RECYCLED PACKAGING

USER'S MANUAL

UHF/VHF dual band radio

long standby time

high capability Li-ion battery

sound quality clear

long distance

PREFACE

RF EXPOSURE COMPLIANCE AND CONTROL GUIDELINES AND OPERATING INSTRUCTIONS

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

Guidelines:

●Do not remove the RF Exposure Label from the device.

●User awareness instructions should accompany device when transferred to other users.

●Do not use this device if the operational requirements described herein are not met.

Operating Instructions:

●Transmit no more than the rated duty factor of 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 because this radio generates measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance).

●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 antenna. Antenna should be kept away from eyes.

●When worn on the body, always place the radio in approved clip, holder, holster,case, or body harness for this product. Using approved body-worn accessories is important because the use of other manufacturer's non-approved accessories may result in exposure levels, which 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 in the intended use position in front of the face, then ensure the antenna and the radio are kept at least 2.5 cm (one inch) from the body when transmitting. Keeping the radio at the proper distance is important because RF exposures decrease with increasing distance from the antenna.

●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.

●Contact your local dealer for the optional accessories of the product.

DECLARATION BY MANUFACTURER

U.S users should confirm the current status of 90.203(e) of the FCC's rules governing the Amateur service before utilizing this on the 144MHz/440MHz band.It's a violation of the FCC Rules if this device operates on unauthorized frequencies.

Frequency Range(MHz)	FCC Rule Part
136-150.8 MHz	For Federal
150.8-152.855 MHz	FCC Part 22/FCC Part 90
152.855-154 MHz	FCC Part 74/FCC Part 90
154-156.2475 MHz	FCC Part 80/FCC Part 90
156.2475-156.1875 MHz	FCC Part 80
157.1875-157.45 MHz	FCC Part 80/FCC Part 90
157.45-161.575 MHz	FCC Part 22/FCC Part 74/ FCC Part 80/FCC Part 90
161.575-161.625 MHz	FCC Part 22/FCC Part 80
161.625-161.775 MHz	FCC Part 22/FCC Part 74
161.755-161.9625 MHz	FCC Part 80/FCC Part 90
161.9625-162.0375 MHz	FCC Part 80
162.0375-173.2 MHz	FCC Part 74/FCC Part 90
173.2-173.4 MHz	FCC Part 90
173.4-174 MHz	For Federal
400-406 MHz	For Federal
406.1-450 MHz	FCC Part 90
450-454 MHz	FCC Part 90
454-455 MHz	FCC Part 22
456-460 MHz	FCC Part 22/FCC Part 90
460-462.5375 MHz	FCC Part 90
462.7375-467.5375 MHz	FCC Part 90
467.7375-470 MHz	FCC Part 90
470-512 MHz	FCC Part 22/FCC Part 90

Also,equipment programming is the responsibility of Authorized Service Personnel, the Amateur Portable Radio complies with 47 CFR Part 90.203(e). in that the operator cannot directly program the transmit frequencies using the normally accessible external controls.

WARNING

Operating this radio on one of the following restricted frequencies without a license or authorization by the FCC can result in a variety of enforcement actions,including seizure of equipment, fines and other criminal penalties: 136MHz-137MHz(Aviation Services,Part 87); 137MHz-138MHz (Satellite Communications,Part 25); 138MHz-144MHz(not available to any FCC licensee-Federal use only); 156.7625MHz-157.0375MHz (Maritime Services,Part80 and Aviation Services,Part 87).

To users

Thank you for your favor with our products.

This product is a high-power radio, If you are long time transmit will cause the heat of this machine is a normal phenomenon, In the case of sufficient distance recommended to use Middle (Middle power) or Low (Low power) to transmit! Thanks for using!

In order to make you fully understand the various advantages of the radio performance and use and maintenance methods, please read this manual carefully.

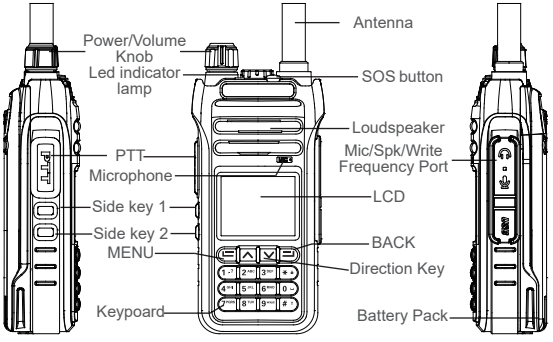
Function feature

- LCD Screen
- High/Medium/Low Power are optional
- DTMF Encoded
- UHF/VHF Full frequency receive
- Up to 128 memory channels
- 1750 Hz TONE for access to repeaters
- ANI code
- CTCSS/CDCSS to Automatic Scan
- Shortcut menu operation mode
- Programmable by PC
- Wired Clone
- Emergency alarm call function
- Chinese/English switch over
- Broadband (Wide) / Narrowband (Narrow) to selectable

Catalog

PORTABLE TWO-WAY RADIO

Familiar with this Product



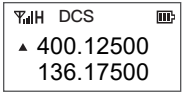
Antenna	A helical antenna for receiving and transmitting signals.
Battery Push-button	This is for fixing the battery
Battery Pack	This is to power the radio
Speaker	This is for the radio output voice
Microphone	This is putting voice into the radio
External interface	This is for external earphones; Or external write frequency line, can use PC write frequency software to write frequency operation and program upgrade.
Strap buckle	The radio body can be clamped on the belt for easy carrying.
【Power/Volume】 Knob	Rotate the knob clockwise to turn the radio on or to increase the volume, and rotate the knob counter-clockwise to turn the radio off or to decrease the volume.

【SOS】 button	Long press to open the alarm function, and then press this button to cancel the alarm function.
【PTT】 Transmit button	After press this key, the radio is in the transmitting status and speaks into the microphone to call the other party. After releasing this key, the radio is in the receiving status.
【⊏】 MENU button	Press it to activate the menu mode, enter the menu and press this button to select menu items. In power off status, Press and hold this button to switch channel mode or frequency mode.
【∧】 / 【∨】 button	In frequency mode, change the current frequency; In channel mode, switch channels up and down; In Menu status, change to set the menu items and menu values, press more than 2 seconds to quickly forward or backward search. In scanning status, Change the scanning direction.
【▭】 Exit and A/B switch button	In the input status, clear the input information; In standby mode, press this button to switch A/B, Switch 65-75/76-108mhz frequency in the FM mode.
* ,#, 0-9 number buttons	0-9 are numeric keys used for input frequency, channel number, menu item and menu value, * key for channel, frequency, CTCSS/DCS and FM broadcasting station scanning, Long press the # key to lock or unlock the keyboard, Press [PTT] button to transmit, and then press the number button to transmit the corresponding DTMF number.

[PTT] Key（Transmit Key）

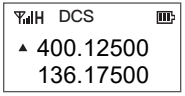
Transmit and receive conversion key: when transmitting, press this key and speak into the microphone; Release this key when receiving.

1、Transmit Interface



2、Receive Interface

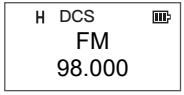
(Triangle icon flicker)



Side key 1（CALL Key）

Press the button to turn on the FM radio, and then press the button to turn off the FM radio.

FM Radio Interface



Side key 2(Flashlight Key)

Press once to turn on the flashlight, press the second time to flash the flashlight, press the third time to turn off the flashlight.

Orange Key

Long press this button to turn on the alarm function, short press again to close.

LCD Screen

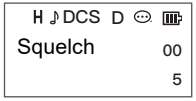
For display all working status of the Radio.

Function of the keyboard

Menu select/confirm key:

Use this key to activate menu modeand select items in the menu mode.

MENU Interface



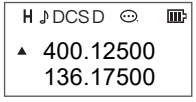
"▲" UP Key(Long press for more than 2 seconds to fast forward)

"▼" DOWN Key (Long press for more than 2 seconds to fast backward)

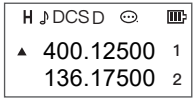
VFO/MR key: Long press this key

For frequency mode and channel mode switching

1、Standby for frequency mode



2、Standby for channel mode



Exit/clear key:

In the input status, clear the input information

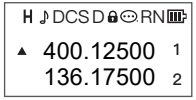
Numeric keypad

For enter information into the programming menu of a radio; in the non-standard CTCSS editing status, the non-standard CTCSS can be directly input, and the corresponding DTMF encoding will be issued when the number key is pressed in the transmit status.

[*] Key

Press this key to invert the receiving and transmitting frequencies;

Press for more than 2 seconds to lock or unlock the keyboard.



[#] Key

Short press for high/medium/low power switch;

Press for more than 2 seconds to turn on frequency or channel scanning;

In the FM radio Mode, press the button to search FM station automatically.

[0]Key

Press for more than 2 seconds to display the current battery voltage in standby mode.

Power / Volume Knob

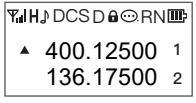
To turn on the power, turn the [Power Switch / Volume Control] knob clockwise until you hear a "click" sound and a short beep sounds. To turn off the radio, turn the knob counterclockwise until you hear a click. (English version supports channel number broadcast); Turn clockwise to increase volume and vice versa.

Led indicator lamp

Transmit ---- Red light / Receive-----Green light

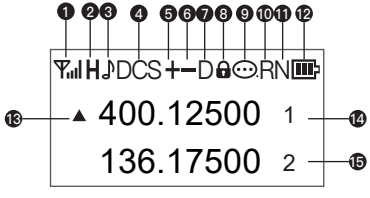
External interface

This is for external earphones; Or external write frequency line, can use PC write frequency software to write frequency operation and program upgrade.



LCD Icons

The LCD screen is used to display all the working status of the two-way radio. The corresponding function icons are displayed on the screen during operation. The screen allows you to know the meaning of the icons and how to set the functions more quickly.

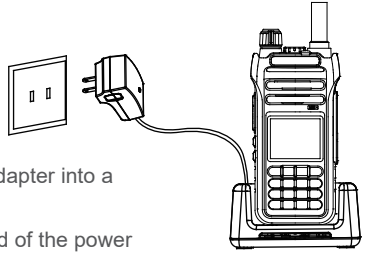


No.	icon	Description
1		The channel signal indication
2	H	The channel transmits at high power；
	M	The channel transmits at medium power
	L	The channel transmits at low power
3	♪	When the DTMF is set to DT-ST/DT+ANI/ANI-ST, the symbol appears
4	DCS	The current is CDCSS
	CT	The current is CTCSS
5	+	The current transmission frequency is the reception frequency plus a frequency bias(Set in menu 24th)
6	−	The current transmission frequency is the reception frequency minus a frequency bias(Set in menu 24th)
7	D	Has been set to dual-band double-waiting function, and allows waiting on two frequency bands displayed on the screen at the same time
8		The keyboard lock is locked; Press the [*] to unlock
9		The VOX has been turned on
10	R	In channel or frequency mode the invert the receiving and transmitting frequencies
11	N	The radio work in narrowband mode
12		The more bars, the more battery power, The icon flashes when the intercom is disabled
13	▲▼	A/ B band pointer
14	Arabic numerals	In channel mode, the current channel number for A
15	Arabic numerals	In channel mode, the current channel number for B

Preparation before use

Charging

Note: Be sure to ensure that the product is off when charging. Battery into the charger may be charging red flashing constantly flashing, this is the battery power is too low, the charger to protect the battery pre-charge process, is a normal phenomenon, Generally continue for 30 seconds to turn the red light of the normal status of charge Please charge the battery with the charger specified by our company. The indicator light of the charger shows the charging status.



1. Plug the power adapter into a power outlet;
2. Plug the other end of the power adapter into the socket on the back of the charging cradle;
3. Insert the battery or the battery-equipped product into the charging cradle correctly; the indicator light on the charging cradle shows the charging status. When the indicator light is red, it indicates the start of charging. When the indicator turns green, the charging is completed. Below is a detailed char.

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Indicator display	Current charge status
Red light flashes	Battery power is too low
Red light	In charging
Green light	The charging is completed

Note:
● For best battery performance, charge for a minimum of 4 hours on first charge.

Battery information

●The first use of the battery

Since the battery is not fully charged at the factory, please charge the new battery before use. Under normal circumstances, the battery when used for the first time, need to charge 4 hours, lithium-ion battery charging using slow charge or fast charge can be performed when charging. It is recommended that the new battery be operated as above for the first three uses. When you find the battery power is low, you need to charge the battery.

●Suitable battery type

Please use the specified battery for charging; use of other batteries may cause explosion, resulting in human injury.

●Battery safety attention

1. Do not allow metal contacts (including coins, keys, jewelry, or other conductive metal) to be touched by the battery contacts or pole pieces. Otherwise, the battery may short circuit, discharge, heat or leak, which may result in damage to the item or personal injury. Therefore, be careful when handling any battery.
2. Do not short-circuit the battery terminals or discard the battery in a fire. Do not disassemble the battery pack. When the battery is discarded, please put into a dedicated battery recycling box.

●Battery normal operation instructions

★Please charge the battery indoors, battery charging at room temperature best.

★Under normal circumstances, the charger indicator from red to green when the battery is fully charged, at this time the battery can be removed.

★You can charge when Battery installed in the walkie-talkie, but when charging is best to turn off the walkie talkie, to ensure that the battery is fully charged.

★Please do not charge the battery when the battery power is not used up (after the battery is exhausted, the voice prompt alarm will be given), which will shorten the service life of the battery.

★Do not put a fully charged battery back on the charger to "power up" again, as this operation significantly reduces the cycle life of the battery.

●Extend battery life

★Battery performance will reduce below -20 ℃ temperature conditions. Prepare back-up batteries for use in colder weather. Please do not throw away cold batteries that cannot work. These batteries may be used at room temperature.

★Dusting the battery contacts may affect the battery life. Please wipe the contacts with a clean, dry cloth before inserting the batteries into the walkie-talkie.

●Battery storage needs to know

1.Since the battery will have a self-discharge phenomenon, the battery when not in use for a long time, please fully charge the battery and then stored to avoid over-discharge of its battery to damage the battery.

2. When the battery is in storage, remove the battery to recharge when stored about 6 months. To avoid over-discharge of electrolyte affect battery capacity.

3. Pay attention to the temperature and humidity of the battery storage environment. Store the battery at room temperature in a cool, dry place to minimize self-discharge of the battery.

Battery Voltage & Power Indication

Long press the 【0】 key for display battery voltage, The top right of the screen shows the current battery power icon is as follows:

Icon				
Battery power	High	Medium	Low	Insufficient

Basic Operation

Power on/off

To turn on the power, turn the【Power Switch / Volume Control】 knob clockwise until you hear a "click" sound and a short beep sounds. To turn off the radio, turn the knob counterclockwise until you hear a click.

Adjusting Volume

After turning on, turn the [Power switch / volume control] knob clockwise to increase the reception volume, and turn counterclockwise to reduce the reception volume.

Dual Standby Mode to Switch

Dual band mode can be selected through the menu; the path is as follows:

1.Press Menu key to enter menu mode.

2.Press【▲】/【▼】to set, then press Menu key to select.

3.Press【▲】/【▼】to the radio setting, then press Menu key to select.

4. Press【▲】/【▼】to “Dual Standby”, then press Menu key to select.

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5.Press【▲】/【▼】to select the required option (Off/On).
6.Press Menu key to confirm and return to the previous menu.

Frequency Mode(VFO)

VFO mode is the basic mode for changing the operating frequency. In the standby interface, press [VFO/MR] to switch to VFO mode, and press 【▲】/【▼】 to increase or decrease the frequency.

Quick Frequency Input

In addition to pressing【▲】/【▼】, you can also input the frequency directly. If the required operating frequency is far from the current frequency, you can use the keypad to directly input the frequency.

●Long press Menu key to switch to VFO mode.

--The frequency must be entered directly in VFO mode.

●Press the number buttons ([0] to [9]) to enter the desired frequency（The first three decimal places are MHZ and the last five decimal places are KHZ）.

●After entering the frequency manually, press and hold the [PTT] button to call the contact of current frequency.

Menu list

No	Level 1 menu	Level 2 menu	Description of settings
0	Squelch	0,...,9	Squelch level, the lower the level is easy to interfere; the higher the level of sensitivity is worse, it is best to set the middle.
1	Step	2.5KHz 5.0KHz 6.25KHz 10.00KHz 12.50KHz 20.0KHz 25.0KHz 50.0KHz	In frequency mode, when the UP and DOWN keys are pressed, the step value of frequency is changed.
2	Tx Power	High	The radio transmits at high power.
		Middle	The radio transmits at middle power.
		Low	The radio transmits at low power.
3	Power save	OFF	Turn off power saving mode.
		ON	Turn on power saving mode.
4	Vox Level	OFF	Turn off VOX.
		1,2,... 10	VOX Level
5	Band-width	Wide	The radio work in wideband mode
		Narrow	The radio work in narrowband mode.
6	Back-light	Bright	The background light is on all the time.
		1Sec,2Sec, ... 10Sec	Turn off the backlight automatically when the time is up.
7	Dual Standby	OFF	Turn off dual standby mode.
		ON	Turn on dual standby mode.
8	Beep Prompt	OFF	Turn off beep prompt
		ON	Turn on beep prompt

No	Level 1 menu	Level 2 menu	Description of settings
9	Tx over time	OFF	Press and hold the PTT key to keep transmits.
		15,30,…600	The number goes from 15 to 600. In 15 steps. Indicates the maximum transmit time by pressing the PTT key
10	Rx DCS	OFF	DCS is not set
		D023N,…	Standard sequence of DCS.
11	Rx CTCSS	OFF	CTCSS is not set
		67.0HZ,…, 254.1HZ	Standard sequence of CTCSS. In Menu Mode, It can be typed directly from the keyboard (standard or non-standard).
12	Tx DCS	OFF	DCS is not set
		D023N,…	Standard sequence of DCS
13	Tx CTCSS	OFF	CTCSS is not set
		67.0HZ,…, 254.1HZ	Standard sequence of CTCSS. In Menu Mode, It can be typed directly from the keyboard (standard or non-standard).
14	VOICE	OFF	Turn off voice prompt
		ON	Turn on voice prompt
15	DTMFST	OFF	
		DT-ST	
		ANI-ST	
		DT+ANI	
16	S-CODE	1,2， …,15	Signal code(only could be set by PC software)
17	Scan Mode	TO	Time mode scan
		CO	Carrier mode scan
		SE	Search mode scan

No	Level 1 menu	Level 2 menu	Description of settings
18	PTT-ID	OFF	Do not send code when PTT is pressed
		BOT	Press PTT to send code; (only could be set by PC software)
		EOT	Release PTT to send code
		BOTH	Send code when it is pressed or released the PTT.
19	MDF-A	Frequency	In channel mode, the A channel is display channel frequency.
		Name	In channel mode, the A channel is display channel name. (only could be set by PC software)
20	MDF-B	Frequency	In channel mode, the B channel is display channel frequency.
		Name	In channel mode, the B channel is display channel name. (only could be set by PC software)
21	Busy Lockout	OFF	Transmit when the channel is occupied
		ON	The channel is occupied and transmission is prohibited
22	Key Auto Lock	OFF	Turn off keyboard lock
		ON	Turn on keyboard lock
23	Direction	None	In frequency mode, there is no frequency difference between transmitting frequency and receiving frequency.
		Plus	In frequency mode, the transmitting frequency is equal to the receiving frequency plus the frequency difference.
		Minus	In frequency mode, the transmitting frequency is equal to the receiving frequency minus the frequency difference.

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No	Level 1 menu	Level 2 menu	Description of settings
24	Offset	00.000,…,99.998	In frequency mode, the difference between the transmitted and received frequencies.
25	Memory	000,…,127	When save a channel, indicates the channel number to be saved. If a number is preceded by “CH-”, the channel already has channel parameters.
26	Delete	000,…,127	Deletes channel parameters for the specified channel, If no “CH-”indicates that the channel has no parameters, the operation is invalid.
27	Alarm Mode	On site	
		Send sound	
		Send code	
28	Scan CTCSS	67.0HZ,…, 254.1HZ	Automatic stop after receiving the CTCSS signal
29	Scan DCS	D023N,…, D754I	Automatic stop after receiving the DCS signal
30	TAIL	OFF	After releases the PTT, the radio will not send the code. Usually, when passing through the repeater, the radio will make noise to confirm whether the signal of the radio is transferred
		ON	When the PTT is released, the radio sends the code, and the receiver makes an instantaneous noise

No	Level 1 menu	Level 2 menu	Description of settings
31	RP _STE	OFF	When transmitting across the repeater and retransmitting, after the transmitter releases the PTT key, the radio enters receiving status. Due to the delay of repeater, the instant signal transmitted by the repeater can be received. The value of the menu item shall be adjusted to ensure that no noise of this radio is generated when transmitting across the repeater, so as to confirm whether the relay is operating. The menu item shall be set OFF.
		1s,2s,3s… 10s	
32	RP _STE	OFF	When the signal is transmitted across the repeater and retransmitted by it, in order to confirm whether the repeater has retransmitted the signal for this radio, the delay time of the repeater stopping transmitting shall be utilized to confirm that the signal has been retransmitted. The menu item is used to adjust the time of the noise. If the noise isn't needed, please set it as OFF.
		1s,2s,3s… 10s	
33	PROGER	OFF	Turn off the end of call prompt tone
		ON	Turn on the end of call prompt tone
34	R-TONE	1000hz,1450hz,1750hz,2100hz	
35	Power On Msg	Preset Logo	
		Preset Msg	
		Voltage	
36	Lan-guage	Chinese	
		English	
37	Reset	VFO	Initialize of Menu
		ALL	Initialize of Menu and channel

Repeater Tone

After the Tone is turned on, press PTT + Side key 2 will emit prompt tone. (Select “DT-ST” from the menu of 15 items, and " " icon will appear at the top of the screen)

Transmit DTMF

Press and hold the 【PTT】 key and press the corresponding number key to launch the corresponding DTMF number

VOX

After activating this function, if the volume level of speech reaches the level selected by the radio, do not press the [PTT] button, the radio can also be automatically transmit.
Operate:
1）Press MENU key to enter menu mode.
2）Press【▲】/【▼】to select “VOX”, Or enter the number 4 directly into the menu item.
3）Press MENU key to select, then the radio voice prompts “VOX”, Press【▲】/【▼】to select 1~10.
4）Press MENU key the radio voice prompts “confirm” to Save and return to the previous menu.
5）Repeat the above operation, select OFF and turn OFF the VOX.

Keypad Lock & Unlock

If the keypad isn’t needed, you can lock into prevent misuse. You can lock or unlock the keypad in the following ways:

1）Press MENU key to enter menu mode.
2）Press【▲】/【▼】to select “Key Auto Lock”, Or enter the number 22 directly into the menu item.
3）Press MENU key to select, then Press【▲】/【▼】to select “ON”.
4）Press MENU key the radio voice prompts “confirm” to Save and return to the previous menu.
5）Repeat the above operation, select OFF and turn OFF the automatic keyboard lock.
The manual operation locks or unlocks the keypad in the following ways:
① In standby mode, long press 【*】 for more than 2s, and the keyboard lock function will be enabled (voice prompt "lock").
② Repeat the above operation, turn off Keyboard lock function (voice prompt "unlock").
After the automatic keyboard lock function is turned on, the radio will automatically lock the keyboard without any keyboard operation for 10 seconds

Dual Standby

When in dual standby mode, the radio can receive the A or B channel. The operation is as follows:
1）Press MENU key to enter menu mode.
2）Press【▲】/【▼】to select “Dual Standby”, Or enter the number 7 directly into the menu item.
3) Press MENU key to select, then Press【▲】/【▼】to select “ON”.
4) Press MENU key the radio voice prompts “confirm” to Save and return to the previous menu.

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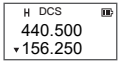
•Repeat the above operation, select OFF and turn OFF the Dual Standby function.
•In dual standby mode, the radio is in the scanning status of main and secondary channels. Even if the power saving function is enabled, the power saving function is still invalid, and the standby time of the interphone will be shortened.

Channel Deleted

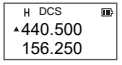
1) Press MENU key to enter menu mode.
2) Press【▲】/【▼】to select “Delete”, Or enter the number 7 directly into the menu item.
3) Press MENU key to select, then the radio voice prompts “Delete Channel”
4) Press【▲】or【▼】to select the channel to delete.
·If the numeric prefix displays the character "CH-," it indicates that the channel number already has channel parameters, which can be deleted
·If the number prefix does not have the display character "CH-", it means that the channel number has no parameters, does not need to be deleted, and can be stored.
5）Press MENU key the radio voice prompts “confirm” to Save and return to the previous menu.
·If the channel has no parameters, press MENU key to directly return to the previous menu (no voice prompt).

Memory Channel

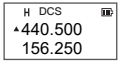
Example: The channel parameters are as follows and are stored in the channel number 001
①Rx Frequency: 440.5 MHZ
②Tx Frequency: 430.5 MHZ
③Rx DCS/CTCSS: D031N
④Tx DCS/CTCSS: D031N
⑤Tx Power: High
⑥Bandwidth: Wideband
Operating Steps:
1．Long press the MANU key to switch to VFO mode and the screen will display



2．In frequency mode, press Exit key to make the frequency pointer symbol point to A .



3．Press the number key 4, 4, 0, 5, 0, 0 successively, and the frequency to 440.500MHZ to display on the screen



4.Power Settings：Press the [MENU] → Keyboard [2] → [MENU] →【▲】or【▼】to select ‘HIGH’→ [MENU]，
5.Bandwidth：Press the Keyboard [5] → [MENU] →【▲】or【▼】to select ‘WIDTH’→ [MENU]，
6.Rx DCS：Press the Keyboard [1] and [0] → [MENU] →【▲】or【▼】to select ‘D031N’→ [MENU]，

·Setting the receive CDCSS, and automatically turn off the receive CTCSS; similarly, setting the receive CTCSS will automatically turn off receive CDCSS.

To set CTCSS: Press the [MENU] → Keyboard [1] and [1] → [MENU] → 【▲】 or 【▼】 to select CTCSS → [MENU]。

7.Tx DCS: Press the Keyboard [1] and [0] → [MENU] → 【▲】 or 【▼】 to select 'D031N'→ [MENU]

·Setting the transmit CDCSS, and automatically turn off the transmit CTCSS; similarly, setting the transmit CTCSS will automatically turn off transmit CDCSS.

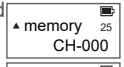
To set CTCSS: Press the [MENU] → Keyboard [1] and [3] → [MENU] → 【▲】 or 【▼】 to select CTCSS → [MENU]

·When setting up CTCSS, it can be entered numerically through the keyboard (non-standard and standard). If you select by the 【▲】 or 【▼】 keys, you can only select standard CTCSS.

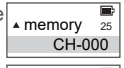
8.PTT-ID： Press the Keyboard [1] and [8] →[MENU]→ 【▲】 or 【▼】 to select 'OFF'→ [MENU].

9.Channel saves settings for receiving and transmitting at the same frequency:

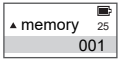
1） Press the MENU key ,Press the Keyboard [2] and [5] to display on the screen.



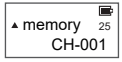
2） Press the MENU key ,then the radio voice prompts "Memory Channel", the screen display.



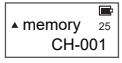
3） Press the 【▲】 / 【▼】 to select empty channel, the screen display



4） Press the MENU key ,then the radio voice prompts "Receive Memory", the screen display ,then press the MENU key ,then the radio voice prompts "Memory Channel".



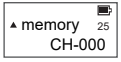
5） Press the MENU key ,then the radio voice prompts "transmit Memory", the screen display.



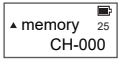
6） Press BACK key to frequency mode.

10.Channel saves settings for receiving and transmitting at different frequencies:

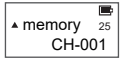
1） Press the [MENU] → Keyboard [2] and [5], the screen display.



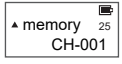
2） Press the MENU key ,then the radio voice prompts "Memory Channel", the screen display.



3） Press the 【▲】 / 【▼】 to select empty channel, the screen display.



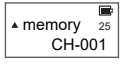
4） Press the MENU key ,then the radio voice prompts "Receive Memory", the screen display.



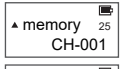
5） Press EXIT key to frequency mode.

6） Follow step 3 and enter the desired transmit frequency;

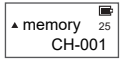
7） Press the [MENU] → Keyboard [2] and [5], the screen display .



8） press the MENU key ,then the radio voice prompts "Memory Channel", the screen display.



9） Press the MENU key ,then the radio voice prompts "transmit Memory", the screen display.



10） Press EXIT key to frequency mode.

CTCSS/CDCSS Scan

Before setting CTCSS/CDCSS scanning, set the receiving frequency to ensure that the signal can be received at the receiving frequency, and cancel the dual standby function, and make the radio work in the frequency mode.

1）CTCSS Scan

A.Press the number key to enter the correct frequency.

B.Press MENU key to enter menu mode.

C.Press【▲】/【▼】to select “Scan CTCSS”, Or enter the number 28 directly into the menu item.

D.Press MENU key .

The CTCSS changes indicate that the machine has entered the CTCSS scanning status, then CTCSS changes rapidly according to the standard sequence. When the radio finds that the CTCSS in the receiving signal is consistent with one of the standard sets of CTCSS, the radio stops scanning and receives the speech.

E. Press EXIT key to exit.

2）CDCSS Scan

A.Press the number key to enter the correct frequency.

B. Press MENU key to enter menu mode.

C. Press【▲】/【▼】to select “Scan DCS”, Or enter the number 29 directly into the menu item.

D. Press MENU key .

The CDCSS changes indicate that the machine has entered the CDCSS scanning status, then CDCSS changes rapidly according to the standard sequence. When the radio finds that the CDCSS in the receiving signal is consistent with one of the standard sets of CDCSS, the radio stops scanning and receives the speech.

E. Press EXIT key to exit.

CTCSS/CDCSS

CTCSS/CDCSS is mainly used to avoid receiving unrelated calls on the same frequency. If CTCSS/CDCSS is set, only calls with the same tone signal set in the channel can be received within the effective communication range. However, if CTCSS/CDCSS signaling is not set up, all calls on the same channel in the valid communication range can be heard.

The CTCSS/CDCSS can be set by write software or manually. You can set the parameters in menu 10, 11, 12 and 13.

A. CTCSS (51 Group)				
67.0	94.8	131.8	171.3	203.5
69.3	97.4	136.5	173.8	206.5
71.9	100.0	141.3	177.3	210.7
74.4	103.5	146.2	179.9	218.1
77.0	107.2	151.4	183.5	225.7
79.7	110.9	156.7	186.2	229.1
82.5	114.8	159.8	189.9	233.6
85.4	118.8	162.2	192.8	241.8
88.5	123.0	165.5	196.6	250.3
91.5	127.3	167.9	199.5	254.1

B. CDS (210 Group)				
D023N	D131N	D251N	D371N	D532N
D025N	D132N	D252N	D411N	D546N
D026N	D134N	D255N	D412N	D565N
D031N	D143N	D261N	D413N	D606N
D032N	D145N	D263N	D423N	D612N
D036N	D152N	D265N	D431N	D624N
D043N	D155N	D266N	D432N	D627N
D047N	D156N	D271N	D445N	D631N
D051N	D162N	D274N	D446N	D632N
D053N	D165N	D306N	D452N	D645N
D054N	D172N	D311N	D454N	D654N
D065N	D174N	D315N	D455N	D662N
D071N	D205N	D325N	D462N	D664N
D072N	D212N	D331N	D464N	D703N
D073N	D223N	D332N	D465N	D712N
D074N	D225N	D343N	D466N	D723N
D114N	D226N	D346N	D503N	D731N
D115N	D243N	D351N	D506N	D732N
D116N	D244N	D356N	D516N	D734N
D122N	D245N	D364N	D523N	D743N
D125N	D246N	D365N	D526N	D754N

D023I	D131I	D251I	D371I	D532I
D025I	D132I	D252I	D411I	D546I
D026I	D134I	D255I	D412I	D565I
D031I	D143I	D261I	D413I	D606I
D032I	D145I	D263I	D423I	D612I
D036I	D152I	D265I	D431I	D624I
D043I	D155I	D266I	D432I	D627I
D047I	D156I	D271I	D445I	D631I
D051I	D162I	D274I	D446I	D632I
D053I	D165I	D306I	D452I	D645I
D054I	D172I	D311I	D454I	D654I
D065I	D174I	D315I	D455I	D662I
D071I	D205I	D325I	D462I	D664I
D072I	D212I	D331I	D464I	D703I
D073I	D223I	D322I	D465I	D712I
D074I	D225I	D343I	D466I	D723I
D114I	D226I	D346I	D503I	D731I
D115I	D243I	D351I	D506I	D732I
D116I	D244I	D356I	D516I	D734I
D122I	D245I	D364I	D523I	D743I
D125I	D246I	D365I	D526I	D754I

Troubleshooting

Problem	Reason	Solution
The radio doesn't start.	The battery doesn't be installed correctly.	Remove and re-install the battery.
	The battery runs out.	Charging or change a new battery.
	The battery is poor contact causing by damaged or dirty.	Clearing the contact. Please get contact with our distributor to repair, if you cannot solve it.
The sound is small/ intermit-tent, or on sound when receiving the signal.	Battery voltage is low.	Charging or change a new battery.
	The voice is too small.	Turn up the sound.
	The antenna is loose.	Turn off the radio and re-install the antenna.
	The speaker is damaged or dirty.	Clear the speaker. Please get contact with our distributor to repair, if you cannot solve it.
Cannot talk with the members in the same group	The frequency is different with other members.	Resetting the same frequency with them.
	In the different digital or analog channels	Correct to the same channel.
	Too far away from each other	Get close with each other
Single call or group call does not work in the digital channel	Be different in the frequency/channel/color code/ time slot	Setting the same frequency/ channel/color code/ time slot
Other sound in the channel, which is not from the members	Interference from the same frequency	Change to new frequency, or correct the squelch
	The signal is not set yet.	Set the signal for all radio in the group
The loud noise	Be too away from other members.	Get close with other members.
	Poor location, such as blocked by tall buildings, or located in the basement	Move to open environment, restart the radio.
	Interfere by the environ-ment or electromagnetic	Avoid the device interfering the radio

Note: As above method still cannot solve your problem, or you meet other problem, please get contact with local distributor to get the technological support.

Maintenance and clean

To keep the performance and extend the service life, please note the content below for maintain the clear the radio.

■Maintenance

>Do not store the radio in an environment containing a corrosive electronic circuit material.

>Do not directly lift an antenna or an external microphone in the course of carrying or using a radio.

>Cover the appendage interface cover, when attachments are not used.

■Clean

>Please use clean, dry cloth or brush to wipe off the surface of the walkie talkie and the dust attached to the charging pole on a regular basis.

>Wipe the radio on dirt with dust, lint free cloth, to prevent poor contact.

>After long term use of radio, walkie talkie buttons, control knobs and chassis are easy to dirty. You can use neutral detergent (do not use strong corrosive chemicals) and wet cloth to clean. After cleaning, make sure the radio is completely dry; otherwise please do not use it.

>When the walkie talkie does not in use, please attach the cover on the socket.

Note: Please turn off the radio and remove the battery before clearing.

PORTABLE TWO-WAY RADIO

Technical specificaion

General	
Frequency Range	VHF:136-174MHz UHF:400-520MHz(Dual band)
Memory Channel	128 Group
Channel Spacing	25KHz(Wide)、12.5K（Narrow）
Operating Voltage	DC7.4V
Frequency Stability	±2.5ppm
Operating Temperature	－20~＋60℃
Antenna Impedance	50Ω
Transmit Current	H≤2.5A; M≤1.8A; L≤1.1A
Modulation (Wide/Narrow)	16KΦF3E / 11KΦF3E
Max Frequency Deviation (Wide/Narrow)	≤5KHz / ≤2.5KHz
Stray Power	≤7.5uW
Adjacent Channel power	≤-65 dB/≤-60 dB
Signal-to-noise(wide/narrow)	≥-45dB /≥-40dB
QT/DQT Deviatio (Wide / Narrow)	0.7±0.1KHz /0.4±0.1KHz
Modulation Sensitivity	8-12mV
Demission	138*63.7*37mm (no including the antenna)
Weight	About 262g (Include in battery and antenna）

Receiver	
Receiver Sensitivity	≤0.25uV（12dB SINAD）
Audio Power	1W@10%
Audio Distortion	＜10%
Signal-to-Noise	≥45dB
Adjacent Channel Selectivity (Wide/Narrow)	≥65 dB /≥60 dB
Intermodulation (Wide/Narrow)	≥65 dB /≥60 dB
Stray Suppression	≥65dB
Receive Current	≤380mA
Note: All specifications may be modified without prior notice or liability.	