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TG-K4AT (UV)

USER'S MANUAL

PRECAUTIONS BEFORE USING

Please read the User's Manual before using. It gives you important information about how to operate the portable radio.

Please put the radio and accessories where the children can not touch.

Maintenance can only be performed by professional technicians.

Please use the standard battery pack and charger in order not to destroy the radio.

Please use the standard antenna, in order not to shorten the distance.

Do not expose the radio to sunlight for a long period of time, nor put it near the heat, nor use it in a high temperature environment.

Do not put it in extreme dust nor wet or on unsteady surfaces.

Keep it dry. (Rain or moisture will erode the electronic board).

Do not transmit when the antenna is not installed.

If you find bad smell or smog, please turn off the radio immediately. And take the battery off the radio, then contact with QS agent.

FEATURES

- UHF/VHF dual band receive/transmit
- FM radio (65-108MHz)
- Large LCD display
- High capacity Li-ion battery and smart charger
- PC programmable
- Fast MENU operation
- Emergency alarm function
- H/L output power selective
- Squelch level adjustable
- Multi power saving function
- Voice prompt(Chinese and English)
- Reminding switch
- Dual display of frequency and channel
- Channel name edit
- Channel storing
- Frequency/channel mode shift
- Multi LCD backlight selective
- Time of backlight auto off selective
- VOX function
- Dual-watch operation
- Receive/transmit code setting separately
- Cable clone
- CTCSS/DCS code search automatically
- Offset frequency and offset direction setting
- Multi step frequency
- Busy channel lock
- Time-out-timer (TOT)
- Multi display mode: channel/frequency/channel name
- Multi scan function selective
- Channel scan additive
- Wide/narrow bandwidth selective
- Main/sub channel shift
- 1750Hz call tone
- Reminding of repeater transfer
- Auto-keylock
- 128 channels
- Channel delete function
- Reset
- DTMF function
- PTT-ID
- CTCSS/DCS
- Reverse function

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SUPPLIED ACCESSORIES

Carefully unpack the portable radio. We suggest that you check the following items before you throw away the packing materials.

STANDARD SUPPLIED ACCESSORIES

ITEM	QTY
Portable radio	1
Antenna	1
Li-ion battery pack (7.2V)	1
Battery charger	1
Belt clip	1
User's manual	1

STANDARD SUPPLIED ACCESSORIES



CHARGING NOTES (1)

Charging the Li-ion battery pack:

- Battery packs are not charged when they are shipped. Charge them before use.
- Initially charging the battery pack after purchase or extended storage (longer than 2 months) will not bring the battery pack to its greatest capacity or its normal charge, which can be done only after repeated charging and discharging two or three times.
- The average use time of battery pack is 10 hours.
- After the battery is charged to its highest capacity, and then used on the radio. If the radio still shows low power, please change a new battery pack.
- Do not short-circuit the battery terminals or throw the battery into fire.
- Never attempt to remove the casing from the battery pack.

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CHARGING NOTES (2)

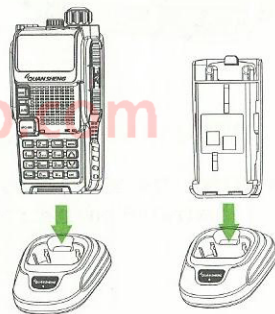
- Plug the charger into 220V power.



- Slide the Li-ion battery pack or radio with a Li-ion battery pack into the charger.

- 1 Make sure the battery pack is in connected with the charging terminals.
- 2 When charging begins, the RED LED light displays. When the battery pack is charged to it's greatest capacity, GREEN LED light displays.
- 3 If the capacity of the battery is too low, the red indicator will glitter and it will return to red light after charging some minutes.

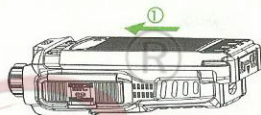
- After the GREEN LED light displays. take the battery pack or the portable radio out of the charger.



ATTACHING /RELEASING THE BATTERY PACK

- Slide the battery pack into the back of the radio in the direction of the arrow (①), then lock it with the battery release button.

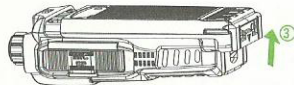
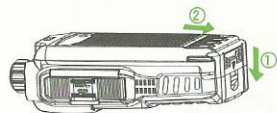
Slide the battery pack until the battery release button makes a "clicking" sound.



- Turn off the radio before releasing the battery pack.

1 Push the battery release button in the direction of the arrow (①) as shown below.

3 The battery pack is then released.



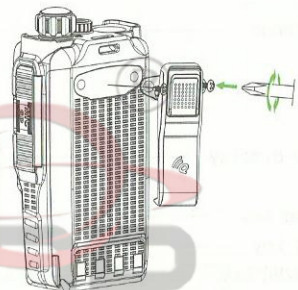
INSTALLING ANTENNA

- Attach the antenna to the radio as illustrated on the right.



INSTALLING BELT CLIP

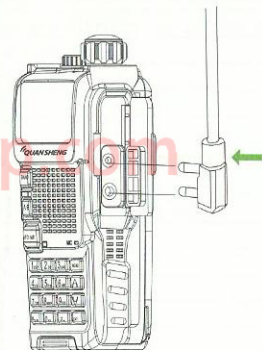
- Attach the belt clip with the supplied screws by a phillips screw driver.



Attaching the belt clip

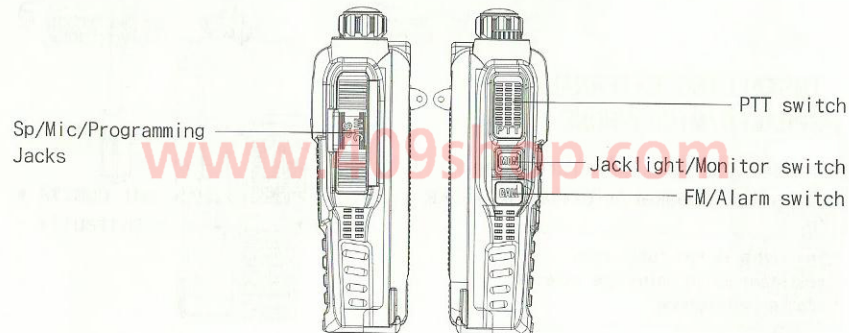
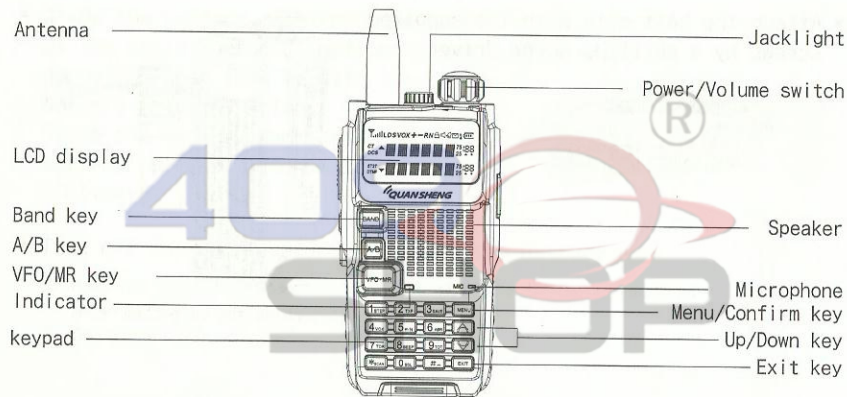
INSTALLING EXTERNAL SPEAKER/MICROPHONE

- Insert the speaker/microphone plugs into the speaker/microphone jacks.

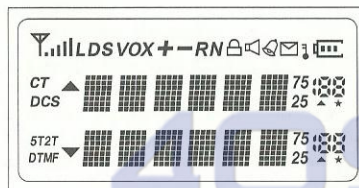


The radio is not fully rain resistant while using the external speaker/microphone.

DIAGRAM



LCD DISPLAY



CT	This symbol will appear when transmitting, it means transmitting CTCSS code.
DCS	This symbol will appear when transmitting, it means transmitting DCS code.
+	In frequency mode, this symbol will appear, it means transmitting frequency equals receiving frequency plus the difference of frequency. It can set different frequency.
-	In frequency mode, it will appear this symbol, it means transmitting frequency equals receiving frequency minus the difference of frequency. It can set different frequencies.
+-	It means the transmitting and receiving frequencies are different at current channel.
S	It means it already set dual watch operation function.
VOX	VOX function
R	Reverse function
N	Narrow bandwidth
	It represents the remaining battery, when the battery is almost used up, the frame starts to flicker and it forbid transmitting the radio.
	It means the keypad is locked, pressing key #/Lock can unlock the keypad.
L	Low frequency.
▲▼	Current frequency and current menu setting.
	Signal strength.
888	Channel number display
75 25	Frequency ending display

BASIC OPERATION

PTT Key

- Transmitting/Receiving switch key:
Press "PTT" to transmit and speak to microphone.
- Release "PTT" to receive.

FM/Alarm Key

- Press it for a short time to turn on FM radio function.
Operate it again to turn it off.
- Press it for a long time to turn on Alarm function.
Operate it again to turn it off.

Jacklight/Monitor Key

- Press it for a short time to turn on Jacklight.
Operate it again to turn it off.
- Press it for a long time to turn on Monitor function.
- Press Jacklight/Monitor key to turn the power on, and then enter channel clone condition, It can copy one radio's channel parameter to another one.





NOTE:Cloning cable must be used to connect these two radios.

Band Key

- UHF/VHF frequency band shift;
- FM radio 65-75/76-108MHz shift;
- In transmitting mode, press Band key to send 1750Hz call tone.

BASIC OPERATION

Function Keypads

- Menu/Confirm key: 
It's use for activating the menu, choose each menu item and confirm the parameter.
- Up key (Press more than 2s to scan, press up key to upward scanning): 
- Down key (Press more than 2s to scan, press down key to downward scanning): 
- Press key Exit to exit and clear. 

Number Keypads

- Input the information to the radio.
- Input the non-standard CTCSS code in non-standard mode.
- In transmitting mode, press number keys to send corresponding DTMF code.





BASIC OPERATION

*Scan Key

- Press scan key for a short time to activate RX/TX reverse function.
- Press scan key for more than 2s to start frequency or channel scanning.
- In FM radio mode, press scan key to automatically search FM radio channel.
- In CTCSS/DCS mode, press scan key to start CTCSS/DCS code scanning.

Key

- In channel mode, press #  for a short time to switch H/L output power.
- Press #  key for more than 2 seconds to lock or unlock the keypad.

Power/Volume Switch

- Turn the Power/Volume switch clockwise to turn the power on.
- Turn the Power/Volume switch counter-clockwise to turn the power off.

Indicator

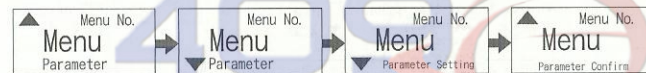
- Transmitting: see the red light
- Receiving: see the green light

Sp/Mic/Programming Jacks

- It' s use for external speaker/microphone.
- It' s use for the connection of program by computer.

FAST MENU SETTING

- 1 Press Menu key;
- 2 Press Menu key again;
- 3 Press Up/Down key to select Menu No.
- 4 Press Menu to exit/confirm. (As picture below)



NOTE:

- ① In channel mode, the setting of following features is invalid.
CTCSS/DCS, Wide/narrow bandwidth, PTT-ID.
Busy channel lock, Channel scan additive, Channel name edit.
- ② Only High/Low power can be changed by pressing fast key #.

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FAST MENU OPERATION FLOW

No.	Feature	Function Character	Function Set	LCD Display	Parameter	LCD Display	Selectable	Confirm key	Back Key	Page
0	Squelch Level	SQL	MENU+0	▲ SQL 0 5	Press Menu key, and then press ▲ or ▼ key to choose.	▼ SQL 0 6	0-9 levels 0:Lowest 9: Highest	MENU	PTT or EXIT	P17
1	Step Frequency	STEP	MENU+1	▲ STEP 1 25.0K	Press Menu key, and then press ▲ or ▼ key to choose.	▼ STEP 1 12.5K	2.5/5.0/6.25 /10.0/12.5/ 25.0KHZ	MENU	PTT or EXIT	P18
2	Output Power	TXP	MENU+2	▲ TXP 2 HIGH	Press Menu key, and then press ▲ or ▼ key to choose.	▼ TXP 2 LOW	HIGH: 5W LOW: 1W	MENU	PTT or EXIT	P18
3	Battery Saving	SAVE	MENU+3	▲ SAVE 3 1	Press Menu key, and then press ▲ or ▼ key to choose.	▼ SAVE 3 2	OFF: OFF 1:1 2:2 3:3 4:4	MENU	PTT or EXIT	P19
4	VOX	VOX	MENU+4	▲ VOX 4 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ VOX 4 9	OFF: OFF 1: Lowest Sensitivity 9: Highest Sensitivity	MENU	PTT or EXIT	P19
5	Wide/ Narrow Bandwidth	W/N	MENU+5	▲ WN 5 WIDE	Press Menu key, and then press ▲ or ▼ key to choose.	▼ WN 5 NARR	W: 25.0K N: 12.5K	MENU	PTT or EXIT	P20
6	Auto Backlight	ABR	MENU+6	▲ ABR 6 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ ABR 6 NARR	OFF 1-5s	MENU	PTT or EXIT	P20
7	Dual-watch Operation	TDR	MENU+7	▲ TDR 7 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ TDR 7 ON	ON OFF	MENU	PTT or EXIT	P21
8	Keypad Sound Reminding	BEEP	MENU+8	▲ BEEP 8 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ BEEP 8 ON	ON OFF	MENU	PTT or EXIT	P21
9	Time-Out-Timer	TOT	MENU+9	▲ TOT 9 15	Press Menu key, and then press ▲ or ▼ key to choose.	▼ TOT 9 600	15, 30..... 600S	MENU	PTT or EXIT	P22
10	Receive DCS	R-DCS	MENU+10	▲ R-DCS10 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ R-DCS10 D023N	OFF D023N-D754N D0231-D7541	MENU	PTT or EXIT	P22

FAST MENU OPERATION FLOW

No.	Feature	Function Character	Function Set	LCD Display	Parameter	LCD Display	Selectable	Confirm key	Back Key	Page
11	Receive CTCSS	R-CTCS	MENU+11	▲ R-CTCS11 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ R-CTCS11 67.0HZ	OFF 67.0-254.1HZ	MENU	PTT or EXIT	P23
12	Transmit DCS	T-DCS	MENU+12	▲ T-DCS12 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ T-DCS12 D023N	OFF D023N-D754N D0231-D7541	MENU	PTT or EXIT	P23
13	Transmit CTCSS	T-CTCS	MENU+13	▲ T-CTCS13 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ T-CTCS13 67.0HZ	OFF 67.0-254.1HZ	MENU	PTT or EXIT	P24
14	Voice Reminding	VOICE	MENU+14	▲ VOICE14 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ VOICE14 ON	ON OFF	MENU	PTT or EXIT	P24
15	ANI-ID	ANI-ID	MENU+15	▲ ANI-ID15 ****		▼ ANI-ID15 ****	1-5 digit arbitrary selection (It can be programmed by software.)	MENU	PTT or EXIT	P24
16	DTMFST	DTMFST	MENU+16	▲ DTMFST16 OFF	Press ▲ or ▼ key or input numbers directly.	▼ DTMFST16 DT-ST	OFF: DT-ST: Sending by keypads ANI-ST: Auto sending DT-ANI: Auto sending and sending by keypads	MENU	PTT or EXIT	P25
17	Signal Code	S-CODE	MENU+17	▲ S-CODE17 1	Press Menu key, and then press ▲ or ▼ key to choose.	▼ S-CODE17 13	1-15 group (It can be programmed by software.)	MENU	PTT or EXIT	P25
18	Scan Resume Mode	SC-REV	MENU+18	▲ SC-REV18 TO	Press Menu key, and then press ▲ or ▼ key to choose.	▼ SC-REV18 SE	TO: Time scanning CO: Carrier wave scanning SC: Search scanning	MENU	PTT or EXIT	P26
19	PTT ID	PTT-ID	MENU+19	▲ PTT-ID19 OFF	Press Menu key, and then press ▲ or ▼ key to choose.	▼ PTT-ID19 BOT	OFF: Press PTT not send BOT: Press PTT to send. (PTT ID code can choose from program software) EOT: Release PTT to send BOTH: Press or release PTT to send.	MENU	PTT or EXIT	P26
20	PTT ID Prolong Time	PTT-LT	MENU+20	▲ PTT-LT20 0	Press Menu key, and then press ▲ or ▼ key to choose.	▼ PTT-LT20 1	0, 1, 2..... 30ms	MENU	PTT or EXIT	P27

FAST MENU OPERATION FLOW

No.	Feature	Function Character	Function Set	LCD Display	Parameter	LCD Display	Selectable	Confirm Key	Back Key	Page
21	A Channel Display Mode	MDF-A	MENU+21	▲MDF-A 21 FREQ	Press Menu key, and then press ▲or▼key to choose.	MDF-A 21 CH	FREQ: Channel+ frequency CH: Channel NAME: Channel name (It can be programmed by software.)	MENU	PTT or EXIT	P27
22	B Channel Display Mode	MDF-B	MENU+22	▲MDF-B 22 FREQ	Press Menu key, and then press ▲or▼key to choose.	MDF-B 22 CH	FREQ: Channel+ frequency CH: Channel NAME: Channel name (It can be programmed by software.)	MENU	PTT or EXIT	P28
23	Busy Channel Lock	BCL	MENU+23	▲BCL 23 OFF	Press Menu key, and then press ▲or▼key to choose.	BCL 23 ON	ON OFF	MENU	PTT or EXIT	P28
24	Auto Keypad Lock	AUTOLK	MENU+24	▲AUTOLK 24 OFF	Press Menu key, and then press ▲or▼key to choose.	AUTOLK 24 ON	ON OFF	MENU	PTT or EXIT	P29
25	Frequency Deviation Setting	SFT-D	MENU+25	▲SFT-D 25 OFF	Press Menu key, and then press ▲or▼key to choose.	SFT-D 25 +	OFF + TX frequency >RX frequency - TX frequency <RX frequency	MENU	PTT or EXIT	P29
26	Frequency of Different Frequency	OFFSET	MENU+26	▲OFFSET 26 00.000	Press Menu key, and then input numbers directly.	OFFSET 26 05.000	00.000~ 69.990MHZ	MENU	PTT or EXIT	P30
27	Channel Store	MEM-CH	MENU+27	▲MEM-CH 27 000	Press Menu, and then press ▲or▼key to choose. Or input three numbers directly.	MEM-CH 27 036	0-127 Channels	MENU	PTT or EXIT	P30~32
28	Channel Delete	DEL-CH	MENU+28	▲DEL-CH 28 000	Press Menu, and then press ▲or▼key to choose. Or input channel numbers directly.	DEL-CH 28 006	Any one of the stored channels.	MENU	PTT or EXIT	P32~33
29	Standby Backlight	WT-LED	MENU+29	▲WT-LED 29 OFF	Press Menu, and then press ▲or▼key to choose.	WT-LED 29 BLUE	OFF Green Red Yellow	MENU	PTT or EXIT	P33
30	RX Backlight	RX-LED	MENU+30	▲RX-LED 30 OFF	Press Menu, and then press ▲or▼key to choose.	RX-LED 30 BLUE	OFF Green Red Yellow	MENU	PTT or EXIT	P33

FAST MENU OPERATION FLOW

No.	Feature	Function Character	Function Set	LCD Display	Parameter	LCD Display	Selectable	Confirm Key	Back Key	Page
31	TX Backlight	TX-LED	MENU+31	▲TX-LED 31 OFF	Press Menu key, and then press ▲or▼key to choose.	TX-LED 31 BLUE	OFF Green Red Yellow	MENU	PTT or EXIT	P34
32	Alarm Mode	AL-MOD	MENU+32	▲AL-MOD 32 OFF	Press Menu key, and then press ▲or▼key to choose.	AL-MOD 32 SITE	SITE: Site alarm TONE: Sending alarm tone CODE: Sending alarm code	MENU	PTT or EXIT	P34
33	Frequency Band Shift	BAND	MENU+33	▲BAND 33 UHF	Press Menu key, and then press ▲or▼key to choose.	BAND 33 VHF	UHF: 400~ 480MHz VHF: 136~ 174MHz	MENU	PTT or EXIT	P34
34	Dual-watch Operation (Cross Band TX/RX)	TDR-AB	MENU+34	▲TDR-AB 34 OFF	Press Menu key, and then press ▲or▼key to choose.	TDR-AB 34 A	OFF A band transmit (Upper row frequency) A band transmit (Bottom row frequency)	MENU	PTT or EXIT	P35
35	Tail Tone Elimination	SET	MENU+35	▲SET 35 OFF	Press Menu key, and then press ▲or▼key to choose.	SET 35 ON	ON OFF	MENU	PTT or EXIT	P35
36	Repeater Tail Tone Elimination	RP-SET	MENU+36	▲RP-SET 36 OFF	Press Menu key, and then press ▲or▼key to choose.	RP-SET 36 5	OFF 1, 2, ..., 10ms	MENU	PTT or EXIT	P36
37	Time of Repeater Tail Tone Elimination	RPT-RL	MENU+37	▲RPT-RL 37 OFF	Press Menu key, and then press ▲or▼key to choose.	RPT-RL 37 5	OFF 1, 2, ..., 10ms	MENU	PTT or EXIT	P36
38	Displays of Power On	PONMSG	MENU+38	▲PONMSG 38 FULL	Press Menu key, and then press ▲or▼key to choose.	PONMSG 38 MSG	FULL: Full frequency character MSG: Display of Quansheng logo	MENU	PTT or EXIT	P37
39	Reminding of End Talk	ROGER	MENU+39	▲ROGER 39 OFF	Press Menu key, and then press ▲or▼key to choose.	ROGER 39 ON	ON OFF	MENU	PTT or EXIT	P37
40	Reset	RESET	MENU+40	▲RESET 40 ALL	Press Menu key, and then press ▲or▼key to choose.	RESET 40 VFO	VFO: Menu initialization ALL: Menu and channel initialization	MENU	PTT or EXIT	P37~38
41	Manually Lock the Keypads		Press key "#" for more than 2s	▲400.875 41 136.225		▲400.875 41 136.225	Repeatedly press key "#" for more than 2s to lock or unlock.	Auto	Auto	P38

FAST MENU OPERATION FLOW

No.	Feature	Function Character	Function Set	LCD Display	Parameter	LCD Display	Selectable	Confirm key	Back Key	Page
42	FM Radio	FM	Slightly press Call key	▲ FM 100.700	Press BAND key, and then press ▲ or ▼ key to choose, or it can input numbers directly.		65-75MHZ 76-108MHZ 65-108MHZ	Auto	PTT or tap call key	P39
43	Rapid Alert	ALARM	Press CALL key for more than 2s.	▲ ALARM 138.625				Auto	PTT	P39
44	Jacklight		Tap MON key				Repeatedly tap MON key to turn it on or off	Auto	Auto	P39
45	Monitor	MON	Press key MON for more than 2s.				Press key MON for more than 2s to turn it on. Release key MON to turn it off.	Auto	Auto	P39
46	Cable Clone	COPING	Press key MON to turn the power on.	COPING				Auto	Auto	P40
47	Channel / Frequency Mode Conversion	VFO/MR	Press the VFO/MR key.	▲ 400.875 136.225		▲ 400.875 136.225 4	Display channel mode according to menu21 and 22.	Auto	Auto	P40
48	TX 1750Hz Call Tone		Press key PTT+BAND					Auto	Release PTT	P40
49	Reverse Function	R	Tap "*" key	▲ R 400.875 136.225			Repeatedly tap key "*" to turn it on or off.	Auto	Auto	P40
50	Frequency Scanning	FM	In frequency mode, press key "*" for more than 2s.	▲ 400.875 136.225	Press key ▲ or ▼ to change the scanning direction.		Scan upward or downward according to the set step frequency.	Auto	PTT or EXIT	P40 -41
51	Channel Scanning		In channel mode, press key "*" for more than 2s.	▲ 400.875 136.225 3	Press key ▲ or ▼ to change the scanning direction.		Scan upward or downward according to the set channels.	Auto	PTT or EXIT	P41
52	Auto Search FM Radio	FM	In FM Radio mode, press key "*" .	▲ FM 100.700	Repeatedly press key "*" .		FM Radio band: 65-108MHz.	Auto	PTT or tap call key	P41
53	Research CTCSS/DCS Code		MENU+10 or MENU+11	R-CTCS or R-DCS	Press "*" key		Automatically research CTCSS/DCS code.	MENU	PTT or EXIT	P42
54	Cursor "▲" Conversion	A/B	Tap key "AB"	▲ 400.875 136.225 4	Repeatedly press key "AB"	400.875 3 ▼ 136.225 4	A (Upper row) / B (Bottom row)	Auto	Auto	P42

FAST MENU OPERATION FLOW

No.	Feature	Function Character	Function Set	LCD Display	Parameter	LCD Display	Selectable	Confirm key	Back Key	Page
55	High/Low Power Fast Conversion	H/L	In Channel mode, tap key "#"	▲ H 400.875 136.225 3	Repeatedly press key "*" .	▲ 400.875 136.225 4	H:5W L:1W	Auto	Auto	P42

NOTE: This model has dual-frequency display function. In frequency mode it can display two different receiving and transmitting frequencies; In channel mode it can display two related parameters of two different channels.

In frequency or channel mode, press key A/B to shift between main-channel A and sub-channel B. When "▲" points to the main channel, all operations are against channel A; When "▼" points to the sub-channel, all operations are against the sub-channel.

FUNCTION OPERATION AND DESCRIPTION

(The following description is without voice prompt.)

Squelch Level (SQL) — Menu No. 0

This function can turn on or off the monitor according to signal strength.

The operation steps are as follows:

1. In frequency or channel mode, press Menu+0, the LCD displays

▲ SQL 0
5

2. Press key Menu, the LCD displays

▲ SQL 0
6

3. Press key ▲ or ▼ to choose squelch level.

There are 0-9 levels. 0: Lowest 9: Highest

4. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.



NOTE: Too high squelch level may result in failing to receive in weak signals.

Too low squelch level will make it be disturbed by other signals.

Step Frequency (STEP) —Menu No. 1

This function can choose the step frequency you want to set.

The operation steps are as follows:



1. In frequency mode, press Menu+1, the LCD displays: 
2. Press key Menu, the LCD displays: 
3. Press key ▲ or ▼ to choose your desired step frequency.
You can set 2.5/5.0/6.25/10.0/12.5/25.0KHz step frequency.
4. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE: In channel mode, this function is invalid.

Output Power (TXP) —Menu No. 2

This function can choose High/Low output power.

The operation steps are as follows:

1. In frequency or channel mode, press Menu+2, the LCD displays: 
2. Press key Menu, the LCD displays: 
3. Press key Menu, and then press key ▲ or ▼ to choose.
High: 5W, Low: 1W.
4. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.



NOTE: Select high output power can improve the quality of the call, low output power can reduce radiation and the battery capacity loss.

In channel mode, press fast key “#” to switch between high and low output power.
(See Menu No. 55)

Battery Saving (SAVE) —Menu No. 3

This function is mainly to save the capacity of battery when the radio is standby.

The operation steps are as follows:




1. In frequency or channel mode, press Menu+3, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose battery saving function. The LCD displays: 
There are five kinds of mode. ①OFF ②1: 1 ③1: 2 ④1: 3 ⑤1: 4
Example: 1: 1 (1s' working, 1s' battery saving.) 1: 2 (1s' working, 2s' battery saving.)
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE: If you choose OFF, the radio is not battery saving. In general, we suggest you choose 1:1.

VOX Function (VOX) —Menu No. 4

When this function is on, the system will inspect your talking to the microphone and then it will automatically shift to transmitting mode without manual operation. (This function is useful for earphone users.)

The operation steps are as follows:



1. In frequency or channel mode, press Menu+4, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose VOX level. The LCD displays: 
There are (OFF-10) levels. OFF: OFF 10: Lowest level 1: Highest level
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby. The LCD displays: 

NOTE: The higher the level is, the higher the sensitivity of microphone is.
This function is invalid in scanning and FM radio mode.

Wide/Narrow Bandwidth (W/N) —Menu No. 5

This function is used to set the working bandwidth of the radio.

The operation steps are as follows:



- 1、In frequency mode, press Menu+5, the LCD displays: 
- 2、Press key Menu, and then press key ▲ or ▼ to choose wide or narrow bandwidth.
The LCD displays: 
WDIE: 25KHz, NARR: 12.5 KHz
- 3、After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE:The radio normally use wide band.
In channel mode, this function is invalid.

Auto Backlight (ABR) —Menu No. 6

This function can adjust the auto off time after radio display backlight is on.

The operation steps are as follows:

- 1、In frequency or channel mode, press Menu+6, the LCD displays: 
- 2、Press key Menu, and then press key ▲ or ▼ to choose the backlight display time(1-5s).
The LCD displays: 
- 3、After setting, press key Menu to confirm, and then press key PTT or Exit to standby.



NOTE:We suggest you setting 4-5 levels.

Dual-watch Operation (TDR) —Menu No. 7




When this function is on, you may receive the frequency of channel A and channel B at the same time.

If any AB channel or frequency receives signal, “▲” will glitter on corresponding channel or frequency.

Example: Channel A: 460.125MHz, Channel B: 151.235 MHz ,

The LCD displays:  or 

The operation steps are as follows:



- 1、In standby mode, press Menu+7, the LCD displays: 
- 2、Press key Menu, and then press key ▲ or ▼ to choose on, the LCD displays: 
- 3、After setting, press key Menu to confirm, and then press key PTT or Exit to standby.
The LCD displays: 

NOTE:In dual-watch operation mode, you can change the parameter of AB channel or frequency freely.

Keypad Sound Reminding (BEEP) —Menu No. 8

This function is to set the reminding sound. It will beep when you press keypad.



The operation steps are as follows:

- 1、In frequency or channel mode, press Menu+8, the LCD displays: 
- 2、Press key Menu, and then press key ▲ or ▼ to choose on, the LCD displays: 
- 3、After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

Time-Out-Timer (TOT) — Menu No.9

This function is to limit the calling time, the radio will stop transmitting and then launch voice if it transmits over setted time.




Example, if you want to set time limit for 15s. The operation steps are as follows:

1. In frequency or channel mode, press Menu+9, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose 15s. The LCD displays: 
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

Receiving DCS (R--DCS) — Menu No.10

Using this function can set your privacy and prevents disturbance from others or matching with the code of other radios.

The operation steps are as follows:




1. In frequency mode, press Menu+10, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose. The LCD displays: 
OFF: OFF
R-DCS: D023N-D754N (Normal DCS)
R-DCS: D023I-D754I (Inverse DCS)
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby. The LCD displays: 

NOTE: There are 208 groups of normal and inverse DCS in this radio.
This function is invalid in channel mode.

Receiving CTCSS (R--CTCSS) — Menu No.11

Using this function can set your privacy and prevents disturbance from others or matching with the code of other radios.

The operation steps are as follows:




1. In frequency mode, press Menu+11, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose from 67.0—254.1Hz. The LCD displays: 
CTCSS: 67.0—254.1Hz, OFF: OFF
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby. The LCD displays: 

NOTE: There are 50 groups of CTCSS.
This function is invalid in channel mode.

Transmitting DCS (T--DCS) — Menu No.12

Using this function can set your privacy and prevents disturbance from others or matching with the code of other radios.

The operation steps are as follows:




1. In frequency mode, press Menu+12, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby. The LCD displays: 

NOTE: There are 50 groups of CTCSS.
This function is invalid in channel mode.

Transmitting CTCSS (T--CTCS) —Menu No. 13

Using this function can set your privacy and prevents disturbance from others or matching with the code of other radios.

The operation steps are as follows:

1. In frequency mode, press Menu+13, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
(CTCSS mode reference Menu No. 11)
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.
The LCD displays: 



NOTE: There are 50 groups CTCSS.

This function is invalid in channel mode.

Voice Reminding (VOICE) —Menu No. 14

It will voice remind you when you operate the radio. It's convenient for users.

The operation steps are as follows:


1. In frequency or channel mode, press Menu+14, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

ANI-ID (ANI-ID) —Menu No. 15

ANI-ID can check out the code of your radio.

This function can just be operated by program software, it can set 1-5 bit digit code.



Example: The software set the ID code as 88888. The operation steps are as follows:

1. In frequency or channel mode, press Menu+15, the LCD displays: 
2. After searching, press key Menu to confirm, and then press key PTT or Exit to standby.

DTMFST (DTMFST) —Menu No. 16

This function is that when the radio transmits, the recipient can hear the DTMF and AND-ID code issued by the radio.

The operation steps are as follows:



1. In frequency or channel mode, press Menu+16, the LCD displays: 
2. Press key Menu and then press key ▲ or ▼ to choose, the LCD displays: 
Choose mode: OFF: OFF
DT-ST: When transmitting, manually press keypads to make DTMF sound.
ANI-ST: When transmitting, it automatically makes DTMF sound.
DT+ANI: When transmitting, manually press keypads or automatically makes DTMF sound.
3. After setting, press key Menu to confirm, then press PTT or Exit to standby.

NOTE: Select "OFF" when using in case of affecting the radio.

Signal Code (S-CODE) —Menu No. 17

This function is to set radio signal code, it can set 1-15 groups. This function can just be set by program software.

The operation steps are as follows:



1. In frequency or channel mode, press Menu+17, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE: Do not use this function if not necessary in case of affecting the radio.

Scan Resume Mode (SC-REV) — Menu No. 18

This function can scan activities from other radios' frequencies or channels. You can select the scan mode according to your request.



The operation steps are as follows:

1. In frequency or channel mode, press Menu+18, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
There are three ways of scanning.
TO: Time scanning, continue scanning after searching signal for 5s.
CO: Carrier scanning, when it searches the signal, it continues scanning after the signal disappear.
SE: Search scanning, stop scanning after searching the signal.
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

PTT ID (PTT-ID) — Menu No. 19

This function can set the sound when you press key PTT to transmit or release to sending PTT-ID.

The operation steps are as follows:



1. In frequency or channel mode, press Menu+19, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
There are four kinds of mode:
OFF: Press PTT key to turn it off.
BOT: Press PTT key to send code. (The PTT-ID refers to software.)
EOT: Release PTT key to send code.
BOTH: Press or release PTT key to send code.
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE: Select "off" in normal using to prevent affecting the radio.

PTT ID Prolong Time (PTT-LT) — Menu No. 20

This function is to set the prolong time of the radio's PTT-ID.

The operation steps are as follows:



1. In frequency or channel mode, press Menu+20, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
(There are 0-30ms to choose.)
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE: Select "0" in normal using to prevent affecting the radio.

A Channel Display Mode (MDF-A) — Menu No. 21

This function is to set the display mode of channel A.

The operation steps are as follows:

1. In standby mode press Menu+21, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 

Display modes: ① FREQ: Frequency + Channel No.



② CH: Channel No.



③ NAME: Channel Name





3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.


NOTE: Channel name must be setted by program software. It can edit any three numbers or characters.


B Channel Display Mode (MDF-B) —Menu No. 22

This function is to set the display mode of channel B.

The operation steps are as follows:

1. In standby mode, press Menu+22, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 

Display modes: ① FREQ: Frequency + Channel No. 

② CH: CH: Channel No. 

③ NAME: Channel Name 



3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE: Channel name must be setted by program software. It can edit any three numbers or characters.

Busy Channel Lock (BCL) —Menu No. 23

When this function is on, it may prevent other radios' interference. If the selected channel is being used by other radios, when you press key PTT, the radio you use can not transmit. It can transmit only when the station can not receive any signals.




The operation steps are as follows:

1. In standby mode, press Menu+23, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
ON: ON OFF: OFF
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

Auto Keypad Lock (AUTOLK) —Menu No. 24

When power on, but the radio is not in the working mode, the keypad will be automatically locked after 15s.



The operation steps are as follows:


1. In frequency or channel mode, press Menu+24, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
ON: ON OFF: OFF
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.
If you set on, the LCD displays: 


Frequency Deviation Setting (SFT-D) —Menu No. 25

Using this function, you may set deviation between receiving and transmitting. In general, it's use for repeater.

The operation steps are as follows:

1. In frequency mode, press Menu+25, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
The frequency deviation mode:
 - a. Transmitting frequency higher than receiving frequency (+) ;
 - b. Transmitting frequency lower than receiving frequency (-) ;
 - c. OFF
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

When you set the frequency deviation (+), the LCD displays: 



When you set the frequency deviation (-), the LCD displays: 

NOTE: You should set different frequency deviation according to the repeaters selected.
This function is invalid in channel mode.

Frequency of Different Frequency (OFFSET) —Menu No. 26

Using this function, you can set the deviation between receiving and transmitting.
In general, this function is use for repeater. The frequency deviation of this radio is:
0-69.990MHz.

The operation steps are as follows:


1. In frequency mode, press Menu+26, the LCD displays:  
2. Press key Menu, and then input your desired deviation frequency.
If you want to input the frequency deviation 5MHz, pls input numbers 0、5、0、0、0 directly.
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE:Setting the frequency deviation. (See Menu No.25)









Channel Store (MEM-CH) —Menu No. 27

When the radio is in frequency working mode or standby mode, input the desired frequency or parameters directly.




The operation steps are as follows:

1. In frequency mode, press Menu+27, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose channel number, or you can input your desired channel number directly.
Fox example, if you want to input No. 25 channel, pls input number 0、2、5 directly.
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.
Example: Channel 1 (Same frequency) Receiving frequency: 465.875 MHz CTCSS:71.9 Hz
Transmitting frequency: 465.875 MHz CTCSS:71.9 Hz
Channel 2 (different frequency) Receiving frequency: 465.575 MHz
Transmitting frequency: 460.575 MHz CTCSS:88.5 Hz


First, storing channel 1:


- a. In frequency mode, input number 4、6、5、8、7、5、
 - b. Press Menu+11, the LCD displays: 
 - c. Press key Menu, and then press key ▲ or ▼ to adjust to 71.9 Hz, the LCD displays: 
 - d. After setting, press key Menu to confirm, and then press key PTT or Exit to standby. The LCD displays: 
 - e. Press key Menu+13, the LCD displays: 
 - f. Press key Menu, and then press key ▲ or ▼ to adjust to 71.9 Hz, the LCD displays: 
 - g. After setting, press key Menu to confirm, and then press key PTT or Exit to standby. The LCD displays: 
 - h. Press Menu+27, the LCD displays: 
 - i. Press key Menu, and then press ▲ 001 channel or input number 0、0、1、directly, the LCD displays: 
 - j. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.
 - k. Press key VFO/MR to channel mode, display modes see Menu No. 21 and Menu No. 22.
- NOTE:If you don't want to set CTCSS, do not follow b、c、d、e、f operation steps.

Secondly, storing channel 2: (Transmitting frequency is 5MHz lower than receiving frequency.)

- a. In frequency mode, input number 4、6、5、5、7、5、
- b. Press Menu+13, the LCD displays: 
- c. Press key Menu, and then press key ▲ or ▼ to adjust to 88.5 Hz, the LCD displays: 
- d. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.
After transmitting, the LCD displays: 

e. Press Menu+25, the LCD displays: 


f. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 

g. After setting, press key Menu to confirm, and then press key PTT or Exit to standby. The LCD displays: 


h. Press Menu+26, the LCD displays: 

i. Press key Menu, then input number: 0, 5, 0, 0, 0

j. Press Menu+27, the LCD displays: 

k. Press key Menu, and then press key ▲ or ▼ to choose No. 2 channel or input number 0, 0, 2 directly. The LCD displays: 

l. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

M. Press key VFO/MR to channel mode, the LCD displays: 

Display modes see Menu No. 21 and Menu No. 22.


NOTE: Pls check the channel you store has the original channel or not, if does, you need to delete it before channel storing. (Channel delete see Menu No. 28)


Channel Delete (DEL-CH) — Menu No. 28

This function is used to delete channels and information of the radio.

Example: Delete channel 2

The operation steps are as follows:

1. In frequency or channel mode, the LCD displays: 

2. Press key Menu, and then press key ▲ or ▼ to adjust channel 002 or input number 0, 0, 2 directly. The LCD displays: 


3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.


NOTE: Please correctly choose the channel you want to delete in case of restoration and unnecessary trouble.
With display CH-*** means there is storage channel, and then can be deleted

Standby Backlight (WT-LED) — Menu No. 29

You can choose the color of backlight when the radio is standby.

The operation steps are as follows:

1. In frequency or channel mode, press Menu+29, the LCD displays: 

2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 

There are four options:


- OFF
- GREEN
- RED
- ORANGE


3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

RX Backlight (RX-LED) — Menu No. 30

You can choose the color of backlight when the radio is receiving.

The operation steps are as follows:

1. In frequency or channel mode, press Menu+30, the LCD displays: 

2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 

There are four selection:

- OFF
- GREEN
- RED
- ORANGE

3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

TX Backlight (TX-LED) —Menu No. 31

You can choose the color of backlight when the radio is transmitting.

The operation steps are as follows:

1、In frequency or channel mode, press Menu+31, the LCD displays:

▲ TX-LED³¹
OFF

2、Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays:

TX-LED³¹
▼ BLUE

There are four options:

OFF
GREEN
RED
ORANGE

3、After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

Alarm Mode (AL-MOD) —Menu No. 32

This function can set tone alarm/code alarm/site alarm of the radio.

The operation steps are as follows:

1、In frequency or channel mode, press Menu+32, the LCD displays:

▲ AL-MOD³²
OFF

2、Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays:

AL-MOD³²
▼ TONE

There are three options:
SITE ALARM
TONE ALARM
CODE ALARM

3、After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

Frequency Band Shift (BAND) —Menu No. 33

In frequency mode, press key BAND can choose frequency band.

VHF: 136-174MHz

UHF: 400-480MHz

Dual-watch Operation (TDR-AB) —Menu No. 34

When this function is on, you may receive signals of A/B channel or frequency.

It also can be used for cross band receiving and transmitting.

The operation steps are as follows:

1、In frequency or channel mode, press Menu+34, the LCD displays:

▲ TDR-AB³⁴
OFF

2、Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays:

TDR-AB³⁴
▼ A

There are three options:

OFF: "▲" or "▼" will glitter on transmitting frequency band.

A band to transmit in dual-watch code

B band to transmit in dual-watch code

Example: The LCD displays:

CT▲ 465.575
136.225

① Choose A means 465.575MHz is the transmitting frequency band, 136.225MHz is the receiving frequency band.

② Conversely, choose B means 136.225 MHz is transmitting frequency band, 465.575MHz is receiving frequency band.

3、After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

Tail Tone Elimination (STE) —Menu No. 35

To eliminate the annoying audio called by carrier wave disappearing after the transmitter ends the communication.

The operation steps are as follows:

1、In frequency or channel mode, press Menu+35, the LCD displays:

▲ SET³⁵
OFF

2、Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays:

SET³⁵
▼ ON

There are two options: ON

OFF



3、After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

Tail Tone Elimination In Communication Through Repeater (RP-SET) —Menu No. 36

This function is that when the radio is through the repeater, the transmitter release PTT to enter receiving condition.

Because of the delay of the repeater, it will receive the noise from repeater to confirm if the repeater is working.

The operation steps are as follows:



1. In frequency or channel mode, press Menu+36, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
OFF: OFF
1、2、3、4、5……10 for prolong time.
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE:Pls close this function in normal using,lest affect your normal conversation.

Delay Time Of Tail Tone Elimination In Communication Through Repeater (RPT-RL) —Menu No. 37

This function is that when the radio use through repeater, the aim is to confirm if the repeater have transfer the signal.

The operation steps are as follows:





1. In frequency or channel mode, press Menu+37, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
OFF: OFF
1、2、3、4、5……10 for prolong time.
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.

NOTE:Pls close this function in normal using,lest affect your normal conversation.

Displays of Power On (PONMSG) —Menu No. 38

This function can set the display mode when power on.



The operation steps are as follows:

1. In frequency or channel mode, press Menu+38, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
FULL: Full frequency character display
MSG: QUANSHENG logo display.
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.
4. Setting FULL, the LCD displays:  , Setting MSG, the LCD displays: 

Call End Warning Tone (ROGER) —Menu No. 39

This function is to make receptor hear a beep when conversation end.




The operation steps are as follows:

1. In frequency or channel mode, press Menu+39, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose, the LCD displays: 
OFF:OFF
ON:ON
3. After setting, press key Menu to confirm, and then press key PTT or Exit to standby.




Reset (RESET) —Menu No. 40

This function is to set Menu and channel initialization. You can set the desired function and parameter after reset.

VFO-Menu initialization


1. In frequency or channel mode, press Menu+40, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose VFO, and then press key Menu again, the LCD displays: 
3. Press key Menu, the LCD displays: 
4. Press key Menu to confirm and return to standby automatically.

ALL-Menu and channel initialization

1. In frequency or channel mode, press Menu+40, the LCD displays: 
2. Press key Menu, and then press key ▲ or ▼ to choose ALL, and then press key Menu again, the LCD displays: 
3. Press key Menu, the LCD displays: 
4. Press key Menu to confirm and return to standby automatically.


Manually Lock the Keypads—Menu No. 41

This function can lock the keypads.

1. Press key “#” for more than 2s, the radio will be locked and the LCD displays: 
2. Press key “#” for more than 2s to unlock.


FM Radio (FM) —Menu No. 42

You can listen to the radio frequency, the frequency range is from 65–108MHz. The operation steps are as follows:

1. In frequency or channel mode, tap call key, the LCD displays: 
2. Press key ▲ or ▼ to adjust radio frequency manually or input known radio frequency.
Example: 100.7MHz Input number 1, 0, 0, 7, 0, 0 directly.
88.9MHz Input number 8, 8, 9, 0, 0 directly.
3. Repeatedly press “*” key can be automatically adjusted to the radio station.
4. Tap call key to exit FM radio.

NOTE: When listening to the radio, the frequency or channel of A/B receiving signal will automatically switch to the frequency or channel state for normal transmitting and receiving. And it will automatically switch to FM state when signal disappears.

Rapid Alarm (ALARM) —Menu No. 43

In frequency or channel mode, press CALL key for more than 2s for rapid alarm, the LCD displays:  Press key PTT to cancel.

NOTE: Alarm mode see Menu No. 32.

Jacklight—Menu No. 44

This function suitable for night illumination.
Tap key MON to turn it on. Repeatedly tap key MON to turn it off.

Monitor (MON) —Menu No. 45

In the same frequency mode, it can monitor.
Press MON key for more than 2s to turn it on.
Release MON key to turn it off.

Cable Clone (COPING) — Menu No. 46

This function can copy one radio's information to another one.

The operation steps are as follows:

1. Connect with the main-radio and sub-radio by cloning cable.
2. Press and hold MON to turn the radio on, the LCD displays: COPING. The red light of main-radio glitter and the green light of sub-radio glitter
3. When the red and green light do not glitter, the LCD of sub-radio displays:
or QUAN SHENG it means it succeeded in cloning.



Channel/Frequency Mode Conversion (VF0/MR) — Menu No. 47

Tap VF0/MR key to switch between channel and frequency mode.

TX 1750Hz Call Tone — Menu No. 48

Press key PTT+BAND to send 1750Hz call tone. (This function is for the repeater of European market.)

Reverse Function (R) — Menu No. 49

When you set different frequencies, tapping "R" key can shift the transmitting and receiving frequency, the LCD displays:



Example:

1. As above picture the receiving frequency of channel A is 420.875MHz the transmitting frequency is 425.875MHz.
2. Tap "R" key, the receiving frequency is change to 425.875MHz, the transmitting is change to 400.875MHz, the LCD displays:



NOTE: This function is invalid in the same frequency.

Frequency Scanning — Menu No. 50

This function can scan the frequency from other radio.

The operation steps are as follows:

1. In frequency mode, press key "*" for more than 2s, it will frequency scan according to setted step frequency.
2. Press key ▲ or ▼ to change the direction of scanning.
3. Press any key to confirm after scanning the signal.

NOTE: Scanning mode see Menu No. 18.

Channel Scanning — Menu No. 51

This function can scan the frequency from other radio.

The operation steps are as follows:

1. In channel mode, press key "*" for more than 2s, it can scan according to the channel you setted.
2. Press key ▲ or ▼ to change the direction of scanning.
3. Press any key to confirm after scanning the signal.

NOTE: Scanning mode see Menu No. 18

Automatic Search FM Radio (FM) — Menu No. 52

This function can automatically search the FM radio frequency.

The frequency range is from 65-108MHz

The operation steps are as follows:

1. In frequency or channel mode, tap call key, the LCD displays:
2. Repeatedly press "*" key can automatically search the FM radio frequency.
3. Tap call key to exit FM.









NOTE: When listening to the radio, the frequency or channel of A/B receiving signal will automatically switch to the frequency or channel state, and when normal transmit and receive signal disappears it will automatically switch to FM state. Manually search see Menu 42.

Search CTCSS/DCS Code — Menu No. 53

Using this function may search and store the CTCSS/DCS code from other radio .

Example: CTCSS code scanning; the transmitting frequency is 465.255MHz, CTCSS is 88.5Hz

The operation steps are as follows:

- 1、In frequency mode, press Menu+11, the LCD displays:  
- 2、Press key Menu, the LCD displays: 
- 3、Press key "*", the LCD displays: 
- 4、When other radio transmits, the LCD displays: , CT glitter means the radio has entered scanning condition.
- 5、Your can choose CTCSS from 67.0–254.1MHz.
- 6、After searching the CTCSS code, the radio will beep and stop scanning.
- 7、After setting, press key MR/VFO to confirm and store, otherwise press key PTT or Exit will return to standby mode.

NOTE:1.The operation steps of DCS scanning is the same with CTCSS, except that it needs to press Menu+10 to enter scanning.
2.If CTCSS have not searched the code, you can search using DCS mode.

Cursor "▲" Conversion (A/B) — Menu No. 54

Directly tap AB key can move the cursor up and down, you can modify or confirm the parameters of the frequency and channel where the cursor indicates.

High/Low Power Fast Conversion — Menu No. 55

In channel mode, tap "#" key to shift between high and low power.

CTCSS

01	67.0	18	118.8	35	183.5
02	69.3	19	123.0	36	186.2
03	71.9	20	127.3	37	189.9
04	74.4	21	131.8	38	192.8
05	77.0	22	136.5	39	196.6
06	79.7	23	141.3	40	199.5
07	82.5	24	146.2	41	203.5
08	85.4	25	151.4	42	206.5
09	88.5	26	156.7	43	210.7
10	91.5	27	159.8	44	218.1
11	94.8	28	162.2	45	225.7
12	97.4	29	165.5	46	229.1
13	100.0	30	167.9	47	233.6
14	103.5	31	171.3	48	241.8
15	107.2	32	173.8	49	250.3
16	110.9	33	177.3	50	254.1
17	114.8	34	179.9		

DCS

01	D023N	19	D116N	37	D225N	55	D325N
02	D025N	20	D122N	38	D226N	56	D331N
03	D026N	21	D125N	39	D243N	57	D332N
04	D031N	22	D131N	40	D244N	58	D343N
05	D032N	23	D132N	41	D245N	59	D346N
06	D036N	24	D134N	42	D246N	60	D351N
07	D043N	25	D143N	43	D251N	61	D356N
08	D047N	26	D145N	44	D252N	62	D364N
09	D051N	27	D152N	45	D255N	63	D365N
10	D053N	28	D155N	46	D261N	64	D371N
11	D054N	29	D156N	47	D263N	65	D411N
12	D065N	30	D162N	48	D265N	66	D412N
13	D071N	31	D165N	49	D266N	67	D413N
14	D072N	32	D172N	50	D271N	68	D423N
15	D073N	33	D174N	51	D274N	69	D431N
16	D074N	34	D205N	52	D306N	70	D432N
17	D114N	35	D212N	53	D311N	71	D445N
18	D115N	36	D223N	54	D315N	72	D446N

DCS

73	D452N	91	D627N	109	D032I	127	D132I
74	D454N	92	D631N	110	D036I	128	D134I
75	D455N	93	D632N	111	D043I	129	D143I
76	D462N	94	D654N	112	D047I	130	D145I
77	D464N	95	D662N	113	D051I	131	D152I
78	D465N	96	D664N	114	D053I	132	D155I
79	D466N	97	D703N	115	D054I	133	D156I
80	D503N	98	D712N	116	D065I	134	D162I
81	D506N	99	D723N	117	D071I	135	D165I
82	D516N	100	D731N	118	D072I	136	D172I
83	D523N	101	D732N	119	D073I	137	D174I
84	D526N	102	D734N	120	D074I	138	D205I
85	D532N	103	D743N	121	D114I	139	D212I
86	D546N	104	D754N	122	D115I	140	D223I
87	D565N	105	D023I	123	D116I	141	D225I
88	D606N	106	D025I	124	D122I	142	D226I
89	D612N	107	D026I	125	D125I	143	D243I
90	D624N	108	D031I	126	D131I	144	D244I

DCS

145 D245I	163 D346I	181 D464I	199 D662I
146 D246I	164 D351I	182 D465I	200 D664I
147 D251I	165 D356I	183 D466I	201 D703I
148 D252I	166 D364I	184 D503I	202 D712I
149 D255I	167 D365I	185 D506I	203 D723I
150 D261I	168 D371I	186 D516I	204 D731I
151 D263I	169 D411I	187 D523I	205 D732I
152 D265I	170 D412I	188 D526I	206 D734I
153 D266I	171 D413I	189 D532I	207 D743I
154 D271I	172 D423I	190 D546I	208 D754I
155 D274I	173 D431I	191 D565I	
156 D306I	174 D432I	192 D606I	
157 D311I	175 D445I	193 D612I	
158 D315I	176 D446I	194 D624I	
159 D325I	177 D452I	195 D627I	
160 D331I	178 D454I	196 D631I	
161 D332I	179 D455I	197 D632I	
162 D343I	180 D462I	198 D654I	

SPECIFICATIONS

General

Frequency range	VHF:136~174MHz, UHF:400~480MHz
Memory channel	128 channels
Step frequency	2.5/6.25/10/12.5/20/25KHz
Rated voltage	DC7.2V (Rechargeable Li-ion battery)
Frequency sensitivity	±2.5ppm
Working temperature	-20°C ~+50°C
Working manner	Same frequency single operation or different frequency single operation
Antenna impedance	50Ω
Battery capacity	2000mAh
Dimensions	115mmX58mmX35.5mm (Not include antenna)

Transmitter

Output power	5W
Modulation mode (W/N)	16KΦF3E/11KΦF3E
Maximum frequency deviation (W/N)	≤5KHz/≤2.5KHz
Supurious radiation	≤7.5μW
Adjacent channel selectivity	≤-65dB/≤-60dB
Signal-noise rate (W/N)	≥-45dB/≥-40dB
CTCSS/DCS frequency deviation (W/N)	0.7±0.1KHz/0.4±0.1KHz
Modulation sensitivity	8-12mV
Emission current	≤1.4A (H)

Receiver

Sensitivity	-122dB (12dB SINAD)
Audio power	1W
Audio distortion	<10%
Intermodulation (W/N)	≥65dB/≥60dB
Adjacent channel selectivity	≥65dB/≥60dB
Spurious rejection	≥65dB
Receiving current	≤380mA

All stated specifications are subject to change without notice or obligation