

**THANK YOU!**

**We are grateful for your purchase of AWC product. We believe this easy-to-use radio will provide you with dependable and reliable communications. This AWC portable two-way radio is a precision device. Treat it with care, and you will enjoy years of reliable operation.**

**MODELS COVERED IN THIS MANUAL**

**AWR1688: 461.0375-469.5625MHz**

# Contents

**User Safety Information**  
**Product Inspection**  
**Battery Information**  
**Accessory Installation**  
**Getting Started**  
**LCD Display**  
**Features and Operations**  
**Turning On/Off the Radio**  
**Setting the Clock**  
**Setting the Alarm**  
**Setting Channels**  
**Operations In Standby Mode**  
**Entering Menu Mode**  
**Troubleshooting Guide**  
**Care and Cleaning**

## **Product Safety and RF Exposure for Portable Two-Way Radios Compliance with RF Energy Exposure Standards**

**NOTICE:** This radio is intended for use in occupational/controlled applications where users have been made aware of the potential for exposure and can exercise control over their exposure. This radio device is **NOT** authorized for general population, consumer or similar use.

BEFORE USING THIS RADIO, READ THE TRAINING MATERIAL BELOW WHICH CONTAINS IMPORTANT OPERATING INSTRUCTIONS FOR SAFE USAGE AND RF ENERGY AWARENESS AND CONTROL INFORMATION FOR COMPLIANCE WITH RF ENERGY EXPOSURE LIMITS IN APPLICABLE NATIONAL AND INTERNATIONAL STANDARDS.

### **Federal Communication Commission (FCC) Regulations**

The FCC has established limits for safe exposure to radio frequency (RF) emissions from portable two-way radios. The FCC requires manufacturers to demonstrate compliance with RF exposure limits before portable two-way radios can be marketed in the U.S. When two-way radios are approved for occupational/controlled environment exposure limits, the FCC requires users to be fully aware of, and exercise control over, their exposure. Awareness and control of RF exposure can be accomplished by the use of labels, or by education and training through appropriate means, such as information and instructions in user manuals or safety booklets. Your Advanced Wireless two-way radio has an RF exposure information label in the battery compartment. The training material below includes useful information about RF exposure and helpful instructions on how to control your RF exposure.

Your Advanced Wireless two-way radio is designed and tested to comply with a number of national and international standards and guidelines (listed below) regarding human exposure to RF electromagnetic energy. In terms of measuring RF energy for compliance with FCC exposure guidelines, your radio radiates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.

### **Compliance and Control Guidelines and Operating Instructions for Portable Two-Way Radios**

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

- \* Transmit no more than 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) button. To receive calls, release the PTT button. Transmitting 50% of the time or less is important since the radio generates measurable RF energy exposure only when transmitting (in terms of measuring standards compliance).

- \* Hold the radio in a vertical position in front of the face with the microphone positioned at least one inch (2.5 cm) away from the lips. Keeping the radio at the proper distance is important since RF exposure decreases with increasing distance from the antenna.

- \* For body-worn operation, always place the radio in an AWC approved belt-clip or similar accessory that contains no metallic components and provides a minimum separation distance of 0.7 cm between the back of the radio and the user's body. AWC-approved accessories, antennas, and device combinations have been tested and comply with the occupational/controlled environment RF exposure limits. The use of non-AWC approved accessories may result in exposure levels which may exceed the FCC's occupational/controlled environment RF exposure limits.

- \* If you are not using a body-worn accessory and are not using the radio held in front of the face,

ensure the radio is kept a minimum of 0.7 cm from the body when transmitting. Keeping the radio at a proper distance is important since RF exposure decreases with increasing distance from the antenna.

#### **FCC license Information**

Your Advanced Wireless Communications radio operates on communications frequencies which are subject to FCC (Federal Communications Commission) Rules & Regulations. FCC Rules require that all operators using Private Land Mobile radio frequencies obtain a radio license before operating their equipment. Application for license must be made on FCC form 601, and schedules D, E, and G.

**FAX:** Forms can be obtained by fax from the FCC Fax-On-Demand system. Call 1-202-418-0177 from your fax machine and request document number 000600 for the form, schedules, and instructions.

**MAIL:** Forms can be ordered by telephone, and will be sent to you by first class mail. Call the FCC Forms Hotline at 1-800-418-FORM (1-800-418-3676).

**INTERNET:** Form 601 and instructions can be downloaded from the FCC Forms website at:

<http://www.fcc.gov/Forms/Form601/601.html>

**Questions?** Call the FCC for license application questions at 1-888-CALL-FCC (1-888-225-5322).

If you have any questions, call Advanced Wireless Communications:  
1-800-475-5852

#### **Notices to The User**

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.

One or more of the following statements may be applicable:

#### **FCC WARNING**

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

**INFORMATION TO THE DIGITAL DEVICE USER REQUIRED BY THE FCC**

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 generate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer for technical assistance.

**SAFETY INFORMATION:**

Your wireless portable two-way radio has been designed using a low power transmitter.

When the **PTT** switch is pressed, the radio generates radio frequency (RF) electromagnetic energy (EME). This radio is designed to comply with the FCC Report and Order FCC 96-326 (August, 1996).

## User Safety Information

READ THIS IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION BEFORE USING YOUR AWC PORTABLE TWO-WAY RADIO.

- Only qualified technicians are allowed to maintain this product.
- To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any place where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy. When on aircraft, turn off your radio when airline crew instruct you to do so.
- When in vehicles with an airbag, do not place a portable radio in the area over an airbag or in the airbag deployment area.
- Turn off your radio prior to entering any area with a potentially explosive atmosphere. Do not remove, install, or charge batteries in such areas.
- To avoid possible interference with blasting operations, turn off your radio when you are near electrical blasting caps.
- Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with your skin, a minor burn may result.
- Do not expose the radio in direct sunlight for a long time or place it close to a heating source.

## Product Inspection

Thank you for your use of AWC portable two-way radio AWR1688. Before use, you are recommended to inspect the product as follows.

First check the shipping carton for any signs of damage. If any damage has occurred, please contact your dealer immediately. Confirm the supplied product against the packing slip to assure accuracy.

Available Accessories for Standard Packing

Item	Qty. (pcs)
Adaptor	1
Desktop Charger	1
NI-Cd Battery Pack	1
Belt Clip	1
Owner's Manual	1
Strap	1

\* The accessories should be purchased separately when simple packing is used. (Refer to the optional accessories in Page 19.)

## Battery Information

Battery Charging Information

The battery is not charged by the manufacture. Charge the newly purchased battery or out of use for more than 2 months one before use. The battery capacity will be optimum only

after being charged/discharged for two or three times. When the battery power is lower, please charge it or replace it with a new one.

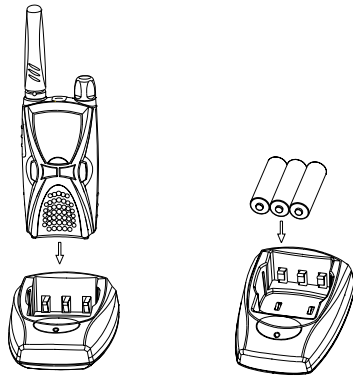
**Notices:**

- Do not short out the battery terminals or dispose of the battery by fire.
- Turn off the radio when charging the battery inside the radio.
- Remove the radio and the battery from the charger when charging cycle is over. Overcharging will shorten the battery life.
- Do not continue charging the battery if it is already fully charged. Or the battery life will be shortened.
- Store the battery in a 25° place. Charging the battery in less than 10° temperature will cause the electrolyte leakage and damage the battery.
- Charging the battery in over 35° temperature will affect the battery capacity.

**Charging Batteries**

**1. Charge the battery inside the radio**

Insert the radio with battery vertically into the charging cup. Charging begins.



**2. Charge the battery pack**

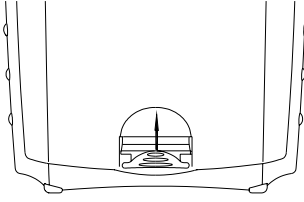
Place the battery pack in the desktop charger. Make sure the “+” and “-” markings of the batteries match the ones in the charger. Charging begins.

**Note:** \* Make sure the radio or the battery connects well with the charger before charging.

\* The LED on the charger will glow red continuously while charging. LED glows green when charging is complete.

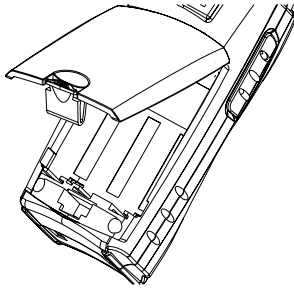
\* The desktop charger used to charge the AA rechargeable batteries should be purchased separately. Or you can insert the radio with AA rechargeable batteries into the charger to charge the batteries.

**Installing Batteries**



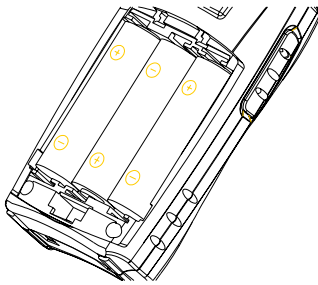
Push the battery latch upwards to loosen the battery door. (See fig.1)

Fig.1



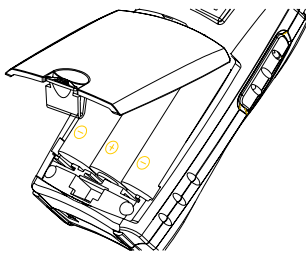
Lift battery door off. (See fig.2)

Fig. 2



Insert the battery into the radio. (See fig.3) Make sure the "+" and "-" markings match the ones in the compartment.

Fig.3



Attach battery door (see fig.4), pressing lightly until latch clicks.

Fig.4

### **Accessory Installation**

#### **Belt Clip**

Push the grooves of the belt clip along those at the top of the radio chassis until they connect well. (See fig.5)



Press the tab between the battery cover and the belt clip along the indicated direction (See fig.6). Slide the belt clip upwards along the radio chassis to detach the clip from the radio. (See fig.7)

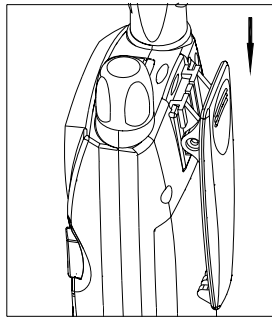


Fig.5

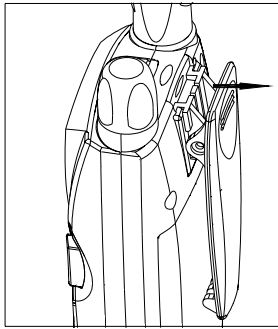


Fig.6

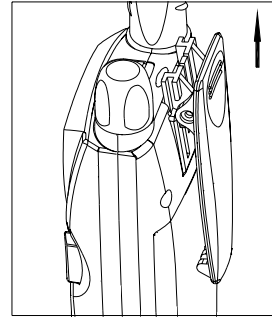
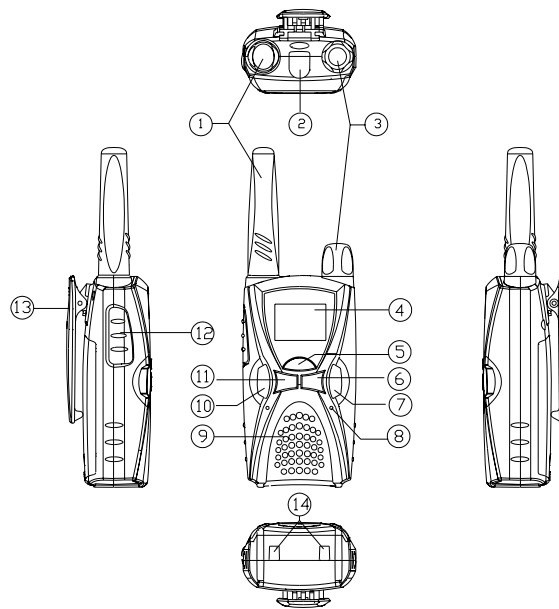



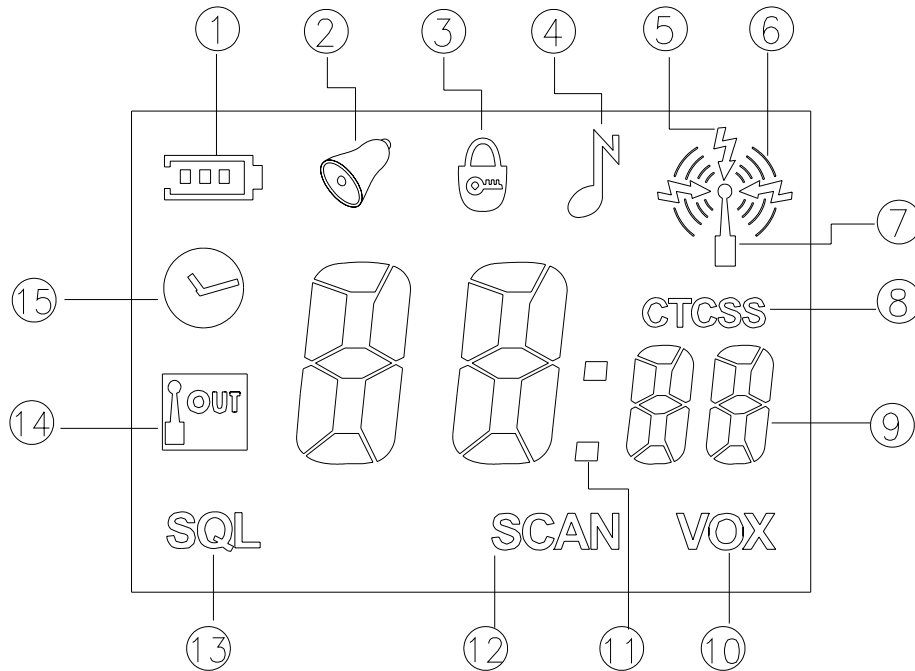
Fig.7

## Getting Started



1. Antenna
2. Speaker/Mic Jack
3. Power/Volume Knob  
Rotate the Power/Volume Knob clockwise until a “click” is heard to turn the radio on, fully counter clockwise to turn the radio off. When the radio is on, turn the knob to adjust volume.
4. LCD Display  
Indicate operation status of the radio. (Refer to “LCD Display” for details)
5. MENU key  
Used to enter the menus.
6. “-” key  
Used to select the channel downwards or change menu settings.
7. MON key  
Press MON key to monitor the selected channel for activity.
8. MIC
9. Speaker
10. “”key (CALL key)  
If Call feature is enabled, briefly press (less than one second) the CALL key to transmit a call signal or save the current setting and go to standby mode; Press and hold the CALL key in standby mode to switch between keypad lock and unlock.
11. “+” key  
Used to select the channel upwards or change menu settings.
12. PTT button  
Press and hold PTT, radio operates in transmit mode. Release PTT, radio returns to receive mode. In channel setting mode, press PTT key to go back to “select desired channel” menu.
13. Belt Clip  
Used to clip radio on your belt.
14. Charging Connectors  
Connect the charging connectors with that on the charger to begin charging.

## LCD Display



1. Battery Meter, used to indicate the battery power.
2. Appears when setting the Alarm or the Alarm is on; Flashes when the Alarm rings.
3. Appears when keypad lock is on;
4. Appears when setting the call tone;
5. Appears when receiving signals from the selected channel;
6. Appears when transmitting;
7. Appears when transmitting/receiving is enabled;
8. Indicate that the number on the LCD displays CTCSS and channel number. The number under it indicates current CTCSS;
9. Two large "8" and two small "8" displays the current channel number, CTCSS, frequency, time or the status of current setting;
10. Appears when setting VOX or VOX feature is on;
11. Appears between hour and minute when LCD displays time;
12. Appears when scanning channel or current channel is scan-item in "select desired channel" menu;
13. Appears when setting squelch level;
14. Communication Range Alarm, flashes when your companion are out of range; appears when setting communication range alarm or communication range alarm is on.
15. Appears when setting the clock.

## Features and Operations

### Turning On/Off the Radio

Turn On: Rotate the Power/Volume Knob clockwise until a click is heard;

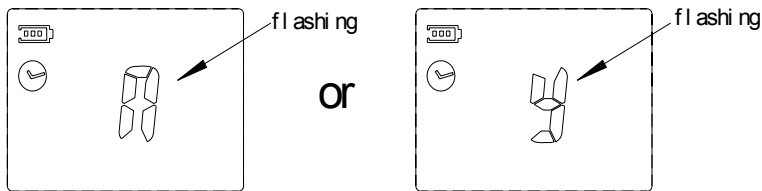
Turn Off: Rotate the Power/Volume Knob counter clockwise until a click is heard.

### Setting the Clock

Used to set display mode in standby or set the current time.

#### Setting the Clock Display

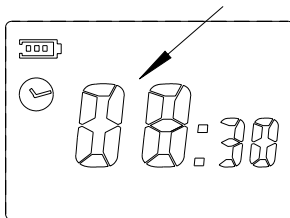
Press and hold "🎵" key when turning the radio on to enter the Clock Display setting menu.



1. Press "+" / "-" key to turn the Clock Display on/off in standby mode. "🕒" appears indicating that LCD displays clock in standby mode. And "📻" appears indicating that LCD displays channel number.
2. Press MENU key to enter the hour setting menu; or press "🎵" key to go to standby mode.

#### Setting the Hour

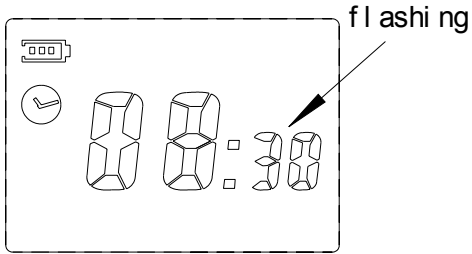
Enter the hour setting menu,



1. Press "+" / "-" key to set the hour;
2. Press MENU key to enter minute setting menu; or press "🎵" key to go to standby mode.

#### Setting the Minute

Enter the minute setting menu



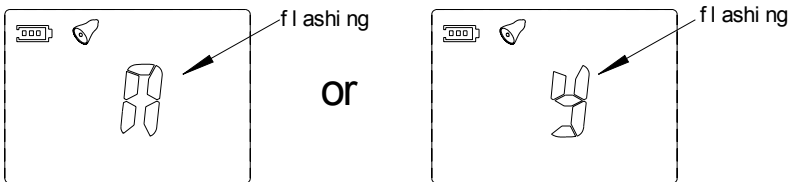
1. Press “+” /“-” key to set the minute;
2. Press MENU key to enter Alarm setting menu; or press “🎵” key to go to standby mode.

### Setting the Alarm

When the radio is on, the alarm rings and “🔊” flashes at the set time. Stop the ringing by pressing any button and “🔊” stops flashing at the same time.

### Turning On/Off the Alarm

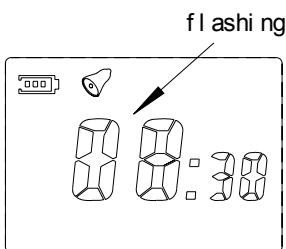
Enter the Alarm Setting Menu



1. Press “+”/“-” key to turn the Alarm on/off. “1” on the LCD means turning the alarm on and “0” means off.
2. Press MENU key to enter alarm hour setting menu or press “🎵” key to go to standby mode.

### Setting Alarm Hour

Enter alarm hour setting menu

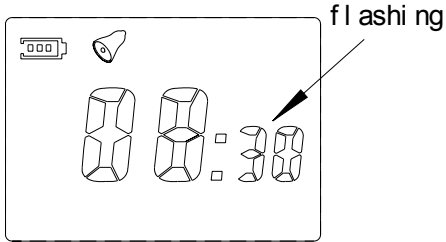



1. Press “+” /“-” key to set alarm hour;
2. Press MENU key to enter alarm minute setting menu; or press “🎵” key to go to

standby mode.


### Setting Alarm Minute

Enter alarm minute setting menu



1. Press “+”/“-” key to set alarm minute;
2. Press MENU key to enter clock display setting menu; or press “” key to go to standby mode.




### Setting Channels

Turn the power on while holding down “” key and PTT key simultaneously. The radio is now in channel setting mode. Then you can set the frequency and CTCSS of per channel and the number of channels available.

Select desired channel

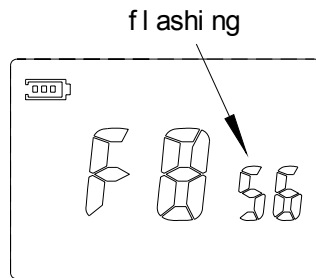
Select your desired channel to change the frequency and CTCSS. LCD displays frequency and CTCSS of current channel alternately.



1. Press “+”/“-” key to select your desired channel.
2. Press MON key to set the selected channel as scan-item or non scan-item. When the current channel is scan-item, LCD displays “”. “” icon will not appear on the LCD if current channel is set as non scan-item.
3. Press MENU key to enter channel frequency setting menu.
4. Press “” or PTT key to go to standby mode.

Setting channel frequency

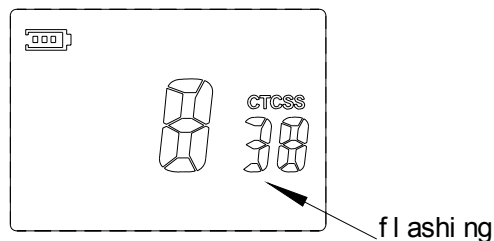
There are 56 frequencies available. They are indicated as frequency number from 01 to 56. (Please refer to the “frequency chart” for more details). Frequency number flashes when the radio is in channel frequency setting mode.



1. Press “+”/“-” key to select the frequency of current channel.
2. Press PTT, the radio goes back to “select desired channel” menu.
3. Press MENU key to enter “setting CTCSS” menu.
4. Press “🎵” key to go to standby mode.

#### Setting CTCSS

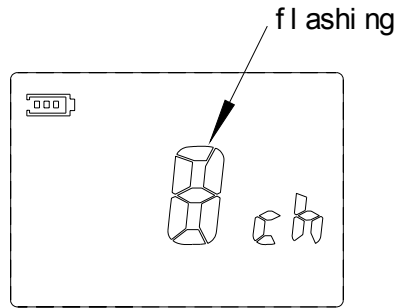
CTCSS feature is used to avoid receiving unwanted signals from the same frequency. When CTCSS is 00, you can receive all signals from the same frequency. CTCSS number flashes in CTCSS setting menu.




1. Press “+” /“-” key to select CTCSS of current channel.
2. Press PTT, the radio goes back to “select desired channel” menu.
3. Press MENU key to enter “setting number of available channels ” menu.
4. Press “🎵” key to go to standby mode.

#### Setting number of available channels

There are at most 8 channels available. You can also decrease the number of available channels. The number flashes in this menu.




1. Press “+”/“-” key to set the number of available channels.
2. Press PTT or MENU key, the radio goes back to “select desired channel” menu.
3. Press “” key to go to standby mode.

**Notes:**

1. In the above menu, the radio will save the current setting and go to standby mode if no button is pressed in one minute.
2. In the following operations, you can press PTT or PTT of the audio accessory to transmit, press MON to monitor or receive signals from the current channel. When the radio is in “setting the clock”, “setting the alarm” and “setting channels” menu, these features will be disabled.

**Operations In Standby Mode**

When turn the power on without holding any key or press “” key in menu mode, the radio enters standby mode.

**Setting the Channel**


When LCD displays channel number in standby mode, briefly press “+” /“-” key to increase/decrease a channel. Press and hold “+”/“-” key to scroll channels in ascending/descending order.


When LCD displays clock in standby mode, press “+”/“-” key for the first time to return to channel number display. Press again to change channel number.

**Transmit a Call**

If call feature is enabled in call tone setting menu, briefly press “” key to transmit a call.

**To Talk**

Press and hold PTT to enter transmitting mode, and “” appears on the LCD. Speak into

the radio to talk. Release PTT to return to receive mode and “” disappears. If roger tone is enabled, your partner will hear roger tone when conversation is over.

You can disable/enable roger tone by turning the power on while holding down PTT.

Turn the power on while holding down PTT, two beeps sound after power on tone indicating



that roger tone is enabled and one beep sounds indicating disabled.

#### Monitor

This feature is used to receive weak signals, but will be interfered in by other noises and/or unwanted signals.

Press MON key to enter monitor mode. Release MON key in five seconds to go to standby mode. Press MON key for more than five seconds, the radio will monitor automatically after a beep. Press again to return to standby mode.

#### Using PTT On External Earphone To Talk

This feature enables you to talk without holding the radio.



Insert plug of earphone (with external PTT) into the accessory jack of the radio. Put on the earphone and press PTT. Speak into the microphone to talk.

#### Using VOX To Talk

This feature enables you to talk hands-free.

Insert plug of VOX accessory into the accessory jack of the radio, set the VOX Sensitivity Level in the VOX setting menu, and then speak into the microphone to talk. When transmitting using VOX feature, you will hear yourself talking through the accessory speaker.

#### Keypad Lock/Unlock

When keypad lock is on, “+” /“-“ and MENU key are all locked to avoid accidental operations that may change your selected channel and menu settings. Press”  ” more than one second to switch between keypad lock and unlock.”  ” appears when keypad lock is turned on and disappears when off.

### Entering Menu Mode

In the following setting, the radio will save the setting and go to standby mode if no button is pressed in fifteen seconds, unless the radio is scanning.

#### Channel Scanning

By using channel scanning, you can detect channels that are set as scan items in “select desired channel” menu for activity. The radio will stay on the active channel when detecting a signal from the same frequency and CTCSS.

Briefly press MENU key in standby mode to enter channel scanning menu and “ **SCAN** ” appears on the LCD. Continue to press MENU key to enter the next setting menus.

1. Press “+”/“-“ key to scan upwards/ downwards.
2. When the radio detects activity, it will lock on to that channel for five seconds. If no key is pressed in five seconds, scan resumes. You can press “+” to scroll through the active channel and resume scanning upwards or press “-“ to scan downwards.
3. Press PTT button during scan to transmit on the last active channel; release PTT button to receive on the same channel. If no signal is received within five seconds and neither PTT nor MON is pressed, scan resumes.

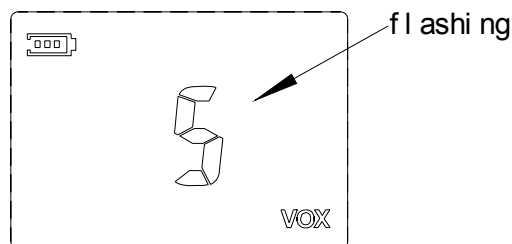
4. Press MON during scan to monitor on the last active channel. Release MON in five seconds to receive on the same channel. Press MON key for more than five seconds, the radio will monitor automatically after a beep. Press again to receive on the same channel. If no signal is received in five seconds and neither PTT nor MON is pressed, scan resumes.
5. Press MENU during scan, the radio returns to the channel before scanning and enters VOX setting menu.
6. Press "J" during scan, the radio returns to standby mode with the channel before scanning as the selected channel.

#### Setting VOX

When VOX feature is enabled, insert audio accessory into accessory jack in standby mode.

LCD displays "VOX". To transmit, speak into accessory microphone.

Press MENU key until "VOX" appears.



1. Press "+"/ "-" key to enable/disable VOX and set sensitivity level. "A" appears if VOX is disabled. There are five sensitivity levels. The higher the sensitivity level, the lower audio needed to trigger a transmission. Higher sensitivity level enhanced the possibility of unintended noises triggering a transmission.

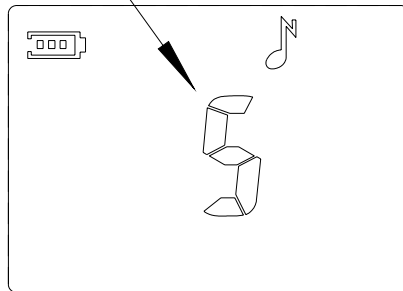
2. Press MENU key to enter call tone setting menu or press "J" key to return to standby mode.

#### Setting the Call Tones

In this menu, you may disable call tone or choose from five distinct call tones.


Press MENU key until "J" appears.

f l a s h i n g




1. Press “+” / “-” key to scroll through the available call tones or disable call tones. You may choose from 1-5. The radio plays a sample of each call tone as you scroll through them.

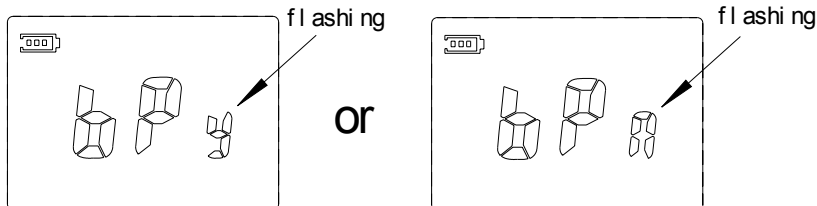
If call tone is disabled, “**fl**” appears.


2. Press MENU key to enter button beeps setting menu or press “” key to return to standby mode.

#### Turning On/Off Button Beeps

This feature is used to enable/disable button beeps. When button beeps is on, every time you press the MENU key, “” key, MON key, “+” key and “-” key, it beeps unless you turn button beeps off.

Press MENU key until “**bP**” appears.

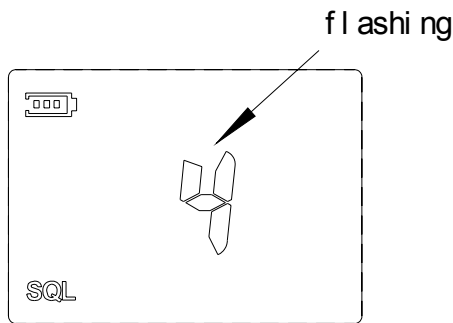


1. Press “+” / “-” key to enable/disable button beeps. “**y**” means on and “**fl**” means off.
2. Press MENU key to enter squelch level setting menu or press “” key to return to standby mode.

#### Setting Squelch Level

Higher squelch level makes it harder for the radio to receive weak signals and avoid interference of noises and/or unwanted signals; if squelch level is low, the radio will be apt to receive weak signals and be interfered in by noises and/or unwanted signals.

Press MENU key until “SQL” appears.



1. Press “+”/ “-“ key to select squelch level. LCD displays selected level.
2. Press MENU key to enter communication range alarm setting menu or press “” to return to standby mode.

#### Turning the Communication Range Alarm On/Off

When the Communication Range Alarm is enabled, the Communication Range Alarm icon “” will flash and the radio beeps when you are almost out of range. The beeps and flashing icon continue until you are within the range again or turn the Communication Range Alarm off.

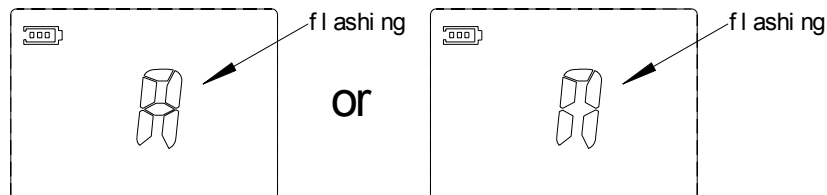
Press MENU key until “” appears on the LCD.

1. Press “+”/ “-“ key to set Communication Range Alarm. “” means turning the Communication Range Alarm on and “” means off.
2. Press MENU key to enter Battery Type setting menu; or press “” key to return to standby mode.


#### Setting the Battery Type

Setting the battery type allows the battery meter “” to recognize and properly display the power usage.

Press MENU key until the following menu (See the figure) appears.



1. Press “+”/ “-“ key to set the battery type. Your choice will appear on the LCD. “”

means rechargeable battery and “” means non-rechargeable one.

2. Press MENU or “” key to return to standby mode.

Frequency Chart:

Frequency No.	Frequency (MHz)	Frequency No.	Frequency (MHz)
1	464.5000	29	462.9125
2	464.5500	30	464.4875
3	467.7625	31	464.5125
4	467.8125	32	464.5375
5	467.8500	33	464.5625
6	467.8750	34	466.0375
7	467.9000	35	466.0625
8	467.9250	36	466.0875
9	461.0375	37	466.1125
10	461.0625	38	466.1375
11	461.0875	39	466.1625
12	461.1125	40	466.1875
13	461.1375	41	466.2125
14	461.1625	42	466.2375
15	461.1875	43	466.2625
16	461.2125	44	466.2875
17	461.2375	45	466.3125
18	461.2625	46	466.3375
19	461.2875	47	466.3625
20	461.3125	48	467.7875
21	461.3375	49	467.8375
22	461.3625	50	467.8625
23	462.7625	51	467.8875
24	462.7875	52	467.9125
25	462.8125	53	469.4875
26	462.8375	54	469.5125
27	462.8625	55	469.5375
28	462.8875	56	469.5625

## Troubleshooting Guide

Trouble	Solution
No power	<ul style="list-style-type: none"><li>● Battery may be used up. Please replace or recharge the battery.</li><li>● Battery may not be attached properly. Remove the battery and attach again.</li></ul>
Power doesn't last long even if fully charged.	<ul style="list-style-type: none"><li>● Battery life cycle is over. Please replace it with a new one.</li></ul>
Can't talk to or hear other users in your group.	<ul style="list-style-type: none"><li>● Make sure you are using the same frequency and CTCSS tone as other users in your group.</li><li>● Other users may be too far away. Make sure you are within the communication range.</li></ul>
Voice of other users (non-group user) appears on the channel.	<ul style="list-style-type: none"><li>● Please change your CTCSS tone. Be sure to change the tone on all the other radios in your group.</li></ul>

## Care and Cleaning

- ◇ Do not carry your radio by the antenna or remote microphone;
- ◇ Wipe the battery contacts with a lint-free cloth to remove dirt, grease, or other material that may prevent good electrical connection;
- ◇ When not in use, keep the accessory jacks covered with the protective caps;
- ◇ Clean the shell, controls and keys of your radio with neutral detergent and warm water after a long period of usage. Avoid using strong chemicals.