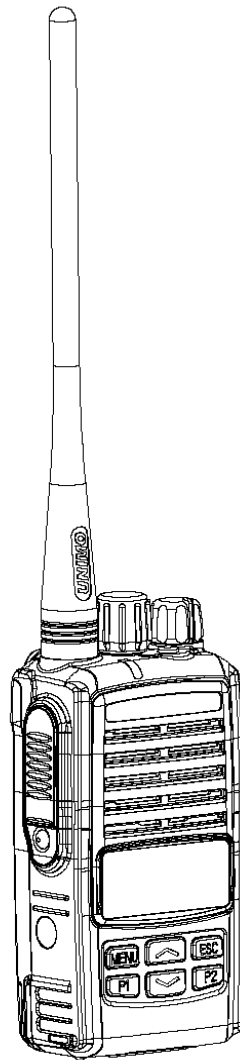


UDR-100E/400E Portable Radio

Digital Mobile Radio

User Manual



UNIMO Technology Co.,Ltd.

※ Understanding the Product

- ♣ sure to read and understand the user manual before using this equipment.
- ♣ Features may be changed without prior notice to improve product performance.
- ♣ The copyright of the user manual belongs to UNIMO Technology Co., Ltd., and unauthorized reproduction in whole or in part is prohibited.
- ♣ Screens and pictures in the user manual may differ from the actual product.
- ♣ If you have any questions about the contents of the user manual, please contact our dealer or A/S.

User Manual

Precautions for safety

This information is to ensure user safety and prevent property damage.

Be sure to read it carefully and use it correctly!

Matters Affecting the Performance and Appearance of the Equipment



Do not use the antenna if it has been removed, modified, or altered. The radio generates strong radio waves through the antenna, which reduces the radio's performance and may cause serious malfunction.



Rechargeable batteries, adapters, external speakers/microphones and earphones are designed to be used only with models designated by UNIMO Technology Co., Ltd. Therefore, using third-party products may not only damage the battery but also cause malfunction or breakdown of the device.



Do not use it for any purpose other than the prescribed communication purpose.



Do not disassemble or modify the radio arbitrarily.
If the product breaks down or malfunctions, you cannot receive free repairs.



Do not use the radio by changing its frequency to anything other than the designated frequency. (Subject to legal punishment)

- ※ Avoid subjecting the radio to severe shock.
- ※ When using or storing the radio, avoid direct sunlight or places with high humidity.
- ※ Do not short-circuit or subject the battery to strong shock.
- ※ When moving at high speeds, the quality of transmission and reception may deteriorate due to rapid changes in the radio wave environment. If possible, use it in a stationary state.

Matters affecting the operation of radios or other devices

Because radios generate strong radio waves and detect weak radio waves, the operation of other electronic devices may be affected or affected.



Turn off your radio when boarding the aircraft. When using it, follow the rules of the aircraft or the instructions of the flight attendant.



Before using medical equipment, check with the medical equipment manufacturer or doctor in charge to determine whether electromagnetic waves are affected.



Avoid using it near various electrical and electronic devices, such as computers. The strong radio waves from the radio may cause damage to electrical and electronic devices.

※ Electronic and electrical devices generate various electromagnetic waves. The effects of these electromagnetic waves may occasionally cause unwanted reception. Example) Fluorescent lights, computers, monitors, vending machines, etc.

Safety precautions

The following information provides guidance and instructions for the safe and effective use of your UNIMO radio. Please be sure to read it.



When using a walkie-talkie, keep it at least 1 inch (2.5 cm) away from your body.



The antenna coating may be damaged and cause burns if it touches the skin.



If a conductive metal (key, necklace, etc.) touches the battery terminal, heat may be generated and burns may occur. Be especially careful when storing batteries in pockets or bags.



If you want to use it while driving, check if there are any regulations regarding the use of radios while driving and refrain from using them as much as possible. You can reduce the risk by using separate accessories such as an ear/microphone.



Do not listen at too high a volume. This may affect your hearing.



When using in an explosion hazard area, only devices that have passed the explosion proof test can be used. Do not remove, replace, charge or discharge the battery within the hazard zone. Electrical sparks may cause burns or death.



Turn off the radio near workplaces where electromagnetic explosions occur.

1 PRODUCT FEATURES

The UDR-E Series terminal is a European standard DMR type digital walkie-talkie that uses AMBE+2 vocoder to provide optimized sound quality and noise-free voice quality regardless of distance. It is also designed to have a light and sturdy structure and provides powerful sound. The UDR-Series terminal is designed to provide sufficient services to users in industrial sites and public safety, and when used, calls can be made with perfect security and clear sound quality.

UDR-Series terminals can be provided with various optional specifications. The terminal can be programmed with a personal computer using a phone jack and a separate program cable.

- DMR(Digital Mobile Radio)
- Frequency : VHF(136~174Mhz)/UHF(400~470Mhz)
- Channel Spacing : 12.5KHz
- Transmission Output(2W/5W)
- SFR (Single Frequency Repeater)
- TX Intercept
- Encryption AES256
- Mic AGC Gain
- Graphic LCD
- Powerful Security Features
- Individual call, Group call, All call Functions
- Squelch Adjustment(3 steps)
- Remote Radio Stun/Unstun
- Wired and Wireless Cloning
- USB PC Programming(CPS)
- 7.4V/2,600mAh large capacity battery
- Waterproof(IP67 & IP54)

2 COMPONENTS

2.1 Basic Components

- Transceiver1EA
- 7.4V, 2,600mAh lithium-ion battery1EA
- Antenna1EA
- Quick Charger1EA
- AC110~220V/DC12V Adapter1EA
- User manual1EA
- UDR Wrist strap1EA

2.2 Optional components

- Leather case
- Antenna
 - . Helical Antenna
 - . Stubby Antenna
- Regular Ear-Microphone
- Security Ear-Microphone
- Hand Speaker-Microphone
- Cloning Cable
- USB PC program cable(for CPS)
- 1-Prong charger , 2-Prong charger

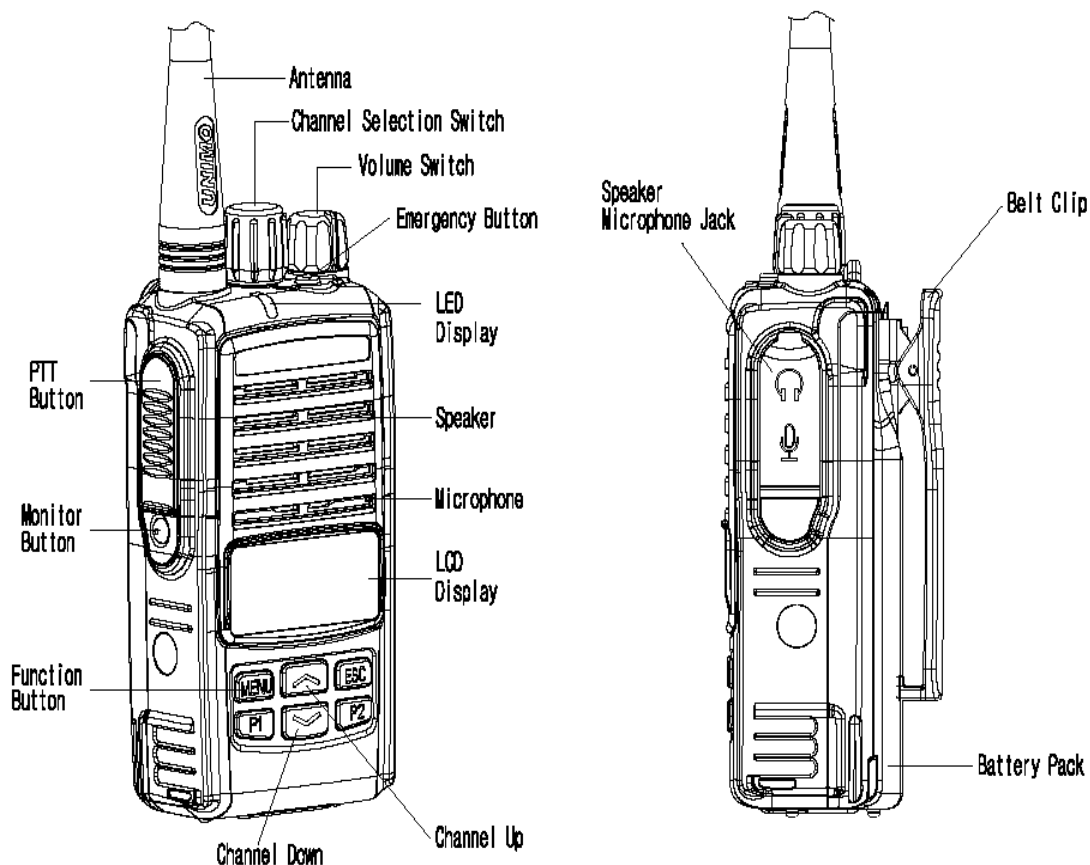
* Components may change upon request.

3 NAME AND EXPLANATION OF EACH PART

The following is a description of the UDR-E series transceiver operation and display functions.

Detailed operation instructions are provided in the next chapter.

3.1 Description of each part



Power ON/OFF Volume Variable

If you slowly turn the volume switch clockwise, the device turns on and the volume gradually increases. If you turn it counterclockwise, the volume decreases and the power turns off.

Channel Change Switch(encoder)

Wireless channels must be programmed into the terminal in advance using a CPS program, and a total of 1024 channels can be entered and selected. When the channel selection switch is turned clockwise, the programmed channel changes one step at a time to the next channel (direction of increasing channel number), and when turned in the opposite direction, it changes one step at a time to the previous channel (direction of decreasing channel number). This channel change is possible at the same interval even by using the button set for channel change..

PTT(Transmit) button

When you press the largest PTT button located on the side of the terminal, the terminal changes to transmission mode and transmits a wireless signal using a pre-programmed channel and transmission output. When you release the PTT button, the terminal stops transmitting and enters the receiving standby state..

Monitoring button(Analog-only function)

Use the monitor button to check the reception status of the set channel.

Continuous mode: If you press the monitor button within about 2 seconds, you can continuously check the reception status of the channel with a noise and a “beep” tone. If you press the monitor button again, the monitor function will be canceled and the terminal will be in a reception standby state..

Emergency button

If an emergency situation occurs according to a preset function, if you press the red emergency button on the top of the main unit, the terminal emits an emergency siren sound through its own speaker. At the same time, an emergency signal is transmitted through the emergency channel.

Menu Button

By pressing the menu button and entering, you can search, change, and set various function s..

Function Button

In the CPS program, users can use the functions they need by assigning them to buttons..

EXT Speaker & Microphone Jack

You can connect and use external accessories (external speaker & microphone, earphones, et c.) through the speaker & microphone jack located on the side of the terminal. Terminal programming is possible using a CPS program cable or cloning cable.

3.2 Status Display

Status LED

Users can recognize the current status of the terminal through the status display LED located at the top of the terminal. The status display is as follows

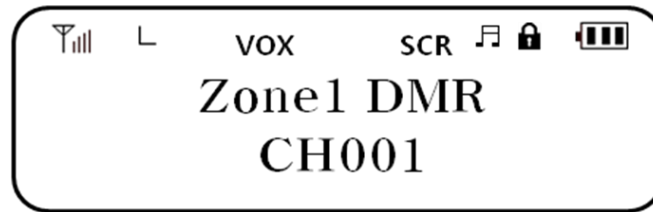
- Red LED on: Transmitting.
- Green LED on: Receiving.
- Blinking Red LED: Low Battery Level.

Graphic LCD display

By using a graphic type LCD, various special characters can be expressed freely, and the radio's screen can be used in more diverse ways, making it convenient to use.

The LCD screen can display 12 English characters. In this area, you can select and display a group, channel number, frequency, or pre-programmed channel name. Additionally, when using menu mode, various information can be displayed and selected.

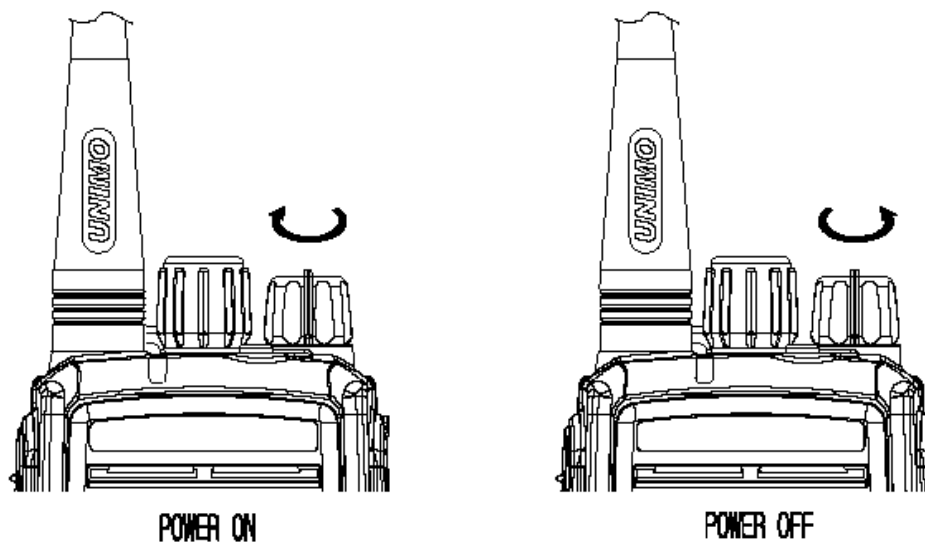
In addition, it contains 7 icons that allow you to intuitively recognize the terminal's usage information and status, and you can use them to recognize the terminal's status.



- ①  Receiving signal strength display: Status display according to the strength of the received signal. If the signal is strong, all 4 bars light up.
- ②  Transmission output: When the “L” icon is turned on, the channel’s transmission output operates in [Low power mode]. When the “H” icon is turned on, the channel’s transmission output operates in [High power mode].
- ③ **Txi**: When the TX Interrupt function is activated, the icon turns on. (Limited to supported models)
- ④ **VOX** Mode: “VOX” Icon lights up when the terminal operates in VOX mode.
- ⑤ **SCR** Secret Mode: When the channel is operated in secret mode, the “SCR” Icon turns on. (Limited to supported models)
- ⑥  Tone mute: When the user can hear various tones from the terminal, the icon is turned on and in silence, the terminal does not emit a tone and the icon is turned off.
- ⑦  Lock: Icon lights up when the terminal is set to locked.
- ⑧  Battery remaining amount display: You can display the remaining battery amount, and all icons turn on when the battery is fully charged. As the remaining battery power decreases as you use the device, the icons turn off one by one. When the battery-shaped outer icon blinks, it indicates that the battery needs to be recharged.

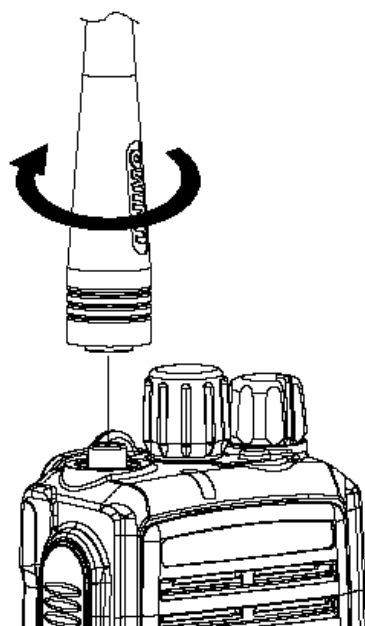
4 BASIC OPERATION METHOD

4.1 Power ON/OFF

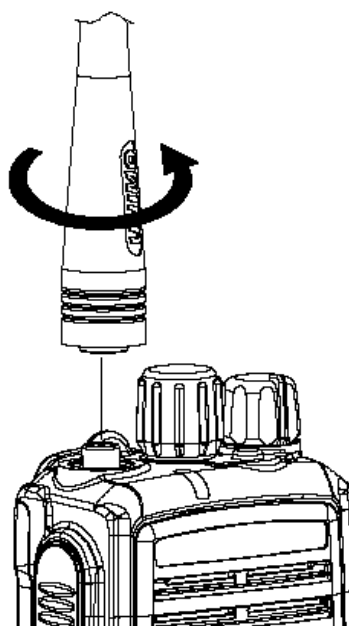


- Turn the power/volume switch clockwise to turn it on.
- Turn the power/volume switch counterclockwise until you hear a tick to turn it off.

4.2 Attaching and Removing Antenna



Antenna Assembly



Antenna Disassembly

- Antenna mounting -

- Antenna removal -

- To separate and attach the antenna, attach the antenna to the antenna connector of the main body and turn it clockwise to connect the antenna. Turn it counterclockwise to disconnect the antenna..

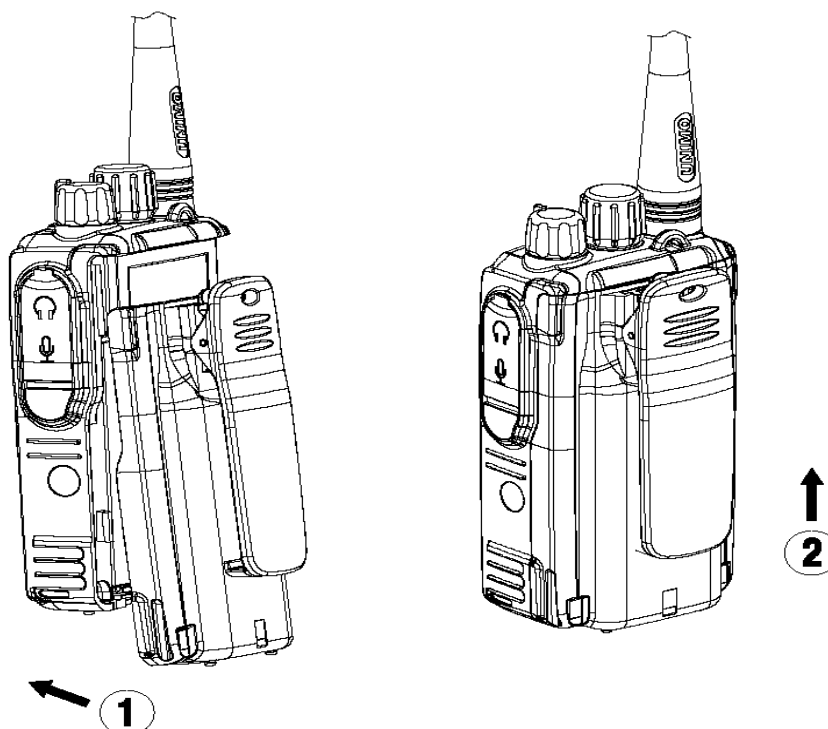


Caution `

When connecting the antenna, be careful not to apply excessive force or pull the antenna as the antenna connector may be damaged.

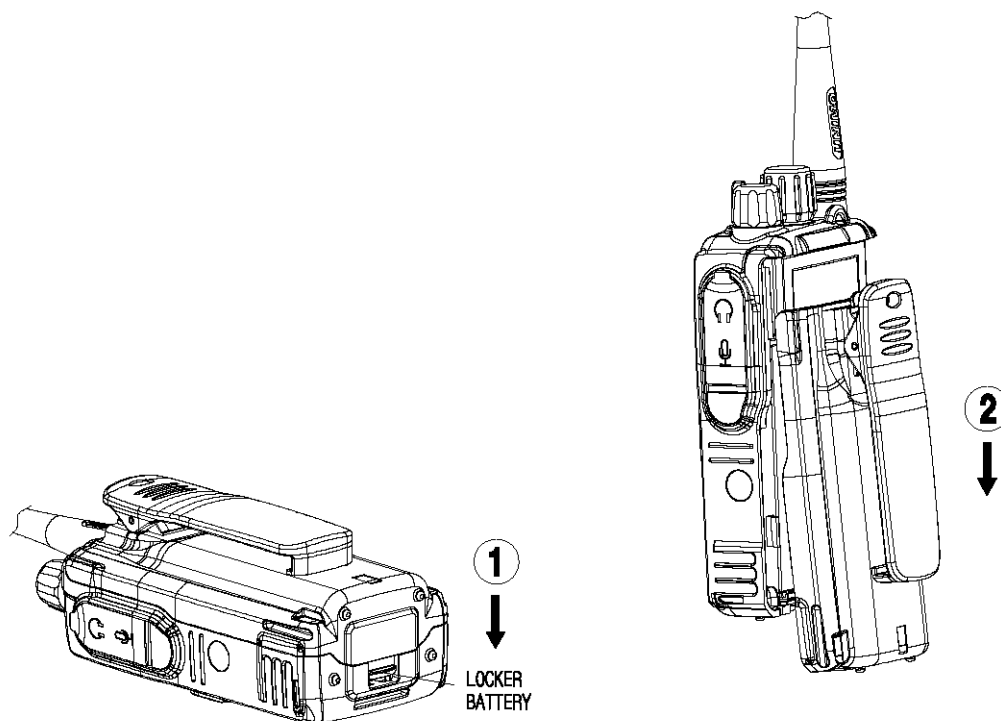
4.3 Install and Remove Battery

Battery Installed



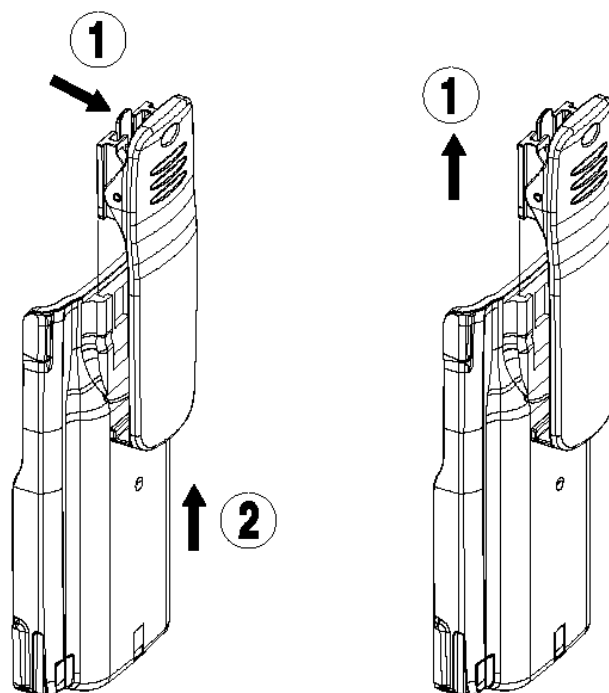
- Turn off the main unit.
- Hold the main unit and battery in both hands so that the back is visible.
- Align the hooks on the back of the main body with the hooks on the front of the battery.
- While pressing the bottom of the battery, slide the battery upward until it clicks into place.
- Make sure the battery lock is in the normal position.

Removed Battery



- Turn off the main unit.
- Hold it in both hands so that the back of the body and battery are visible.
- While pressing down on the locking device, gently slide the battery downward to remove it from the main body.

4.4 Installing and removing the battery belt clip



- Belt clip removal -

- Belt clip attached -

- Remove the belt clip from the battery by lifting the locking device located on the top of the belt clip and sliding the belt clip upward.
- The battery belt clip is installed by aligning the belt clips in the grooves of the battery and pushing the belt clip down until you hear a 'click' sound..

4.5 Charge the Battery

Lithium-ion battery used in the UDR-Series is a battery with high stability and reliability. To maintain optimal capacity and stable operation of the terminal, be sure to fully charge the battery before use.

4.6 When to Charge the Battery

Charge new batteries or batteries that have been left unattended for a long time before using the equipment. If the battery voltage drops, the communication distance becomes shorter and the device cannot operate to its full potential. Please charge in the following situations.

- When performance is judged to have decreased after approximately 10 to 13 hours of use.
- When charging a radio with a battery, turn it off completely and then insert it into the charger.
- There are two types of chargers: 1-prong and 2-prong. In the case of the 2-prong charger, the front slot can be used to charge while attached to the UDR-Series terminal, and the rear slot can only charge the battery..
- Even if the green lamp lights up after charging is complete, perform supplementary charging for about 30 minutes to fully charge.

Operating status	LED Color
Charging	Red LED lights ON
Charging complete	Green LED lights ON
Bad battery	Red LED flashing
Temperature out of range, Rear slot waiting for charging	Yellow LED flashing



The charger must be a genuine product provided by UNIMO Technology Co., Ltd.

Precautions when charging

- The battery is designed to be used only with our dedicated charger, and we are not responsible for any problems arising from the use of a third-party charger.
- When charging the battery while it is installed in the terminal, the terminal must be turned off and charged for full charging..
- There is a risk of fire or explosion if the user arbitrarily disassembles or shorts it.
- Be careful because if the battery terminal touches a metal or conductor, it may damage the object or cause injury to the human body.
- Do not charge the battery near fire or place it in direct sunlight.
- If the charger's LED flashes yellow during charging, it indicates a defect in the battery pack, so be sure to contact your dealer.

5 DETAIL OF FUNCTION

5.1 Power On/Off

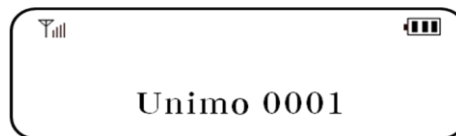
When power is supplied by turning the power switch clockwise, the manufacturer name and model name are displayed on the LCD, followed by the current group name and terminal ID, and a “beep beep” sound is heard. From this point on, the terminal can operate normally.



If you turn on the radio while pressing the button, it will enter special function mode and the radio will not transmit or receive. Do not use for purposes other than those intended

5.2 Wireless Transmission

When you press the PTT button on the side of the transmitting terminal, the red LED turns on and voice is transmitted. For best sound quality, it is recommended to maintain a distance of 5 to 10 cm.



When setting the TOT function, a function that blocks indefinite transmission is activated. This is to give other users the opportunity to transmit.

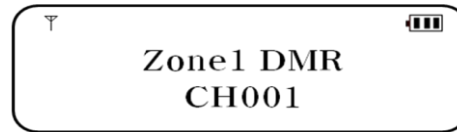
5.3 Wireless Reception

Use the volume switch to adjust the volume. In normal reception mode, the antenna bar on the LCD is displayed and the top lamp lights up in green. The frequencies are the same, but if the reception is not normal, the green lamp blinks.

5.4 Change Channel

When you press the channel up/down button or turn the channel switch (encoder) left or right

t, the channel changes to the next channel (channel number increases) with a “beep” sound. If you press and hold the channel up/down button, the channel changes quickly and there is no “beep” sound.



5.5 Change RF Power

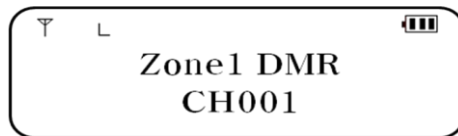
Transmission output can be selected as high output or low output mode.

In a good communication environment, you can extend battery usage time by changing to low output mode.

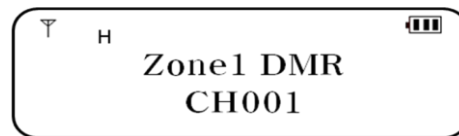
For channels saved in high output mode, the “H” icon lights up on the LCD.

For channels selected in low output mode, the “L” icon lights up on the LCD.

The transmission output mode can be set in advance using the CPS program, and can be changed by the user through menu mode or a set button.



< LOW POWER >



< HIGH POWER >

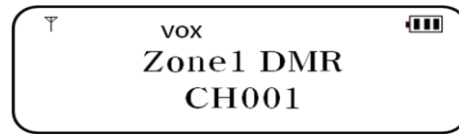
5.6 Channel Scan

In call waiting mode, press the SCAN button. The SCAN function is executed with a “beep” sound. Channel numbers for which scanning is set are displayed sequentially. To cancel the function, press the MENU button again or turn the power off and then on.

SCAN channels can be set in advance using the CPS program..

5.7 VOX(Voice Operated Exchange)

The VOX function allows you to transmit using the voice signal input into the microphone without pressing PTT. The VOX operation voice level can be adjusted, set in advance using the CPS program, and changed by the user in menu mode.



5.8 RX Monitoring (Analog-only function)

You can forcibly disable or activate the squelch lock function using the monitoring button. Monitoring button operation is a toggle.

5.9 Subtone Squelch 톤(Analog-only function)

CTCSS / DCS codes can be set and used in the CPS program to operate squelch for each wireless channel.

CTCSS Tone

CTCSS subtone types are as follows

No.	Frequency(Hz)	No.	Frequency(Hz)	No.	Frequency(Hz)	No.	Frequency(Hz)
1	67.0	15	110.9	29	179.9	43	196.6
2	71.9	16	114.8	30	186.2	44	199.5
3	74.4	17	118.8	31	192.8	45	206.5
4	77.0	18	123.0	32	203.5	46	229.1
5	79.7	19	127.3	33	210.7	47	254.1
6	82.5	20	131.8	34	218.1	48	165.5
7	85.4	21	136.5	35	225.7	49	171.3
8	88.5	22	141.3	36	233.6	50	177.3
9	91.5	23	146.2	37	241.8		
10	94.8	24	151.4	38	250.3		
11	97.4	25	156.7	39	69.3		
12	100.0	26	162.2	40	159.8		
13	103.5	27	167.9	41	183.5		
14	107.2	28	173.8	42	189.9		

DCS Code

DCS code is below

No.	DCS Code	No.	DCS Code	No.	DCS Code	No.	DCS Code
1	023	27	165	53	413	79	731
2	025	28	172	54	423	80	732
3	026	29	174	55	431	81	734
4	031	30	205	56	432	82	743
5	032	31	223	57	445	83	754
6	043	32	226	58	464	84	036
7	047	33	243	59	465	85	053
8	051	34	244	60	466	86	122
9	054	35	245	61	503	87	145
10	065	36	251	62	506	88	212
11	071	37	261	63	516	89	225
12	072	38	263	64	532	90	246
13	073	39	265	65	546	91	252
14	074	40	271	66	565	92	255
15	114	41	306	67	606	93	266
16	115	42	311	68	612	94	274
17	116	43	315	69	624	95	325
18	125	44	331	70	627	96	332
19	131	45	343	71	631	97	356
20	132	46	346	72	632	98	446
21	134	47	351	73	654	99	452
22	143	48	364	74	662	100	454
23	152	49	365	75	664	101	455
24	155	50	371	76	703	102	462
25	156	51	411	77	712	103	523
26	162	52	412	78	723	104	526

5.10 Digital(DMR) Call Mode

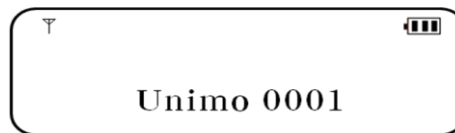
Individual call

If you select the transmission destination by individual ID, one-to-one communication is performed with the terminal with the correct ID.

To set up, simply select the individual ID you want to send from the contacts in the menu.

Or, you can select it with a channel switch (when set in the CPS program)

The receiver receives if the received ID is the same as MY ID (the received ID is the other party's radio ID).(Need to be confirmed))



Group Call

If you select the transmission destination by group ID, you will make a call with the terminals included in the corresponding group. To set up, simply select the Group ID you want to send from the contacts in the menu. The receiver receives if the received group ID matches my group list.

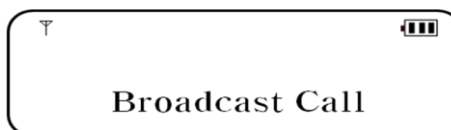


All Calls

If you select the transmission destination as All IDs, calls will be made to all terminals.

To set up, simply select the full call ID you want to send from the contacts in the menu.

All receivers on the same frequency will receive.



All calls must match the color code set for the frequency

5.11 Stun/Unstun

This is a function that allows you to remotely stun and unstun a radio that has a Stun ID set at the center. When a Stun ID is received, the radio displays “STUN” on the LCD and then stops operating. In this state, no keys work. It remains in this state even if you turn the power off and on. Upon receiving the Unstun ID, normal operation will return..



5.12 TOT(Time Out Timer)

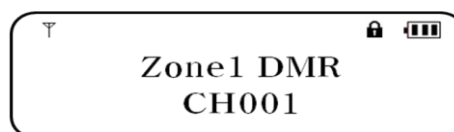
This function prevents one person from transmitting indefinitely.

When you press the PTT button, if the transmission exceeds the preset time, the transmission will be stopped and if you retransmit within the penalty time, the message “Transmission time exceeded” will be displayed on the LCD. If a penalty time is set, normal transmission occurs after that time. It can be set in advance using the CPS program, and the user can change it in menu mode.



5.13 Button Lock

The Key Lock function is performed when you press the Button Lock button in call standby mode or activate the Button Lock function in the radio settings. When this function is set, a lock symbol appears on the screen and all buttons except PTT and emergency key do not work.



5.14 PSC(Power Save)

Pressing the PSC button automatically turns the power on/off during reception standby time to reduce battery consumption. Can be set in advance using the CPS program

5.15 Password (When Turning On)

This is the function to assign a password to the radio.

Once a password is assigned, the password is confirmed when the radio starts (powers on). Can be set in advance using the CPS program.

5.16 Display Language

Select Korean or English in the language selection function.

It can be set in advance using the CPS program, and the user can change it in menu mode..

5.17 Squelch Select Level

The squelch level can be adjusted in 3 levels. It can be set in advance using the CPS program, and the user can change it in menu mode.

5.18 Cloning

CLONING is a function that copies the channel information of one radio to another radio. Items to be duplicated can be frequency channels/tones/SCAN, etc. Cloning function supports wired, wireless and Clone One methods.

Wired Cloning

- We prepare a dedicated cloning cable manufactured by our company.
- Turn on the original radio by pressing the monitor button on the side, and keep the clone radio in standby mode.
- The text "CLONE (LINE)" is displayed on the LCD of the original radio.
- Connect the cloning cable to the Ear/Mic Jack of both radios.
- When you press the 'Menu' button on the original terminal, 0% is displayed, and then when you press the PTT button, cloning is performed. If cloning is successful, the text "Complete" is displayed on the LCD of the original radio.
- After removing the cable, power cycle both radios. After confirming that cloning was successful, use the terminal.

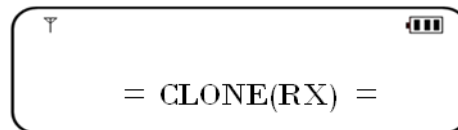


Wireless Cloning

Turn on the original radio while pressing the monitor button on the side, then press the 'UP/DOWN' button to select "CLONE (TX)" .



Turn on the clone radio by pressing the monitor button on the side, then press the 'UP/DOWN' button to select "CLONE (RX)" .



- When you press the 'Menu' button on the original terminal, 0% is displayed, and then when you press the PTT button, cloning is performed. If cloning is successful, the text "Complete" is displayed on the LCD of the original radio..



Cloning data on radios of different models and versions may cause fatal operational errors..

5.19 SMS(Short Message Service)

This is a function for sending and receiving short messages.

Select one of the pre-stored short messages (1 to 10) from the menu and send it. Received messages can be checked on the LCD window..

5.20 Emergency Call

When you press the emergency button, an emergency alarm sounds and an emergency bell is transmitted to the current channel. If it is set to repeat mode, the emergency bell will be transmitted periodically (to cancel the repeat, press the emergency button again). It cannot be activated in SCAN mode. It can be set in advance using the GPS program, and the user can

change it in menu mode.

In digital channels, my ID is transmitted to the terminal with a specific ID or an emergency bell rings in my terminal..



5.21 Lone Worker

If there is no user operation for a set period of time, an alarm is repeatedly sent at the given time. The function stops when entering the menu.

5.22 License Option Function

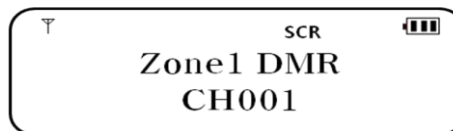
This is an item that can be used by adding a separate license option in addition to the existing functions.

보안통화

This is a powerful security feature that prevents third parties from eavesdropping or eavesdropping on your calls.

AES: Encryption possible in 128bit, 192bit, 256bit. Up to 30 encryption keys can be stored.

It can be set in advance using the CPS program, and can be set by the user in menu mode.



TX Intercept

This function stops communication of all radios transmitting/receiving on the same channel and allows radios with interception rights to transmit first. Interception can only be set to one radio, and only works on the same model version. You can use the interception function by selecting it in the CPS program "Menu Settings" (both the interception permission and the target radio must be set)

SFR(Single Frequency Repeater)

This function allows you to use a single channel as a repeater.

In GPS program channel settings, select SFR Rep for the terminal to be used as a repeater, and select SFR Unit for the terminal to be used in relay mode.

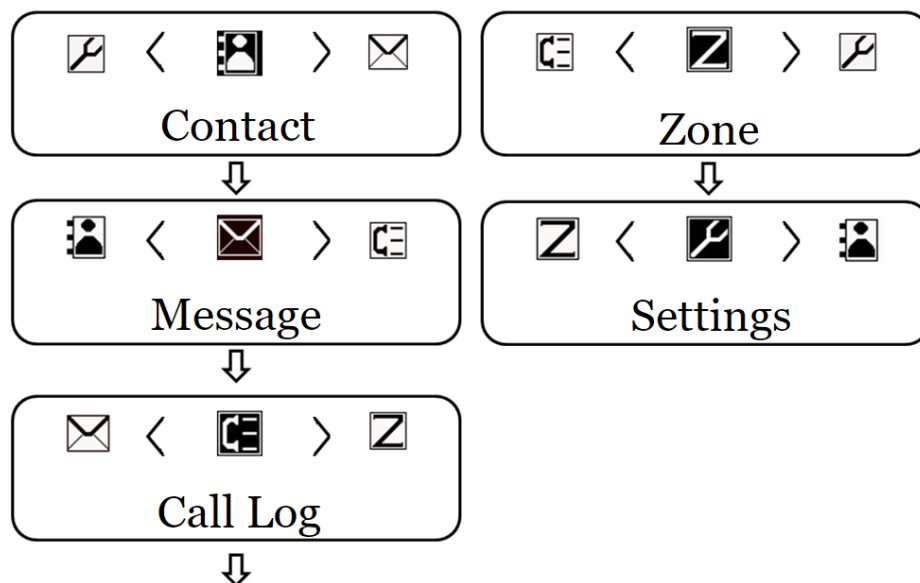
You can also set it in the radio's menu settings.

In the radio settings, go to the “Settings” menu and select “SFR-Rep” for the terminal to be used as a repeater and “SFR-Unit” for the terminal to be used in relay mode in the “SFR-Settings” item.

Terminals that do not use the “SFR-Rep” function may consume more battery.

5.23 Setting up and Using Features

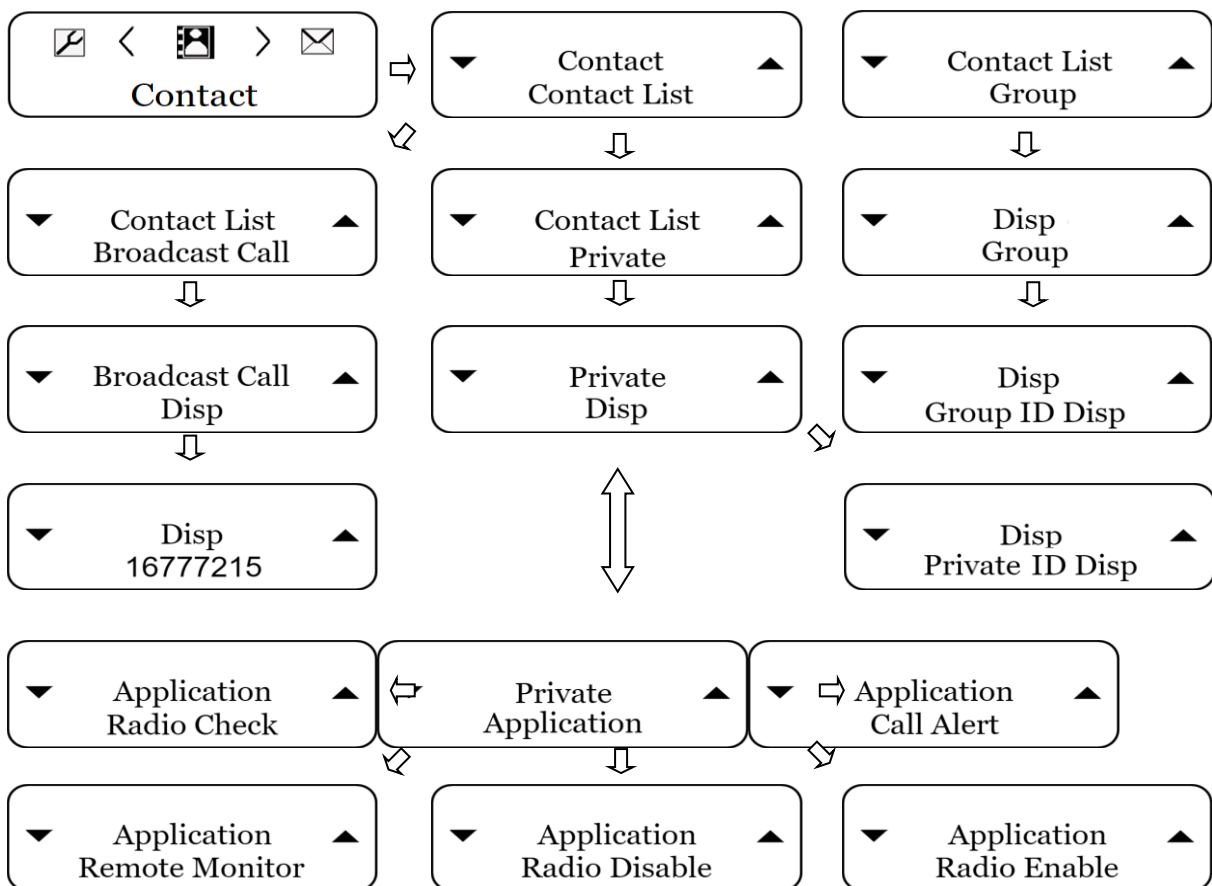
When you press the menu button, you will enter menu mode with a “beep” sound. There are 6 large menus in menu mode, and you can use the radio more conveniently by setting it according to your intended use and environment. Use the ‘UP’ and ‘DOWN’ keys to select the relevant menu. *Menu composition may vary depending on model and digital/analog model.



Contact

A total of 50 IDs are available for this equipment, and each phone number can be set in the GPS program and menu.

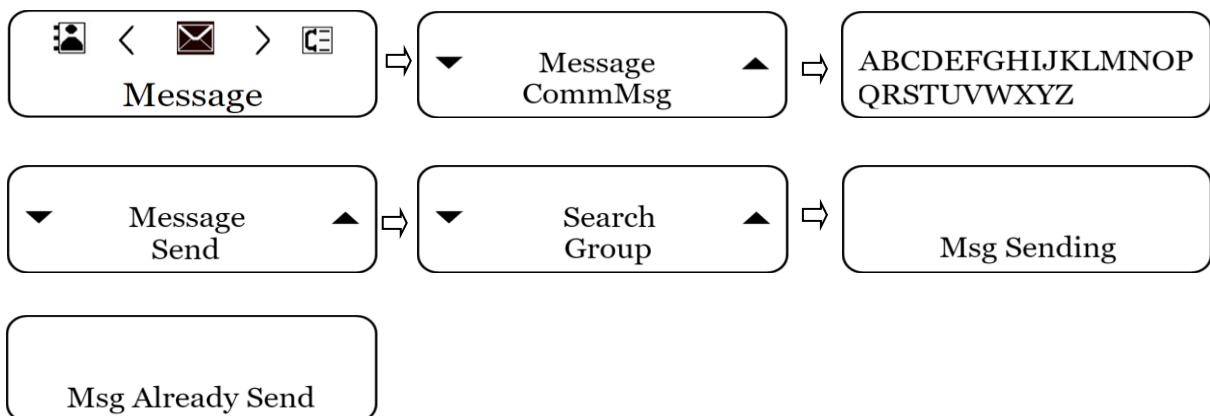
- 'MENU' button (LCD display: "Contact")
- 'MENU' button again (LCD display: "Contact List") and the ID will be displayed.
- the 'MENU' button again (LCD display: "ID Display")
- Use the 'UP, DOWN' keys to check the desired ID.
- Press the 'ESC' button to exit the menu mode.



Message

Send Message

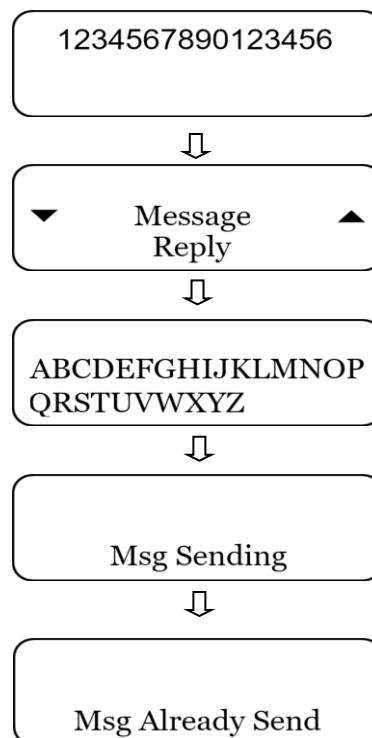
- Press the 'MENU' button (LCD display: "Message ")
- Press the 'DOWN' button (LCD display: "CommMsg")
- Press the 'MENU' button again (LCD display: "Message Display")
- Press the 'MENU' button (LCD display: "Send")
- Press the 'MENU' button again (LCD display: "ID Display")
- Press the 'MENU' button again to send.



Inbox Message

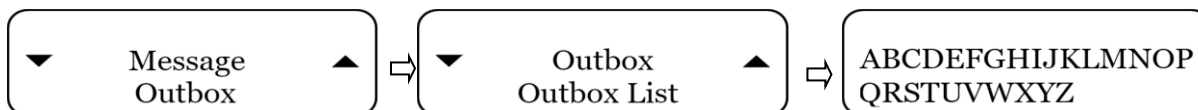
- Press 'MENU' button (LCD display: "Message ")
- Press 'MENU' button to select the inbox. (LCD display: "Inbox")
- Press 'MENU' button again (LCD display: "Inbox List")
- Press 'MENU' button (LCD display: "ID Display")
- Press 'MENU' button (LCD display: "Inbox Message")
- Press 'MENU' button (LCD display: "Reply")
- Press 'MENU' button again (LCD display: "Message Display")
- Press 'MENU' button again to transmit.





Outbox Message

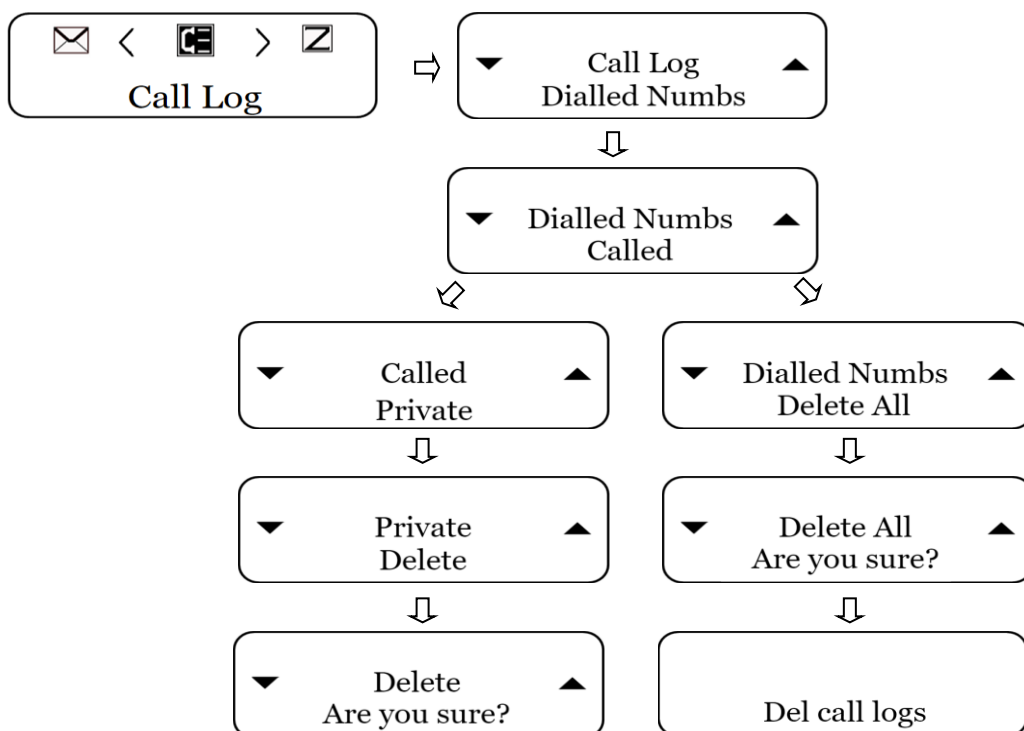
- Press 'MENU' button (LCD display: "Message ")
- Press 'MENU' button and select the send box. (LCD display: "Outbox")
- Press 'MENU' button again (LCD display: "Outbox List")
- Press 'MENU' button (LCD display: "Outbox Message Display")
- The message you sent is displayed.



Call Log - Dialed Numbs

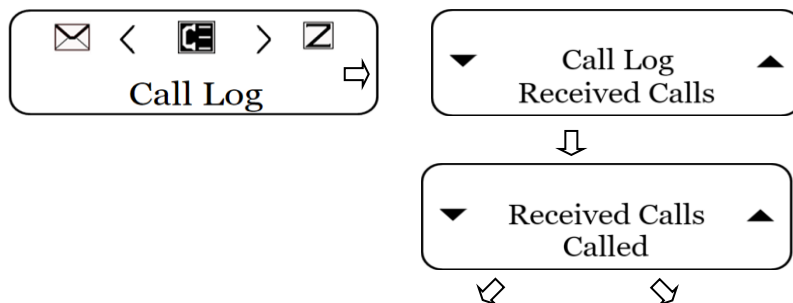
- Press 'MENU' button to select the call list. (LCD display: "Call Log")
- Press 'MENU' button again (LCD display: "Dialed Numbs")
- Press 'MENU' button again (LCD display: "Called" , "Delete All")
- Press 'MENU' button again (LCD display: "ID Display")
- Press 'MENU' button while ID is displayed (LCD display: "Delete")
- Press 'MENU' button again (LCD display: "Are you sure?")

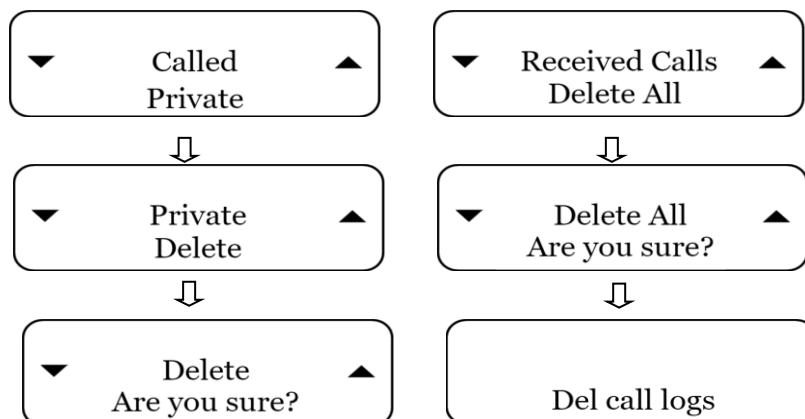
- The sent call is deleted.
- -Delete all is the same-



Call Log - Received Calls

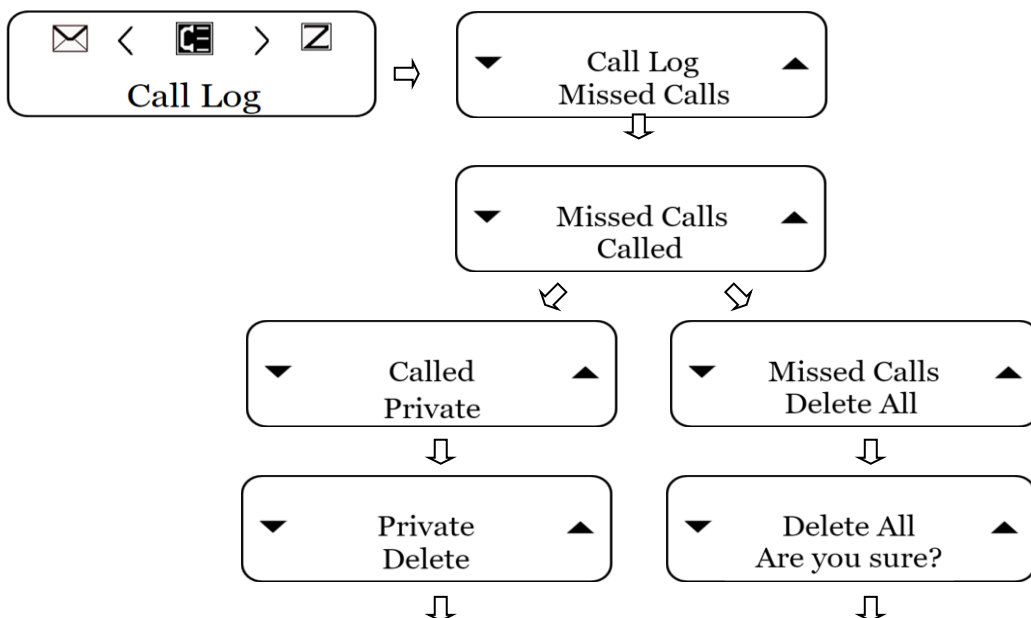
- Press 'MENU' button to select the call list. (LCD display: "Call Log")
- Press 'MENU' button again (LCD display: "Received Calls")
- Press 'MENU' button again (LCD display: "Called" , "Delete All")
- Press 'MENU' button again (LCD display: "ID Display")
- Press 'MENU' button when the ID is displayed (LCD display: "Delete")
- Press 'MENU' button again (LCD display: "Are you sure?").
- Received calls are deleted. -Delete all is the same-





Call Log - Missed Calls

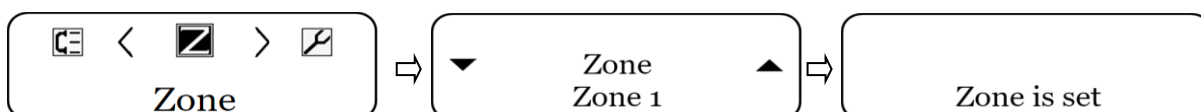
- Press 'MENU' button to select the call list. (LCD display: "Call Log")
- Press 'MENU' button again (LCD display: "Missed Calls")
- Press 'MENU' button again (LCD display: "Called" , "Delete All")
- Press 'MENU' button again (LCD display: "ID Display")
- Press 'MENU' button when the ID is displayed (LCD display: "Delete")
- Press 'MENU' button again (LCD display: "Are you sure?")
- Missed calls are deleted.
- - Delete all is the same-





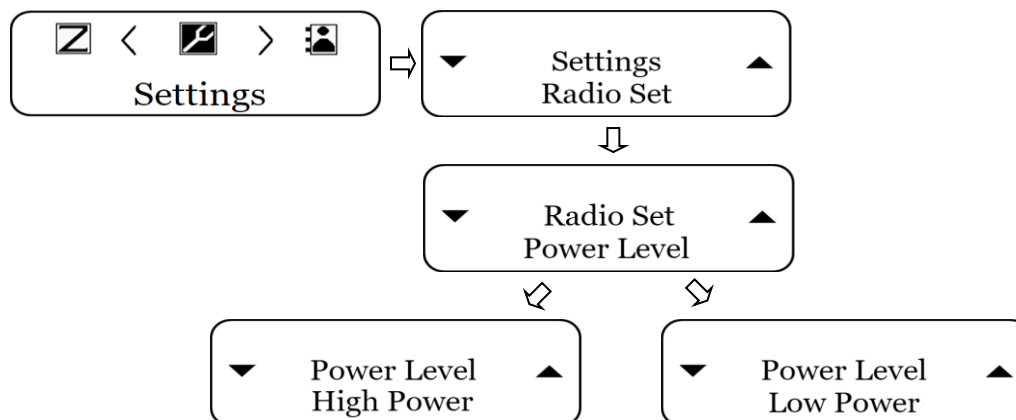
Zone

- Press 'MENU' button to select a zone. (LCD display: "Zone")
- Press 'MENU' button again (LCD display: "Zone1")
- Use 'UP, DOWN' buttons to select the desired zone, and use the 'MENU' button to select. LCD display: "Zone is set")



Radio Setting - Power Level

- The radio's output can be changed to the user's desired output.
- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Power Level")
- Press 'MENU' button again and select the output using the 'UP, DOWN' keys.
(LCD display: "High Power" , " Low Power")
- -Change radio output-

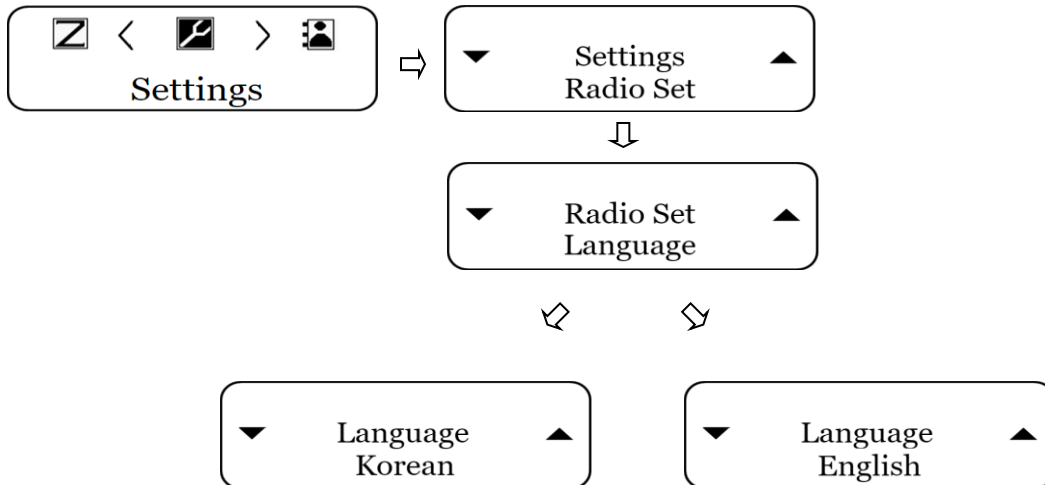


Radio Setting - Language

- Change radio's language to your preferred language.
- Press 'MENU' button to select the setting. (LCD display: "Radio Set")

- Press 'MENU' button again (LCD display: "Language")
- Press the 'MENU' button again and select the language using the 'UP, DOWN' keys.
(LCD display: "Korean" , " English")

-Change the radio language-



Radio Setting - Time Set

Edit the radio's current date and time.

Date

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Time Set")
- Press 'MENU' button again and select the date using the 'UP, DOWN' keys. (LCD display: "Date")
- Press 'MENU' button to select the date. (LCD display: "2024/03/01")
- Change the date using the 'UP, DOWN' keys and the 'Channel Selection Switch' .
(LCD display: "Date is set")

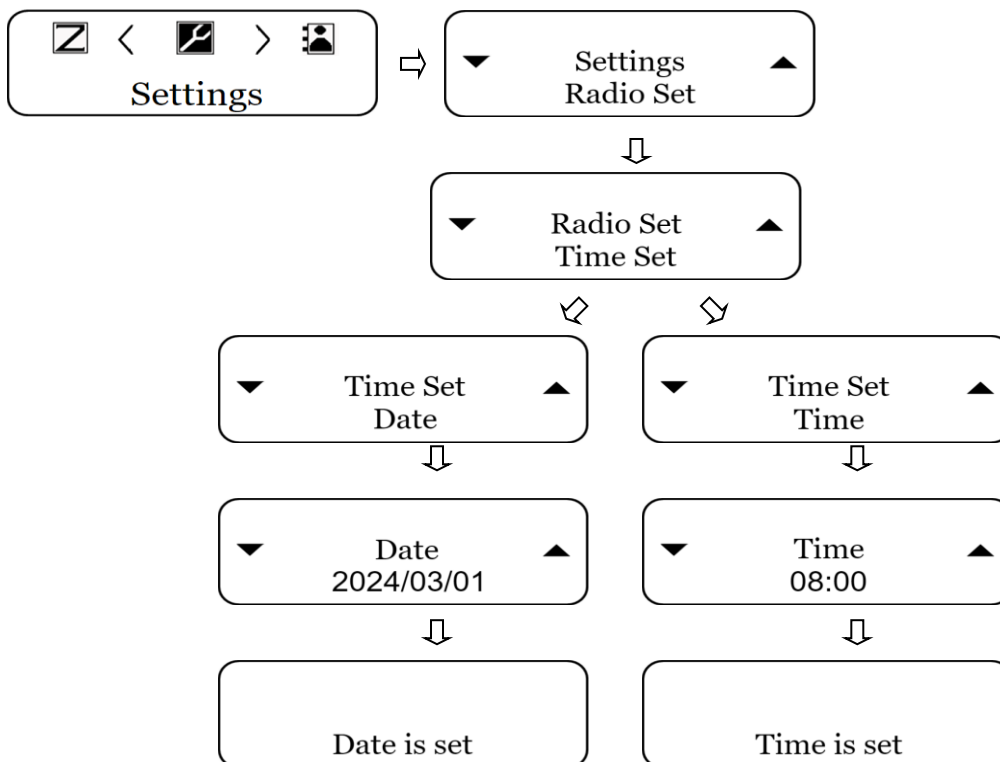
Time

- Press the 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press the 'MENU' button again (LCD display: "Time Set")
- Press the 'MENU' button again and select the time using the 'UP, DOWN' keys.

(LCD display: “Time”)

- Press the ‘MENU’ button to select the time. (LCD display: “10:54”)
- Change the time using the ‘UP, DOWN’ keys and the ‘Channel Selection Switch’ .

(LCD display: “Time is set”)



Radio Setting – Backlight

Change the on/off, timing, and contrast of the radio's backlight.

BL(Back Light) Switch

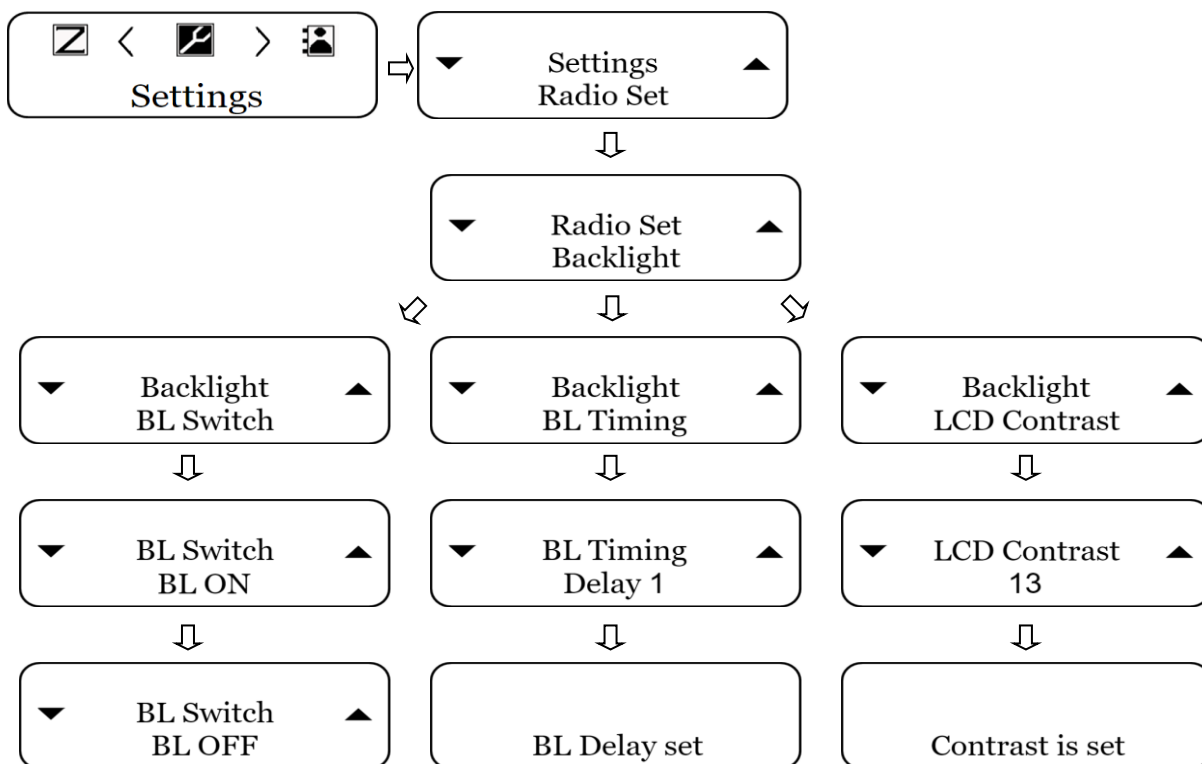
- Press ‘MENU’ button to select the settings. (LCD display: “Radio Set”)
- Press ‘MENU’ button again (LCD display: “Backlight”)
- Press ‘MENU’ button again and select the BL switch using the ‘UP, DOWN’ keys. (LCD display: “BL Switch”)
- You can turn the BL value on and off using the ‘MENU’ button and the ‘UP, DOWN’ keys. (LCD display: “BL ON” , BL OFF)

BL(Back Light) Timing

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Backlight")
Press 'MENU' button again and use the 'UP, DOWN' keys to select the BL timing. (LCD display: "BL Timing")
- You can use the 'MENU' button and the 'UP, DOWN' keys to set the level of delay in the BL period. (LCD display: "Delay 1~10")

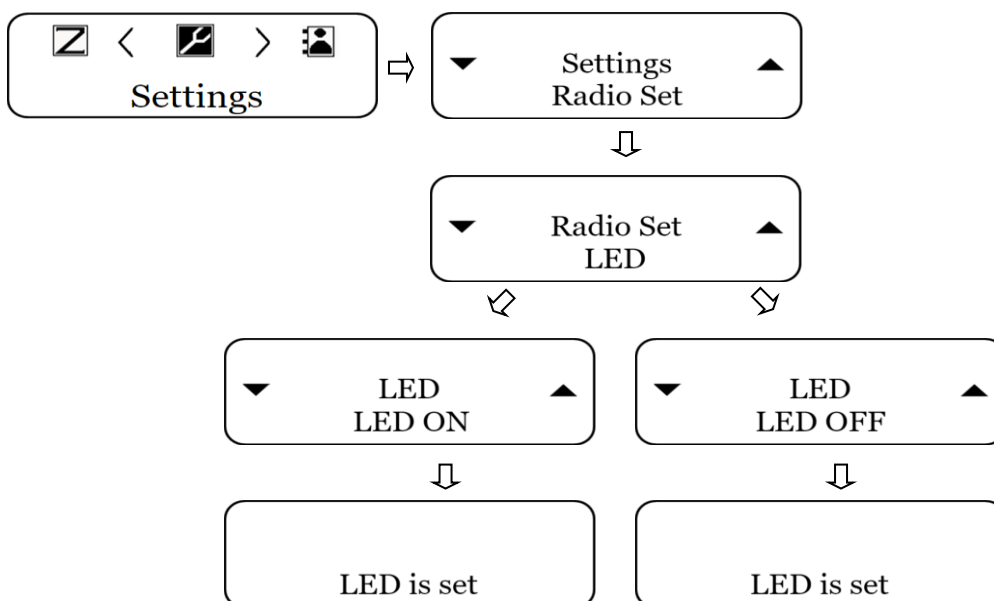
LCD Contrast

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Backlight")
- Press 'MENU' button again and select the BL contrast using the 'UP, DOWN' keys. (LCD display: "LCD Contrast")
- You can set the level of BL contrast using the 'MENU' button and the 'UP, DOWN' keys. (LCD display: "1~15")



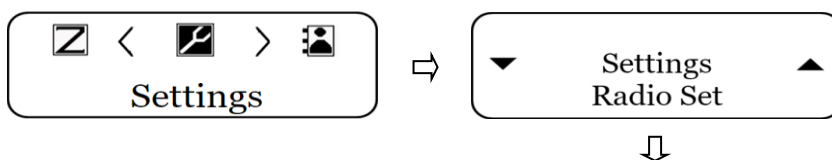
Radio Setting - LED

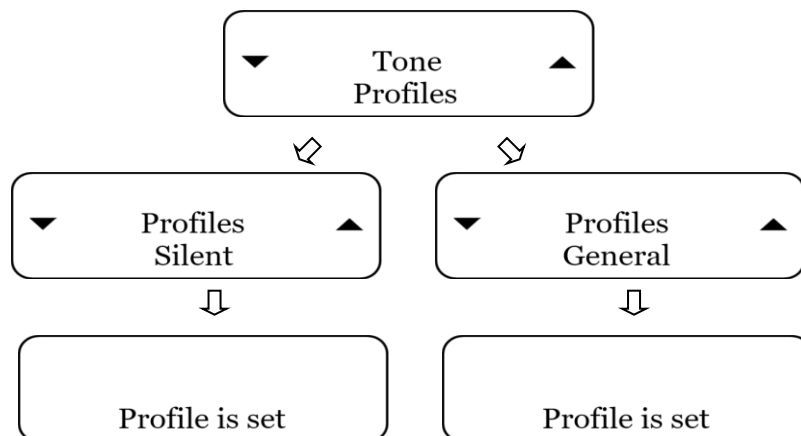
- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "LED")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select on/off.
(LCD display: "LED ON" , "LED OFF"



Radio Setting - Tone(Profile)

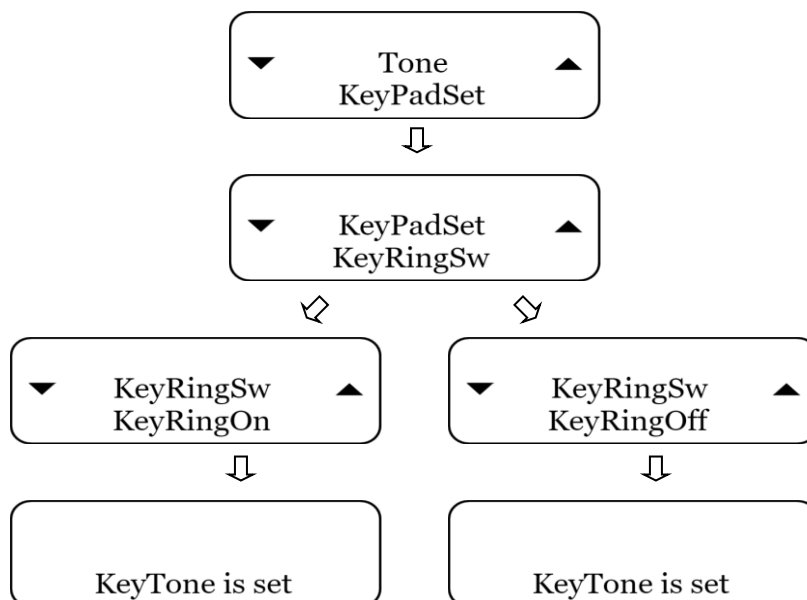
- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Tone")
- Press 'MENU' button again and select a profile using the 'UP, DOWN' keys.
(LCD display: "Profiles")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select silence or general.
(LCD display: "Silent" , "General")





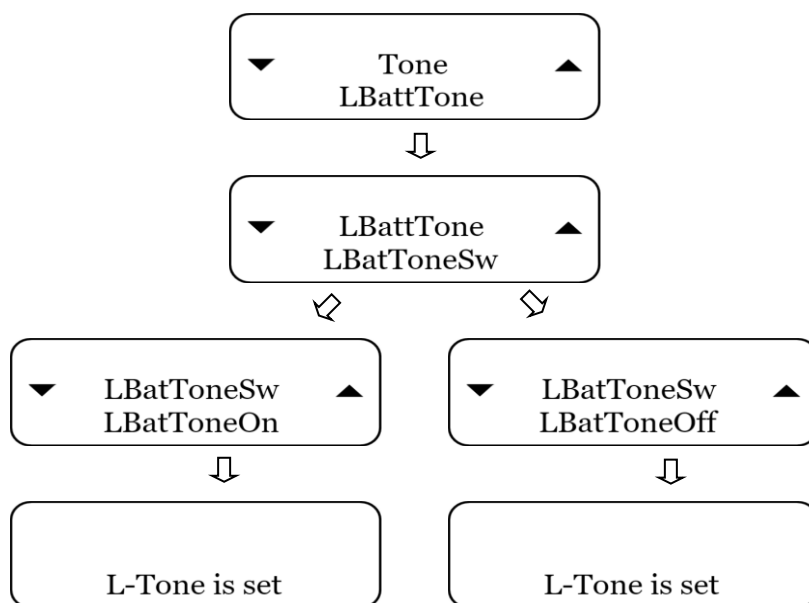
Radio Setting - Tone(KeyPadSet)

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Tone")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select the keypad setting. (LCD display: "KeyPadSet")
- Press 'MENU' button again (LCD display: "KeyRingSw")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select on or off. (LCD display: "KeyRingOn" , "KeyRingOff")



Radio Setting - Tone(L Batt Tone)

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Tone")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select a low voltage tone. (LCD display: "LBattTone")
- Press 'MENU' button again (LCD display: "LbatToneSw")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select on or off. (LCD display: "LBatToneOn" ," LBatToneOff")



Radio Setting - Tone(Msg Tones)

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Tone")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select the message tone. (LCD display: "MsgTones")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select the ring. (LCD display: "Ring 1~5")



Radio Setting - Tone(Private Call)

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Tone")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select a private call.
(LCD display: "PrivateCall")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select the ring.
(LCD display: "Ring 1~5")



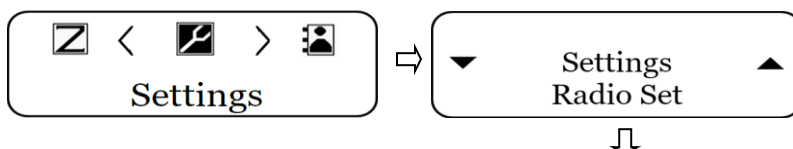
Radio Setting - Tone(Group all)

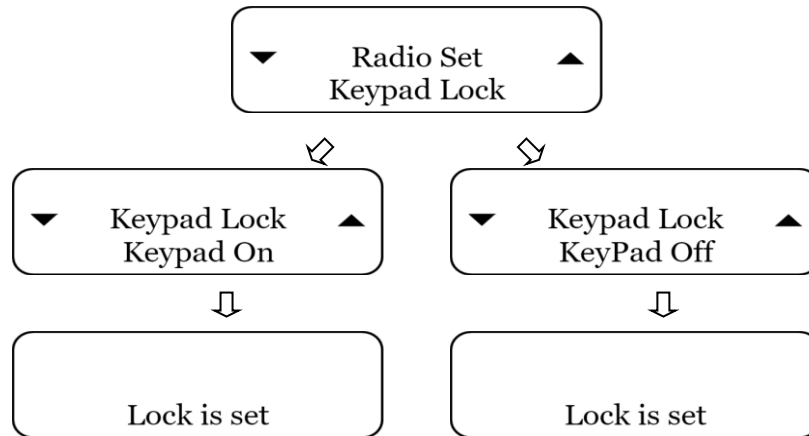
- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Tone")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select a group call.
(LCD display: "GroupCall")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select the ring.
(LCD display: "Ring 1~5")



Radio Setting - Key Pad Lock

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Select key lock with 'UP, DOWN' keys and press 'Menu' button again.
(LCD display: "Keypad Lock")
- Press 'MENU' button again and use the 'UP, DOWN' keys to select on or off.
(LCD display: "Keypad On" , "Keypad Off")





Radio Setting – VOX

VOX Switch

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "VOX")
- Press 'MENU' button again (LCD display: "VOX Switch")
- Press 'MENU' button again (LCD display: "VOX On" , "VOX Off")
- Set on/off using the 'UP, DOWN' keys.

VOX Level

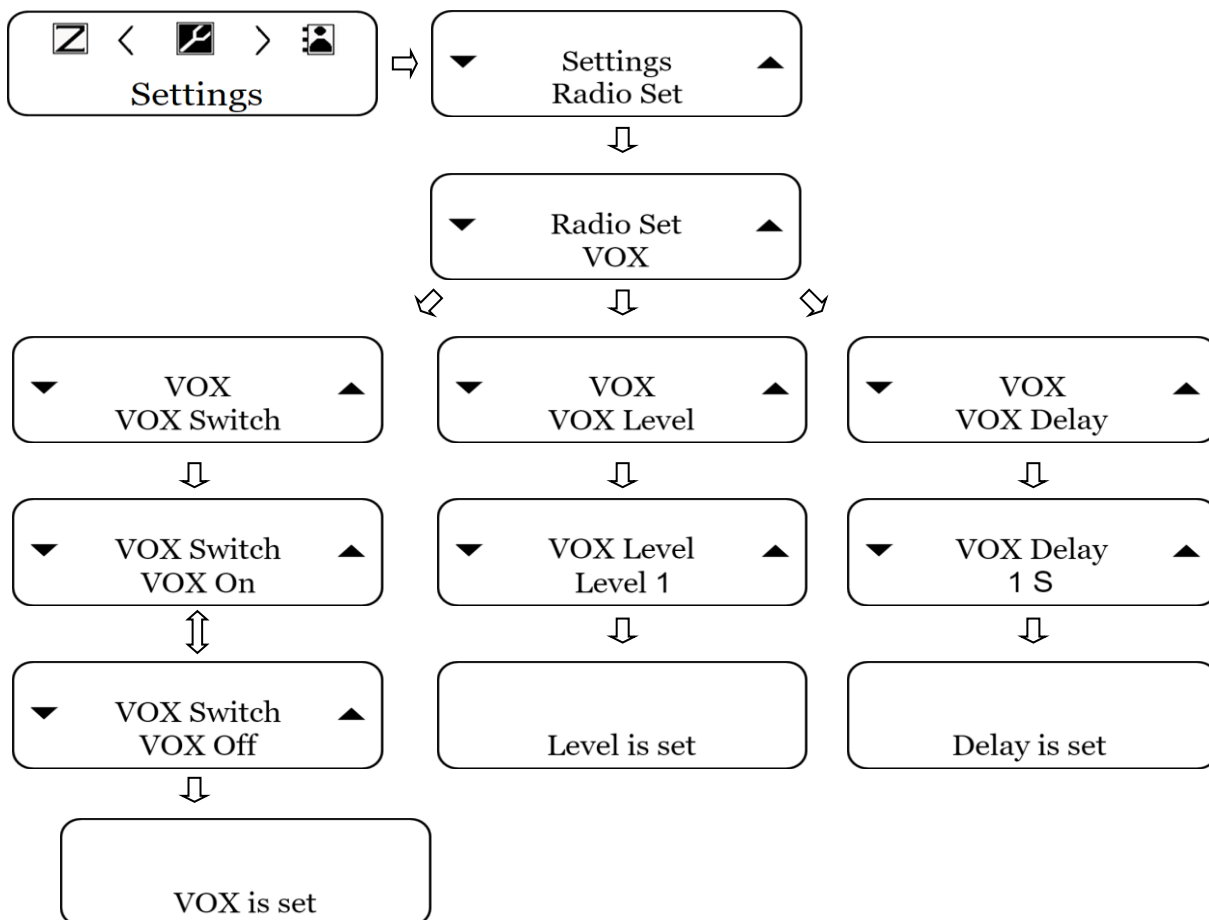
- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "VOX")
- Press 'MENU' button again (LCD display: "VOX Level")
- After selecting the vox level, press the 'MENU' button again (LCD display: "Level 1~5")
- Use the 'UP, DOWN' keys to change the level.

VOX Delay

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "VOX")
- Press 'MENU' button again (LCD display: "VOX Delay")
- After selecting the vox delay, press the 'MENU' button again (LCD display: "1~4")

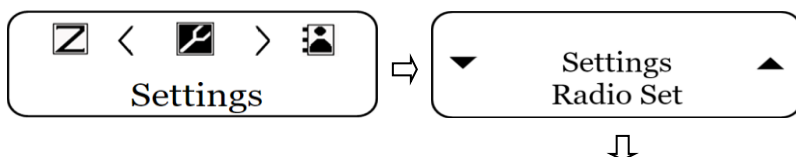
S")

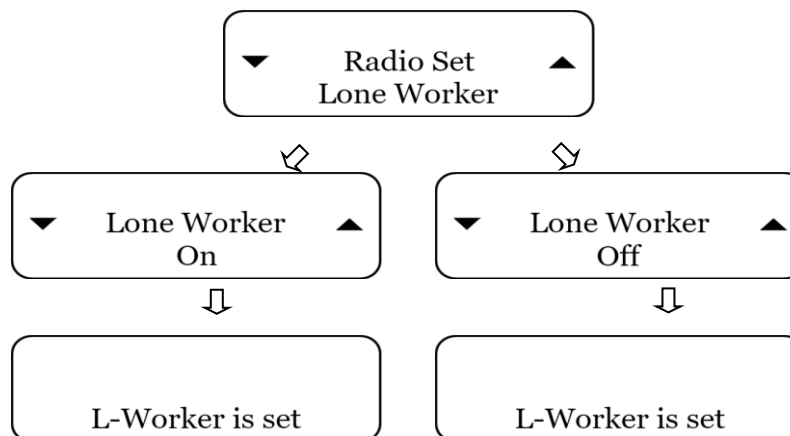
- Use the 'UP, DOWN' keys to change the degree of delay.



Radio Setting - Lone Worker

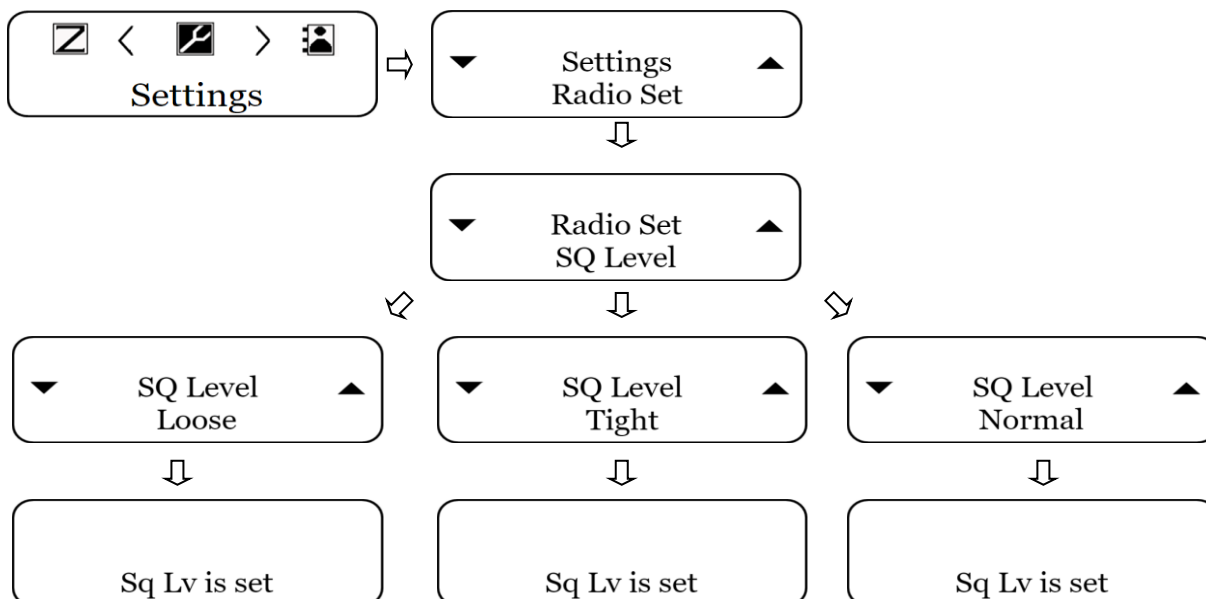
- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Lone Worker")
- After selecting Lone Walker, press the 'MENU' button again (LCD display: "On" , "Off")
- Use the 'UP, DOWN' keys to change activation or deactivation.





Radio Setting - SQ Level

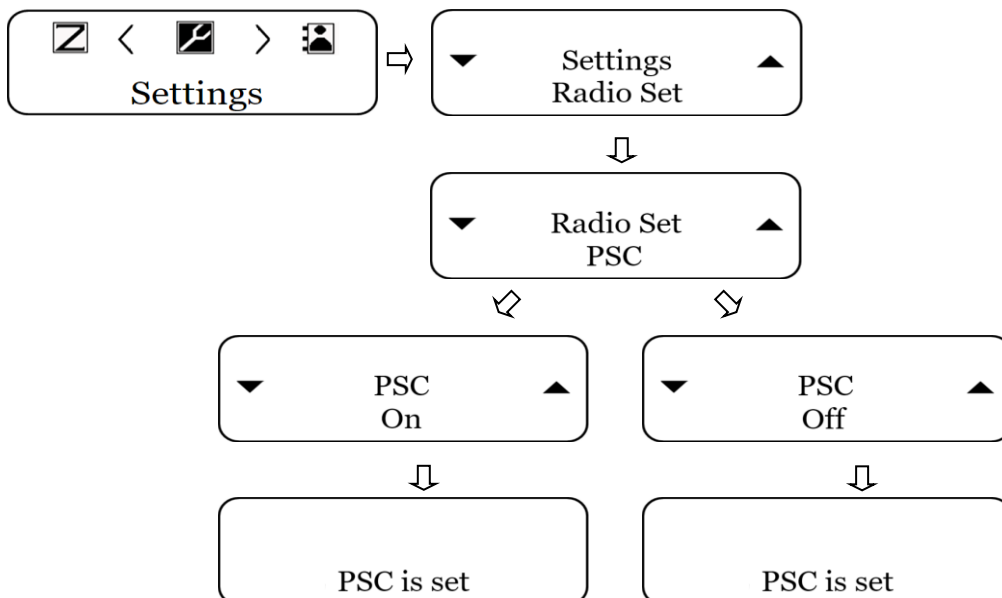
- Press 'MENU' button to select the setting. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "SQ Level")
- After selecting the squelch level, press the 'MENU' button again
(LCD display: "Loose" , "Tight" , "Normal")
- Use the 'UP, DOWN' keys to change the squelch level.



Radio Setting - PSC(Power save control)

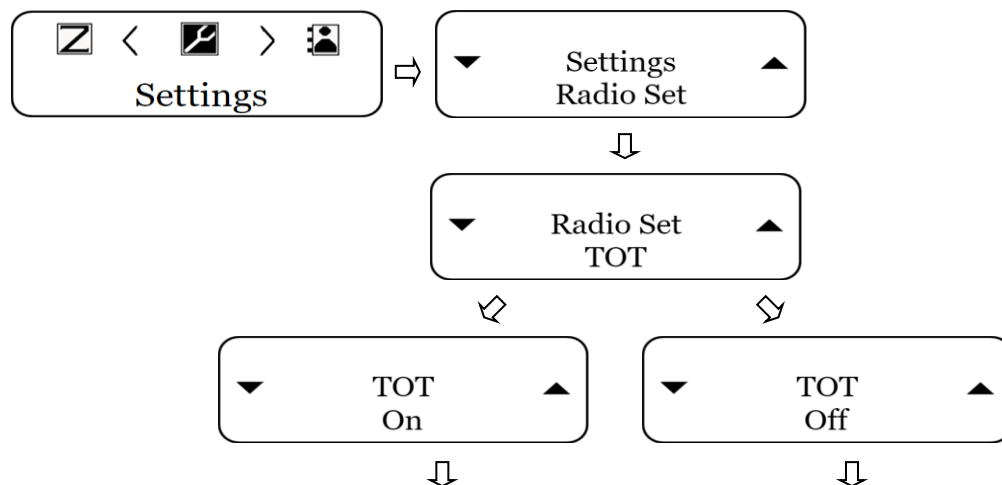
- Press the 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press the 'MENU' button again (LCD display: "PSC")

- Selecting power management, press the 'MENU' button again (LCD display: "On" , "Off")
- Use the 'UP, DOWN' keys to change activation or deactivation.



Radio Setting - TOT(Time Out Timer)

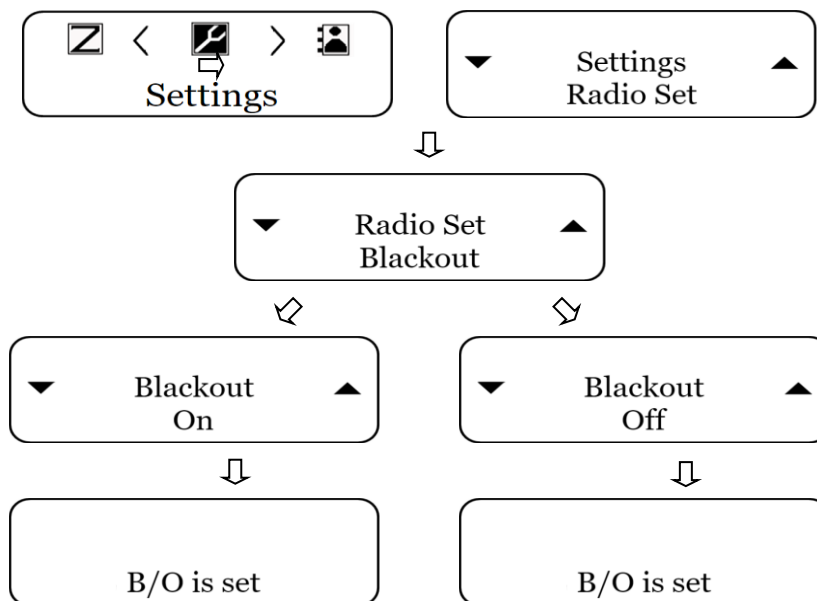
- Press the 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press the 'MENU' button again (LCD display: "TOT")
- After selecting TOT, press the 'MENU' button again (LCD display: "On" , "Off")
- Use the 'UP, DOWN' keys to change activation or deactivation.





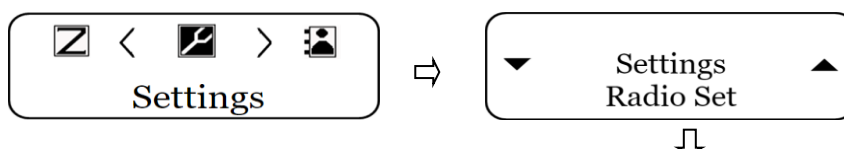
Radio Setting - Blackout(cover and concealment : Tone, LED, LCD Back Light)

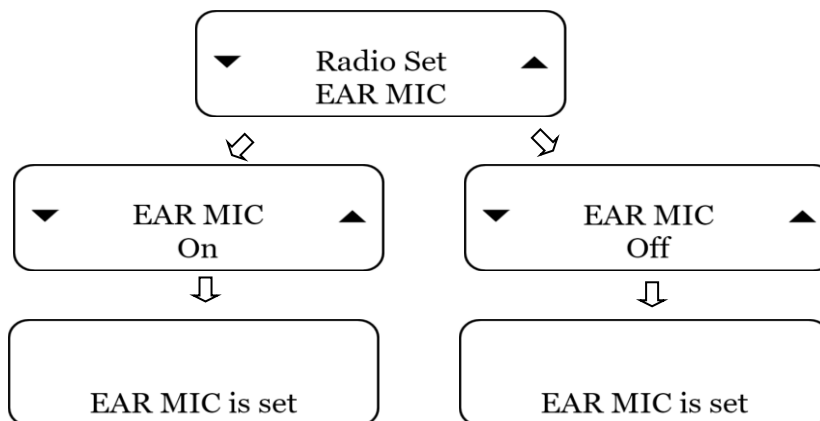
- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "Blackout")
- After selecting blackout, press the 'MENU' button again (LCD display: "On" , "Off")
- Use the 'UP, DOWN' keys to change activation or deactivation.



Radio Setting - EAR MIC

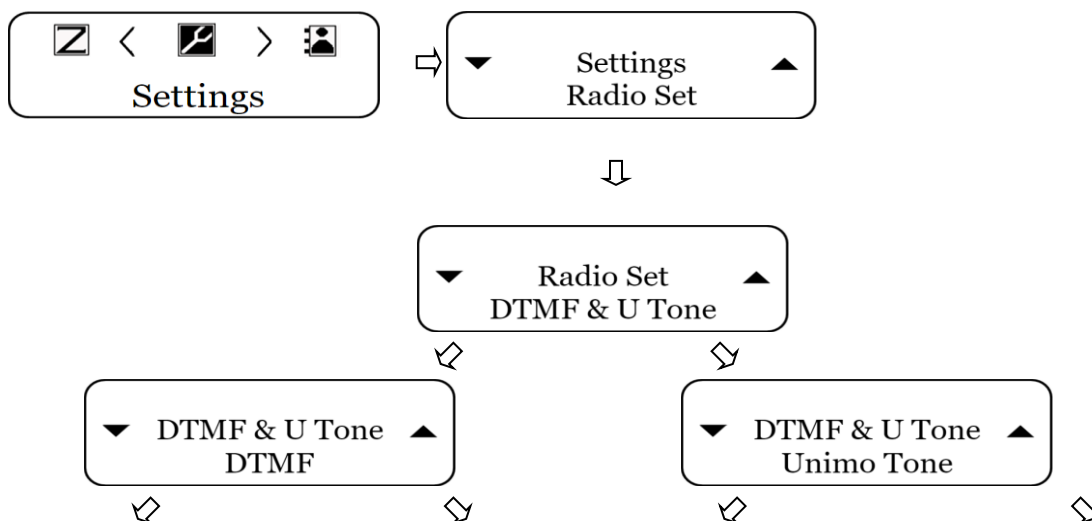
- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "EAR MIC")
- After selecting EAR MIC, press the 'MENU' button again (LCD display: "On" , "Off")
- Use the 'UP, DOWN' keys to change activation or deactivation.

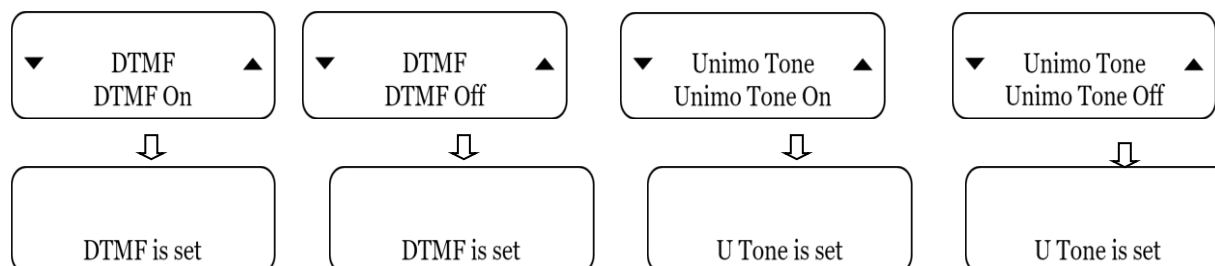




Radio Setting – DTMF & U Tone(UNIMO Tone)

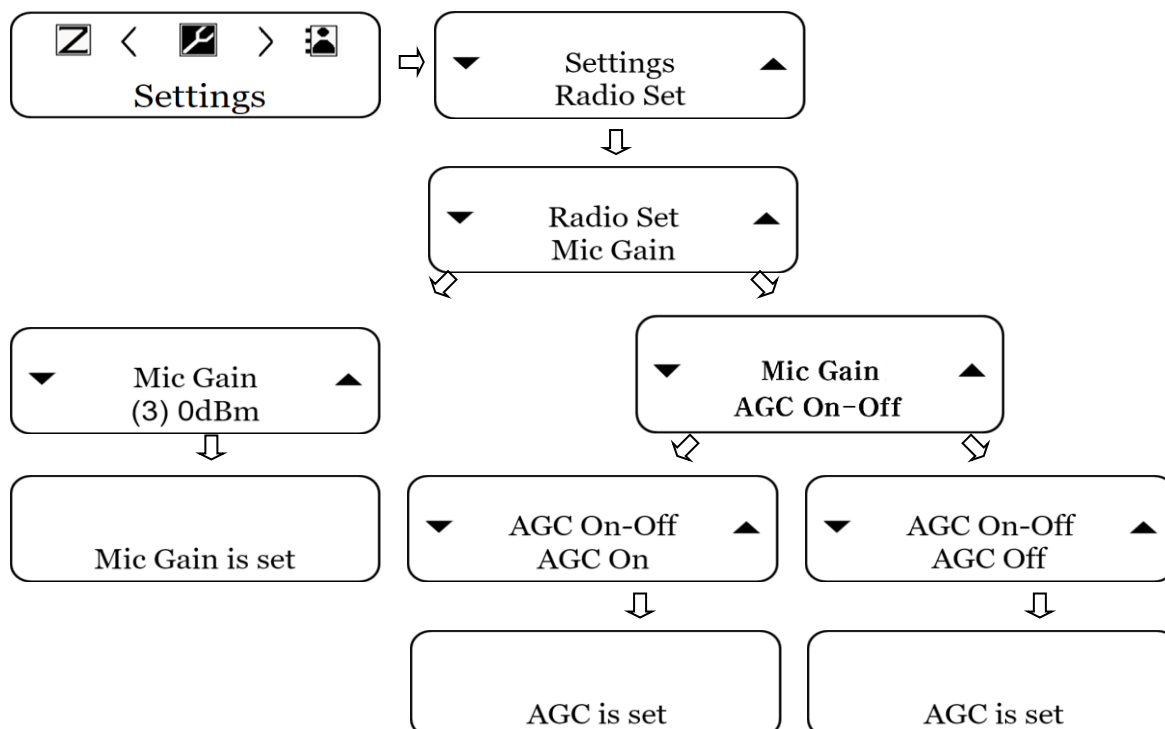
- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'Menu' button again (LCD display: "DTMF & U Tone")
- After selecting DTMF, press the 'Menu' button again (LCD display: "DTMF On" , "DTMF Off")
- Use the 'UP, DOWN' keys to change the function to "DTMF On" or "DTMF Off" .
- If you set DTMF On when setting UNIMO Tone, UNIMO Tone is automatically turned off.
- Select UNIMO Tone and press the 'Menu' button again.
LCD display: "UNIMO Tone On" , "UNIMO Tone Off")
- Use the "UP,DOWN" keys to change the function to "UNIMO Tone On" and "UNIMO Tone Off" .
- If you set UNIMO tone on when setting DTMF, DTMF will be automatically turned off.





Radio Setting – Mic Gain(Auto gain control or Select)

- Press ‘MENU’ button to select the settings. (LCD display: “Radio Set”)
- Press ‘Menu’ button again (LCD display: “Mic Gain”)
- Press ‘MENU’ button again (LCD display: “(1) ~ (5) x dBm” , “AGC On-Off”)
- Use the ‘UP, DOWN’ keys to change to the desired setting.

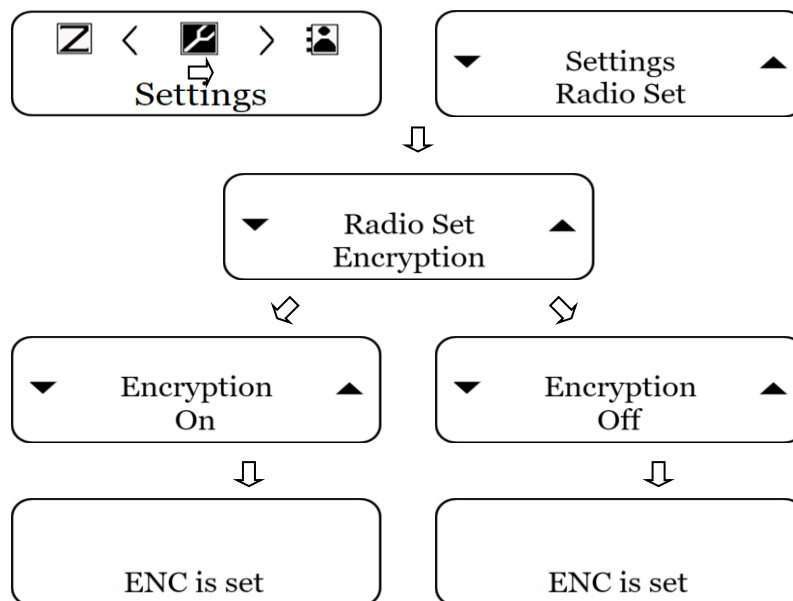


Radio Setting – Encryption (License Option)

- Press ‘MENU’ button to select the settings. (LCD display: “Radio Set”)
- Press ‘MENU’ button again (LCD display: “Encryption”)
- After selecting security management, press the ‘MENU’ button again

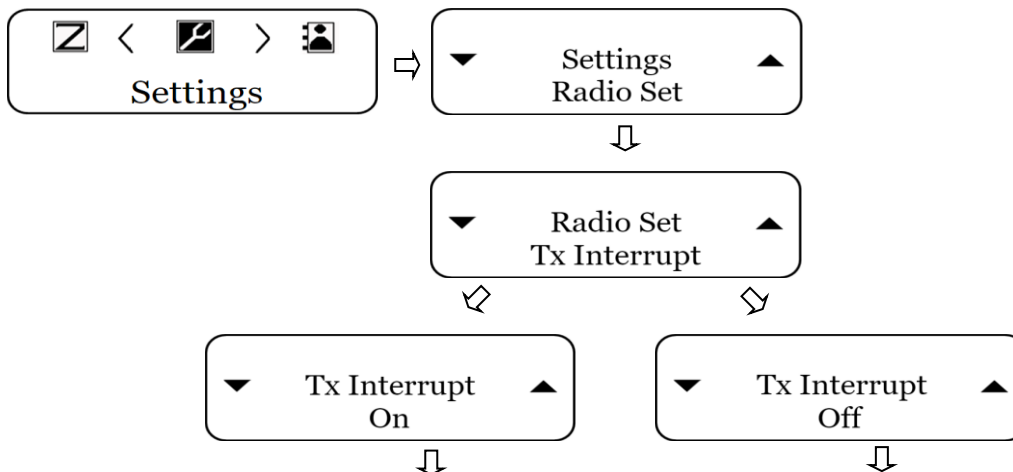
(LCD display: “On” , “Off”)

- Use the ‘UP, DOWN’ keys to change activation or deactivation.



Radio Setting - Tx Interrupt (License Option)

- Press ‘MENU’ button to select the settings. (LCD display: “Radio set”)
- Press ‘MENU’ button again (LCD display: “Tx Interrupt”)
- After selecting intercept, press the ‘MENU’ button again
(LCD display: “On” , “Off”)
- Use the ‘UP, DOWN’ keys to change activation or deactivation.

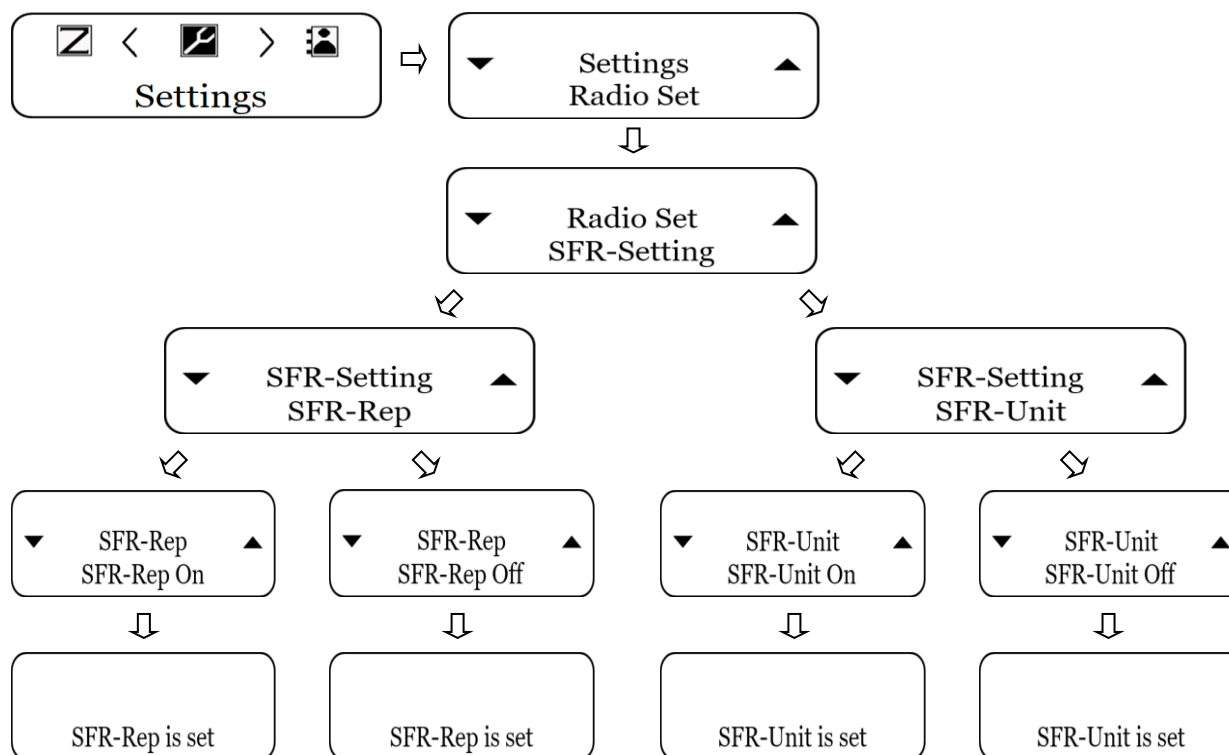


INT is set

INT is set

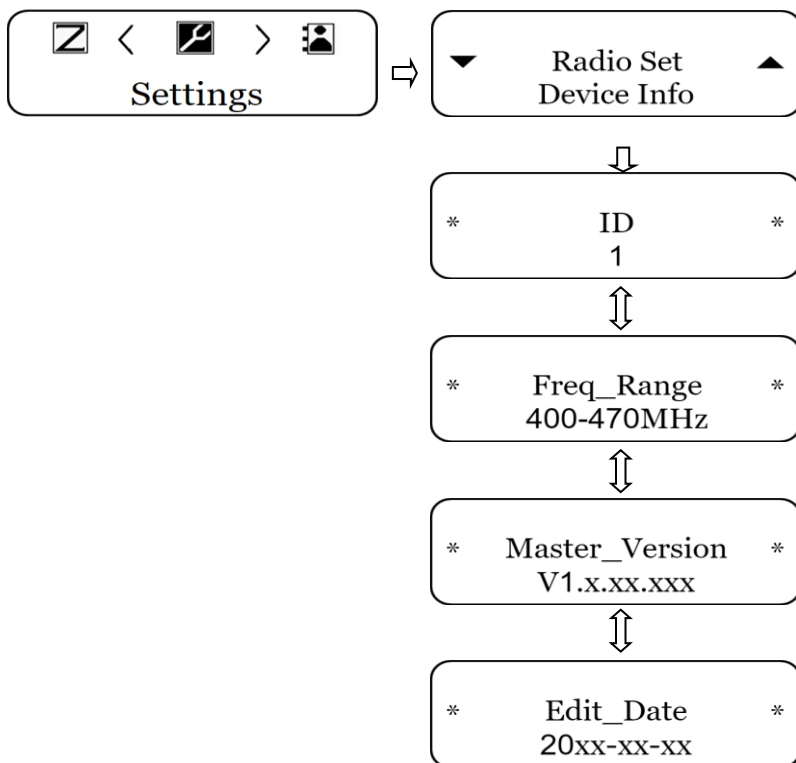
Radio Setting - SFR (License Option)

- Press 'MENU' button to select the settings. (LCD display: "Radio Set")
- Press 'MENU' button again (LCD display: "SFR-Setting")
- Press 'MENU' button again (LCD display: "SFR-Rep" , SFR-Unit")
- Use the 'UP, DOWN' keys to change to the desired function.



Settings - Equipment Version Information

- Press 'MENU' button to select settings. (LCD display: "Device Info")
- Use the 'UP, DOWN' keys to check the ID, frequency range, master version, and modification date.



6 SPECIFICATION

6.1 MODEL: UDR-100E

GENERAL

Dimensions(Less Antenna) H x W x D	102.4 × 53mm × 32.5 mm
Weight	
Radio (less battery)	117.7g
with battery (2,600mAh)	268.2g
Programmable Channels	1024 Channels
Channel Spacing	12.5(Digital)
Power Source	7.5V DC Rechargeable Li-ion 2,600mAh battery pack
Current Drain (maximum)	
Receive Standby mode	70 mA
Receive Full Audio	420 mA
Transmit at 5 Watts	1.7 A

TRANSMITTER

136 ~ 174 MHz
 ±2.5 ppm (-30 to +60℃)
 5 Watts / 2 Watts
 -36dBm<1GHz, -30dBm>1GHz
 40dB
 5% maximum
 +1, -3dB from 6dB per octave pre-emphasis
 Characteristic from 300 ~ 3000Hz

RECEIVER

136 ~ 174 MHz
 .25uV 12 dB SINAD
 .22uV 10 dB SINAD
 60dB
 70dB
 60dB
 40dB
 1 Watt across an 16-ohm load
 Less than 5% at rated output
 +1, -3 dB from 6dB per octave de-emphasis
 Characteristic from 300 ~ 3000Hz

6.2 MODEL: UDR-400E

GENERAL

Dimensions(Less Antenna) H x W x D	102.4 × 53mm × 32.5 mm
Weight	
Radio (less battery)	117.7g
with battery (2600mAH)	268.2g
Programmable Channels	1024 Channels
Channel Spacing	12.5(Digital)
Power Source	7.5V DC Rechargeable Li-ion 2600 mAH battery pack
Current Drain (maximum)	
Receive Standby mode	120 mA
Receive Full Audio	420 mA
Transmit at 4.8 Watts	1.7 A

TRANSMITTER

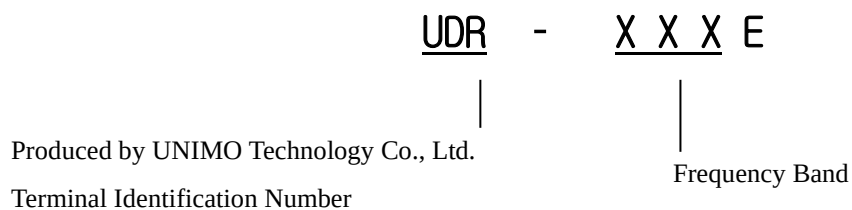
400 ~ 470 MHz
 ±2.5 ppm (-30 to +60℃)
 5 Watts / 2 Watts
 -36dBm<1GHz, -30dBm>1GHz
 40dB
 5% maximum
 +1, -3dB from 6dB per octave pre-emphasis
 Characteristic from 300 ~ 3000Hz

RECEIVER

400 ~ 470 MHz
 .25uV 12 dB SINAD
 .22uV 10 dB SINAD
 60dB
 70dB
 60dB
 40dB
 1 Watt across an 16-ohm load
 Less than 5% at rated output
 +1, -3 dB from 6dB per octave de-emphasis
 Characteristic from 300 ~ 3000Hz

6.3 Model Number

The Model Number System for UDR-Series is as Follows.

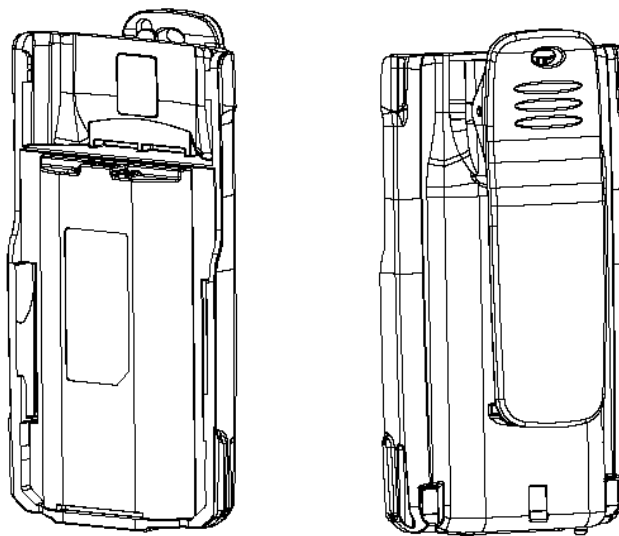


Model Number	Frequency Band
UDR - 100E	136 - 174 MHz
UDR - 400E	400 - 470 MHz

6.4 배터리

The following batteries can be used in UDR-Series terminals.

- . PBC-2260W: High capacity battery (2600mAh Li-ion).
- . It is safe in any environment and provides high capacity and high reliability.
- . If you use the standard charger provided by UNIMO, you can fully utilize the battery's efficiency and service life.



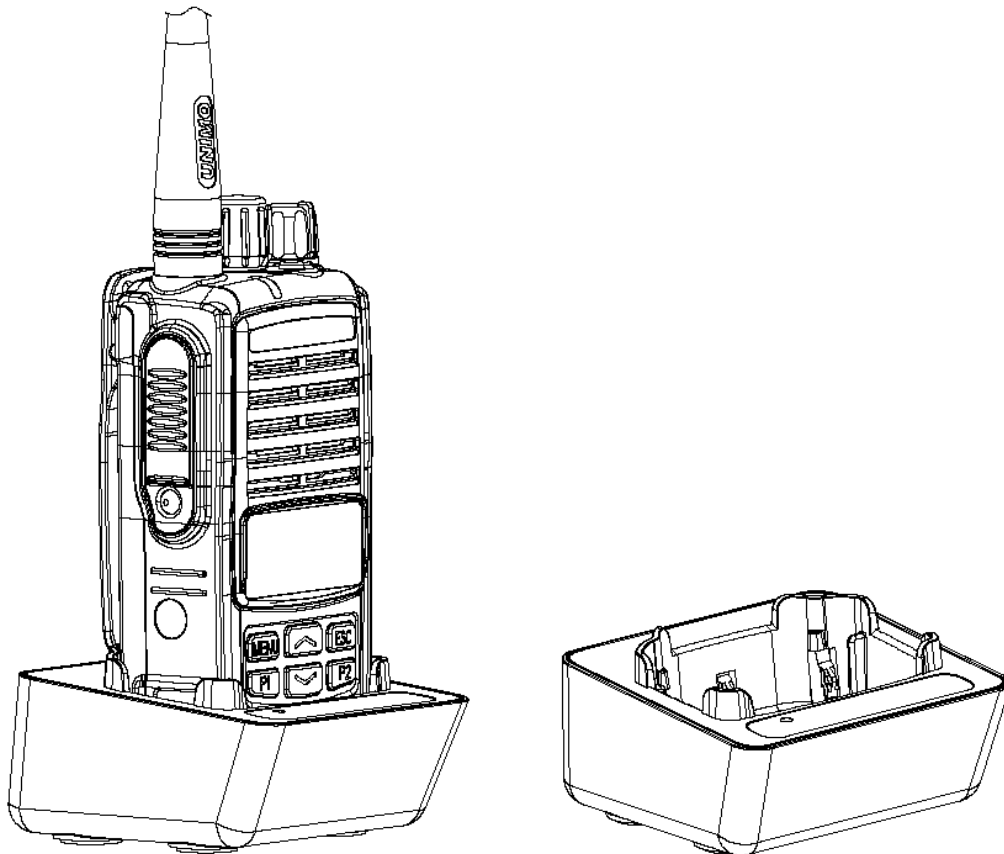
Must use genuine batteries provided by UNIMO Technology Co., Ltd.

6.5 Charger Cradle

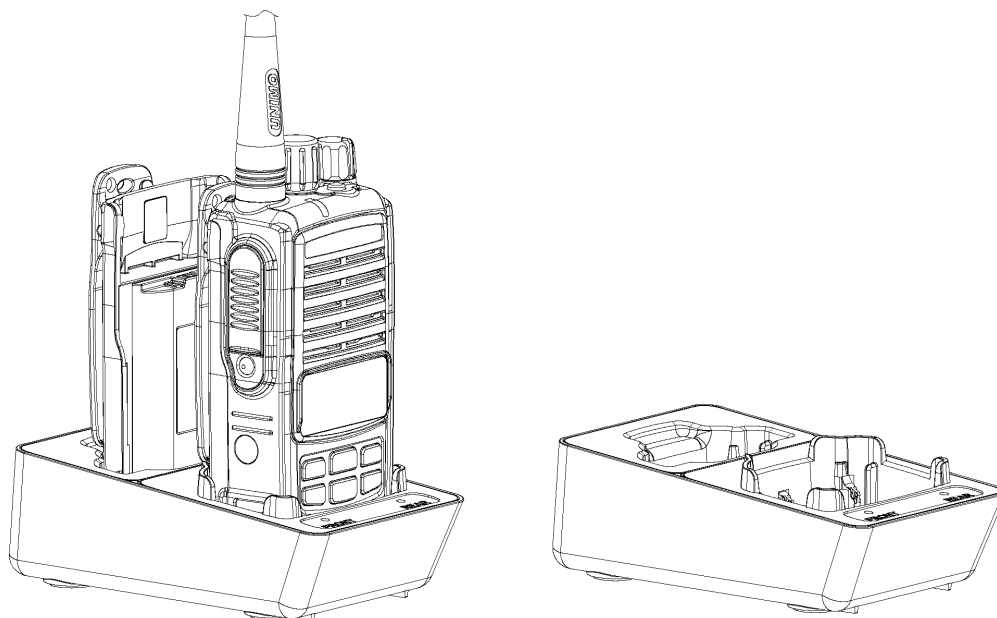
This is a dedicated charger designed to charge the high capacity Li-ion battery (PBC-2260W) provided by UNIMO.

There is a 1-prong charger (CHNZ-260S) and a 2-prong charger (CHNZ-260DK), and we provide 1-prong or 2-prong chargers depending on the requested option.

1-Prong Charger (CHNZ-260S)



2-Prong Charger (CHNZ-260DK)



Charger Specifications

Item	Specifications
Input Voltage	DC 12V $\pm$ 20%
Applicable Battery	PBC-2260W
Charging Time	3시간 30분
Operating Temperature	0 ~ 40℃
Size	135(L) * 87(W) * 50(H)m/m
Charging Current	900 mA

. Address : 6F, Hanshin IT 2nd Tower, 47 Digital-ro 9-gil, Geumcheon-gu, Seoul, Rep ofKorea)

. Tel : +82-2-6710-7000 / Fax : +82-2-6710-7004

. <http://www.unimo.co.kr> / <http://chatterboxglobal.com>

UNIMO *Technology Co.,Ltd.*

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 radiocommunications. 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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Energy Exposure Awareness and Control information and Operational instructions for Occupational Use

Notice: this radio is intended for use in occupational/controlled conditions where users have full knowledge of their exposure and can exercise control over their exposure to meet the occupational limits in FCC and international standards. This radio device is NOT authorized for general population consumer use,

Federal Communication Commission (FCC) Regulations

When this radio device is used as a consequence of employment, the FCC requires users to be fully aware of and able to control their exposure to meet occupational requirements. Exposure awareness can be facilitated by the use of a product label directing users to specific user awareness information. Your radio device has a RF Exposure Product Label. Also, your radio device user manual includes information and operating instructions required to control your RF exposure and satisfy compliance requirements.

Compliance with RF Exposure Standards

Your radio device is designed and tested to comply with a number of national and international standards and guidelines for human exposure to radiofrequency electromagnetic energy. This radio complies with the IEEE (FCC) and ICNIRP exposure limits for occupational/controlled RF exposure environments at operating duty factors of up to 50% talk - 50% listen and is approved for occupational use only. In terms of measuring SAR energy for compliance with these exposure

guidelines, your radio generates measurable RF energy only while it is transmitting (during talking, not when it is receiving (listening or in standby mode).

Your radio device complies with the following RF energy exposure standards and guidelines:

- United States Federal Communications Commission (FCC), Code of Federal Regulations;
- Institute of Electrical and Electronic Engineers (IEEE) C95.1
- International Commission on Non-ionizing Radiation Protection (ICNIRP)

RF Exposure Compliance and Control Guidelines and Operating instructions for Two-Way Radio Operations

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits, always adhere to the following procedures;

- DO NOT remove the RF Exposure Label from the device
- User awareness instructions should accompany device when transferred to other users.

Operational instructions and Training Guidelines

To ensure optimal performance and compliance with the occupational controlled environment RF energy exposure limits in the above standards and guidelines users should transmit no more than 50% of the time and always adhere to the following procedures.

- In front of the face, hold the radio in a vertical position with microphone (and other parts of the radio including the antenna) at least one inch (2.5 centimeters) away from the nose or lips. Keep the radio at a proper distance is important to ensure compliance.
Note: RF exposure decreases with increasing distance from the antenna.
- Body Worn Operation; when worn on the body, always place the radio in an approved clip, holder, or body harness for this product. Using approved body-worn accessories is important because the use of non-approved accessories may result in exposure levels, which exceed the occupational/controlled environment RF exposure limits. Using only approved supplied or replacement antennas, batteries, and audio accessories, use of non-approved antennas, batteries, and wired or wireless accessories may exceed the applicable RF exposure guidelines (IEEE, ICNIRP Or FCC).