

EnGenius™

SN - 9 2 0 U L T R A



User's Manual

Table of Contents

Congratulations	1	Call on-Hold	26
Handset		Muting a Call	27
Diagram	3	Call Waiting	28
Features	4	Transferring a Calls	28-31
Base Unit		Disconnecting Calls	31
Diagram	8	Advanced Operations	
Features	9	2-Way Radio	
Charging Cradle		Handset-to-Handset	32
Diagram	10	Base-to-Handset	33
Features	11	Handset-to-Base	34
Getting Started		Base Unit Options	
Base Unit Setup	12-13	Ring Volume	35
Charging Cradle Setup	13-15	Voice Volume	35
Basic Operations		Main Menu Function Chart	36
Modes	16-19	Handset/Base Registration	
Making Calls		Registering a Handset	37-39
Manual Dial Pre-dial tone	20	De-registering Handset	39
Manual Dial Post-dial tone	21	Registering additional Base Units	40-41
Redial	21	Handset Menu Options	
Directory Dial	21-22	Key Guard	42
Memory Dial	22-23	Directory	42-50
Answering Calls		Caller ID	50-53
Handset in Charging Cradle	25	Sounds	
Handset not Charging Cradle	25	Ring Volume	53-54
Voice Volume	26	Ring Type	54
		Key Volume	54
		Key Tone	54
		Settings	
		Area Code	55
		Tone/Pulse	56
		Backlight	56
		Reset	57
		Custom Name	57

Call Manager.....	58-59
Contrast.....	59
Dial Prefix.....	60
Product Specifications.....	61
Safety Instruction.....	62-66
Regulatory Information.....	67-68
EnGenius Product Guide.....	69

SN-920 ULTRA

FCC ID: NI3-SN-920U

CANADA 36161032069A

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.

CAUTION :

- When selecting a location for the base unit, it is better to locate the base unit as high as possible to avoid obstructions that might interfere with the radio transmission and getting a clear signal.
In any case, the base unit must be located 8 inches (20 cm) from any person to be in compliance of FCC safety regulations.
In any case, the base unit must be located 8 inches (20 cm) from any person to be in compliance of FCC safety regulations.
- Person with pacemaker: Should always keep the handset more than 20 cm (6 inches) from their pacemaker when the handset is switched on. Should not carry the handset in a breast pocket. If you have any reason to suspect that interference is taking place, switch off your handset immediately.
- For body-worn hands-free operation of the handset, the device has been tested for RF exposure compliance with the EnGenius provided belt-clip and leather pouch. Other belt-clips, holsters or similar accessories that have not been tested may not comply with RF exposure requirements and should not be used.

Congratulations!

You have purchased an exceptional business communications tool from the leading Industrial Cordless™ Phone System manufacturer.

The EnGenius SN-920 ULTRA Industrial Cordless™ Phone System is the second generation of the Longest Range Cordless Phone and 2-Way Radio system. EnGenius systems are ideal for the Small Office Home Office (SOHO) user. The expandable design allows the system to grow with your business. With sophisticated digital signal processing and six times the power of typical cordless phones, the EnGenius system provides cordless phone and two-way communications in a wide variety of business settings from multi-level office buildings, construction sites, warehouses, farms, business complexes and other demanding business environments. The EnGenius system is capable of supporting up to 4 lines (4 base units) and 36 handsets. The EnGenius system is able to provide you increased mobility within your business environment.

Another unique feature of the EnGenius system is the ability to use the handsets as digital, full duplex, two-way radios. The digital two-way radio mode allows members of the work group to be in contact with their co-workers while leaving phone lines available for incoming or outgoing calls. Users can designate their handsets to receive all incoming calls or receive only intercom (2-way) and transferred calls, with the Call Manager feature. Additionally, an incoming call can be answered, placed on-hold or transferred to the appropriate person, from any handset.

The many EnGenius system features include: long-range, 2-way radio and cordless phone operation, system expandability, military level digital security, music message on-hold capability, 80 minute battery recharge and the new 4-line LCD display with Caller ID / Call Waiting readout capability have given birth to a new product category in the cordless phone industry known as Industrial Cordless™ Phone Systems. The convenience, mobility

and flexibility of this unique telecommunications system cannot be overbooked for the Small Office / Home environment.

Intellectual Property Rights Notice

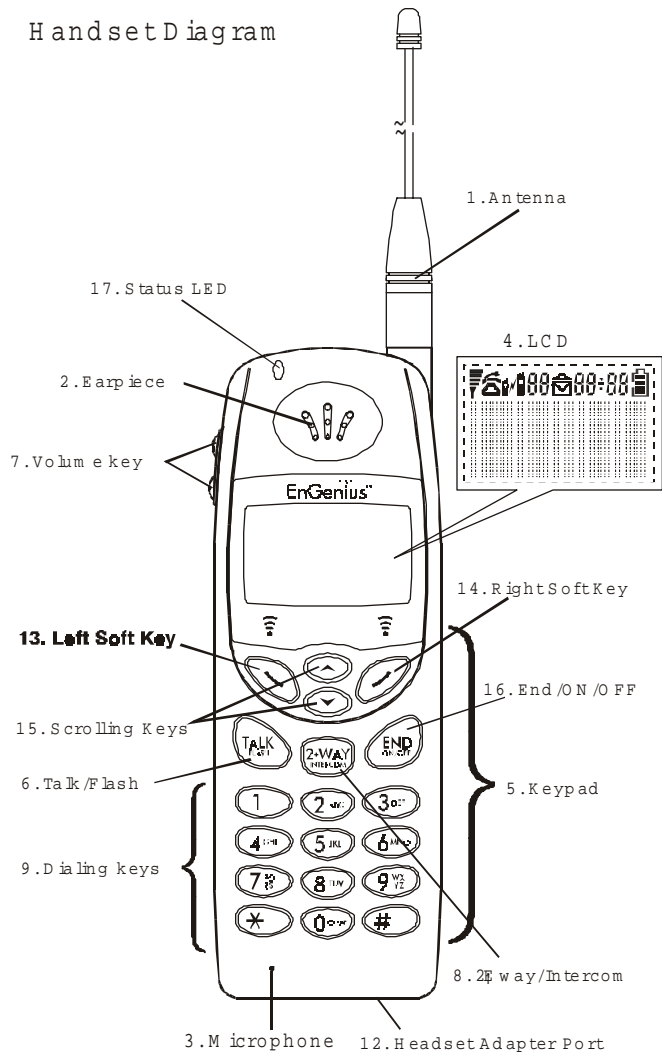
EnGenius SN-920 ULTRA Users Manual
Copyright © 2000 EnGenius Technologies.

All rights reserved.

No part of this Users Manual may be reproduced, stored in a retrievable system, or transmitted, in any form or by any means, electronic or mechanical, including photocopying, recording, or otherwise, without permission of EnGenius Technologies.

EnGenius is a trademark used herein under exclusive license and Industrial Cordless™ is a trademark of EnGenius Technologies. All rights to patents, including patents pending EnGenius products are the exclusive properties of EnGenius Technologies.

Handset Diagram



~ 3 ~

Handset Features

1. Antenna
2. Earpiece
3. Microphone
Functions as mouthpiece.
4. Liquid Crystal Display (LCD)
 - * The display has Light Emitting Diode (LED) for backlighting.
 - * The first line of the LCD consists of eight icons.
 - * The next two lines consist of user-programmable alphanumeric characters.
 - * The last line displays the softkey functions.

* Receive Signal Strength Indicator (RSSI)

The number of bars is proportional to the signal strength of the RF signal received.



* Call in-progress (ON/OFF Hook)



* Intercom Mode: Active



* Handset ID



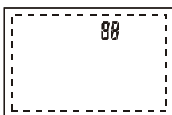
~ 4 ~

* Caller ID Log

Unread messages: Closed Envelope
Read messages: Open Envelope
No information or no Caller ID Service:
No Envelope is Displayed.



* Two-digit Number Display
Tracks Caller ID log and Phone
Directory record location.



* Line or Base Indicator

Indicates the base that is active.
(Example: b-01)



* Battery Strength

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



5. Keypad

19 button face keypad.
Backlight option can be set to OFF,
ON, or 8 seconds time out.

6. Talk / Flash

Answer incoming phone or two-way
radio (intercom) call. Place an
outgoing phone call.
This button also acts as the flash
button for functions like call waiting
and toggling between calls.

7. Volume key

Located on side of handset: up / down buttons control volume.

8. 2-WAY/INTERCOM

Used to place an intercom call to another handset or base.

9. Dialing Keypad

Used for dialing phone numbers and entering alphanumeric
information into Phone Directory.

10. Ringer (not shown)

Emits several sounds to indicate various events or alarms.
Single Beep: Successful operation
Double Beep: Failed operation or invalid key. Also, indicates
power on/off.
Periodic Short Single Beep (every two seconds):
Low battery warning.
Periodic Long Series of Beeps (repeats every 30 seconds):
Indicates a call on hold.
Continuous Beep (2 seconds): Indicates out of range while
in talk mode.

11. Battery Pack Slot (on back of handset) (not shown)

12. Headset Adapter Port (on bottom of handset)

13. Left Soft Key

14. Right Soft Key

15. Scrolling Keys

16. END

On / Off for power and to end (hang-up) a call

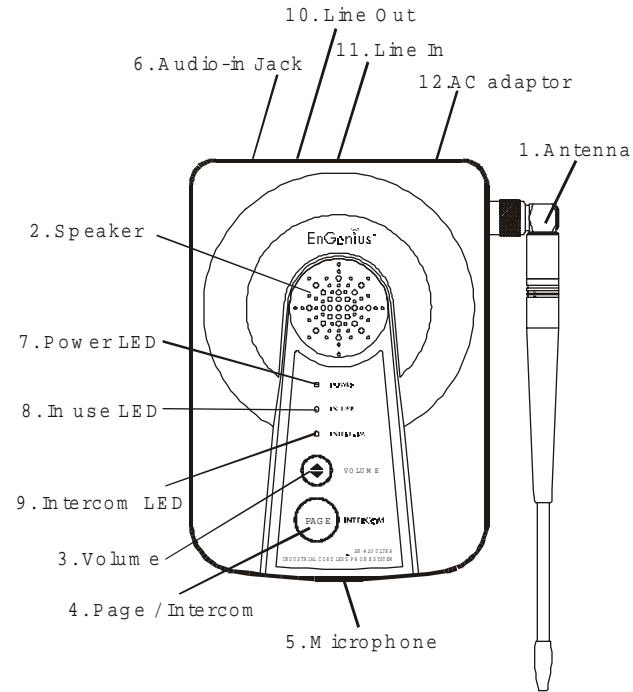
17. Status LED

Blinking: Stand by
Solid: On a call or the first 8 seconds after power on

Additional Handset Features

- * Call Waiting with Caller ID (requires Call Waiting and Caller ID services from local phone service provider)
- * Call Manager option: User programmable option for handset to allow all calls or only transferred and intercom calls
- * Touch any key to answer call
- * Call transfer to another handset within the system
- * Unique, system assigned Security ID (1 of 65,000)
- * Phone Directory: up to 30 phone numbers (20 digits) and names (14 characters)
- * 30 number memory speed dial for Phone Directory
- * Last number redial
- * Caller ID (requires Caller ID service from phone service provider)
- * Caller ID log: stores up to 30 calls of caller information including caller's name, number, date and time
- * Intercom communications with base unit
- * Handset-to-handset communication independent of the base (Digital, full duplex two-way radio)
- * Three level ring volume adjustment (low, high & vibrate)
- * Four ring types
- * Six level voice volume control adjustment
- * Ring or vibration alert option
- * Tone / pulse dial option
- * Low battery alarm and display
- * Change battery while call on-hold
- * Keypad illumination
- * Three level key tone volume control (low, high & off)
- * Four different key tone sound selections
- * Auto power management
- * Hold
- * Mute
- * Flash

Base Unit Diagram



Base Unit Features

1. Antenna

Swivelbase for ease of positioning. (Note: Reverse thread antenna adapter; to remove, turn clockwise).

2. Speaker

3. Volume

4. Page / Intercom

5. Microphone

6. Audio-in Jack (3.5 mm)

7. Power LED

LED indicates base unit has AC power.

8. In Use LED

LED indicates a phone call, base / handset intercom call, or handset registration is in progress.

9. Intercom LED

LED indicates when base is in intercom mode.

10. Line In

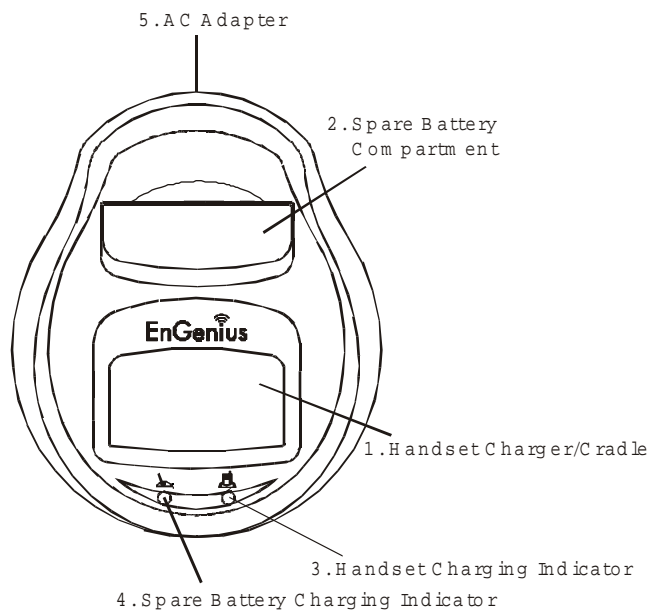
11. Line Out

12. AC Adapter Port

Additional Base Unit Features

- * Supports up to 9 handsets per base unit. One handset can be registered to 4 base units.
- * Assigns handset security code during registration
- * Adjustable four level ringer and voice volume control

Charging Cradle Diagram



Charging Cradle Features

1. Handset Charging Cradle
Holds handset
Charges handset battery pack each time handset is placed in cradle. 80 minute rapid charge.
2. Spare Battery Compartment
Spare battery recharged when placed in this slot.
80 minute rapid charge.
3. Handset Charging Indicator
LED is not lit: Slot is empty or proper connection is not made.
LED is blinking red: Battery is charging.
LED is green: Battery is fully charged.
4. Spare Battery Charging Indicator
LED is not lit: Slot is empty or proper connection is not made.
LED is blinking red: Battery is charging.
LED is green: Battery is fully charged.
5. AC Adapter Port

Additional Charging Cradle Features

- * Handset and a spare battery pack can be charged at the same time
- * Fully discharged battery packs can be charged in approximately 80 minutes
- * A trickle charge feature will maintain charge on a nearly fully charged battery
- * It is impossible to overcharge the batteries using this charger
- * Fully charge battery packs before first use

GETTING STARTED

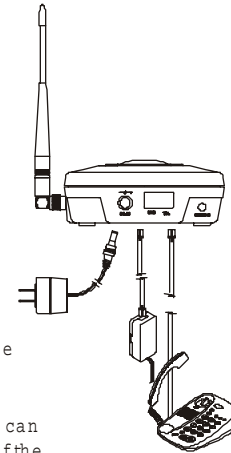
Base Unit Setup

There are three possible base unit setups:

- * Base unit alone
- * Base unit plus telephone answering device
- * Base unit plus standard telephone

Basic Instructions

1. Plug the small end of the 9V DC power adapter into the "DC IN" port on the back of the base unit.
2. Plug the two-pronged 9V DC power adapter into a standard 120 V AC electrical outlet.
3. Plug telephone line cord into the next receptacle on the back marked LNE.
4. Plug the telephone line cord into the telephone wall outlet.
5. A standard telephone or answering machine can be plugged into the adjacent receptacle on the back of the base unit marked TEL.
6. The Music/Message On-Hold feature can be achieved by plugging either end of the included audio cable into the audio port on the back of the base unit.
7. For best performance, computers, faxes, telephones, answering machines, televisions, stereos and other cordless devices should be at least 1 meter (approximately 3 feet) from the base unit.

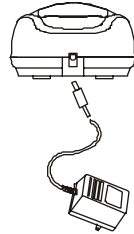


NOTE: Follow instructions that come with the answering device or telephone if different from those described here.

Charging Cradle Setup

The location for the handset charging cradle requires a standard 120V AC electrical wall outlet.

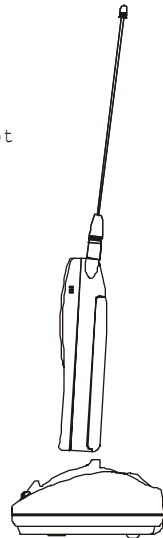
1. Plug the small end of the 12V DC adapter into the receptacle on the back of the charger unit.
2. The two-pronged 12V DC adapter is then plugged into the wall outlet.



Charging a Battery

The battery charger can charge the handset and a spare battery pack at the same time. The charging unit has spare battery charging slot behind the handset charging slot.

1. To charge the handset, simply place the handset, with battery pack attached, into the charging slot with the handset facing the front of the charger. If the handset is properly in the cradle, the cradle's PHONE indicator light will be illuminated.
2. To simultaneously charge a spare battery, insert the spare battery pack with pack contacts facing down and towards the rear into the rear charging slot.



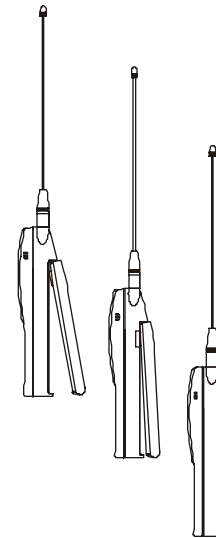
NOTE: It takes about 80 minutes to fully charge a battery in either the (front) handset slot or the (rear) spare battery slot.

Battery Light Indicators

- * LED is not lit: Slot is empty or proper connection is not made.
- * LED is blinking red: Battery charging.
- * LED is green: Battery is fully charged.

Installing New Battery

1. To remove the handset battery: Turn the handset face down and locate the battery pack release on the bottom of the handset. Push the release towards the top of the phone and lift up.
2. To install battery pack: Carefully slide the top battery pack tabs into battery pack area of handset aligning the metal contacts of handset and battery pack. Press down on the bottom end of the battery pack. The battery pack should "click" into a secured position on the handset.



Low Battery Indicator

Charge the batteries when one of the following happens:

- * Phone beeps twice every two seconds
- * Battery icon is empty
- * Phone does not respond when a key is pressed
- * LCD and backlighting become dim

Battery Replacement

Your EnGenius phone system uses rechargeable Nickel Metal Hydride (Ni-MH) battery packs. Each battery provides up to three hours of talk-time, based on range, terrain and environmental conditions, or up to 40 hours of standby time. These high performance battery packs have an average life span of about 300 charges (a charge is defined as going from empty to fully charged). Additional or replacement new SN-920 ULTRA battery packs are available as part number: SN-920 ULTRA-BA.

CAUTION! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

CAUTION! Do not open the plastic battery pack encasing.

BASIC OPERATIONS

Operation Modes

Both the base unit and handset have levels of operation at which time only certain procedures or functions can be performed. These levels or modes of operation will be referred to throughout this manual and vary from base unit to handset.

Base Operation Modes

The base unit operates in three different modes: IDLE, TALK, and REGISTRATION.

IDLE MODE - this is the default mode. The intercom and volume keys are active in IDLE mode. The POWER LED is red.

TALK MODE - the base operates in this mode during an incoming or outgoing intercom call and an incoming or outgoing phone call. Volume key is active in TALK mode. POWER, IN USE and INTERCOM (during an intercom call) LEDs are red.

REGISTRATION MODE - the base enters this mode by simultaneously holding down the intercom and volume keys for three seconds. There are no active base unit keys once this mode has been entered. The IN USE and POWER LEDs are illuminated. The IN USE LED will come on and stay active for approximately 30 seconds and then turn off.

Handset Operation Modes

The handset operates in one of five different modes: IDLE, MENU, TALK, REGISTRATION and CRADLE.

IDLE MODE

This is the default operating mode.

- * The LCD will show the following screen and icon placement in the IDLE mode:
- * If there is no on-going activity, the handset automatically goes into SLEEP/IDLE mode to save battery power.
- * The handset can be turned off completely by holding down the END key for 3 seconds.

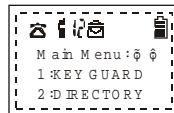


NOTE: The idle screen display (custom name) can be edited (in the menu mode) with the handset owner's name or other custom greeting.

The 2-digit number near the top center of the LCD shows the handset ID.

MENU MODE

- * Pressing the RIGHT SOFT FUNCTION key activates MENU mode.
- * The screen will look like this in MENU Mode:



3 CALLER ID
4 SOUNDS
5 SETTINGS
6 REGISTER

- * In MENU mode, the handset settings and information contained in memory can be changed. (For example: the Caller ID bg and Phone Directory).

- * All keys, except 2-WAY (Intercom), are active in MENU mode.

- * If the handset remains inactive in MENU mode for 30 seconds (no keys are pressed or no incoming calls), it will exit MENU mode and return to IDLE mode.

NOTE: The functions available through the MENU selection are covered in greater detail under Handset Menu Options.


TALK MODE

- * When the handset is in IDLE mode, pressing the TALK key or answering an incoming or intercom call will activate TALK Mode.
- * The screen will look like this in TALK Mode:
- * All keys are active in the TALK Mode.

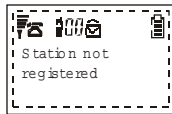


NOTE: In the TALK mode the TALK key functions as a FLASH key. Pressing the TALK key will temporarily place the call on hold while answering another call with the Call Waiting feature. Pressing the TALK key again will return you to the original call. Call Waiting requires telephone service provider subscription.

REGISTRATION MODE

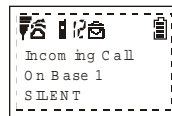
- * Do not register your handset if it has been registered at the factory. If, when you first turn on the phone, "00" is displayed near the top center of the LCD (to the right of the  icon), the handset has not been registered at the factory.
- * Specific instructions on how to register the handset are covered in detail under Handset/Base Registration in the Advanced Operations section.

- * If the handset is not registered with the base unit, any attempt to make an outgoing call or intercom call to another handset will fail. The LCD will read:



CRADLE MODE

- * Placing the handset into the charger cradle activates the handset CRADLE mode.
- * While in the CRADLE mode, the battery charging unit recharges the handset battery pack.
- * An incoming or intercom call while in the CRADLE mode will generate this screen:
- * Removing the handset from the cradle during an incoming call automatically answers the call and places the handset in TALK MODE.
- * Placing the handset in the cradle or pressing END will end a call.



Making Calls

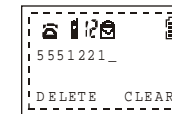
You can enter a phone number before or after connecting to dial tone.

Manual Dial (Pre-Dial Tone)

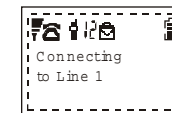
ENTERING A NUMBER BEFORE CONNECTING TO DIAL TONE

Selecting a phone number before connecting to dial tone offers the advantage of reaching the correct party with the first phone call.

- * From the DLE mode, enter the number you wish to call. The number you input will appear on the handset screen as typed. For example, the number 555-1221 would appear as:



- * If an incorrect number has been entered, select the CLEAR option by pressing the RIGHT SOFT FUNCTION key to clear the entire number, then re-enter the number you wish.
- * The DELETE option is selected by pressing the LEFT SOFT FUNCTION key. DELETE will delete one digit at a time from right to left, similar to a backspace key.
- * When the correct number is displayed on the screen, press TALK to complete the call.
- * You will hear a dial tone and see the following three screens as the number is dialed:



Manual Dial (Post-Dial Tone)

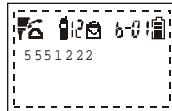
ENTERING A NUMBER AFTER CONNECTING TO DIAL TONE

While the handset is in the IDLE mode, you can press TALK to make a call. There are three ways to make a call in the TALK Mode:

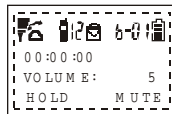
* When dial tone is heard and the handset is waiting for a phone number to be entered, the following screen will appear:



* Enter the desired phone number from the numbered keypad. The screen will show the following display:

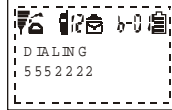


* After a number is dialed, this screen will be displayed:



Redial

* While in the TALK mode, press the LEFT SOFT FUNCTION key to select the REDIAL option. The following screen will be displayed:



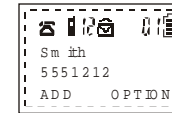
* The last number dialed will be redialed.

Directory Dial

* To call a number stored in the Phone Directory, you can access the Phone Directory by entering the menu or you can simply press the Up or Down Scrolling Arrows to access the Phone

* From IDLE mode, press the RIGHT SOFT FUNCTION key to select the MENU option.

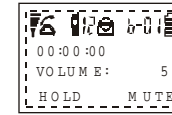
* While in the Main Menu, select the directory scrolling option by pressing the 2 key.



* Information stored in location 01 will be displayed first. Use the Up or Down arrows to scroll through the directory to locate the number of your choice.

* Press TALK to dial the phone number displayed.

* When the handset has dialed the selected phone number, the screen will display:



NOTE: See Directory View Mode for additional instructions on how to use the phone directory feature.

If the handset is unable to link to the base unit, it will return to IDLE mode. The handset will display "No Connection" for five seconds or until a key is pressed.

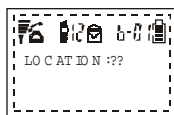
Memory Dial

* In the TALK mode, the following screen will be displayed:



* To select MEMORY DIAL, press the RIGHT SOFT FUNCTION key.

* The following screen will appear:



* Enter the 2 digit Phone Directory index code (e.g. 1= 01) for the stored phone number.

* The phone number stored in the location will be dialed.

NOTE: Telephone numbers stored in the Phone Directory have been indexed with a number from 01 to 30. To access the correct index number or location, follow these steps:

For example, if the location is 3, press 0 then 3.

If the index number is 12, press 1 then 2.

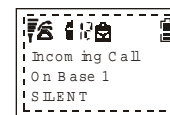
Answering Calls

All handsets that have been registered for use with the base unit, and are in the IDLE mode, will ring when an incoming call is received. The handset can be set to either ring or vibrate with an incoming call.

NOTE: Under SETTINGS, the user has the option of receiving incoming/intercom/transferred calls from 1 to 4 base units. This option is accessed via the Call Manager function, under SETTING. Depending upon number of base units the handset is registered to.

Receiving an incoming call

* Handset is on the charger cradle-No caller ID service



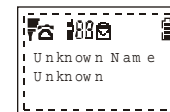
* Handset is off the cradle-No caller ID service

Receiving an incoming call with caller ID service **

* Caller ID service, but the ID has been blocked by the caller:



* Caller ID service, but not supported by the originating party:



* Caller ID service, but only the number has been transmitted:



* Caller ID service, all information has been transmitted:



Handset in Charging Cradle

Pick-up handset from charging cradle to answer the call.

Handset not in Charging Cradle

Press "TALK" or any key (except END) to accept the incoming call.

NOTE: The first handset to answer a call will connect to the base unit and will operate in TALK mode. Other registered handsets will be locked out of the call. However, they will still be able to participate in handset-to-handset calls or receive the call if transferred.

** Caller ID service must be ordered from your local phone company for these screen displays to function. Services may vary in your area.

Voice Volume

Adjusting the volume on the handset can be done only during a call or when in the TALK Mode.

- * When in the TALK Mode, the volume control button on the left side of the handset can be used to adjust the volume to 6 different levels.
- * Volume level 3 is set as default.

* The top button increases volume and the lower button decreases volume.

* The screen during volume adjustment displays the following:

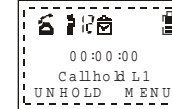


Placing a Call on Hold

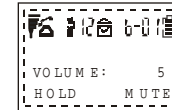
1. When a call is in progress it can be put on hold by pressing the LEFT SOFT FUNCTION key which selects the HOLD option:



The display will then show:



2. To bring the call back on line, press the LEFT SOFT FUNCTION key again. The display will return to this screen:



The handset will double beep three times every 30 seconds when a call is on hold as a reminder that you

Picking up a Call on Hold

The handset that placed the call on hold, can simply take the call off hold by pressing the LEFT SOFT FUNCTION key. Another registered handset can pick up the call on hold by pressing 2-WAY and the base ID (2:01), then choosing the "UNHOLD" option.

NOTE: The base unit will maintain the communications link with the incoming call as long as it is on hold. No other outgoing call or page from the base can be completed until the call on hold is ended by the handset or has timed out.

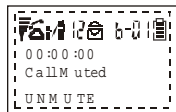
Muting a Call

A call must be in the TALK mode to select the MUTE function.



1. Use the RIGHT SOFT FUNCTION key to select MUTE.

The display will then show:



2. To remove MUTE, press the LEFT SOFT FUNCTION key again.

NOTE: When MUTE is activated (ON), the handset user cannot be heard by the caller, but the user can still hear the caller. The MUTE feature is automatically turned off when the call is ended.

Call Waiting: Receiving a Second Call

If you have Call Waiting service through your telephone company and you wish to take a second incoming call, you will use the FLASH feature.

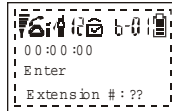
1. In the TALK mode, the TALK key operates as a FLASH function allowing you to place the first call on hold and answer the second call. Unlike when using the HOLD feature, the LCD will not change to reflect that the first call is "temporarily on hold."
2. Pressing TALK again will return you to the original call, placing the second call on hold.
3. You can terminate either call by pressing END during the call.

Transferring a Call

Calls can be transferred between registered handsets while a phone call is in progress.

1. During an active call, a transfer can be initiated by pressing the 2-WAY key on the originating handset.

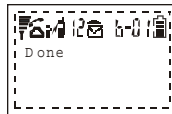
2. The originating handset LCD will show a prompt for the target handset ID number:



The call transfer can be canceled at any point by pressing END

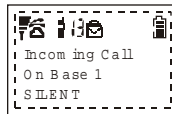
3. Enter the ID number of the target handset.

* The call will be transferred to the target handset:



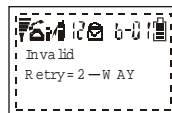
* The target handset will ring with a distinctive ring, signaling an incoming call.

* The target handset LCD will show the following readout:



NOTE: If the target handset does not respond within 30 seconds, the call is transferred back to the originating handset. If an invalid handset ID number has been entered, an error message will be displayed:

Repeat steps 1-3.



NOTE: A handset ID number is invalid if:

- * The number is 0
- * The number is the same as the originating handset
- * The target handset is not registered with the base unit

Transferring Calls Using the Hold Option

If you wish to announce the call that you are about to transfer, follow the steps below.

1. During an active call, place the call on hold by pressing the LEFT SOFTFUNCTION key.

* The LCD will then display the following screen:



2. Press the 2-WAY key.

* The originating handset LCD will show a prompt for the target handset ID number:



* The handset to handset call can be cancelled at this point by pressing END

3. Enter the ID number of the target handset.

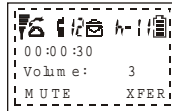
* The target handset will ring and the screen will light up, signaling an incoming call

* The target handset LCD will show the following readout:

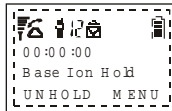


* Upon answering, the originating and target handset users can talk.

4. Pressing the RIGHT SOFT FUNCTION key on the handset will select the "XFER" function, initiating transferring the call to target handset.



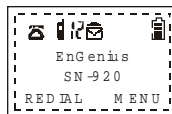
5. Pressing END will terminate a handset to handset call, the originating handset will then display:



Disconnecting Calls

From the TALK mode, you can end a call by pressing END or by placing the handset in the cradle. The handset will return to the IDLE mode.

The LCD will show the following:



ADVANCED OPERATIONS

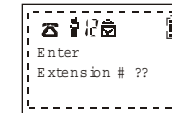
Digital 2-Way Radio Mode

Handset to Handset Calls

The EnGenius SN-920 ULTRA Industrial Cordless Phone System offers private, 2-way radio calls from handset to handset, even when handsets are beyond the range of the base unit. 2-way or intercom calls can be placed from or to base units and handsets.

Intercom calls can be established between a handset and an available and registered base unit or second handset. Handset-to-Handset (2-way Radio) communication can be achieved anywhere providing the two communicating handsets are within range of each other.

1. To initiate a handset to handset call press the 2-WAY key and enter the "extension" ID number desired. (The extension number or handset ID number is the 2 digit number located to the right of the icon):



* The LCD will then display this screen:



* Once the voice link is successfully established, the handset's LCD will display:



2. The 2-WAY call can be terminated by either handset, at any time, pressing END.

Paging from Base to Handset

1. Pressing the base unit PAGE or INTERCOM key, will page all registered handsets. The first handset to answer the page will establish a voice link with the base.



2. The INTERCOM LED will flash until a handset responds. The light will stay lit until the link is terminated.

3. The base unit will page for 10 seconds, then terminate the page if no handset responds.

4. Before a handset answers, the page can be cancelled from the base by pressing PAGE again. However, once a handset answers, only the answering handset can end the intercom call.

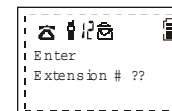
NOTE: A page to a handset cannot be initiated from the base while an incoming call is ringing into the system. The IN USE LED flashes to indicate an incoming call is in progress.

Paging from Handset to Base

For a handset to intercom a base unit, follow the steps below:

1. On the handset press 2-WAY.

2. At the extension prompt, input the 2 digit number for the base unit which will be a 0 followed by the base unit number of 1, 2, 3 or 4.



3. The handset LCD will show a paging prompt:



4. The base will ring once, then automatically connect the intercom call from a handset.

Answer Incoming Calls with a Handset to Base Intercom Call in progress

There are three options for the handset:

1. Press TALK to switch to the incoming call.

2. Press END to terminate the intercom call and allow the incoming call to ring on all handsets.

3. Do nothing and ignore the incoming phone call.

Base Unit Options

Ring Volume

1. When the base unit is not in use (TALK or INTERCOM mode), the VOLUME key will control the ring volume.

2. There are 4 ring volume levels: low, medium, high and off. Pressing the VOLUME key will move the volume to the next level:

LOW → MEDIUM → HIGH → OFF → LOW

NOTE: A ringing volume tone will sound briefly to indicate the ring volume level selected.

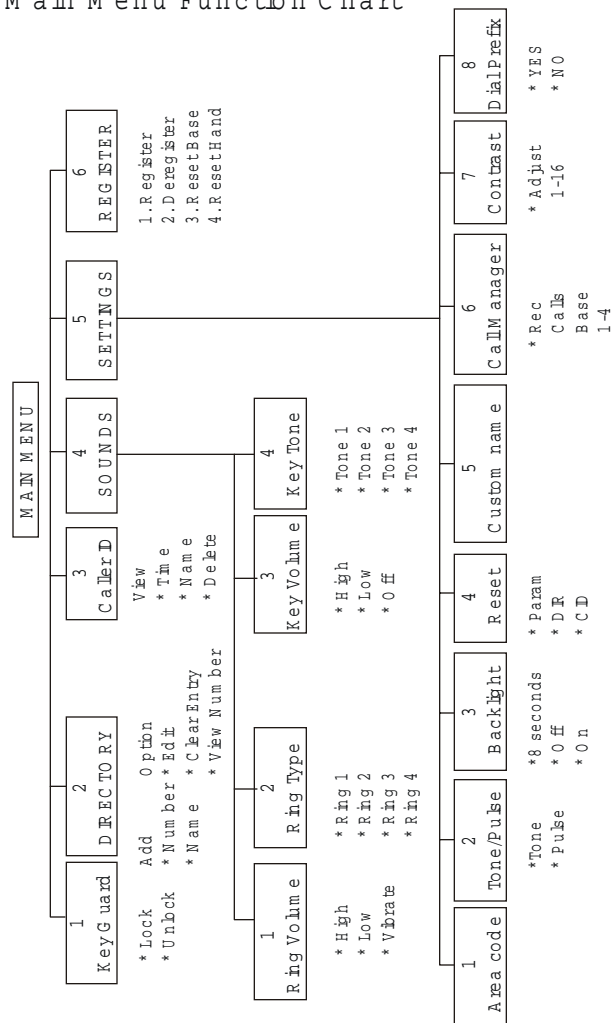
Voice Volume

1. While the base is in INTERCOM mode, the VOLUME key will control the voice volume.

2. The 3 levels of voice volume are: low, medium and high. Each time the VOLUME key is pressed the volume will be adjusted to the next level until the maximum level is reached and then it will return to low again:

LOW → MEDIUM → HIGH → LOW.

Main Menu Function Chart

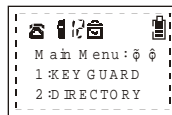


Handset / Base Registration

Main Menu Options

When the handset is in the DLE mode, or when a call is on hold, the Main Menu can be accessed by pressing the RIGHT SOFT FUNCTION key.

Once in the main menu, a list of available options will be displayed, two menu options at a time as shown:



3: CALLER ID
4: SOUNDS
5: SETTINGS
6: REGISTER

1. Use the or scrolling keys to view all of the menu options.

2. At any time while in the Main Menu, an option can be selected by using the corresponding number from the keypad.

Registration

Your handset(s), if purchased as a system, is pre-registered at the factory and does not need to be re-registered to the base unit purchased with the handset. Additional handset displaying "00" as their handset ID must be registered to the base unit. Charge the handset battery fully before registering.

Handset Registration

1. Plug in the base unit to AC power and place a fully charged battery pack into the new handset.
2. Verify base unit's power light is on and turn on the handset power by pressing and holding the END key for 2 seconds.

3. Place base unit into REGISTRATION mode by pressing and holding the VOLUME and PAGE buttons at the same time until you hear a single beep (about 3 seconds). The red "In-Use" light will come on. Handset registration must be performed within 30 seconds after entering the registration mode.

4. Pressing the RIGHT SOFT key, on the handset, selects the MENU function.

5. Press the number "6" key on the handset keypad, this will place the handset into the registration menu.

6. Press the number "1" key on the handset keypad, this completes the handset registration.

7. Repeat steps 3 through 6 for each handset you want to register to that base.

8. The result of the registration or deregistration procedure is displayed on the LCD for 5 seconds. There are 4 possible results:

* Registration is successful



* Failed registration or deregistration. Base failed to respond to handset. Steps must be repeated to retry procedure.



* Base has already registered maximum number of handsets (9) it can support. A handset must be deregistered before a new one can be added to the system.



* Handset registered to a base with same ID.



9. Press END to return to the handset main menu.

NOTE 1: Upon successful registration, your handset will display "Reg OK New ID = "

NOTE 2: Your handset will automatically exit the REGISTRATION mode after 30 seconds.

NOTE 3: You can register your handset to a maximum of 4 base units. The handset ID number in the middle of the top line of the handset display will not change after registering the first base unit (known as the primary base unit).

SECURITY FUNCTION: A third option is available for deregistering all the handsets at once and generating a new base ID code (system registration reset). This option can be selected by pressing "MENU", "6", "3", then enter a new base number (1-4). Both the handset and base must be in the registration mode.

De-Registering a Handset from all Base Units

1. Press the RIGHT SOFT FUNCTION key to select MENU.

2. Press the "6" key to select the REGISTER option.

3. Press the "4" key to select RESET HAND. The LCD will display the following screen:



4. Press the LEFT SOFT FUNCTION key for "YES."

5. Deregistration is successful.



The handset has now been de-registered from all base units. The handset ID number will be reset to "00" as seen in the middle of the top LCD line.

Register a Second, Third or Fourth Base Unit

NOTE: A handset can be registered to a maximum of 4 base units. All base units that come from the factory are registered as base unit 01.

NOTE: If there is more than one base unit and a handset is to be registered to more than one base unit, the base unit's identification number must be changed from factory default number of "1" to either "2", "3", or "4".

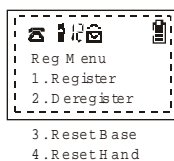
1. Plug in the new base unit to AC power and place a fully charged battery pack into the handset.

2. Verify base unit's power light is on and turn on the handset power by pressing and holding the END key for 2 seconds.

3. Place base unit into REGISTRATION mode by pressing and holding the VOLUME and PAGE buttons at the same time until you hear a single beep (about 3 seconds). The red "In-Use" light will come on. Handset registration must be performed within 30 seconds after entering the registration mode.

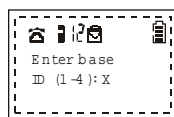
4. Pressing the RIGHT SOFT BUTTON, on the handset, selects the MENU function.

5. Press the number "6" button on the handset keypad, this will place the handset into the registration menu.



6. Press the number "3" button on the handset keypad.

7. The handset display will now request that you "Enter base ID (1-4): X"



8. Enter a number "1", "2", "3", or "4" from the keypad. Choose a base ID number different from base ID number you are already using.

9. Repeat steps 1 through 8 for each new base you want to register.

NOTE: Upon successfully changing the base ID number, the display will say "Base ID = X, Dereg All." This means that you have successfully created a new identification number for that base unit. All handsets previously registered to that base unit (if any) were de-registered. You may now begin registering handsets to the base unit. Follow steps 3 through 6 of Handset Registration section.

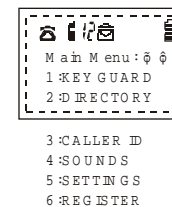
Handset Menu Options

Key Guard

Press "MENU", "1" to set KEY GUARD.

1. To access the KEY GUARD option from the IDLE mode, press the RIGHT SOFT FUNCTION key to select the MENU option.

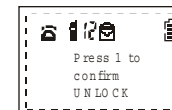
2. While in the MAIN MENU press the "1" key to select KEY GUARD:



3. Selecting the KEY GUARD option LOCKS the keypad from use. The screen will display the following:



4. To unlock the keypad press the LEFT SOFT FUNCTION key. The screen will display the following:



5. Press the "1" key to confirm unblocking the keypad.

Directory

This feature allows you to store up to 30 frequently used telephone numbers (up to 20 digits each) and names (up to 14 characters each) in a directory that resides in the handset memory. Entries in the Phone Directory may be viewed or edited at any time. The Phone Directory may be viewed by pressing the or arrow keys from the idle mode.

DIRECTORY VIEW MODE

Press "MENU", "2" to access Directory screen

- To view the Directory from the IDLE mode, press the RIGHT SOFT FUNCTDN key to select the MENU option.

- While in the Main Menu, press the "2" key to select DIRECTORY:



- Information in the Phone Directory is stored vertically, as shown in Table 1 below. The up and down arrow keys are used to move through the directory records.

Index Code	Information
01	Name # 1
	Telephone # 1
02	Name # 2
	Telephone # 2
▼	
▼	
30	Name # 30
	Telephone # 30

Note: Press the RIGHT SOFT BUTTON and enter the Index Code to dial the phone directory number.

DIRECTORY EDIT MODE

While in the DIRECTORY VIEW mode, the LCD will display the following screen:



To enter the DIRECTORY EDIT mode, either ADD or OPTION must be selected.

ADD

- * Press the LEFT SOFT FUNCTDN key to select ADD. This choice will allow an entry to be added to the Phone Directory.

- * If the directory is full, the following will be displayed on the LCD:



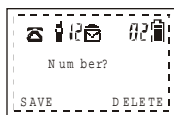
- * To return to the DIRECTORY VIEW mode, press the LEFT SOFT FUNCTDN key.

- * If there are available spaces, the first empty space will be accessed automatically and the following screen will appear:



- * If information is to be stored in a specific location, use the scrolling keys to find the correct location for the new information. The location number will appear as a 2 digit number to the left of the battery icon.

* Select ADD again using the LEFT SOFT FUNCTION key. The following screen will then appear:



1. Enter a new phone number by pressing the corresponding keypad number key once.

Note: The following characters require a special key combination:

Space: press the # key two times (# #).

Dash: press the # key three times (# # #).

2. Press the LEFT SOFT FUNCTION key to SAVE the phone number. OR

To correct an incorrect entry, press the RIGHT SOFT FUNCTION key to select the DELETE option. DELETE will delete one number at a time from right to left.

3. A prompt will appear to enter a name that goes with the phone number. The name field can be left blank by selecting SAVE with the LEFT SOFT FUNCTION key.



NOTE: The directory will store a name and a phone number, or just a phone number, but not a name by itself.

4. To enter the letters of a name, press the corresponding keypad number one or more times depending on the order of the characters on the key. See Table 2 for a listing of available characters that can be used in the name field.

For example: press "2" once for the letter "A," twice for the letter "B," etc.

NOTE: In the name editing mode, as indicated on the LCD prompt, all letters will automatically be entered in the upper case. Since this is the default setting, using the * key will then allow you to enter lowercase letters. This function will stay locked in the lowercase mode until the * key is pressed again, or the name edit mode is terminated.

NOTE: Each time you enter a character, the cursor automatically advances to the next character field as long as you press a different keypad key to enter each character. However, if you need to press a keypad key two or more times to enter consecutive characters, you need to first press the (left arrow) key to advance the cursor to the next character field. Selecting DELETE with the RIGHT SOFT BUTTON or pressing the (down arrow) key will backspace the cursor to the previous field. The (right arrow) will advance the cursor.

5. When the name is entered correctly, press the LEFT SOFT FUNCTION key to select SAVE. The new entry will be displayed on the screen and the DIRECTORY VIEW mode will automatically be activated.

Table 2	
Key	Characters
1	4 , . * () & 1
2	A B C Ç 2
3	D E F 3
4	G H I 4
5	J K L 5
6	M N O Ñ 6
7	P Q R S 7
8	T U V 8
9	W X Y Z 9
0	0
*	TOGGLE CASE
#	SPACE -

NOTE: Unique character Key 2: Ç, Key 6: Ñ

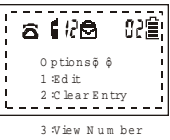
Example: In the DIRECTORY EDIT mode, to enter the name "Jane Doe" use the following key sequence:

5 (J) * 2 (a) 66 (n) 33 (e) # (space) * 3 (D) * 666 (o) 33 (e)

OPTION

Choosing OPTDN while in the DIRECTORY EDIT mode allows a directory record to be edited, deleted or a number to be viewed.

Press RIGHT SOFT FUNCTION key to select OPTDN. The following screen will be displayed:



Edit Option

This option allows a phone record to be changed.

1. Select the "1" key from the keypad. The following screen will be displayed:



2. Use the RIGHT SOFT FUNCTION key to delete the phone number or simply type the new number over the old entry.

3. If a name is a part of the record, you will receive the following prompt:



4. The cursor will appear under the first letter of the name. Type new information over the existing name or press the RIGHT SOFT FUNCTION key to select DELETE.

NOTE: Selecting DELETE will move the cursor to the far right edge of the LCD screen. Pressing the RIGHT SOFT FUNCTION key repeatedly will move the cursor right to left across the LCD screen, deleting each letter above cursor.

5. Once the new information is entered, press the LEFT SOFT FUNCTION key to save the new entry.

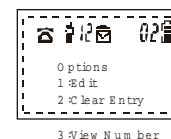
6. If the name is unchanged press the LEFT SOFT FUNCTION key to re-save and exit to the DIRECTORY



Clear Entry Option

This option allows a record to be completely removed from the Phone Directory.

1. While in the Options Menu press the "2" key to select clear entry:



2. At this point, the record previously accessed while in the DIRECTORY VIEW mode can be deleted by pressing the LEFT SOFT FUNCTION key to select YES as shown on the LCD screen:



3. Deleting the records will bring up the following prompt, at which time a new record can be added to the directory (refer to steps under ADD):



4. Selecting NO will return the handset to the DIRECTORY VIEW mode.

View Option

This option allows a record to be viewed in the phone directory.

Caller ID

To use this option you must first subscribe to the Caller ID service offered by your local telephone company. Caller ID information will then appear on the LCD and also be stored automatically in the handset for later retrieval.

Press "MENU", "3" to access Caller ID screen.

1. From the IDLE mode, press the LEFT SOFT FUNCTION key to select MENU.



2. To access the Caller ID information stored in the handset, press the "3" key from the keypad to select Caller ID.

3:CALLER ID
4:SOUNDS
5:SETTINGS
6:REGISTER

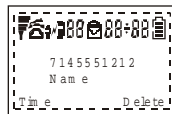
NOTE: Shows the number of new Caller ID entries since the last time the Caller ID log was checked. The value in the top LCD line to the right of the envelope icon.

3. Press the key to view the most recent call or the key to view the oldest call information:



NOTE: Caller ID information is stored in a table with the newest entry on the top of the table. Using the to view the Caller ID log ensures starting at the "top" of the table.

4. The Caller ID log will store up to three information fields:



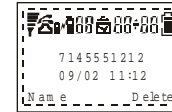
* Caller phone number, if transmitted.

* Caller name, if transmitted.

* Date and time stamp.

5. The first Caller ID screen will display the first two information fields.

6. Date and time information can be viewed by pressing the LEFT SOFT FUNCTION key:



NOTE: The 2 digit number to the right of the envelope icon tracks the number of unviewed Caller ID records.

7. The displayed information may be deleted with the RIGHT SOFT FUNCTION key. The display will show:



8. Press the LEFT SOFT FUNCTION key to confirm the deletion, or press the RIGHT SOFT FUNCTION key to cancel the command.

NOTE: Once the caller ID capacity (30 records) has been reached, the oldest record is removed from the table.

9. While in the CALLER ID VIEW mode, the displayed number can be dialed by pressing TALK.

10. Press END to return to the Main Menu.

Caller ID with Call Waiting Option

To make use of this option you must subscribe to both Call Waiting and Caller ID service with your local telephone company.

* When on a call, you will be alerted to an incoming call with a short beep. The phone number and name of the incoming caller will be displayed simultaneously.

* You can place the first call on hold and answer the second call by pressing TALK. Pressing TALK again will switch back to the first call.

Sound

Ring Volume

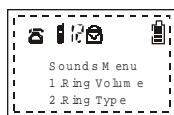
Press "MENU", "4", "1" to access Ring Volume menu.

1. From the IDLE mode press the RIGHT SOFT FUNCTION key to enter the Main Menu:



3 CALLER ID
4 SOUNDS
5 SETTINGS
6 REGISTER

2. Select the SOUNDS option by pressing the "4" key from the keypad.



3 Key Volume
4 Key Volume Tone

3. Select RING VOLUME by pressing "1".

4. Once in this option, the current ring volume level will be displayed on the second line of the LCD:



5. Ring levels are: HIGH, LOW and VIBRATE. Use the (V) (A) scrolling keys to select ring level. Press the LEFT SOFT FUNCTION key to SAVE setting.

6. Selecting END returns handset to the Sounds Menu.

Ring Type

Press "MENU", "4", "2" to access Ring Type menu.

One of four distinctive ring tones may be selected for the handset by pressing the (V) or (A) scrolling keys and pressing the LEFT SOFT BUTTON to save.

Key Volume

Press "MENU", "4", "3" to access Key Volume menu.

The key volume is the loudness of the sound of the keys when pressed. Choices are: HIGH, LOW and OFF.

Key Tone

Press "MENU", "4", "4" to access Key Tone menu.

The key tones are the type of sound that the keys produce when pressed. Choices are Tone 1, Tone 2, Tone 3 and Tone 4.

Settings (Setting Handset Preferences)

This menu option can be used to set: local area code, dial mode, and the backlight. Selecting reset within this option allows you to reset these preferences (plus all sound settings) back to the factory settings. Custom Name is the name that appears on the LCD in the IDLE mode.

* From the IDLE mode, press the RIGHT SOFT FUNCTION key to enter the Main Menu. Press the "5" key from the keypad to select SETTINGS.

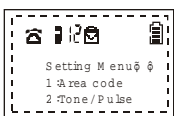


3 CALLER ID
4 SOUNDS
5 SETTINGS
6 REGISTER

Area Code

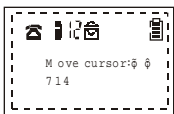
Press "MENU", "5", "1" to access Area code screen.

By setting the local area code, when a telephone number is auto-dialed from the Phone Directory or Caller ID containing the selected area code, the phone will not include the area code when the number is dialed.



3 Backlight
4 Reset
5 Custom name
6 Call manager
7 Contrast
8 Dial Prefix

1. When this option is selected, the local area code is displayed as shown:



The field for the area code has a maximum of three numbers.

2. The area code can be edited by typing the new numbers over the current digits. The key can be used to delete the number above the cursor and the key can be used to move to the desired number.

3. Press the LEFT SOFT FUNCTION key to save the new area code setting or press END to return to the Settings Menu without saving the number.

Tone/Pulse Mode

Press "MENU", "5", "2" to access Tone/Pulse screen. The handset may be set to either tone or pulse mode.

1. After selecting this option, the LCD will show the current setting as shown:



Use the scrolling keys to change the setting.

2. Press the LEFT SOFT FUNCTION key to save the new dial mode or press END to return to the Settings Menu without saving.

Backlight

Press "MENU", "5", "3" to access Backlight screen. The length of time the backlight stays lit when the handset is in use may be set with three options: 8 sec, 0 and 0n.

1. The scrolling keys may be used to choose one of the three options.

2. Press the LEFT SOFT FUNCTION key to save the new backlight setting or press END to return to the Settings Menu without saving.



NOTE: It is recommended that the backlight be kept at the factory setting of 8 seconds. Leaving the backlight on will deplete the battery life more quickly.

Reset

Press "M MENU", "5", "4" to access Reset menu.

Choosing this option allows the handset parameters (dial mode, backlight, ring and key tone settings and ring/voice volume) to be reset to the factory settings. Also, this option will delete all the Phone Directory entries and all the Caller ID entries.

1. The Reset parameters option LCD will show:



2. The Reset DR option LCD will show:



3. The CID option LCD will show:



4. In all cases, press the LEFT SOFT FUNCTION key to select YES and the RIGHT SOFT FUNCTION key to select NO.

5. Choosing YES, NO or the END key will return the handset to the Settings Menu.

Custom Name



Press "M MENU", "5", "5" to access Custom name screen.

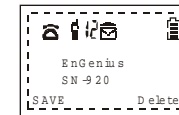
This option allows either a name or a greeting to be selected that will be displayed on the LCD in IDLE mode or when the handset is turned on.

1. Accessing this option displays the current name setting.



2. The custom name can then be edited by using the numbered keys on the keypad to overwrite the existing characters.

3. In this option the second and third lines of the LCD can be used. The   keys can be used to move the cursor from one line to the other and from one side of the line to the other.



4. Use LEFT SOFT FUNCTION key to save the new custom name or the RIGHT SOFT FUNCTION key to delete the name. END will return the handset to the Settings Menu.

NOTE: This procedure is similar to the phone directory name edit mode (see Table 2: Available Characters under Directory Option).



Call Manager

Press "M MENU", "5", "6" to access Call Manager screen.

This option allows the handset to receive calls from 1 to 4 base units.

1. Once in the Settings Menu press the "6" key from the keypad to select the Call Manager option. The screen will display:



2. The   scrolling keys may be used to select a base unit number from 1 to 4. Pressing the RIGHT SOFT FUNCTION key moves the → from YES to NO and back to YES in the selection process. Pressing the LEFT SOFT FUNCTION key will save the setting.



3. Repeat the process until all base units from which calls are to be accepted have been selected for the handset.

Contrast

Press "MENU", "5", "7" to access Contrast screen. This option adjusts the contrast for the handset's LCD screen.

1. While in the Settings Menu, select the "7" key from the keypad. The LCD will display the current contrast setting:



2. Use the   scrolling keys to change the contrast setting from 1 to 16 (1 is the lightest setting and 16 is the darkest).

3. The LEFT SOFT FUNCTION key will save the new setting. Press END to return the handset to the Settings Menu. Pressing END again returns the handset to the Main Menu.

Dial Prefix

Press "Menu", "5", "8" to access the Dial Prefix screen. Allows you to enter up to an eight-digit dialing prefix (ie.: 1010555 for long distance service).

Use the UP/DOWN scrolling keys to toggle between the Yes or No Dial Prefix default selection. Press the RIGHT SOFT FUNCTION key to select "Edit" then enter the Dial Prefix number via the keypad. Press the LEFT SOFT FUNCTION key to select "Save".

If you have elected to use a Dial Prefix, enter a phone number, prior to establishing dial tone, then press the "TALK" Key. The screen will ask you "Use Prefix?" select "Yes" by pressing the LEFT SOFT FUNCTION key or select "No" by pressing the RIGHT SOFT FUNCTION key.

Product Specifications

Electrical Specifications	Base Unit	Portable Handset	Charger
Frequency	902-928 MHz	902-928 MHz	NA
Power Source	AC Adapter	750 mAh NiMH	AC Adapter
Output Power	900 mW	630 mW	NA
Transmit Power Control	Yes	Yes	NA
Speech Coding	32 kbps ADPCM	32 kbps ADPCM	NA
User Data Rate	93 kbps	93 kbps	NA
Number of Channels	142	142	NA
Modulation	Pulse-shaped FSK	Pulse-shaped FSK	NA
Duplex	Time Division Duplex (TDD)	Time Division Duplex (TDD)	NA
Multiple Access	Frequency Hopping CDMA	Frequency Hopping CDMA	NA
Frequency Hopping Rate	> 200 Persecond	> 200 Persecond	NA
Receiver Sensitivity	< -106 dBm (@ BER 10 ⁻³)	< -106 dBm (@ BER 10 ⁻³)	NA
Antenna Gain	2dBi indoor/5dBi outdoor	Max 3dBi, Typical 10dBi/Retractable	NA
Voice Quality	TR/FR-470B	TR/FR-470B	NA
Line Reversal Support	Yes	NA	NA
Regulation Compliance	FCC Part 15, Part 68 CAN/DOC RSS 210, CS03	FCC Part 15, Part 68 CAN/DOC RSS 210, CS03 Heating AHC Compatible	NA
Safety Compliance	CUL 1950, JUL 1950 FCC MPE	CUL 1950, JUL 1950 FCC SAR (OET-65)	CUL 1950, JUL 1950
Dimensions without Antenna	6 7/8 x 5 x 1 5/8 inches 1 7/2 x 1 24 x 41 mm	7/8 x 1 3/8 x 5 1/4 inches 46 x 34 x 132 mm	3 1/2 x 4 1/8 x 2 1/4 86 x 104 x 56 mm
Weight	18 ounces/497 grams	With Battery: 9 ounces 250 grams Without Battery: 4 ounces 115 grams	4 ounces 115 grams

Note: The manufacturer reserves the right to change designs and specifications without notice.

Important Safety Instructions

BEFORE USING YOUR TELEPHONE EQUIPMENT, BASIC SAFETY INSTRUCTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK AND INJURY TO PERSONS AND DAMAGE TO PROPERTY.

Cordless Safety Tips

Your cordless phone gives you the freedom and flexibility to stay in touch while you move around. However, the safe and responsible use of the phone depends entirely on you. Avoid accidents by not reaching for the phone or taking on the phone if that distracts you from working safely. Your life and the lives of others are at stake.

- When using your cordless phone ensure your safety and the safety of others:
 - Always watch where you are walking and standing.
 - Don't let a phone call distract you from working safely.

- In an Emergency
 - If an emergency occurs, dial 911. Remember: if you are in an area where your phone is searching or scanning for a signal or there is no signal, it is highly probable that a call to 911 will not go through. Locate the nearest landline phone and call for help.

Cordless 911 calls may not automatically provide emergency personnel with your name, phone number or location. Tell the dispatcher:

- Your name and phone number, including area code.
- The nature of the emergency.
- Whether police, fire or medical assistance is needed.
- The exact location of the emergency, including cross streets, mileposts or landmarks.

3. Power Outage

In the event of a power outage, your cordless telephone will not allow you to make an outgoing call or take an incoming call. The cordless base station requires electricity for operation. You should have a telephone which does not require electricity available for use during power outages, or alternatively having proper backup power for the base station.

4. Notice to Hearing Aid Wearers: This phone system is compatible with inductively coupled hearing aids.

5. Notice to Cardiac Pacemaker Wearers: Preliminary studies done by 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.

Product Safety Tips

1. Read and understand all instructions.
2. Follow all warnings and instructions including those marked on the product.
3. Unplug this product from the wall telephone jack and power outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use damp cloth for cleaning.
4. Do not use the telephone near water, for example, near a bathtub, washbowl, kitchen sink, laundry tub, wet basement or swimming pool.
5. Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to the product.

6. Slots or openings in the products housing back, side and bottom, 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. This product should not be placed in a built-in installation unless proper ventilation is provided.

7. 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.

8. Do not overbad wall outlets and extension cords as this can result in the risk of fire or electric shock.

9. Never push objects of any kind into this product through housing slots as they may touch dangerous voltage points or short out parts that could result in the risk of fire, electric shock, or injury. Never spill liquid of any kind on this product.

10. To reduce the risk of electric shock or burns, do not disassemble this product. Take this product to qualified service personnel when service or repair work is required. Opening or removing covers may expose you to dangerous voltages, electrical current or other risks. Incorrect reassembly of the product can cause electric shock when the product is subsequently used.

11. Warning: Changes or modifications to this product not expressly approved by Engineer could void the warranty and the FCC authorization to operate the equipment.

12. Unplug the base station from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- If liquid had been spilled into the product.
- When the power supply cord or plug is damaged or frayed.
- If the product has been exposed to rain or water.

- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by qualified service personnel to restore the product to normal operations.
 - If the product has been dropped or housing has been damaged.
 - If the product exhibits a distinct change in performance.
13. Avoid using telephone during an electrical storm. There may be a risk of electrical shock from lightning.
14. Do not use the telephone to report a gas leak while in the vicinity of the leak.
15. The antenna on the desk station does not retract. To prevent injury, do not place the telephone where persons can step, trip or fall on the telephone.
16. Do not place metal objects on the antenna.
17. Do not install the base station or cordless handset charger near microwave ovens, radio equipment, or non-cable connected televisions. These appliances may cause electrical interference to the base station or cordless handset.
18. The base station must be placed on a hard, flat surface and connected to both a phone wall jack and an AC power outlet.
19. Do not stick foreign objects into any of the holes on the base station or cordless handset. You could harm the speakers, earpieces, microphones, or yourself.
20. Battery Safety Precautions: To reduce the risk of fire, injury or electric shock, or property damage, and to properly dispose of batteries, please read and understand the following instructions:
- BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY. DO NOT DISPOSE BATTERY IN MUNICIPAL WASTE.

- Only use Energizer approved Nickel-MetalHydride (NIMH) rechargeable batteries in the cordless handset and battery charger.
- DO NOT use other rechargeable batteries or non-rechargeable batteries, or mixed types of batteries. The batteries could short-circuit, and the battery shell may be damaged causing a hazardous condition. Instruction labels are located in the handset and charging unit battery compartment.
- Always follow basic safety precautions when using and disposing of batteries. Do not dispose of the batteries in a fire; the cells may explode. Do not expose batteries to water.
- Check with local codes for special disposal instructions.
- Periodically clean the charge contacts on both the charger and handset.
- DO NOT mix old and new batteries in this product.
- Position positive (+) battery contact to match diagram in cordless handset.
- Charge the batteries provided with, or identified for use with, this product only in accordance with the instructions and limitations specified in the instruction manual.
- Exercise care in handling batteries in order not to short the batteries with conducting materials such as rings, bracelets, and keys. The batteries or conducting materials may overheat and cause burns or fire.
- Do not open or mutilate the batteries. Released electrolyte is corrosive and may cause damage to the eyes or skin. The electrolyte may be toxic if swallowed.
- During charging, batteries heat up. This is normal and is not dangerous.
- Do not use non-Energizer charging devices. This could damage the batteries.

SAVE THESE SAFETY INSTRUCTIONS

Regulatory Information

1. This telephone system complies with Part 68 of the FCC rules. On the bottom of the base station is a label that contains, among other information, the FCC Registration Number, Ringing Equivalence Number (REN) and the Universal Service Order Code (USOC), which is RJ-11C. Your telephone company may ask you for this information.
2. The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those 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 five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.
3. If your telephone equipment causes harm to the telephone network, the telephone company may ask you to disconnect the system from the line until the problem has been corrected or they may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice isn't practical, you should be notified as soon as possible. You will be informed of your right to file a complaint with FCC or DOC.
4. Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your telephone system. If they do and if possible you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service. If you experience trouble with this telephone system, disconnect it from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.
5. This telephone system may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs. Privacy of communications may not be ensured when using this phone.
6. This telephone system equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules and RS210 of the DOC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Some cordless and wireless telephones operate at frequencies that may cause interference to nearby TVs, VCR's, radios, computers, or other electronic devices. To minimize or prevent such interference, the telephone system should not be placed or operated near these devices. If interference is experienced, moving the base station or handset farther away from them will often reduce or eliminate the interference.
7. However, there is no guarantee that interference will not occur in a particular installation. If this telephone system does cause harmful 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 more of the following measures:
 - Increase the separation between the handset and/or base and the device that experiences interference.
 - Connect the base station into a power outlet on a circuit different from that to which the other device is connected.
 - or, connect the base station to another telephone outlet.
 - Consult the dealer or an experienced electronic technician for help.

EnGenius™ Optional Outdoor Antenna Installation Instructions

For safety and optimum performance, be sure to read these instructions carefully.

Order Information

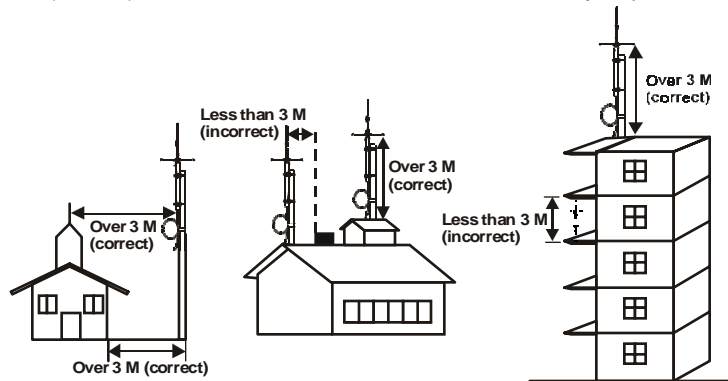
Please order the EnGenius™ SN-900 Ultra Outdoor Antenna and/or cable.

Warning

- For your safety, keep the antenna away from electric power lines to avoid electric shock.
- Install the antenna in good weather when there is no risk of lightning strikes. A lightning protection kit should be installed by a professional installer following applicable national and local electrical to prevent injury or damage caused by lightning.
- For FCC compliance, the outdoor antenna must not be located within 8 inches (20cm) of any person.

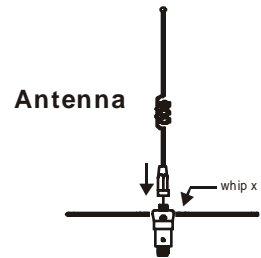
Site Selection

- The higher the antenna is installed, the better the communication will be. If you can install the antenna higher than surrounding obstructions, the communication range will be better.
- The antenna must be on the roof and maintain a three meter (10 feet) clearance in all directions to meet RF safety requirements.



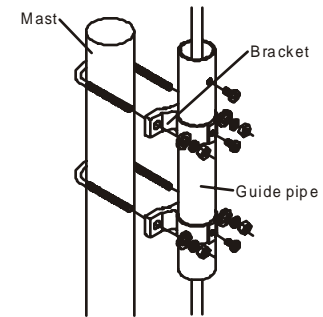
Antenna Installation

1. Find a mast (metal pole) that is longer than five meters and 25 to 50mm (1" to 1.9") in diameter.
2. Assemble the antenna body and six whips.

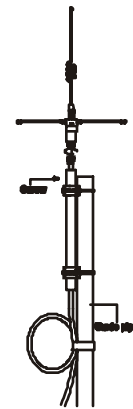


3. Connect brackets to guide pipe, sliding the brackets on from the bottom.

4. Fit the guide pipe and bracket on mast firmly.



5. Thread the coaxial cable through the guide pipe and connect one end of the coaxial cable to the antenna.



6. Connect the other end of the coaxial cable to the base station.

Note: Use only EnGenius antenna and cable. The base station antenna connector has reverse thread that only works with cables supplied by EnGenius.

Important Safety Instructions

When using EnGenius SN-900 Ultra, always follow basic safety precautions to reduce the risk of injury, fire, and electrical shock, including the following practices:

- 1. Read and understand all instructions** included in the user's manual and this antenna installation instructions. In addition, observe all warnings and instructions marked on the product.
- 2. Avoid using a telephone during thunderstorms.** There may be a remote chance of electrical shock from lightning.
- 3. Do not use a telephone in the vicinity of a gas leak.**
Report a suspected gas leak immediately, but use a telephone away from the area where gas may be leaking. Because this product is a wireless model, make sure the base is also removed from the area.
- 4. Do not use this product near water, or when you are wet.**
For example, do not use it in a wet basement or shower, or next to a swimming pool, bathtub, kitchen sink, or laundry tub.
- 5. Unplug this product from any line or power source before cleaning or if it comes in contact with any liquids.**
Do not use liquids or aerosol sprays for cleaning. Use only a damp cloth when cleaning. Do not plug the product back in until it has dried thoroughly.
- 6. Install this product in a protected location** where it is not at risk of falling and no one can trip over and line or power cord. Protect cords from damage or fraying. Do not place and objects on the power cord.
- 7. 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 supplied to your home, consult your dealer or local Power Company. If this product has user replaceable batteries, replace batteries only as described in your user's manual. Do not burn or puncture batteries because they contain caustic chemicals.
- 8. Do not short circuit the battery pack.** The metal bands on the battery pack should never come in contact with a conductive surface at the same time. Also, do not let two battery metal bands touch each other.
- 9. Do not block slots and openings in the cabinet and the back or bottom, these are provided for ventilation.** To protect it from overheating, do not block these openings by placing the product on the bed, sofa, rug, or other similar surfaces. This product should never be placed near or over or over a radiator or exceed the environmental specifications listed in the user's manual. In addition, this product should not be placed in a built-in installation where proper ventilation is not available.
- 10. Never push objects of any kind into this product through cabinet slots** as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock.
- 11. To reduce the risk of electrical shock, do not disassemble this product.** If service or repair work is required, contact EnGenius™ Customer Service or email us at info@engeniustech.com. Opening or removing cabinet parts other than specified access doors may expose you to dangerous voltages or other risks. Incorrect reassembling can cause electrical shock when the appliance is subsequently used.
- 12. Do not overload wall outlets and extension cords as this can result in the risk of fire or electrical shock.**
- 13. Unplug this product from the wall outlet if any of the following situations should occur:**
 - when the power supply cord or plug is damaged or frayed.
 - If liquid has been spilled into the product.
 - If the product has been exposed to rain or water.
 - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions.
 - If the product has been dropped and the cabinet has been damaged.
 - If the product exhibits a distinct change in performance.

SAVE THESE INSTRUCTIONS