Members of work group(s) can be in contact with their co-workers while leaving phone lines available for incoming and outgoing calls. Handsets that are within range of each other can use the 2-way feature even while out of range of the base station. EP-236 can support up to 36 handsets.

#### **Equipment Checklist**

- In a Base + Handset package, please find the following components:
  - a. Base Station x 1
  - b. Base AC/DC Adaptor x 1
  - c. Handset x 1
  - d. Battery Pack x 1
  - e. Charger x 1
  - f. Charger AC/DC Adaptor x 1
  - g. Telephone Cord x 2
  - h. Handset Belt Clip x 1
  - i. User's Manual, Warranty Card
- 2. In a Handset package, please find the following components:
  - a. Handset x 1
  - b. Battery Pack x 1
  - c. Charger x 1
  - d. Charger AC/DC Adaptor x 1
  - e. Handset Belt Clip x 1
  - f. User's Manual, Warranty Card
- 3. Optional Accessories:
  - a. Outdoor Antenna Kit (including antenna and cable)

#### **Handset Features**

## **Basic Handset Features**

- 1. Antenna
- 2. Earpiece/Receiver
- 3. Microphone
- 4. 4-line LCD (Liquid Crystal Display)
  - a. The LCD display has LED (Light Emitting Diode) for backlighting.
  - b. The 1<sup>st</sup> line of LCD consists of icons (see below).
  - C. The 2<sup>nd</sup> and 3<sup>rd</sup> lines of the LCD, maximum 14 characters each, display status, message, menu selections, or usereditable alphanumerical characters.
  - d. The last line displays the left and right soft keys.
  - e. Icons (from left to right):
    - RSSI (Receive Signal Strength Indicator)
       During a call, the number of bars is proportional to the radio signal strength received.
    - ii) Handset
    - iii) Handset ID

Displays a handset icon and a 2-digit Handset ID.

- iv)
- v) Active Line Indicator
- vi) Bell
- vii) Message
- viii) Battery Strength

Number of bars is proportional to the amount of battery time remaining.

## 5. TALK/FLASH

- a. Places or answers a telephone or intercom call.
- b. Toggles between calls in built-in call waiting operations.
- C. Sends a Flash signal to phone line to retrieve a dial tone after the call ends, or to perform phone company provided call waiting operation during a call.

## 2-WAY/INTERCOM

- a. Places an intercom call to another handset ID or a group ID (group paging).
- b. Intercom calls are digital, full duplex, and are conducted without the assistance from the base, thus leaving the base's line handling capacity intact.

## 7. Ringer

- a. Rings to an incoming call.
- b. Distinctive alert sounds indicating various events:
  - i) Single Beep: successful key entry
  - Double beep: failed operation or invalid key entry, also indicates power on/off
  - iii) Periodic 1-Long-2-Short Beep (every 1 minute): low battery warning
  - iv) Periodic Long Series of Beeps (repeat every 30 seconds): indicates a call is on-hold
- 8. Battery
- 9. Headset Jack
  - 2.5 mm headset jack for hands-free operation
- 10. Left/Right Soft Keys
  - Make menu selection.
- 11. Up/Down Scrolling Keys
  - a. Scroll through records and menu selections.
  - b. Adjust receiver voice volume when in Talk mode.
- 12. END Key / Power On or Off Key
  - a. Ends a call.
  - b. Leaves current menu operation, up one level.

#### **Additional Handset Features**

1. Up to 36 handsets and 36 Handset IDs

- a. ID 1-8: Group ID. Handsets can "subscribe" from the handset menu to group(s) and be paged when a landline caller or an intercom caller enters a Group ID.
- 2. Over-the-air handset registration
- 3. Security
  - One of the over 65,000 possible security codes is randomly selected by the base station during registration.
- 4. Ringer Vibrator
- 5. Call Waiting
  - a. Notifies handset the arrival of a 2<sup>nd</sup> call from another phone line.
  - b. Allows handset to toggle between 2 phone calls.
- 6. Caller ID
  - Displays incoming call phone number and name on the LCD (needs Caller ID service from local telephone company)
- 7. Call waiting with Caller ID
  - Displays 2<sup>nd</sup> incoming call information on the same phone line when 1<sup>st</sup> call is in progress (needs Call Waiting with Caller ID service from local telephone company)
- 8. Call Transfer
  - a. Direct Transfer: transfer a telephone call to another handset without announcement.
  - b. Announced Transfer: speak to the destination handset before transferring a telephone call.
- 9. Call Forwarding
  - a. Forward all incoming phone calls to another handset.
  - b. Forward all incoming phone calls to another landline or cellular phone number.

#### Note:

- Once enabled from the handset, all phone calls will be routed to the designated number until disabled. A warning message will appear on the LCD.
- 2. Intercom calls are not forwarded.

## 10. Call Conferencing

- a. 2-handset and 1-line conferencing
  - i) Dial telephone line call
  - ii) Select Option (Left) soft key
  - iii) Scroll to highlight Conference, then select OK (Left) soft key.
  - iv) Highlight handset using the scrolling keys, then select OK (Left) soft key.
  - v) Enter handset ID number.
  - vi) When other handset answers the display will show Conference and involved handsets and line.
- b. 1-handset and 2-line conferencing

## 11. DND (Do Not Disturb, i.e., Silent Ring)

- You can press END, to silence the ringer for that call only. That call can still be answered from another handset or by pressing TALK.
- 12. Base (desk) station programmable Flash key timing
  - a. From the base station, press MENU-5-7 to enter Dial Settings.
  - b. After the Dial Mode screen appears use the scrolling keys to view Flash Time screen, then Select (F1) key. The current setting is displayed on this screen.
  - C. Use the scrolling keys to highlight the Flash Time preference, then press OK (F1) key to select.
  - d. 8-levels (100 ms 800 ms) timing selections.

**Note**: The default value (600 ms) works in most areas. Changing this setting may cause Flash key not working. Change only when you are certain of the new value would work.

## 13. Five Call Logs

- Dialed Call Log: Stores 10 phone numbers (up to 32 digit each) dialed most recently. Can perform last-number redial on all 10 numbers.
- b. Personal Received Call Log: 10 entries (16-digit phone number, 15-character names, and time stamp), needs Caller ID service from local telephone company.
- C. **Public Received Call Log**: 10 entries (16-digit phone number, 15-character names, and time stamp), needs Caller ID service from local telephone company.
- d. **Personal Missed Call Log**: 10 entries (16-digit phone number, 15-character names, and time stamp), needs Caller ID service from local telephone company.
- e. **Public Missed Call Log**: 10 entries (16-digit phone number, 15-character names, and time stamp), needs Caller ID service from local telephone company.
- f. Phone numbers and names can be saved into phonebook while in display.
- 14. Any Key Answer (except END and soft key)

## 15. Keyguard

Prevents accidental dialing.

## 16. Dialing Prefix

 Up to 14 digits, including pause(s), one access code can be pre-programmed to be added automatically in front of the dialed number when dialing from call logs, phonebook, and dial-and-send dialing.

## 17. Call Hold

- a. Places call on hold.
- b. Change battery while call is on hold.

## 18. Mute

#### 19. Phonebook

- a. 50 entries, each stores a phone number or handset ID (up to 32-digit) and name (up to 16-character)
- b. Alphabetically sorted display and search.
- c. Dial from display.

- 20. Twenty levels of LCD contrast selections
- 21. Six-level voice volume selections
- 22. Six-level ringer volume selections (low/medium/high/off and vibrate/vibrate with ring)
- 23. Four-level keytone volume selections (high/medium/low/off)
- 24. Sixteen ringer type selections
- 25. Display call time duration for current call during and immediately after the call

#### **Base Features**

## **Basic Base Station Features**

- 1. Antenna
  - a. When selecting a location for the base station, it is better to locate the base station as high as possible to avoid obstructions that may interfere with radio transmission.
  - b. When using an outdoor antenna, locate the antenna (not the base station itself) as high as possible for a clear transmission path.
- 2. Audio-in Jack (3.5 mm)
  - Provides MOH (Music on Hold).
- 3. Line Status LED's
  - LED lit indicates an active telephone line.
- 4. LCD base display
  - LCD lit indicates base station has power.
  - Menu selections
- 5. Line In
  - a. Supports 2 simultaneous telephone line connections.
  - b. Two standard RJ-11C/CA-11A connectors.
- 6. DC In
  - · Connects to Base Station AC Adaptor.

#### **Additional Base Station Features**

- 2-channel Auto-Attendant
  - a. 2 Auto-Attendant can be active at the same time in case of 2 simultaneous incoming calls.
  - b. Allows private paging to a single handset (with individual Handset ID) or group paging to a group of handsets (with Group ID).
  - C. Per line AA enable/disable by administrator.

- d. When disabled for a line, the administrator can set all handsets to ring with an incoming call on that line, or a particular Handset ID (10-99, Group ID 1-8) can be assigned to have both incoming and outgoing call privileges on that line.
- e. Up to 128 seconds customizable main greeting message.
- 2. Optional Outdoor Antenna Kit with cable
- 3. Supports both DTMF and Pulse dialing
  - From the base select Phone Settings, select Dial Settings, scroll to select Tone or Pulse
  - b. Default is Tone dialing.

#### **Administrator Features**

- 1. Auto-Attendant (AA) Configuration
  - a. Turns AA on/off for each of the 2 lines.
  - b. If AA is turned off, select from two options
    - i) Ring all registered handsets.
    - ii) Ring a particular Handset ID (10-99, Group ID 1-8). Only this particular Handset ID can receive incoming on that line as well.
  - C. Records main greeting message.
  - d. Playbacks main greeting message.
- 2. Answer-Machine (VM) Configuration
  - a. Sets number of rings before VM answers (2-9).
  - b. Turns VM on/off for each of the 2 lines.
  - **C.** If VM is turned off, select from two options
    - i) Ring all registered handsets.
    - ii) Ring a particular Handset ID (10-99, Group ID 1-8). Only this particular Handset ID can receive incoming on that line as well.
  - d. Records main greeting message.
  - e. Playbacks main greeting message.
- 3. System Configuration
  - a. Removes Handset ID from the base station.

## **Charger Features**

- 1. DC In
  - Connects to Charger AC Adaptor.
- 2. Handset Charging Slot
  - Charge handset battery when handset is placed in cradle.
     12 hour charge from empty.
- 3. Spare Battery Charging Slot
  - Charge spare battery when battery is placed in slot. 90 minute fast charge from empty.
- 4. Charger Power Indicator
  - a. LED is not lit: no power to the charger.
  - b. LED is green: power to the charger.
- 5. Spare Battery Charging Indicator
  - a. LED is not lit: slot is empty or no/poor contact.
  - b. LED is red: battery is being charged.
  - c. LED is green: battery is fully charged.
- After battery is fully charged, charger enters a trickle charge mode.
- 7. It is impossible to overcharge the battery using this charger.

#### Notes:

- 1. Fully charge battery packs before first use.
- 2. Both handset and spare batteries can be charged at the same time.

#### **Getting Started**

#### **Base Station Installation**

1. Plug the transformer end of the base station AC/DC adaptor into a standard AC electrical power outlet, plug the other end into the "DC In" jack on the back of the base station.

## Note:

- 1. The base adaptor's DC plug is larger in dimension than the charger's DC plug. The charger adaptor's DC plug will not fit into the base's DC In jack.
- 2. The base station's power supply (DC Adaptor) and telephone line should be plugged into a surge protector with phone line protection.
- 3. It is recommended to use an UPS (Uninterruptible Power Supply) to prevent lost of telephone services in a power outage.
- 2. Plug one end of the phone cord into one of the 2 phone jacks marked Line 1 or Line 2, starting from Line 1, plug the other end into the telephone outlet.
- 3. Repeat for additional phone lines. You can add the second phone line at a later time.
- For best performance, maintain at least a distance of 1 meter (about 3 feet) between the base station and other electronic devices (e.g., TV, computer, stereo, fax machine, answer machine, cordless phone, etc.)
- 5. Recommended phone line features from the local phone company: Multiple phone lines "hunt group" is a useful feature and works well with this phone system. This feature "ties" multiple phone lines to a single phone number. When an outside caller calls this common phone number, the phone company automatically finds a free line. In a hunt group, the Call Waiting and the Caller ID with Call Waiting (or called Type II Caller ID) features are unnecessary because a 2<sup>nd</sup> call will come in on a separate line, rather than on the same line. For a 2<sup>nd</sup> call coming in on a separate line, the phone system's

- built-in Call Waiting feature will alert the user and allow the user to toggle between 2 lines.
- To use the Music/Message-On-Hold feature: Connect one end of a standard audio cable into a radio or audio player, and plug the other (3.5 mm) end into the MOH jack on back of the base. Audio cable is not included.

## 7. Connecting an external telephone answering device:

- a. Follow instructions that come with the answering device.
- b. An exemplary configuration: install the external answering device in-between the wall phone jack(s) and the Base Station. Either a multiple of single-line answering devices or a multiple-line answering device can be used. You may want to disable the Base Station's Auto-Attendant function if that interferes with the external device's built-in Auto-Attendant.

## **Handset and Charger Installation**

- 1. Plug the transformer end of the Charger AC/DC adaptor into a standard AC electric power outlet, plug the other end into the DC In jack on the back of the Charger.
- 2. Install battery pack onto the handset.
- 3. Place handset onto the charger front slot. Battery is fully charged when the corresponding battery icon shows 4 bars.
- 4. The phone system is now ready to perform basic functions such as making and receiving phone calls and intercom calls. No base station or handset programming is needed for basic operations.

#### : Note:

- Handset(s) packaged along with a Base Station are preregistered at the factory. If you have a new handset, you will need to register the handset with the base station in order to be recognized as a member handset by the base(s) and by other handsets. See Handset Registration.
- 2. Fully charge battery packs before first use.

#### **Basic Operations**

## Making a Telephone Call

- 1. Press TALK, wait for dial tone, and then enter phone number.
- Alternatively, you can enter phone number first then press TALK key. When using this method to dial out, you can use the Up (scroll key) to delete and edit the number entered. The Up scroll key erases the last digit entered.
- 3. To abort dialing, press END key.

#### Notes:

- The Base Station will automatically search for an available line and dial out.
- 2. If both lines are occupied, including if some lines are made unavailable to all handsets (lines can be dedicated only to certain handsets, the LCD shows "System Busy" and handset returns to standby.
- 3. If a link cannot be established, the LCD will show "Searching".
- 4. A call duration timer will start displaying the length of the call after link is established (regardless if and when the call is answered).

## Making an Intercom Call to Base Station

- 1. Press 2-WAY (Intercom) key to be linked to the base station.
- 2. To abort dialing, press END key.

## Making an Intercom Call to another Handset

- 1. Press the 2-digit handset ID followed by the 2-WAY (Intercom) key to be linked to the handset.
- 2. To abort dialing, press END key.

## Notes:

#### 23

#### Redial

- 1. Press Option (Left) soft key.
- The LCD shows the options menu. Use the Scrolling Keys to highlight Redial then press the OK (Left) soft key to select.
- Use Up Scrolling Key to enter the dialed number log and scroll through the last 10 phone numbers dialed. Select and press TALK to dial.

**Notes:** Intercom numbers (Handset ID) are not stored in the last 10 numbers dialed log.

## Receiving a Telephone Call

- 1. When an incoming call arrives, the ringer will ring or vibrate unless the ringer has been turned off.
- If the handset is on the charger cradle (ringer will be temporarily switched to "Ring" if it has been set to "Vibrate"), lift the handset and start conversation.
- 3. If the handset is not on the cradle, press any key (except END) to answer.

#### Notes:

- 1. The LCD displays the line number of the call.
- 2. You can press END, to silence the ringer for that call only. That call can still be answered from another handset or by pressing TALK.
- 3. If Caller ID service is available, the LCD will display the incoming call information. If the LCD shows "Private" or "Unknown", the caller's information may have been blocked by the caller or the originating phone company.

## Receiving an Intercom Call

- 1. When an intercom call arrives, the ringer will ring or vibrate unless the ringer has been turned off.
- If the handset is on the charger cradle (ringer will be temporarily switched to "Ring" if it has been set to "Vibrate"), lift the handset and start conversation.
- 3. If the handset is not on the cradle, press any key (except END) to answer.

#### Notes:

- 1. The LCD displays the caller's Handset ID.
- After the two-way link is established each handset will display the handset's ID number followed by the handset's ID number linked with.

## **Ending a Call**

To end a telephone or intercom call, press END key or place handset into charger cradle.

## Adjusting Receiver (Earpiece) Voice Volume

- 1. Voice volume can only be adjusted during a call.
- 2. Use Up and Down Scrolling Keys to turn up or down the earpiece volume.
- 3. The new setting remains effective for all future calls until changed.

**Notes:** To achieve maximum volume, adjust the position of the earpiece to align with the ear.

## Placing a Call On Hold

 When a call is in progress, it can be put on hold by selecting the Hold option from the Options menu.

- Select Options (Left) soft key. The LCD will display the options menu.
- Use the Scrolling Keys to highlight Hold, then press OK (Left) Soft Key to select.
- 4. To return to the conversation, press "Unhold" (Left) soft key.

## Notes:

1. The call being placed on hold can only be "un-hold" by the handset that puts it on hold.

- 2. Handset LCD displays a call is being on hold. An alert tone (double beep) every 30 seconds will remind the handset that a call is being on hold.
- 3. If the operation (e.g., call transfer) after putting a call onhold fails, the held call may be dropped.

## Mute

- 1. When a call is in progress, you can mute the microphone by selecting the Mute option from the Options menu.
- 2. Select Options (Left) soft key. The LCD will display the options menu.
- 3. Use the Scrolling Keys to highlight Mute, then press OK (Left) Soft Key to select.
- 4. When mute is active, the other end will not hear your voice, but still can speak to you.
- 5. To return to the unmuted conversation, press "Unmute" (Left) soft key.

**Note**: Mute is effective only for the current call. It is automatically turned off after the call is ended.

Do Not Disturb (Silent Ring)

- 1. Enter the key sequence MENU Ring Settings Ring Alert Settings, then select "Off". This will turn off the ringer until it is turn on again from the menu.
- 2. For temporary silencing the ringer when an incoming call arrives, press the END key.

## **Key Guard**

- To prevent accidental dialing, you can press Menu (Left) soft key, then select Keypad Settings, select Keypad Guard Settings, then select OK to make Keypad Guard Active. The handset keypad is locked. No key entry is accepted except the power on/off key.
- 2. To unlock the keypad, press and hold the "9" key, then, within 2 seconds, select OK (Left) soft key to unlock.
- 3. Key Guard is in effect until unlocked or powered off.

## **Battery Recharge and Replacement**

- 1. Charge the battery when one or several of the following happen:
  - a. Phone beeps twice every thirty seconds.
  - b. Battery icon is empty.
  - c. Phone does not respond when a key is pressed.
  - d. LCD and backlighting become dim.
  - e. Talk range shortfall is experienced.
- 2. You can replace the handset battery after placing the call-inprogress on hold.
- Battery talk time and standby time vary depending on the talk/standby pattern and the operating distance. Putting the handset back to charger cradle as often as possible is recommended for best performance.

Note: Use only manufacturer provided batteries and charger.

#### **Advanced Operations**

## **Handset Registration**

- 1. If your handset(s) is purchased as part of a system, it has been pre-registered with the base station at the factory.
- 2. A new additional handset would need to be registered to the base station if the handset displays reads "Not Registered".

## 3. Registration:

- a. Press handset Menu (Left) soft key.
- b. Press the number "7", then "1", this will enter the handset registration menu.
- c. On the base (desk) station press MENU "5" "5", this will enter the handset registration mode.
- d. Select OK from the base station by pressing F1. A sixty second timer will begin, registration must be completed within 60 seconds.
- e. On the handset select OK (Left) soft key.
- f. Enter the handset ID request 10 through 99. The assigned ID will be displayed on the handset LCD, indicating successful registration.
- g. Repeat above steps for all additional handsets.

## 4. De-registration by the handset:

- a. Press handset Menu (Left) soft key.
- b. Press the number "7", then "2", this will enter the handset registration menu.
- c. Select OK (Left) soft key on handset.
- d. Handset display will display "Delete?", select OK (Left) soft key.
- e. After deregistration, the handset will not be able to use the base to make or receive phone calls.
- f. Press END to return to main display screen.

## 5. De-registration by the base (desk) station:

- a. On the base (desk) station press MENU "5" "6", this will enter the handset de-registration mode.
- b. Base station will display "Enter Handset Number 00", enter the handset ID to be de-registered.
- c. If successful, display will read "Deregistration Successful".

#### Notes:

Repeat registration or de-registration process if unsuccessful.

## **Handset Group Subscription**

- 1. Up to eight handset groups (1-8) can be defined and handsets can decide which group(s) they want to be in.
- 2. For example, Group 1 represents the Customer Service Group, Group 2 represents the Sales Group, and Group 3 is the Marketing Group. Suppose that Handset 10 wants to receive incoming rings for all Sales and Marketing related calls in addition to calls addressed to his/her own Handset ID. Then handset 10 will need to "subscribe" to Group 2 and Group 3.
- 3. Group Selections:
  - a. Press handset Menu (Left) soft key.
  - Press the number "6", this will enter the phone setting menu.
  - c. Press number "4", handset enters group select menu.
  - d. Handset display will show "Select Page Group" and the list of groups the handset is subscribed to (1-8).
  - e. Press Select (Left) soft key and use the scrolling keys to highlight the desired group to join.
  - f. Press Select (Left) soft key to join the group.
  - g. Join additional groups by continually scrolling, highlighting and selecting.
  - h. A shaded box will appear next to joined groups.
  - i. Delete a group selection by highlighting a joined group then pressing the Select (Left) soft key.

#### Notes:

- 1. The handset can change group affiliations at any time.
- 2. The base is not responsible for group assignments. Consequently, it cannot de-subscribe a handset from a group.
- 3. When an outside line or an intercom caller enters a group ID, all handsets subscribed to this group will ring. The first handset to answer will establish a link with the caller. Afterward, it is a one-to-one call, not a one-to-many call.

## **Call Transfer**

- While a telephone call is in progress, you can transfer the call to another handset.
- 2. Press TRANSFER (Right) soft.
- Enter the two-digit handset number you want to receive the transferred the call.
- 4. Transfer Call:
  - a. Un-announced Call Transfer:
    - Press "END" before the destination handset answers, the call is automatically transferred to the destination handset.
  - b. Announced Call Transfer:
    - i. Speak to the destination handset before pressing END to complete the transfer.

**Notes:** If the destination handset does not answer after handset paging timeout, the call is routed back to the originating handset.

## 3-Way Conferencing

- 1. While a telephone call is in progress, you can place call on hold and bring in another phone line or another handset for a 3-way conference.
- 2. Press OPTION (Left) soft key.
- 3. Use scrolling keys to highlight CONFERENCE, then select OK (Left) soft key.
- 4. 3-Way Conferencing with a Second Handset:
  - Use scrolling keys to highlight LINE, HANDSET or BASE, then select OK (Left) soft key.
  - b. Enter the handset ID of the second handset.
  - c. Two handsets and one phone line can now talk simultaneously. Any one of the handsets can drop out of

the 3-way conferencing, leaving the remaining two parties still in conversation.

## 5. 3-Way Conferencing with a Second Phone Line:

- a. Press number "1" and enter a phone number to call another phone line.
- b. After the second line answers, press the CONF (Left) soft key.
- One handsets and two phone lines can now talk simultaneously.
  - i. If one phone line hangs up, the handset continues talking to the remaining phone line.
  - ii. If the handset presses END key, the 2<sup>nd</sup> phone line will be dropped. The handset and the first phone line continue conversation.

#### Notes:

- 1. 3-way conferencing between 3 handsets is not supported.
- Unlike 3-way conferencing provided by the phone company, 3way conferencing involving 2 phone lines will take up two physical lines, leaving only two lines left available for other handsets.

## **Call Forwarding**

- A handset can direct the base station to forward all future phone calls to be routed to another handset or another phone number.
- 2. Press handset Menu (Right) soft key.
- 3. Press the number "5", this will enter the handset setting menu.
- 4. Press number "3", handset enters call forwarding setting mode.
- 5. Use Up/Down arrow to scroll up and down the selection (Off, Another Handset, External Line).
- Make a selection (default = Off) and press SAVE (Left) soft key.
- 7. When prompted, enter a two-digit handset ID or an external phone number, up to 14 digits.

- 8. A warning message "All calls are forwarded" will appear on the handset LCD.
- To turn off call forwarding, repeat the above procedures and select "Off".

#### Notes:

- Because this setting is stored both on the handset and on the base station, the handset must be in range with the base to change setting.
- 2. A warning message will appear on the handset LCD to inform the handset that all calls are forwarded.
- Calls can be forwarded to another handset or a phone number, but not both. Setting a call forwarding address will automatically replace the previous setting.
- 4. There is no call forwarding announcement, the caller is not aware of the call is being forwarded.
- 5. Call forwarding can be only one-hop. That is, for example, if Handset 11 forwards calls to Handset 22, but Handset 22 also sets calls forwarding to another handset, calls for Handset 11 are still routed to Handset 22.

## Auto-Attendant (AA)

- 1. When enabled by the administrator, an automated attendant would greet a telephone line incoming call.
- 2. The caller will be prompted by the greeting message to enter a two-digit extension number (Handset ID) or press "0" for operator.
- 3. The greeting message is user programmable. The Handset ID that is designated as the operator is also user programmable.
  - Default greeting message (Main OGM): "Please enter the extension number or press 0 for the operator."
  - Default operator: Handset 10.
- 4. AA will ask for another handset ID if the first entry is invalid (no registered handset with that ID) with the announcement (OGM2): "The extension you entered is invalid, please try another extension or press 0 for the operator."

- 5. If there is no entry after time out, AA will announce (OGM3): "Please hold, your call is being transferred to the operator." and automatically ring the operator handset.
- 6. If the destination handset does not answer (busy, power off, or out of range) after handset paging time out, the AA prompts the caller for another extension number by announcing (OGM5): "The extension you've entered is busy or not available. Please enter another extension number or press 0 for the operator."
- 7. If the 2<sup>nd</sup> try is still not successful, AA will announce (OGM4): "Sorry, nobody can answer your call right now. Please try again later, goodbye." then drops the call.

#### Notes:

- 1. Intercom calls are not routed by Auto-Attendant.
- 2. Routing messages OGM2, 3, 4, and 5 are not user programmable.
- 3. The timeout is 5 seconds for entering extension number.
- Call routing is at most 2 hops. That is, if both the 1<sup>st</sup> and the 2<sup>nd</sup> handsets do not answer, the call will be terminated. Call routed to the operator is final and will be terminated if the operator does not answer.

## Call Waiting (integrated w/ system)

- 1. A handset, while talking on one phone line, can be informed of the arrival of a new incoming phone call.
- 2. For example, suppose that Handset 15 is talking on Line 1. When a new call comes in on, Line 2, and the caller enters extension number "15" when prompted by the AA, or if the call is set to be routed to Handset 15 when AA is disabled.
- 3. The base station recognizes that Handset 15 is busy. Instead of announcing to Line 4 that Handset 15 is busy, the base sends an alert to Handset 15.
- 4. Upon receiving the alert, the handset sounds an audible double beep alert and LCD displays "New call on Line 4".

- 5. Handset 15 can:
  - a. Ignore the new call; continue talking to Line 1.
  - b. Press FLASH key to switch to Line 4.
  - Subsequent pressing of FLASH key will toggle between Line 1 and Line 4.
  - d. Press END key while talking to a line will terminate that particular call and automatically switch back to talking to the remaining line.

#### Notes:

- This built-in call waiting is separate from the Call Waiting feature available from the local phone company. The phone company provided Call Waiting functions on the same phone line, while the Call Waiting functions on two separate phone lines.
- 2. This feature only works for 2 lines, if a 3<sup>rd</sup> phone call comes for the same handset, the call will not be routed to the handset.
- It is recommended to order from the local phone company Hunt Group feature for all your lines and not subscribe to the Call Waiting feature.

## **AA Configuration by Administrator**

- 1. Administrator can change the following AA settings:
  - · Record/playback new main greeting message.
  - Set number of rings before AA picks up a call.
  - Turn on/off the AA line-by-line.
  - Set Designated Handset ID for AA disabled line(s). Only the Designated Handset can use that particular line for incoming and outgoing calls. In other words, the line is now dedicated to a particular handset.
  - Designate an operator, the handset which would answer un-routable calls or when the caller chooses "Operator" when prompted.

## 2. Change AA Parameters:

- a. From an administrator handset (Handset 10 or 11), press Menu (Right) soft key.
- b. Press number "9", this will enter administration menu.
- c. Press number "1", handset enters AA setting menu.
  - i. Press "1" and follow instruction to record new greeting message.
  - ii. Press "2" to playback the current greeting message.

Draft version EP-236-1.1UM Draft version EP-236-1.1UM

- iii. Press "3" to set number of rings before the AA picks up a call. Use Up/Down arrow to choose between 2 and 9 rings.
- iv. Press "4" to turn AA On/Off: This can be done for each line separately. Turning off the AA may be useful when
  - The line is not used by a group of people.
  - External answering machine is to be attached to the line.
  - Use Up/Down arrows to scroll through Line 1 through Line 4, and press "On" or "Off" soft keys.
- v. Press "5" to set Dedicated Handset for each line: When AA is turned off, you can choose between two options:
  - All handsets ring to incoming calls, or
  - Designate one particular handset to have the only access to that particular line for both incoming and outgoing calls.
- vi. Press "6" to set Operator for AA: Enter a two-digit Handset ID (default = Handset 10) as operator for all call addressed to the operator in AA operations.

#### Notes:

- 1. Only administrator can change AA settings.
- 2. Because AA setting is stored on the base station, the handset must be in range with the base to make changes.
- 3. The maximum recording time for the greeting message is 128 seconds.
- 4. Allowing each line's AA to be turned on or off separately is useful if different lines are used for different purposes.
- 5. When AA is disabled, the line can only be dedicated to an individual Handset ID. Group ID (01-09) will not be accepted.
- 6. The operator can be any individual handset or a group; it doesn't need to be an administrator handset (Handsets 10 and 11).
- The minimum number of rings before the AA picks up cannot be lower than two for the purpose of receiving the Caller ID message.

## **Phonebook Operations**

- 1. You can store up to 10 entries in the phonebook. Each entry can contain a phone number or handset ID (up to 28 digits) and a name (up to 15 characters).
- 2. To access the phonebook, while the handset is in standby, enter NAMES (Right) soft key or use the down scrolling key.
- 3. To access the phonebook, while handset is in Talk mode, select OPTION (Left) soft key, then use the scrolling keys to highlight Phonebook. Select OK (Left) soft key, then enter the first letter of the name you are searching for then select FIND (Right) soft key. The scrolling keys can be used to further your search within the phonebook.

## 4. To add a new entry:

- a. Press NAMES (Right) soft key.
- b. Enter name when LCD prompts "Name:" Use the up scrolling key to backspace and delete a character. Select SAVE (Left) soft key when complete and to move to entering the number.
- C. To enter the letters of a name, press the corresponding keypad number one or more times according to the order of the character on the key. See table below for a list of available characters and their orders. For example, press "2" once for the character "A", twice for "B", etc. Use up scrolling key to delete the last character entered. When completed, press SAVE (Left) soft key to save.
- d. Enter a phone number when LCD prompts "Number:" Use up scrolling key to delete the last digit entered. When completed, press SAVE (Left) soft key to move to location selection.
- e. Enter the phonebook location you wish to assign (0-9) to this entry, then select OK (Left) soft key.

#### Notes:

 When enter a phone number, the cursor automatically advances to the next digit field. Use up scrolling key to delete a character or digit. When entering a name, the cursor automatically advances to the next character field if you press a different key for the next character. If you need to enter

- consecutive characters from the same key, you can wait for the cursor to advance or use the down scrolling key to move the cursor forward manually. Also use up scrolling key to delete a character.
- By default, all letters are entered in the upper case. Use the \*
  key to toggle between upper and lower cases. For example,
  pressing \* once will switch to the lower case for all subsequent
  letters. Pressing \* again will return to the upper case mode.
- 3. A "Pause" entry represents a 2.8 second delay in dialing the following digits, which is useful when calling a sequence of segmented numbers (e.g., access code, credit card number, auto-attendant entries, etc.) Pause is entered by pressing the \* key twice (LCD displays P). Entering pause twice (PP) will result in 5.6 seconds pause in the dialing.
- 4. Character Table:

	Key Characters and Orders	
'+,.*()&1	1	
A B C 2	2	
DEF3	3	
GHI4	4	
JKL5	5	
M N O 6	6	
PQRS7	7	
T U V 8	8	

WXYZ9	9		
o	0		
Toggle case when in character editing *P (Pause) when in number editing # Space – in character editing; and # in number editing			

- 5. The entries are alphabetically sorted and stored as a list in an ascending order (A to Z) from the top of the list.
  - a. If the phonebook is entered from the menu, the first entry displayed is the top of the list.
  - b. If the phonebook is entered using the down arrow, the first entry displayed is the top of the list.
  - C. If the phonebook is entered using the up arrow, the first entry displayed is the bottom of the list.
- 6. The first line of LCD display shows name and the 2<sup>nd</sup> line shows the phone number. If the phone number is longer than 14 digits, press OPTION (Right) soft key and select Option 3 to view the complete number.

## 7. To search for a record:

- a. Press a key that corresponds to the first character of the name you are looking for.
- b. For example, you are looking for "Peter", then press the number "7" once. Or, if you are looking for "Smith, John", then press "7" 4 times.
- **C.** The LCD displays the first entry starting with that alphabet.
- d. Use the Up/Down Arrow to locate the exact record you are looking for.

## 8. To erase/edit phonebook:

 Use Up/Down Arrow or the alphabetical search method to locate the record to be erased or edited.

- b. Press OPTION (Right) soft key to enter editing menu.
  - i) Press 1 and confirm to delete a record.
  - ii) Press 2 to edit phone number and name. Press SAVE (Left) soft key when finish.
- 9. Dial from display: press TALK or Intercom to dial the phone number or Handset ID displayed.

## **Menu Operations**

- 1. Press MENU (Right) soft key while the phone is in standby.
- 2. Press "1" to lock keypad (see Key Guard).
- 3. Press "2" to view, search, delete, and edit the phonebook (see Phonebook).
- 4. Press "3" to view the last 10 numbers called, received, or missed. Records can be erased or edit/save into the phonebook.
  - a. Press "1" to view the last 10 phone numbers dialed, starting from the most recent one. Use Up/Down Arrow to scroll through the list.
    - i. Press OPTION (Right) soft key for options.
      - Press "1" and confirm to erase the current record.
      - Press "2" to edit and save or save without editing into the phonebook.
      - Press "3" to view the complete number if the phone number is longer than 14 digits.
  - b. Press "2" to view the last 10 phone numbers received, starting from the most recent one. Use Up/Down Arrow to scroll through the list.
    - i. Press OPTION (Right) soft key for options.
      - Press "1" and confirm to erase current record.
      - Press "2" to view the arrival date and time of the call.
      - Press "3" to edit and save or save without editing into the phonebook.
  - c. Press "3" to view the last 10 phone numbers received but didn't answer, starting from the most recent one. Use Up/Down Arrow to scroll through the list.
    - i. Press OPTION (Right) soft key for options.
      - Press "1" and confirm to erase current record.

- Press "2" to view the arrival date and time of the call.
- Press "3" to edit and save or save without editing into the phonebook.
- d. The two-digit index on the upper right corner of the LCD display shows the location in ascending order, with 01 being the most recent call.
- e. While viewing any of the three call logs, press DIAL (Left) soft key to dial the phone number.

#### Notes:

- 1. Only phone numbers are stored in the three call logs. Intercom calls are not recorded.
- 2. Caller ID service is required from your local phone company in order to receive phone numbers, names and time stamps on incoming calls. The Received and Missed Call Logs will register no incoming calls if Caller ID service is not available.
- 5. Press "4" to set sound-related settings:
  - a. Press "1" to select ringer volume: use the Up/Down Arrow scroll through 5 options: Low, Vibrate, Off, High-then-Vibrate, and High. Press SAVE (Left) soft key to save selection. Default = High.
  - b. Press "2" to select ringer tone: use the Up/Down Arrow scroll through 4 options: 0, 1, 2, and 3. Press SAVE (Left) soft key to save selection. Default = 0.
  - c. Press "3" to select key volume when a key is pressed: use the Up/Down Arrow scroll through 3 options: High, Low, and Off. Press SAVE (Left) soft key to save selection. Default = Low.
  - d. Press "4" to select key tone: use the Up/Down Arrow scroll through 4 options: 0, 1, 2, and 3. Press SAVE (Left) soft key to save selection. Default = 0.
- 6. Press "5" to change handset settings:
  - a. Press "1" to set dialing prefix:
    - i. Use Up/Down Arrow to scroll and select to turn on or off the dialing prefix feature. Default = Off.
    - ii. If "On" is selected, the handset is prompted to enter a prefix, up to 14 digits.
    - iii. Use "Delete" (Right) soft key and Up/Down Arrow to edit prefix.
    - iv. When this feature is turned on, the LCD will prompt the user on each outgoing phone call except during

Draft version EP-236-1.1UM

Draft version EP-236-1.1UM

- redial or dialing by pressing the TALK key first whether to use the dialing prefix. The current prefix is also displayed. Press "Yes" (Left) or "No" (Right) soft key to add the prefix to the beginning of the number.
- v. This feature is useful for access code, calling card, and credit card calls, etc.
- b. Press "2" to Group Select: see Handset Group Subscription.
- c. Press "3" to set turn Call Forwarding on, off, and if on the forward phone number or Handset ID. Default = Off. See Call Forwarding.
- d. Press "4" to clear call logs and phonebook:
  - i. Press '1" and confirm to delete the entire phonebook.
  - ii. Press "2" and confirm to clear the three call logs (Called, Received, and Missed).
- e. Press "5" to change the power-up LCD display to show, e.g., customer name or other greeting message:
  - Use Up/Down Arrow to move the cursor backward or forward to insert (to the left of the cursor) or delete (the character above the cursor, or left of the cursor if cursor is on the right of the last character).
  - ii. Enter characters using the Character Table and method discussed in the Phonebook section.
  - iii. When finished, press SAVE (Left) soft key to save change.
- f. Press "6" to change LCD display contrast:
  - i. Use Up/Down Arrow to scroll through values 1 to 16. Pick one that is most suitable to you. Default = 10.
  - ii. Press SAVE (Left) soft key to save setting.
- g. Press "7" to change the LCD backlight:
  - i. Use Up/Down Arrow to scroll through options: On, Off, and 8 Seconds. Default = 8 seconds, meaning that the backlight is always on. The 8-second option will turn off the backlight after 8 seconds of inactivity.
  - ii. Press SAVE (Left) soft key to save setting.
- 7. Press "6" to register or de-register handset: See Handset Registration.

## **Voicemail Operations**

- 1. Accessing a Personal Mailbox
- 2. Accessing the General Mailbox

- 3. Setting up a Personal Mailbox
- 4. Setting up the General Mailbox
- 5. Message Options

#### **Technical Specifications**

Electrical Specifications	Base Station	Portable Handset
Frequency	2401-2480 MHz	2401- 2480 MHz
RF Power	Peak: 28dBm	Peak: 28dBm
	Average: 18dBm	Average: 18dBm
Channel Spacing	864 kHz	864 kHz
Number of Channels	92	92
Modulation	GFSK	GFSK
Multiple Access	Frequency Hopping TDMA	Frequency Hopping TDMA
Frequency Hopping Rate	100 per second	100 per second
TDMA Frame Length	10 ms	10 ms
Number of Slots/Frame	8	8
Number of	4	4
Users/Carrier		
Receiver Sensitivity	< -90 dBm (@ BER 10 <sup>-2</sup> )	< -90 dBm (@ BER 10 <sup>-2</sup> )
Outdoor Antenna	SMB big size	Non-standard
Connector	_	
Antenna Gain	0 dBi	Max 1.45 dBi
	12 dBi External (optional)	
Telephone Interface	RJ11 x 4	NA
Speech Coding	32 kbps G.726	32 kbps G.726
Channel Coding	8 kbps Convolutional + CRC	8 kbps Convolutional + CRC
Transmission Data Rate	576 kbps	576 kbps
User Data Rate		576 kbps duplex
Duplex	Time Division Duplex (TDD)	Time Division Duplex (TDD)
	FCC Part68	FCC Part68
No. of System ID	232	232
Ring Signal	20-50 Hz, 12-90 Vrms	NA
Auto-Attendant Coding	32 kbps G.726	32 kbps G.721
Flash Time	100-800 ms programmable	NA
Power Source	DC 12V / 800mA Adapter	3.7V / 900mAh Li-lon
Charger Current	NA	500 mA
Charge Time	NA	90 minutes (from empty)
Regulation Compliance	FCC Part 15, Part 68	FCC Part 15, Part 68
	CAN/DOC RSS210, CS03	CAN/DOC RSS210, CS03
	Hearing Aid Compatible	Hearing Aid Compatible
Operating Temperature	-10 – 60 °C	-10 – 60 °C
Storage Temperature	-10 – 60 °C	-10 – 60 °C
Humidity	20 – 75 %	20 – 75 %
Dimension without	305 x 80 x 87 mm	30 x 52.5 x 12.5 mm
antenna		
	1Kg	153g
Notes:		

#### Notes:

- 1. NA = Not Applicable.
- The manufacturer reserves the right to change designs and specifications without notice.

#### Federal Communications Commission (FCC) Statement

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

#### Federal Communications Commission (FCC) Statement

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 into an outlet on a circuit different from that to which the receiver is connected.
- -Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

#### FCC RF Radiation Exposure Statement:

- This Transmitter (Handset and BASE) must not be co-located or operating in conjunction with any other antenna or transmitter.
- This Transmitter (BASE) may be change the antenna, the minimum distance should be keep away from the external Antenna to the body minimum 20 cm,
- 3 This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.