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.

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 use the radio with the AWC Belt-Clip Part No.: 420855203393. 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 that exceed the RF exposure limits for the occupational/controlled environment.

* 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

Before filling out your Form 601 application Technical Data section, you must decide which frequency (or frequencies) you will operate on. Refer to the frequency chart on page 24.

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).

CONTENTS

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 Accessory

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

Battery Information

Battery Charging Information

The battery is not charged by the manufactory. Charge the newly purchased battery or out of use for more than 2 months battery 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.

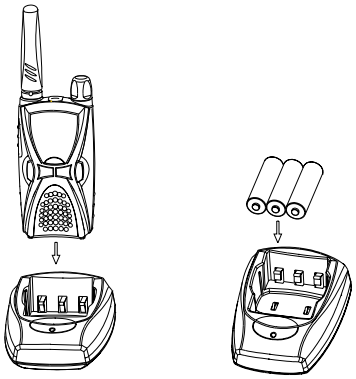
Notices:

- 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 place about 25□. 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

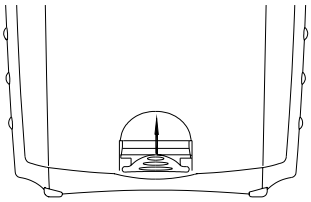
   Place the battery pack in the desktop charger. Make sure the “+” and “–“ markings of the batteries match the ones in the charger. Charging begins.

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.

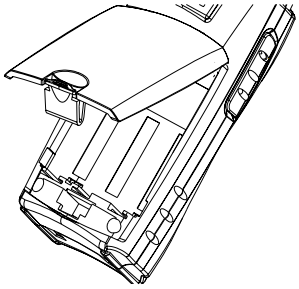
* The desktop charger used to charge the AA rechargeable batteries should be purchased separately. Or you can insert the radio with AA rechargeable batteries into the charger to charge the batteries.

Installing Batteries



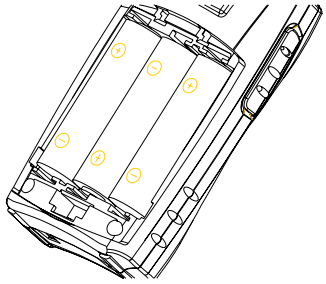
Push the battery latch upwards to loosen the battery door. (See fig.1)

Fig.1



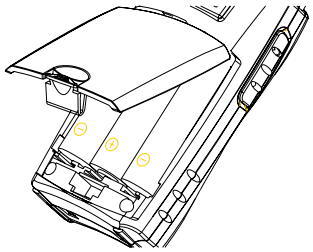
Lift battery door off. (See fig.2)

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)

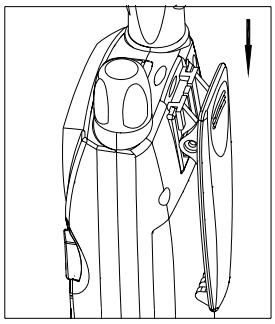


Fig.5

Fig.6

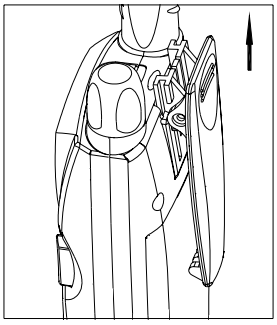
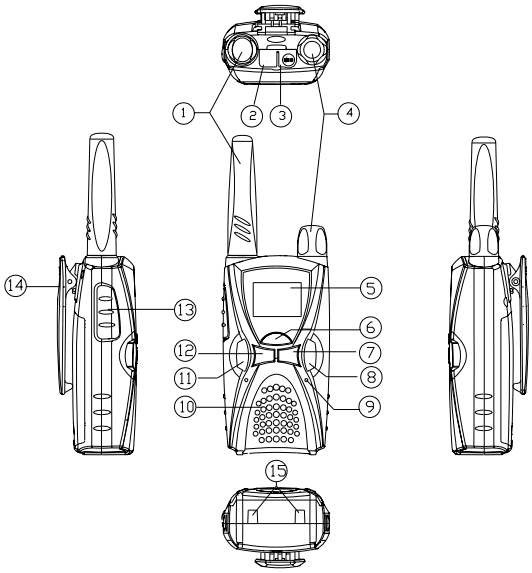


Fig.7

Getting Started



1. Antenna
2. Programming Jack
3. Speaker/Mic Jack
4. 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.

5. LCD Display

Indicate operation status of the radio. (Refer to “LCD Display” for details)

6. MENU key

In standby mode, briefly press MENU key to display current channel information and hold down this key to enter menu mode. During setting, press MENU key to save and switch to the next setting.

7. “-” key

Used to select the channel/interference eliminator code downwards or change menu settings.

8. MON key

In standby mode, briefly press MON key to begin channel scanning; hold down MON key to begin monitoring.

9. MIC
10. Speaker
11. “ ♪ ”key (CALL key)

If Call feature is enabled, briefly press the CALL key to transmit a call signal; During setting, press CALL key to save and return to the first setting or exit; Hold down the CALL key to lock/unlock keypad.

12. “+” key

Used to select the channel/interference eliminator code upwards or change menu settings.

13. PTT button

Press and hold PTT, radio operates in transmit mode. Release PTT, radio returns to receive mode.

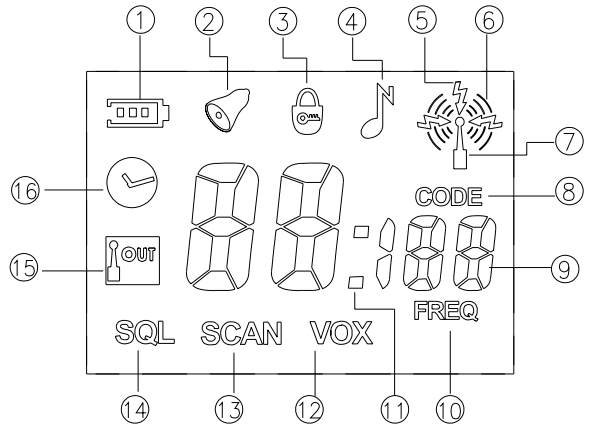
14. Belt-Clip

Used to clip radio on your belt.

15. 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 Clock or the Alarm Clock is on; Flashes when the Alarm Clock 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 interference eliminator code and channel number. The number under it indicates current interference eliminator code.
9. Two large “8”, a small “1” and two small “8” display the current channel number, interference eliminator code, frequency number, time or the status of current setting.
10. Indicate that the number on the LCD displays channel number and frequency number. The number above the icon indicates the frequency number of current channel.
11. Appears between hour and minute when LCD displays clock.
12. Appears when setting VOX or VOX feature is enabled.
13. Appears when scanning channel or setting channel scan add/delete.
14. Appears when setting squelch level.
15. Communication Range Alarm, flashes when your companion are out of range; appears when setting communication range alarm or communication range alarm is enabled.
16. Appears when setting the clock.

Features and Operations

Basic Operation

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 fully counter clockwise.

Operations under Radio Modes

Conventional Mode

Turn the power on to enter conventional mode.
In conventional mode, if LCD displays channel number, the display is shown as figure 1-1; if LCD displays clock, the display is shown as figure 1-2.

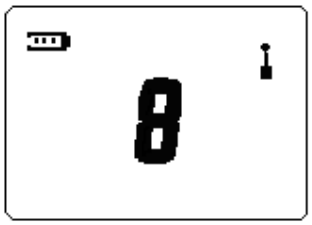


Figure1-1: LCD displays channel number

Figure1-2: LCD displays clock

For example, if LCD displays channel number, you can operate as following:

1) Transmit and Receive

Press and hold PTT to enter transmitting mode, and "" appears on the LCD (See figure2-1). Speak into the radio to talk. Release PTT to return to receive mode and "" disappears.

The receiving icon "" appears when the selected channel receives a signal (See figure2-2), the speaker is opened and you can hear the voice. If interference eliminator code is set on the channel, you will only hear the voice of the user with the same interference eliminator code as you.

You can talk without holding the radio by using PTT On external earphone.

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.

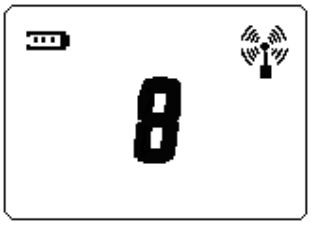


Figure2-1: Transmit

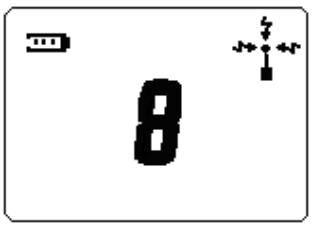


Figure2-2: Receive

2) Call Tone

The call tone feature is valid only when you have set a call tone in the menu mode. You can send a call tone to your partner before begin talking with him/her. Briefly press " " key to transmit a call. The call tone will sound when you receive a call.

This feature can be enabled/disabled by the dealer.

3) VOX Feature

This feature is valid only when the radio is connected with external audio accessory.

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

Press PTT key on the radio to disable VOX feature. This feature is enabled when you turn on the power next time.

This feature can be enabled/disabled by the dealer.

4) Clock Display

The clock display feature is valid only when you have selected clock display in the clock and alarm clock setting mode.

When you turn on the power for the first time, the initial value of the clock is "00:00" (See figure 3-1). The clock will work after you set the hour and minute. The icon ":" between the hour and minute continues to display when the clock stops. When the clock begins to run, the icon ":" flashes.

This feature can be enabled/disabled by the dealer.

Figure3-1: Clock Display "00:00"

5) Alarm Clock

The alarm clock is valid only when you have enabled alarm clock in the clock and alarm clock setting mode.

In conventional mode, the alarm rings and " " icon flashes at the set time. Stop the ringing by pressing any button and " " icon stops flashing at the same time.

This feature can be enabled/disabled by the dealer.

6) Channel Select

In conventional mode, pressing "+" / "-" key can select your wanted channel. The maximum number you can select is decided by the number of available channels and the minimum number is 1. Holding down "+" / "-" key can increase/decrease the channel number continuously.

7) Keypad Lock

In conventional mode, holding down " " key can lock/unlock keypad. When keypad lock is on, " " icon appears on the display and "+" / "-" and MON key are invalid. Holding

down MENU key and briefly pressing “ ♪ ” key are both invalid. The user can transmit/receive through PTT key, briefly press MENU key to display channel information, or hold down “ ♪ ” key to unlock the keypad.

This feature can be enabled/disabled by the dealer.

8) Channel Information Display

In clock display or channel number display mode, briefly press MENU key, LCD will display channel number, frequency number and interference eliminator code of current channel. For example, if LCD displays clock in standby mode (See figure4-1), and then:

Briefly press MENU key, LCD will display frequency number of current channel at bottom right corner. “FREQ” icon glows at the same time. LCD switches to interference eliminator code display automatically after 1 second and “CODE” icon glows at the same time. LCD returns to display clock after another 1 second.

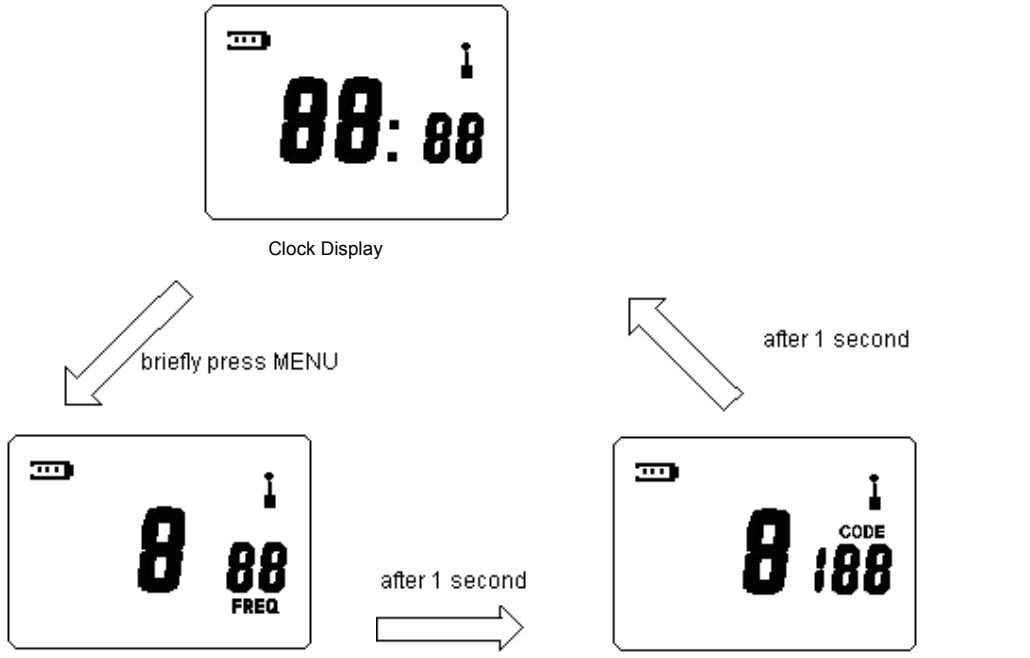
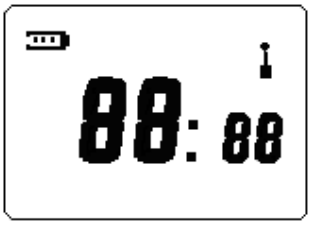
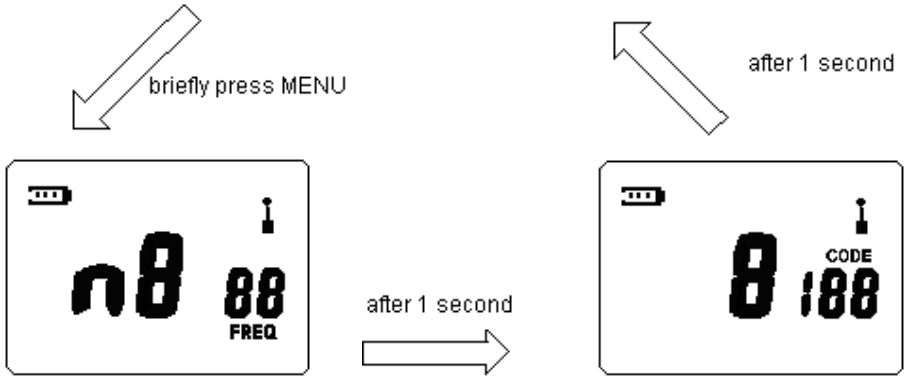


Figure4-1: Channel Information Display

If the frequency indicated by the frequency number is changed through PC programming software, LCD will display channel number and frequency number with an “n” in front of the channel number indicating non-standard frequency number. (See figure5-1)





Channel Number and Non-standard Frequency Number Display Channel Number and Interference Eliminator Code Display

Figure5-1: Channel Information Display

9) Channel Scan

Briefly press MON key in conventional mode to begin channel scanning. (See figure6-1) LCD displays “SCAN” icon, channel number and frequency number of the channel. The radio will stay on the active channel when detecting a valid signal and then continue to scan upwards. You can press “+” / “-” to scroll through the active channel and resume scanning upwards.

Press PTT during scanning to transmit on the selected channel before scanning and LCD displays channel information; release PTT to receive on the same channel and then return to scan mode.

If the set time is due during scan, the radio stops scanning and the alarm rings. Scan resumes until the sound stops.

Briefly press MON key to stop scanning.

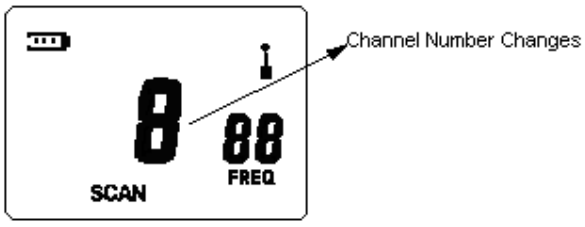


Figure6-1: Channel Scanning

10) Monitor

Press and hold MON key in conventional mode to begin monitoring.

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

Press MON key again to stop monitoring.

11) Low Battery Detect and Battery Power Indication

The radio will detect battery voltage periodically and indicate the battery power. The battery power indicator on the top left corner of LCD will flash when the battery power is low. You should recharge the battery or replace it with a fresh one.

12) Communication Range Alarm

The feature is valid only when you have enabled communication range alarm feature in the menu mode.

The communication range alarm icon “  ” flashes and the radio beeps when you are almost out of range during receiving. The beeps and flashing icon continue until you are

within the range again or turn the communication range alarm off.
This feature can be enabled/disabled by the dealer.
13) Battery Save
In conventional mode, when no activity is on channel and no key is pressed for 10 seconds, the battery save feature will be turned on automatically.
This feature can be enabled/disabled by the dealer.

Clock and Alarm Clock Setting Mode

Turn the power on while holding down CALL and PTT key simultaneously. The radio enters clock and alarm clock setting mode after 2 seconds.
In this mode, press "+" / "-" key to change setting; press MENU key to save and switch to the next setting; press " " key to save and return to the first setting, if the current setting is the first setting, press " " key to save and exit.

The current setting will flash when entering this mode. You can make settings as following:
1) Set the display mode in standby mode (clock or channel number)
When setting the display mode in standby mode, clock icon appears on the left of the LCD and the character "y" or "n" flashes (See figure7-1 and 7-2). "y" indicates that LCD displays clock in standby mode and "n" indicates channel number. Press "+" / "-" key to select from "y" and "n". Press MENU key to confirm the setting and switch to the next setting. Press " " key to save the setting and exit clock and alarm clock setting mode.

The factory default setting is to display channel number in standby mode.

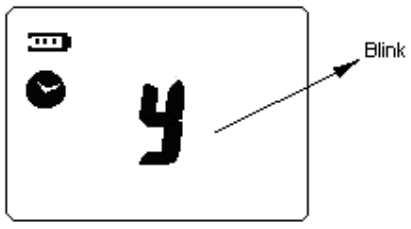


Figure7-1: Clock Display Setting

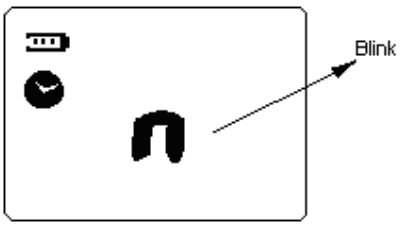


Figure7-2: Channel Number Display Setting

2) Set the hour of the clock
The hour of the clock will flash during setting (See figure8-1). Press "+" / "-" key to select the hour from 0 to 23. Press MENU key to confirm the setting and switch to the next setting. Press " " key to save the setting and return to the first setting or exit clock and alarm clock setting mode.
The factory default setting for the hour is "00".

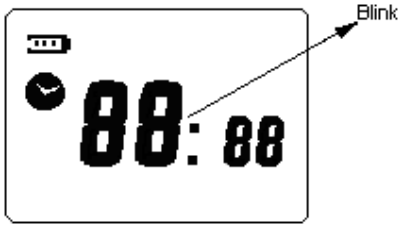


Figure8-1: Setting the Hour

3) Set the minute of the clock

The minute of the clock will flash during setting (See figure9-1). Press “+” / “-” key to select the minute from 0 to 59. Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit clock and alarm clock setting mode.

The factory default setting for the minute is “00”.

Figure9-1: Setting the Minute

4) Turn on/off the alarm clock

When setting the alarm clock, alarm clock icon appears on the top left corner of LCD and the character “y” or “n” flashes (See figure10-1 and 10-2). “y” indicates turning the alarm clock on and “n” indicates off. Press “+” / “-” key to select from “y” and “n”. Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit clock and alarm clock setting mode.

The factory default setting for the alarm clock is off.

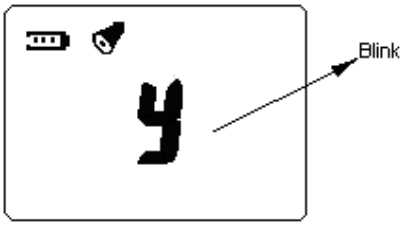


Figure10-1: Turn on the Alarm Clock

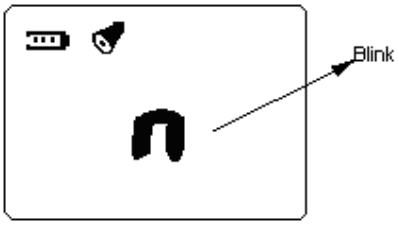


Figure10-2: Turn off the Alarm Clock

5) Set the hour of the alarm clock

The hour of the alarm clock will flash during setting (See figure11-1). Press “+” / “-” key to select the hour from 0 to 23. Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit clock and alarm clock setting mode.

The factory default setting for the hour of the alarm clock is “00”.

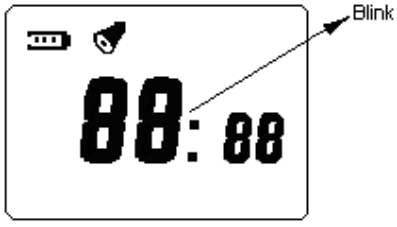


Figure11-1: Setting the Hour of Alarm Clock

6) Set the minute of the alarm clock

The minute of the alarm clock will flash during setting (See figure12-1). Press “+” / “-” key to select the minute from 0 to 59. Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit clock

and alarm clock setting mode.

The factory default setting for the minute of the alarm clock is “00”.

Figure12-1: Setting the Minute of Alarm Clock

Channel Setting Mode

Turn the power on while holding down MON and PTT key simultaneously. The radio enters channel setting mode after 2 seconds.

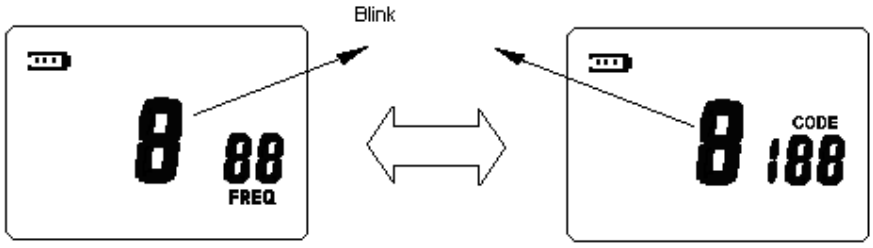
In this mode, press “+” / “-” key to change setting; press MENU key to save and switch to the next setting; press “ ♪ ” key to save and return to the first setting, if the current setting is the first setting, press “ ♪ ” key to save and exit.

The current setting of channel setting will flash when entering this mode. You can make settings as following:

1) Select channel number

During setting, the channel number flashes (See figure13-1). LCD displays frequency number and interference eliminator code of the current channel alternately. Press “+” / “-” key to select channel number. The maximum number you can select is decided by the number of available channels and the minimum number is 1.

Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and exit channel setting mode.



a. Display Channel Number and Frequency Number b. Display Channel Number and Interference Eliminator Code

Figure13-1: Select Channel Number

2) Set frequency number

When setting frequency number of the channel, “FREQ” icon appears on LCD and the frequency number flashes (See figure14-1). Press “+” / “-” key to select frequency number from 1 to 56. Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit channel setting mode.

This feature can be enabled/disabled by the dealer.

The factory default setting for frequency number of each channel is shown as following:

Channel No.	1	2	3	4	5	6	7	8
Frequency Number	7	15	16	31	34	45	48	52

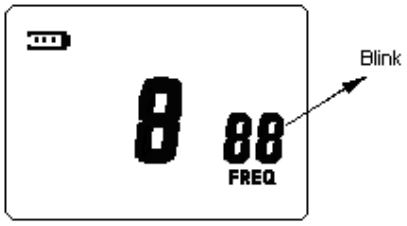


Figure14-1: Set Frequency Number

3) Set interference eliminator code

When setting interference eliminator code of the channel, “CODE ”icon appears on LCD and the interference eliminator code flashes (See figure15-1). Press “+” / “-” key to select interference eliminator code from 0 to 121. If “0” is selected, interference eliminator code is not set in a channel.

Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit the channel setting mode.

This feature can be enabled/disabled by the dealer.

In factory default setting, interference eliminator code is not set in all channels.

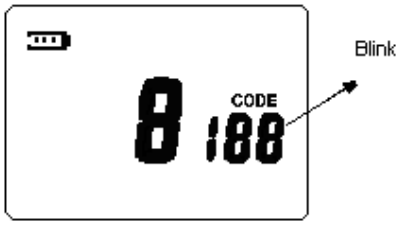


Figure15-1: Set Interference Eliminator Code

4) Set the number of available channels

When setting the number of available channels, “CH ”icon appears on LCD and the channel number flashes (See figure16-1). Press “+” / “-” key to select number of available channels from 1 to 8.

Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit the channel setting mode.

In factory default setting, the number of available channels is 8.

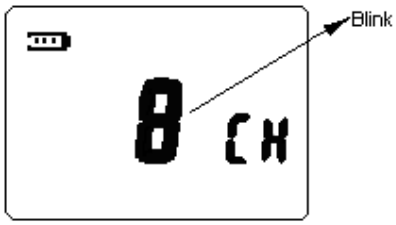


Figure16-1: Set the Number of Available Channels

5) Channel Scan Add/Delete

When setting channel scan add/delete, “SCAN” icon appears on the bottom of LCD and the character “y” or “n” flashes (See figure17-1 and 17-2). “y” indicates channel scan add and “n” indicates channel scan delete. Press “+” / “-” key to select from “y” and “n”. Press

MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit the channel setting mode.
In factory default setting, all the channels are added to scan list.

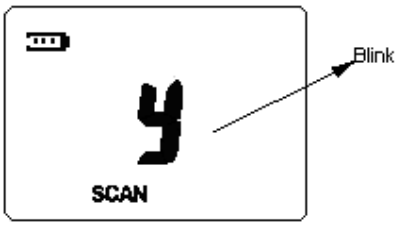


Figure17-1: Channel Scan Add

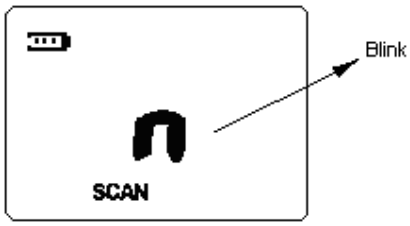


Figure17-2: Channel Scan Delete

Menu Mode

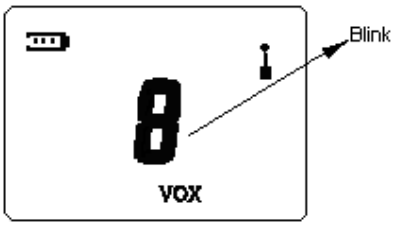
In conventional mode, hold down MENU key to enter menu mode. LCD displays antenna icon “ ” indicating that transmission/receiving is available. When pressing PTT to transmit, LCD displays channel information; when releasing PTT, LCD returns to the display before transmitting.
In this mode, press “+” / “-” key to change setting; press MENU key to save and switch to the next setting; press “ ♪ ” key to save and return to the first setting, if the current setting is the first setting, press “ ♪ ” key to save and exit.
The current setting of menu mode will flash when entering this mode. You can make settings as following:

1) Set VOX Feature

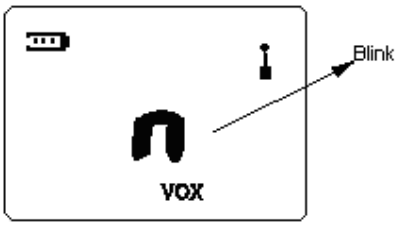
When setting VOX feature, “VOX” icon appears on LCD and the VOX sensitivity level or character “n” flashes (See figure18-1).
There are five sensitivity levels (level 1 to level 5). The higher the sensitivity level, the lower audio needed to trigger a transmission. The VOX feature is disabled when “n” is selected.

Press “+” / “-” key to select sensitivity level or disable VOX feature.

Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit the menu mode.
In factory default setting, the VOX feature is disabled.



a. Select VOX Sensitivity Level



b. Disable VOX Feature

Figure18-1: Set VOX Feature

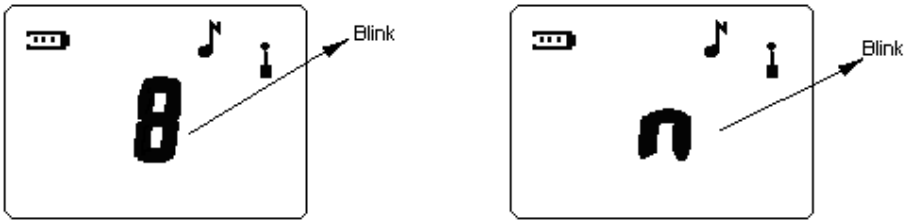
2) Set Call Tone

When setting call tone, “ ♪ ” icon appears on LCD and the call tone number or character “n” flashes (See figure19-1).
There are five distinct call tones (1-5). The call tone feature is disabled when “n” is selected.

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

Press MENU key to confirm the setting and switch to the next setting. Press “ ” key to save the setting and return to the first setting or exit the menu mode.

In factory default setting, the call tone 1 is selected.



a. Select Call Tone b. Disable Call Tone

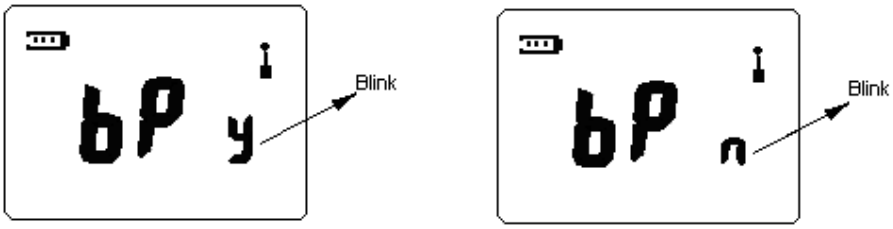
Figure19-1: Set Call Tone

3) Set Button Beep

When setting button beep, “bP” icon appears on LCD and the character “y” or “n” flashes (See figure20-1). “y” indicates enabling button beep and “n” indicates disabling.

Press “+” / “-” key to select from “y” and “n”. Press MENU key to confirm the setting and switch to the next setting. Press “ ” key to save the setting and return to the first setting or exit menu mode.

In factory default setting, the button beep is enabled.



a. Enable Button Beep b. Disable Button Beep

Figure20-1: Set Button Beep

4) Select Squelch Level

When setting squelch level, “SQL” icon appears on bottom left corner of the LCD and the squelch level flashes (See figure21-1).

There are four squelch levels (1-4). Higher squelch level makes it harder for the radio to receive weak signals and avoid interference of noises and/or unwanted signals.

Press “+” / “-” key to select squelch level. Press MENU key to confirm the setting and switch to the next setting. Press “ ” key to save the setting and return to the first setting or exit the menu mode.

In factory default setting, squelch level is set as 2.

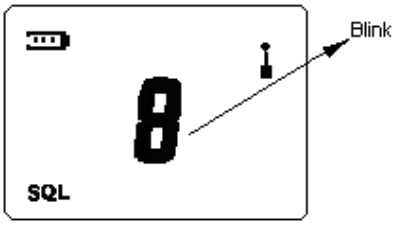


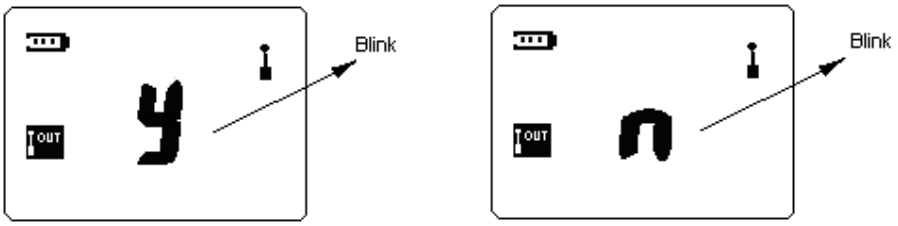
Figure21-1: Select Squelch Level

5) Set Communication Range Alarm

When setting communication range alarm feature, “OUT” icon appears on the left of LCD and the character “y” or “n” flashes (See figure22-1). “y” indicates enabling communication range alarm and “n” indicates disabling.

Press “+” / “-” key to select from “y” and “n”. Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit menu mode.

In factory default setting, the communication range alarm is disabled.



a. Enable Communication Range Alarm b. Disable Communication Range Alarm

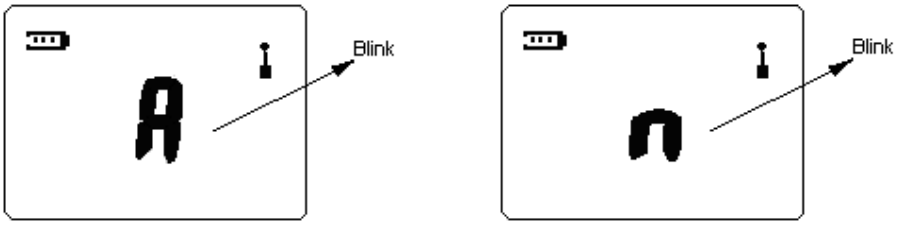
Figure22-1: Set Communication Range Alarm

6) Set Battery Type

Setting the battery type allows the radio to detect low battery and properly display the power usage. When setting the battery type, the character “A” or “n” flashes (See figure23-1). “A” indicates rechargeable battery and “n” indicates non-rechargeable one.

Press “+” / “-” key to select from “A” and “n”. Press MENU key to confirm the setting and switch to the next setting. Press “ ♪ ” key to save the setting and return to the first setting or exit menu mode.

In factory default setting, the battery type is rechargeable battery.

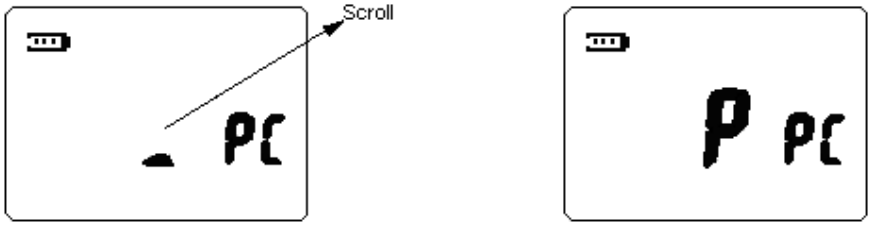


a. Rechargeable Battery b. Non-rechargeable Battery

Figure23-1: Set Battery Type

PC Programming Mode

In standby mode, connect the radio and a PC with programming cable and then programme the radio through programming software, the radio enters PC programming mode. LCD display is shown as figure24-1. During programming, the black cursor in the center of LCD will scroll. When programming is complete, the character “P” will be displayed on the center of LCD. In the PC programming mode, the radio communicate with PC through UART port, all the commands are carried out via PC. After programming, the radio should be turned off and back on again to use.



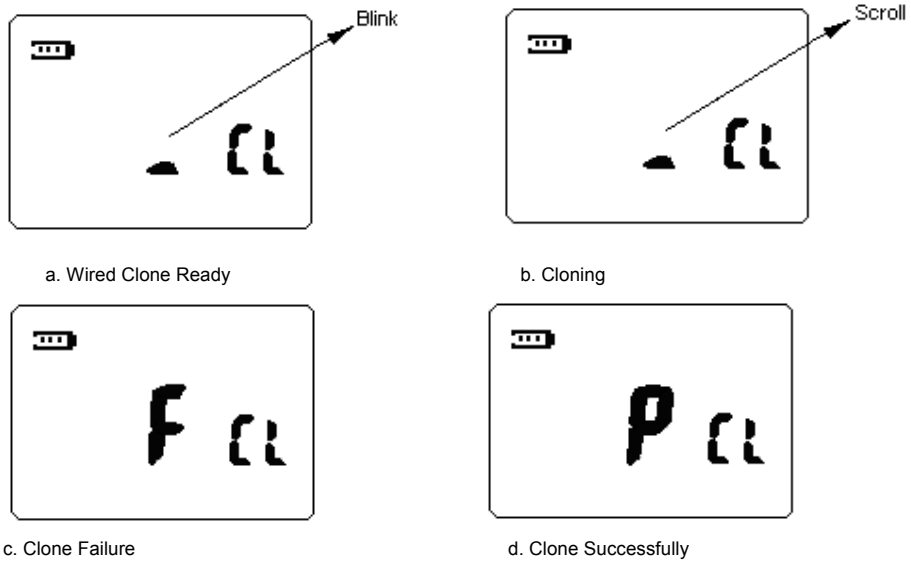
a. Programming b. Programming Over

Figure24-1: PC Programming Mode

Wired Clone Mode

Connect the radio with cloning cable and then turn the power on while holding down CALL and MON key simultaneously. After 2 seconds, the radio enters wired clone mode (source side).

When the radio enters wired clone mode, LCD display is shown as figure25-1. The black cursor in the center of LCD flashes. When the target radio is ready, press MON key to begin cloning. The black cursor in the center of LCD will scroll. During cloning, if an error occurs or the target radio has no response, the cloning stops and LCD displays error prompt. “F” (FAIL) indicates that wired clone is failed. If data is cloned successfully, “P” (PASS) appears.



a. Wired Clone Ready

b. Cloning

c. Clone Failure

d. Clone Successfully

Figure25-1: Wired Clone Mode

Default Setting Mode

This feature is used to enter conventional mode and restore all the radio settings to factory default setting.

Turn the power on while holding down “+” and “-” key simultaneously, all the radio data are initialized after 2 seconds. And then the radio returns to conventional mode.

This feature can be enabled/disabled by the dealer.

Appendix 1: Channel Frequency (461.0375 MHz - 469.5625 MHz)

Frequency Number	Frequency (MHz)	Frequency Number	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

Appendix 2: CTCSS Table (38)

No.	Frequency□Hz□		No.	Frequency□Hz□
1	67.0		20	131.8
2	71.9		21	136.5
3	74.4		22	141.3
4	77.0		23	146.2
5	79.7		24	151.4
6	82.5		25	156.7
7	85.4		26	162.2
8	88.5		27	167.9
9	91.5		28	173.8
10	94.8		29	179.9
11	97.4		30	186.2
12	100.0		31	192.8
13	103.5		32	203.5
14	107.2		33	210.7
15	110.9		34	218.1
16	114.8		35	225.7
17	118.8		36	233.6
18	123.0		37	241.8
19	127.3		38	250.3

Appendix 3: CDCSS Table (83)

No.	CDCSS		No.	CDCSS
39	023		82	331
40	025		83	343
41	026		84	346
42	031		85	351
43	032		86	364
44	043		87	365
45	047		88	371
46	051		89	411
47	054		90	412
48	065		91	413
49	071		92	423
50	072		93	431
51	073		94	432
52	074		95	445
53	114		96	464
54	115		97	465
55	116		98	466
56	125		99	503
57	131		100	506
58	132		101	516
59	134		102	532
60	143		103	546
61	152		104	565
62	155		105	606
63	156		106	612
64	162		107	624
65	165		108	627
66	172		109	631
67	174		110	632
68	205		111	654
69	223		112	662
70	226		113	664
71	243		114	703
72	244		115	712
73	245		116	723
74	251		117	731
75	261		118	732
76	263		119	734
77	265		120	743
78	271		121	754
79	306			
80	311			
81	315			

Troubleshooting Guide

Trouble	Solution
No power	● Battery may be used up. Please replace or recharge the battery. ● Battery may not be attached properly. Remove the battery and attach again.
Power doesn't last long even if fully charged.	● Battery life cycle is over. Please replace it with a new one.
Can't talk to or hear other users in your group.	● Make sure you are using the same frequency and CTCSS/CDCSS tone as other users in your group. ● Other users may be too far away. Make sure you are within the communication range.
Voice of other users (non-group user) appears on the channel.	● Please change your CTCSS/CDCSS tone. Be sure to change the tone on all the other radios in your group.

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.

Optional Accessories

AC Adaptor: PDS-259 (Part No.: 420855203331)
Charger: HC1688AWC (Part No.: 420855203348)
Strap (Part No.: 420855203362)
Ear Loop: 258V-G-P (Part No.: 420855203065)
Ear Bud: 258V-S-P (Part No.: 420855203041)
Belt Clip (Part No.: 420855203393)

AWC endeavor to achieve the accuracy and completeness of this manual, but cannot guarantee its accuracy at all times. All the above specifications and design are subject to change by AWC without notice.