# TWO WAY RADIO(FRS RADIO)

KG-705F

WOUXUN COMMUNICATIONS LIMITED

11/F OFFICE A HARVARD COMMERCIAL BUILDING 105-111 THOMSON RD WAN CHAI HK, 999077 HONGKONG

# USER'S MANUAL

16.2x11cm

**Warning** ⚠

» Please turn off the transceiver in explosive environment (e.g. Coal gas、Dust、Steam etc.)

» Please turn off the transceiver while refueling or parking at the gas station.

## Precautions

Radios are high-quality with excellent design and advanced technology.
The following suggestions will help user fulfill the obligation of warranty, and realize the security of using the transceiver.

1. Please put the transceiver and all accessories away from the children.
2. Please do not disassemble the transceiver as non-professional user maybe damage the transceiver.
3. Please use the company attached Batterypack and charger to avoid damaging the radio.
4. Please use the company attached antenna to avoid shortening communication distance.
5. Please do not put the transceiver near to the heating appliance or expose it in the sun for a long time.
6. Please do not put the transceiver in extremely dusty, moist, watery or unstable place.
7. Please do not wash the radio with strong chemicals or strong lotion.
8. Turn off the power supply immediately if the transceiver emits an unusual smell or smokes, then take out the battery or Batterypack and notify dealer.

**NOTE**

» All the above suggestions are used for radios and accessories.
» Please contact with dealer once the radios and accessories cannot be used

## Contents

## Contents

## Preparation

### ■ Charging

The Batterypack maybe out of voltage during the long transportation, please re-charge the Batterypack with compatible charger before using it as following steps:

1. Insert power supply adaptor plug into jack of charger back.
2. Insert power supply adaptor plug into power socket.
3. Put Batterypack into charger.
4. According to the following charger LED light to know the current charging status.

| LED Indicator Light | Current Charging Status |
|---|---|
| LED (red) flash slow | Trickle charging (this status lasts10~20minutes after put exhausted Batterypack) |
| LED (red) always on | Charge |
| LED (green) always on | Full charge |
| LED (red) flash quick | Abnormal charging |

**NOTE**

» Please do not short connect the Batterypack port or put it into fire.
» Please do not take off the case of Batterypack.



## Installing before use

### Install/remove batterypack

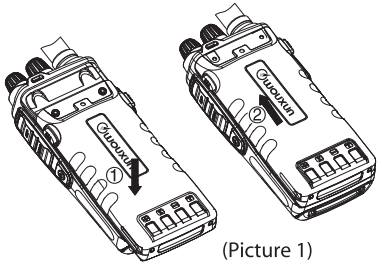
The batterypack is not fully charged before leaving factory. Please charge it before use.

***NOTE*** ⚠

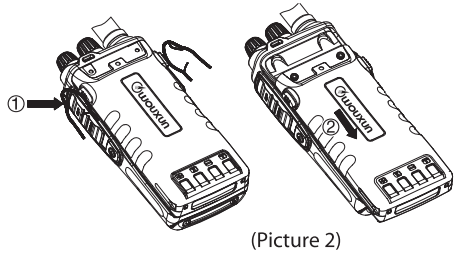
» Do not shortcircuit the terminals or put the batterypack into fire.
» Do not try to remove the case from the batterypack.

***1.*** Please aim the batterypack at the back of the transceiver, and then push up and press down the batterypack to lock the release latch. (Picture 1)

***2.*** If you want to remove the batterypack, push down the release latch, and the batterypack will be released from the transceiver. (Picture 2)




(Picture 1)

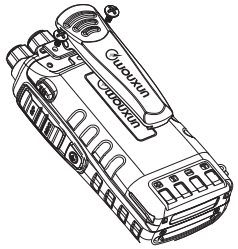



(Picture 2)

## Accessory Installing

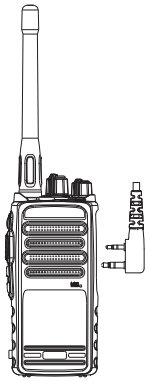
### Beltclip Installation

Align the screw hole of the back clamp with the screw hole on the main engine and lock it with the screw.



## Accessory Installing

### Preparation before use



### Install audio accessories

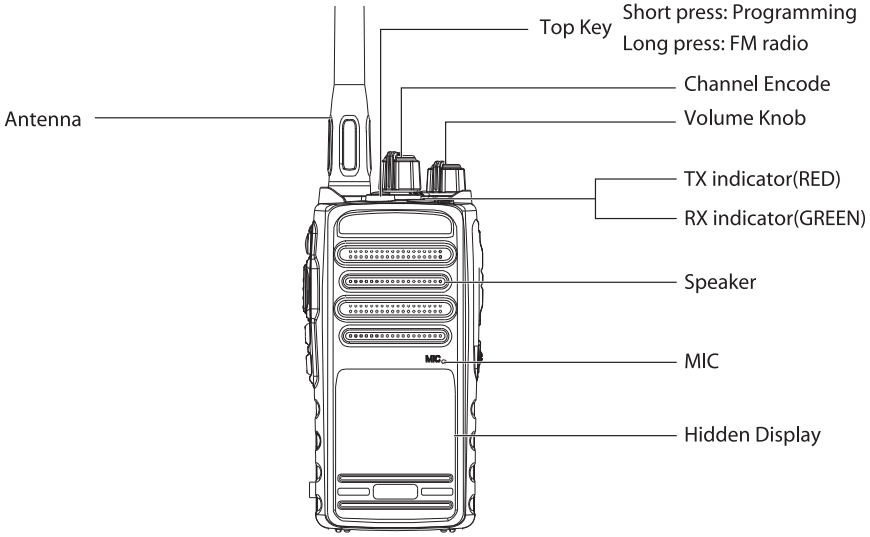
Install headphone cover accessories

**NOTE**

» To avoid affecting the waterproof and dustproof performance of the terminal: After removing the accessories, be sure to close the connector cover and lock the screws.

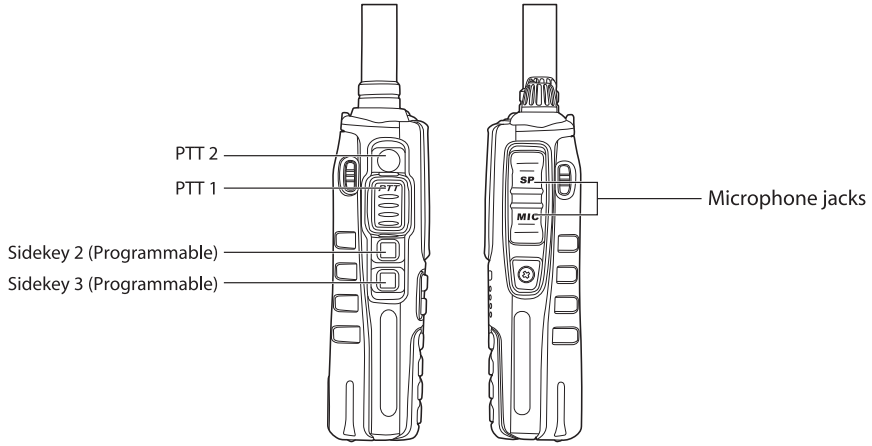
## Learning Transceiver

### Parts Instruction





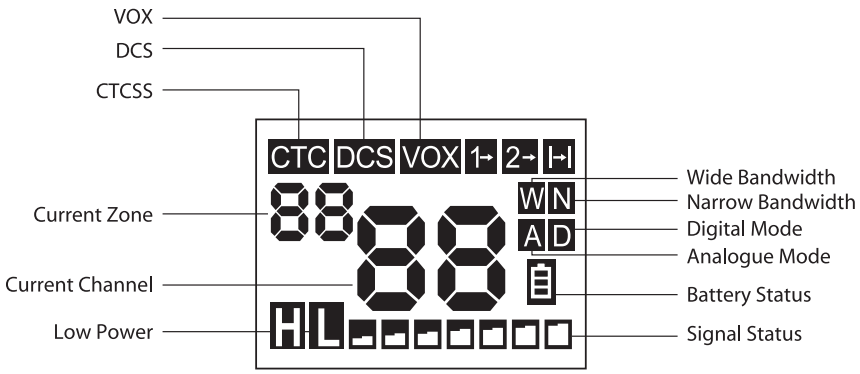

## Learning Transceiver




Note: Programmable definition key can be set as follows:
Monitoring, scanning, working group switching, voice control, power, group call, off-grid, lighting, radio, power viewing

## Device Information

### LCD Screen






## Basic Operation

- **Power on/off**
  Rotate the volume potentiometer clockwise until a clock tone, the radio power on.
  Rotate the volume potentiometer counter-clockwise until a clock tone, the radio power off.

- **Volume Adjustment**
  Rotate the volume potentiometer clockwise to turn up volume, rotate the volume potentiometer counter-clockwise to turn down volume.

- **Select channel**
  The channel is the access through which the signal is transmitted, and you can select the channel through the encoder knob.

- **Switch working channel group**
  Programmable key is defined as Work Group. Press this key to switch the current working channel. At this time, the serial number of the current working group will be displayed in the upper left corner of the interior screen.

- **Check Battery Voltage**
  Programmable key is defined as Battery, press this key, the screen displays the 3-second battery power

percentage value, and then return to display the current working channel number, the battery power is displayed as follows:
99: higher than 7.90V
75:7.89-7,50
50:7.49-7,0
25:6.99-6,50
10:6.49V and below (Low battery warning: Don't transmit when the battery is lower than 6.0V)

- **Frequency measurement function**

  Press and hold the side key PF3 to turn on the machine and enter the frequency measurement mode (at this time, the current channel number blinks and the red light is on). At this time, the channel can be selected through the channel code (so that the frequency can be stored after the measurement), and short press the side key PF3 again to start the frequency measurement (at this time, the traffic light blinks). After reading the frequency, sub-tone will be read, and two beeps will prompt after all measurement (frequency and sub-tone are automatically stored in the current channel selected by the encoder), and the machine will automatically restart (press PTT to exit the frequency measurement mode during the frequency measurement process).





**NOTE** ⚠

» All functional operations are edited by programming software

### CTCCS and D.C.S

This radio is equipped with CTCSS and D.C.S functions, by using CTCSS or D.C.S, you can ignore unwanted calls from others using the same frequency, only if received with the same CTCSS tone or D.C.S code signal, the radio was unsilenced.

**NOTE** ⚠

» CTCSS or D.C.S doesn't make the conversation stealthy or encrypted, it just keeps you from hearing other unwanted conversations.

### SOS disaster relief, rescue and ALARM emergency alarm function

The top key is defined as the emergency alarm function of SOS and ALARM. In the emergency state, long press the top alarm key to send an emergency alarm signal to the outside world through the current channel.
SOS: send an emergency alarm tone
ALARM: send the local ID and alarm code

### Squelch level setting (SQL)

Function description: Set the correct squelch level to reduce unnecessary signal interference, The higher the level, the stronger the signal needs to be received.
Options: 0-9 levels
Default value: 5

### Power Saving mode (SAVE)

Function Description: Set to turn off or turn on the power saving function.
Options: OFF/ON
Default value: ON

### Transmission announcement (ROGER)

Function Description: Set the prompt tone for the radio to press PTT to transmit and release PTT to end transmission.
Options: OFF/BOT (when PTT is pressed down)/EOT(when PTT is released)/BOTH(When PTT is pressed down and released)
Default: OFF



Functional operation and instructions

### Transmit Timeout Timer (TOT)

Function description: Set the time limit for each transmission of the walkie-talkie.
Options: OFF/15-900 (15 seconds per level)
Default: 60s

### Transmit timeout warning (TOA)

Function description: Set the early warning before the radio transmission timeout, when the emission indicator blinks
Options: OFF/1-10 (1 second per level)
Default: OFF

### VOX setting (VOX)

Function description: Using VOX does not need to press the [PTT] key every time it is transmitted. Once the VOX circuit detects that it is speaking to the microphone, it will automatically enter the transmitting state. Please select the VOX gain when using it. In order to ensure the continuity of VOX detection, the voice control delay (VOX-Delay) can be set
Options: OFF/1-9
Default: OFF

### VOX-DLY

Function Description: When the VOX is on, setting the time for delaying the closing of PTT after the VOX is transmitted.
Optional: OFF/1-5, 1 second per level.
Default value: 1

### VOICE

Set the voice prompt for operation of the radio.
Options: OFF/CHINESE/ENGLISH
Defaults: ENGLISH

### Beep (BEEP)

Function description: Set the operation prompt of the radio, operation error or fault prompt tone.
Options: OFF/ON
Default: ON

### Scan Mode (SC-REV)

Function Description: Set the scanning mode for the radio.
Option: TO/SE/CO
TO: After scanning the carrier signal, continue scanning if no operation is performed within 5 seconds.





SE: Stop scanning when the carrier signal is detected.
CO: Stop scanning when the carrier signal is reached, and continue scanning after the carrier signal disappears for 5 seconds.
Default value: TO

### Backlight

Function Description: Set the screen backlight on time.
Optional: Normally open/Normally closed /5 seconds /10 seconds /20 seconds /30 seconds /60 seconds
Defaults: 10 seconds

### ID Editing (ANI-EDIT)

Function Description: Set and edit the ID code of the radio.
Optional: 0-9
Default value: 101

### Id Code Side Tone Setting (DTMF-ST)

Function Description: Set whether the speaker turns on the dual-tone sound when the radio sends the ID code.
Option: OFF/ANI-ST
Default value: ANI-ST

### Id Sending method (PTT-ID)

Function Description: Sets the mode for sending the ID code of the radio.
Options: OFF/BOT/EOT/BOTH
BOT: Send ID code when PTT is pressed.
EOT: sends an ID code when the PTT is released.
BOTH: Send ID codes when you press and release PTT.
Default value: OFF

### Id code Sending Delay (PTT-DLY)

Function Description: Set the delay period for the radio when press PTT to send identity code.
Optional: 100MS – 3000MS, 100 milliseconds per stage.
Default value: 1000MS

### RING time (RING)

Function Description: Set the ring duration before turning on the speaker when the radio is called.
Optional: OFF/ 1-10s, 1 second per level.
Default value: 5

### Id code emission/interval time

Set the code sending duration and code interval when the ID code is sent.





### Call Group Code (CALLCODE)

Function Description: Press selected call function defined by side key when setting the current channel or frequency for the radio. The selected call group with the corresponding DTMF code will be sent.
Optional: 1 - 20
Default value: 1

### Single Tone Setting (S-TONE)

Function Description: The user can set the transmission single tone frequency type.
Optional: 1000 HZ / 1450 HZ / 1750 HZ / 2100 HZ
Default value: 1750HZ

### Priority channel (PRICH-SW)

Description: Set a channel as the priority channel.

### Channel Working Group

Function description: Set the radio working channel group, the machine has a total of 16 channel groups, you can switch the current working channel group through the side key, then switch the channel working group through the channel encoder.
Optional: G1-- G16
Default value: G1

### Priority Scan (PRI-SCN)

Function Description: Enable or disable the priority channel scanning function for the radio
Or option: OFF/ON
Default value: OFF

### SCAN GROUP (SCAN GROUP)

Function Description: Set the scanning group for the radio scanning.
Optional: ALL/G1– G16
Default value: ALL

### SCAN-ADD

Function description: Set the channel currently selected by the radio whether adding to channel scanning.
Optional: ON/OFF
Default value: ON

### SCAN (SCAN)

Function Description: The side key is defined as whether the scan is on/off. When the scan is started, the channel is scanned according to the set scan group.





### Scan Tone Detection (QT-SW)

Function Description: Set the tone matching function when scanning is enabled or disabled
Optional: ON/OFF
Default value: OFF

### RPT-TONE

Function Description: Set to turn on/off the off-line confirmation tone when the radio receives the signal from the repeater.
Optional: ON/OFF
Default value: OFF

### Busy Channel Locking (BCL)

Function Description: Enable the radio to detect whether the channel or frequency is occupied. After this function is enabled, it can prevent conflicts with other radio stations that are communicating.
Optional: OFF/ON
Default value: OFF

## Functional operation and instructions

### Speech Encryption (SCRAMBLE)

Function Description: Select the radio call encryption function.
Optional: OFF/1--8 groups
Default value: OFF

### Radio function (RADIO)

Radio search
After the side key enters the radio, you can press the side key 1 or side key 2 to scan the radio, and long press the side key 1 or side key 2 to exit the radio.



## Detailed description of some functions

### DTMF signaling

**( 1 ) Quick operation**

This machine has the functions of sending personal identification code, selective calling code and DTMF decoding, and can realize selective calling and other operations without resorting to other communication settings. The signaling mute type is set through "SP-MUTE" of the programming software, set to QT*DT or QT+DT.

**a.** The selective call function
Using the matching programming software to edit the information in the group number. For example, the first group is set with the two way radio with the identity code 123456 of "personal call". Then the selective call ID of the first group is set to 123456.

**b.** Set the selective call group number to 1. Through programming software "CALL-ID".

**c.** Define the side key as a "selective call" function through the menu.

**d.** Press the side button defined as the "selective call" function, so that you can make a single call to the radio with the ID code of 123456 (with the same frequency and set mute signaling).
1). For radio with a selective call ID code less than 6 digits, you need to add +# after the selective call group ID code.
2). When the first digit of the identity code is the same, it is a member of the same group. For all radio in the group call, the selective call group needs to be set as a member of the group. Code first +**

3). When calling all radio members in a group, you need to set the selective calling group to*#.

4). The selective call reset time can be set through the programming software, after the individual call, group call, and group call are successful, when the transmission is not received within the reset time, it will automatically reset, and the selective call needs to be re-selected when the signal comes next time.

**(2) Remote kill operation**

Radio A press the PTT button to start transmitting, and then input

[1] [2] [6] [0][1] [8], [A] [B], [8] [9] [8] [1] [8] [8]

**(3) Radio B will be killed after receiving the command.**

Note: 1. Dead radio can't receive and transmit

2. Step (2) During the operation, if the controlled code and ID code are less than 6 digits, add the [#] key (for example, the ID code 123, after press 123, then press key [#] ).

### ( 3 ) Monitoring

Monitor the controlled code of the called machine + fixed code (DA) + the identity code of the called machine to perform the monitoring function.

Monitoring: When the radio is monitored, turn on the microphone by itself, and the surrounding sounds will be automatically sent without any transmission prompts.

Example: Radio A monitors the operation of radio B





(1) First, set the controlled code and the identity code of radio B through the programming software.

For example: the controlled code is set to 126018, and the ID code of radio B is set to 898188.

(2) Monitor operation

Radio A press the PTT button to start transmitting, and then input

[1] [2] [6] [0] [1] [8], [D] [A], [8] [9] [8] [1] [8] [8]

(3) Radio B is monitored after receiving the command.

Note: 1. During the operation of step (2), if the accused code and ID code are less than 6 digits, add press the [#] key (such as the ID code 123, after press 123, then add press key [#] ).

2. Each monitoring lasts only 15 seconds. During monitoring, if there is any operation on the monitored for radio, it will exit being monitored.

### ( 4 ) Inspection

The controlled code of the called machine + fixed code (DB) + the identity code of the called machine to perform the inspection function.

The radio being inspected will automatically send its own body code division, this process is equivalent to a roll call. Use this function to know whether the radio is normally turned on and within the communication distance.

Example: Radio A inspects the operation of radio B

(1) First, set the controlled code and the identity code of radio B through the programming software.

## Detailed description of some functions

For example: the controlled code is set to 126018, and the ID code of radio B is set to 898188.

(2) Inspection operation

Radio A presses the PTT button to transmit, and then enters [1] [2] [6] [0] [1] [8], [D] [B], [8] [9] [8] [1] [8] [8]

(3) After the radio B receives the instruction, it will automatically transmit and send its own ID code.

Note: During the operation of step (2), if the controlled code and 1D code are less than 6 digits, Add press the [#] key (for example, the ID code is 123, and then press again after inputting 123 Click the [#] key).

### ( 5 ) Remote Controlled and Uncontrolled

The controlled code + fixed code (DB) + the identity code of the called machine to release the control of the called machine to perform the function of decontrol. Decontrol can activate the remotely killed and remotely stunned machine.

Example: Radio A decontrols the radio B that is dizzy or killed remotely.

(1) First set the controlled code and the identity code of the radio B through the programming software, such as the controlled code is set to 126018,then the ID code is set to 898188 for the radio.

(2) De-control operation.

Press the PTT key for radio A to transmit, and then input [1] [2] [6] [0] [1] [8] [D] [B] [8] [9] [8] [1] [8] [8]

(3) Radio B will be activated after receiving the instruction.

Note: In step (2), if the controlled code and 1D code are less than 6 digits, add the [#] key (for example, the ID code is 123, and press again after inputting 123 Press the # key).



## CTCSS/DCS

### CTCSS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 67.0 | 11 | 94.8 | 21 | 131.8 | 31 | 171.3 | 41 | 203.5 |
| 2 | 69.3 | 12 | 97.4 | 22 | 136.5 | 32 | 173.8 | 42 | 206.5 |
| 3 | 71.9 | 13 | 100.0 | 23 | 141.3 | 33 | 177.3 | 43 | 210.7 |
| 4 | 74.4 | 14 | 103.5 | 24 | 146.2 | 34 | 179.9 | 44 | 218.1 |
| 5 | 77.0 | 15 | 107.2 | 25 | 151.4 | 35 | 183.5 | 45 | 225.7 |
| 6 | 79.7 | 16 | 110.9 | 26 | 156.7 | 36 | 186.2 | 46 | 229.1 |
| 7 | 82.5 | 17 | 114.8 | 27 | 159.8 | 37 | 189.9 | 47 | 233.6 |
| 8 | 85.4 | 18 | 118.8 | 28 | 162.2 | 38 | 192.8 | 48 | 241.8 |
| 9 | 88.5 | 19 | 123.0 | 29 | 165.5 | 39 | 196.6 | 49 | 250.3 |
| 10 | 91.5 | 20 | 127.3 | 30 | 167.9 | 40 | 199.5 | 50 | 254.1 |

## CTCSS/DCS

**DCS**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | D023N | 22 | D131N | 43 | D251N | 64 | D371N | 85 | D532N |
| 2 | D025N | 23 | D132N | 44 | D252N | 65 | D411N | 86 | D546N |
| 3 | D026N | 24 | D134N | 45 | D255N | 66 | D412N | 87 | D565N |
| 4 | D031N | 25 | D143N | 46 | D261N | 67 | D413N | 88 | D606N |
| 5 | D032N | 26 | D145N | 47 | D263N | 68 | D423N | 89 | D612N |
| 6 | D036N | 27 | D152N | 48 | D265N | 69 | D431N | 90 | D624N |
| 7 | D043N | 28 | D155N | 49 | D266N | 70 | D432N | 91 | D627N |
| 8 | D047N | 29 | D156N | 50 | D271N | 71 | D445N | 92 | D631N |
| 9 | D051N | 30 | D162N | 51 | D274N | 72 | D446N | 93 | D632N |
| 10 | D053N | 31 | D165N | 52 | D306N | 73 | D452N | 94 | D645N |
| 11 | D054N | 32 | D172N | 53 | D311N | 74 | D454N | 95 | D654N |
| 12 | D065N | 33 | D174N | 54 | D315N | 75 | D455N | 96 | D662N |
| 13 | D071N | 34 | D205N | 55 | D325N | 76 | D462N | 97 | D664N |
| 14 | D072N | 35 | D212N | 56 | D331N | 77 | D464N | 98 | D703N |
| 15 | D073N | 36 | D223N | 57 | D332N | 78 | D465N | 99 | D712N |
| 16 | D074N | 37 | D225N | 58 | D343N | 79 | D466N | 100 | D723N |
| 17 | D114N | 38 | D226N | 59 | D346N | 80 | D503N | 101 | D731N |
| 18 | D115N | 39 | D243N | 60 | D351N | 81 | D506N | 102 | D732N |
| 19 | D116N | 40 | D244N | 61 | D356N | 82 | D516N | 103 | D734N |
| 20 | D122N | 41 | D245N | 62 | D364N | 83 | D523N | 104 | D743N |
| 21 | D125N | 42 | D246N | 63 | D365N | 84 | D526N | 105 | D754N |



## Troubleshooting

Before determining that the walkie-talkie has a fault, please check according to the following form:

| Fault | Solution |
|---|---|
| Don't turn it on. No Power | » The battery may be exhausted, please renew the battery or recharge it.<br>» The battery may not be installed correctly. Please remove the battery and reinstall it. |
| The battery does not last long after being charged | » Battery life is up, please renew the battery<br>» The battery is not fully charged, please ensure that the battery is fully charged before removing the battery |
| The receiving light continues to come on while the speaker is silent | » Verify that the volume knob is set to maximum<br>» If there is a different CTCSS/DCS from the other team members, please re-check and then perform the CTCSS/DCS setting |
| Keypad is unresponsive | » Check whether other keys have been pressed. |
| In standby, automatic transmission without pressing PTT key. | » Please check if VOX function is active or the level is set too high. |
| Other (non-crew) in the channel | » Please change the CTCSS/DCS frequency of all group members. |

## Frequency range

TX:462.5500-462.7250MHz,467.5625-467.7125MHz

RX:400-480MHz

The Scanning Receive range:400-480MHz



## Disclaimer

In the process of compiling this manual, we strive to ensure the accuracy and completeness of the content, but our company does not assume any responsibility for any errors or omissions that may occur.

Due to the continuous development of technology, we reserve the right to change product design and specifications without notice. Without our prior written authorization. This Manual may not be reproduced, modified, translated or distributed in any form.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

FCC Statement:

Any Changes or modifications not expressly approved by the party responsible for compliancecould the user's authority to operate the equipment.This device complies with part 15 of the FCC Rules. Operation is subject to the following twoconditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may causeundesired operation.

1)Hold the radio in a vertical position in front of face with the microphone (and the other parts of the radio, including the antenna) at least one inch (2.5 cm) away from the nose. Keeping the radio at the proper distance is important because RF exposures decrease with distance from the the antenna. Antenna should be kept away from eyes.

2)When worn on the body, always place the radio in approved clip, holder, holster, case, or body harness for this product. Use of non-approved accessories may result in exposure levels, which exceed the General Population/Uncontrolled Exposure environment RF exposure limits.

3)Use only manufacturer’s name approved supplied or replacement antennas, batteries, and accessories. Use of non-manufacturer-name approved antennas, batteries, and accessories may exceed the FCC RF exposure guidelines.

4) For a list approved accessories please consult your local dealer for information.

Users must be fully aware of the hazards of the exposure and able to exercise control over their RF exposure to qualify for the higher exposure limits.

Your wireless hand-held portable transceiver contains a low power transmitter.This product sends out radio frequency (RF) signals when the Push-to-Talk(PTT) button is pressed.

The device is authorized to operate at a duty factor not to exceed 50%.