Analog

User's Manual

TG-UV2PLUS

Thank you for purchasing this **QS** Radio. We believe this easy-to-use radio will provide reliable and dependable communication. **QS** Radio incorporates the latest advanced technology. As a result, we know that you will be pleased with the quality and features of this product.

1.Multiband TX&RX,dual display dual standby
2.H (High) , M (Medium) , L (Low) output power selective
3.Double frequency, double channel display of the LCD.
4.Built-in VOX function
5.Dual-watch operation
6.Respectively receive/transmit CTCSS/DCS code
7.Repeater shift direction set
8.Auto code search
9.Reverse frequency function
10.Voice scrambler
11.Multi channel steps
12.Frequency deviation setting
13.Busy channel lock
14.Time-out-Timer
15.Channel, channel-frequency, channel-name display.
16.Priority scan
17.Wide/narrow bandwidth
18.Channel delete
19.Reset
20.Up/down scan function
21.Main/sub channel shift
22.1750Hz call tone
23.Cross-band receiving/transmitting
24.Squelch level
25.Channel name edit
26.Channel store
27.Frequency and channel mode shift
28.Keypad lock
29.Main/sub channel display shift
30.Channel scan list
31.200 channels
32.PC Programmable
33.High capacity Li-ion battery
34.Smart charger
35.FM Radio (88-108MHz)

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.

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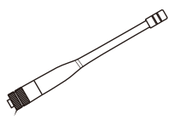
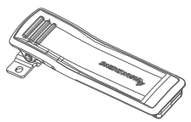
SUPPLIED ACCESSORIES

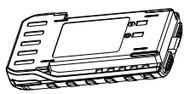
Carefully unpack the portable radio. We suggest that you check the following items before you throw away the packing materials.



Antenna



Belt clip



Li-ion battery

Battery charger

Adapter

User's manual

CHARGING NOTES(1)

Charging the battery pack:

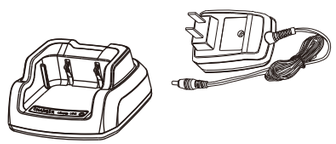
- Battery packs are not charged when they are shipped. Charge them before use.
- Initially charging the battery pack after purchase or extended storage (longer than 2 months) will not bring the battery pack to its greatest capacity or its normal charge, which can be done only after repeated charging and discharging two or three times.
- The average use time of battery pack is 16 hours.

CAUTIONS ⚠

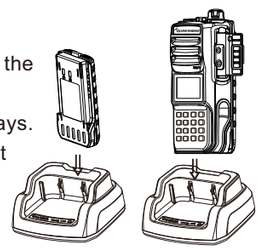
- After the battery is charged to its highest capacity, and then used on the radio. If the radio still shows low power, please change a new battery pack.
- Do not short-circuit the battery terminals or throw the battery into fire.
- Never attempt to remove the casing from the battery pack.

CHARGING NOTES(2)

- Plug the AC adapter into the back of the charger.Then plug the power cable of the adapter into 220V power.



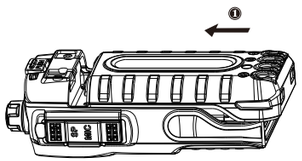
- Slide the Li-ion battery pack or radio with a Li-ion battery pack into the charger.
  - Make sure the battery pack is in connected with the charging terminals.
  - When charging begins, the RED LED light displays. When the battery pack is charged to its greatest capacity, GREEN LED light displays.



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

ATTACHING THE BATTERY PACK

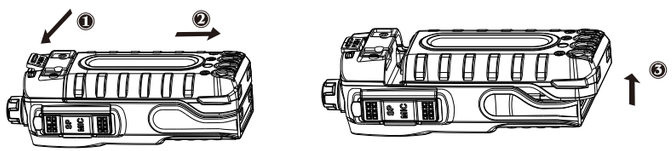
- Slide the battery pack into the back of the radio in the direction of the arrow ( ), then lock it with the battery release button.
  Slide the battery pack until the battery release button makes a"clicking"sound.



RELEASING THE BATTERY PACK

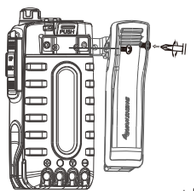
- Turn off the radio before releasing the battery pack.

1. Push the battery release button in the direction of the arrow ( ) as shown below.
2. The battery pack is then released.



INSTALLING BELT CLIP

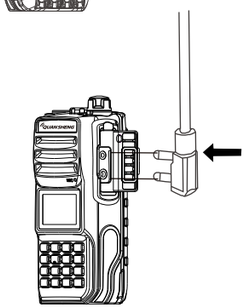
- Conveniently attaches to your belt.
  Attach the belt clip with the supplied screws using a phillips screw driver.



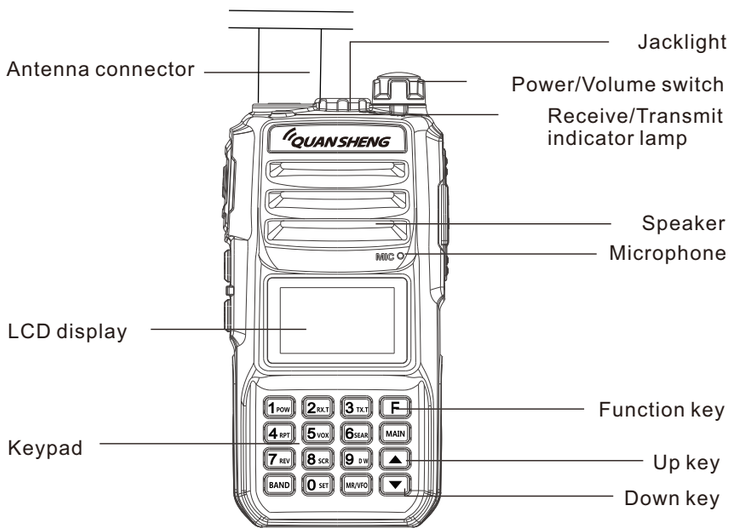
INSTALLING EXTERNAL SPEAKER/ MICROPHONE

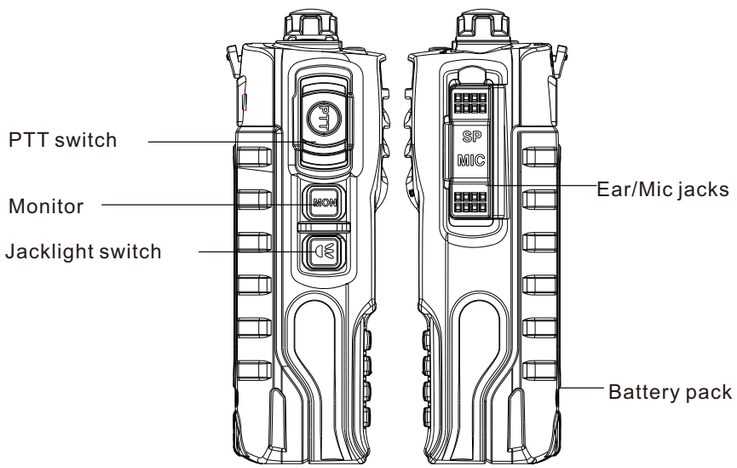
- Insert the speaker/microphone plugs into the speaker/microphone jacks.

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

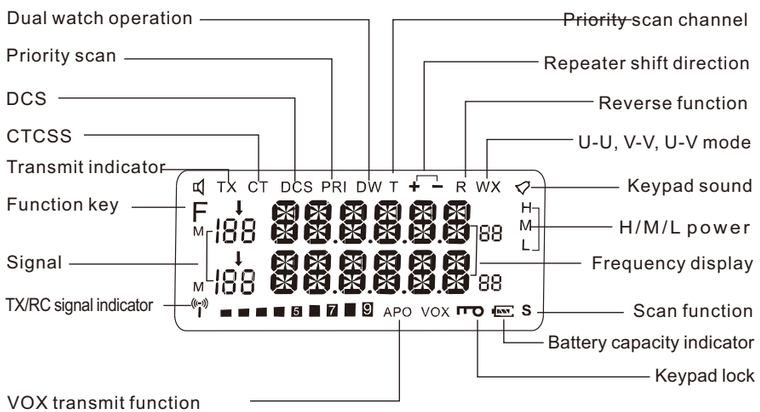


DIAGRAM


Antenna connector
Jacklight
Power/Volume switch
Receive/Transmit indicator lamp
Speaker
Microphone
LCD display
Function key
Keypad
Up key
Down key
QUANSHENG
MIC
1 POW
2 DX.T
3 TX.T
F
4 RPT
5 VOX
6 SEAR
MAIN
7 REV
8 SCR
9 D/W
BAND
0 SET
MR/VFO


PTT switch
Monitor
Jacklight switch
Ear/Mic jacks
Battery pack
SP
MIC

LCD DISPLAY



Note:

Battery capacity indicator (Full)

The rest capacity of the battery

The battery is exhausted, please change a new battery or charge the battery

Receive signal indicator

BASIC OPERATION

- Turn the Power/Volume knob clockwise to turn the power on. When you turn it on, it will beep and the channel will display on the LCD. The LCD backlight shows. (P-1)

P-1

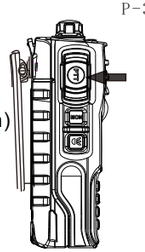
- Turn Power/Volume knob counter-clockwise to turn off the radio. (P-2)

P-2

Note:

Press and hold the Monitor button, then rotate the Power/Volume knob to turn up and down the volume.

P-3



- To make a call, press and hold the"PTT" switch, then speak into the microphone in normal speaking tone. Hold the microphone approximately 1.5 inches (3-4cm) from your lips.
- Release"PTT"to receive signals. (P-3)

FAST MENU OPERATION FLOW

NO.	Feature	Fast key	LCD display	Parameter	Selectable	Confirm	VFO mode	Page
1	Power switch	F+1	H/M/L	Repeatedly press F+1	H: (5W) M: (2.5W) L: (1W)	Auto	Auto	P14
2	Receive code	F+2	RC.***	Press BAND to change the mode and then press ▲ or ▼ to choose	CTCSS (67.0-254.1) DCS (D023N-D754N) DCS (D023I-D754I)	MR/VFO	Auto	P14-15
3	Transmit code	F+3	TC.***	Press BAND to change the mode and then press ▲ or ▼ to choose	CTCSS (67.0-254.1) DCS (D023N-D754N) DCS (D023I-D754I)	MR/VFO	Auto	P15-16
4	Frequency deviation	F+4	+ -	Repeatedly press F+4	+/-/No display	Auto	Auto	P16
5	VOX function	F+5	VOX.*	Press ▲ or ▼	1-9 level/OFF	MR/VFO	Auto	P16-17
6	Code search	F+6	RC.***	Press BAND to change mode	CTCSS (67.0-254.1) DCS (D023N-D754N) DCS (D023I-D754I)	Press MR/VFO confirm.. Press F+MR/VFO channel store	PTT	P17
7	Reverse	F+7	R	Repeatedly press F+7	R/No display	Auto	Auto	P18

NO.	Feature	Fast key	LCD display	Parameter	Selectable	Confirm	VFO mode	Page
8	Voice scrambler	F+8	SCR. **	Press ▲ or ▼	ON/OFF	MR/VFO	Auto	P18
9	Dual watch-operation	F+9	DW	Repeatedly press F+9	DW: ON Nodisplay: OFF	自动	F+9	P18-19
10	Channel step	F+0+1	STP.***	Press ▲ or ▼	5/6.25/10/12.5/15/20/25/30/50/100KHz	MR/VFO	F or PTT	P19
11	Frequency deviation	F+0+2	0.000.00	Input numbers directly	0-69.995MHz choose	MR/VFO	F or PTT	P20
12	Busy lock	F+0+3	BCL. **	Press ▲ or ▼	ON/OFF	MR/VFO	F or PTT	P20
13	Time-Out-Timer	F+0+4	TOT. **	Press ▲ or ▼	1-9 level, 60s/ level OFF	MR/VFO	F or PTT	P21
14	Channel display mode	F+0+5	DSP. **	Press ▲ or ▼	CH/FR/NA three kinds of mode	MR/VFO	F or PTT	P21
15	Priority scan	F+0+6	PCH. *	Press ▲ or ▼	Any channel can be stored.	MR/VFO	F or PTT	P21-22

NO.	Feature	Fast key	LCD display	Parameter	Selectable	Confirm	VFO mode	Page
16	Wide/narrow bandwidth	F+0+7	W/N *	Press ▲ or ▼	W: 25k N: 12.5k	MR/VFO	F or PTT	P22
17	Channel delete	F+0+8	DEL * H	Press ▲ or ▼ or input numbers directly	Any channel be stored	Press twice MR/VFO	F or PTT	P22-23
18	Reset	F+0+9	RESET		Press MR/VFO. it will display "RUST". ? to remind you whether you want to delete.	Press MR/VFO again	F or PTT	P23
19	Upward scanning	F+▲	S	Press ▲ or ▼	Upward		PTT	P23
20	Downward scanning	F+▼	S	Press ▲ or ▼	Downward		PTT	P23
21	Main/sub channel shift	F+MAIN	Top/bottom rows display shift	Repeatedly press F+MAIN	Main/sub	Auto	Auto	P23-24
22	Sending 1750 signal	F+PTT	TX 1750	Repeatedly press F+PTT	Only this	Auto	Auto	P24
23	Cross-band receive/transmit	F+LED	WX		Any setting within frequency range	Auto	F+LED	P24
24	Squelch level	F+MON	SQL. *	Press ▲ or ▼	0-9: 9 Levels 0: Lowest 9: Highest	MR/VFO	Auto	P25

NO.	Feature	Fast key	LCD display	Parameter	Selectable	Confirm	VFO mode	Page
25	Channel name edit	F+BAND	_Glitters	Press ▲ or ▼, press BAND to enter the next letter	Letters (A-Z) Numbers (0~9) Symbols (+ * - /)	MR/VFO	Auto	P25
26	Channel store	F+MR/VFO	SAV** H	Press ▲ or ▼ to directly input number	Press MR/VFO, it will display"SAVE". ?to remind you whether to store	MR/VFO again	Auto	P26-27
27	Frequency channel mode shift	MR/VFO	F * and channel shift	Repeatedly press MR/VFO	Channel/Frequency	Auto	Auto	P27
28	Keylock	Press F long			Press F for more than 2 seconds, you may keylock or unlock	Auto	Auto	P27
29	" ↓ "shift	Press MAIN	" ↓ "up/down row shift		" ↓ "indicates main channel	Auto	Auto	P27
30	Frequency bands shift	Press BAND	Shift between F0,F1, F2,F3,F4	Press BAND	F0 to F4	Auto	Auto	P28
31	Scan list additive	F+MR/VFO	S	F+MR/VFO	Displays: ON Not Displays: OFF	Auto	F+MR/VFO	P28
32	Jacklight			ON/OFF	ON/OFF	Auto	Auto	P28
33	FM Radio	Directly input when on frequency mode	F_0-F_4	Program by computer or direct input	Frequency range 88-108MHz	Auto	Auto	P28-29

FUNCTION INSTRUCTION

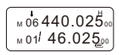
NOTICE ⚠

- This model has double-frequency-display function. On frequency mode, it can show two different receiving and transmitting frequencies at the same time; on channel mode, it can display two different channels and their related parameters at the same time.
- On frequency or channel mode, press"MAIN"to shift between main channel and sub channel. If" ↓ "points to main channel, then all of the operations are processed with main channel frequency or channel; if" ↓ "points to sub channel,then all of the operations are processed with sub channel frequency or channel.

Transmitting Output Power Choose (H/M L)-----Menu 1

Using this function may choose the transmitting output power.

1. On frequency mode, press (F) and (1), the LCD will displays as picture 1.
2. Operating it repeatedly may shift between (H) 5W, (M) 2.5W, (L) 1W.
3. When setting is finished, it would be back to standby state automatically.



Picture1

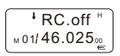
NOTICE ⚠

- On channel mode, the output power may be changed directly. But changing channels or turn the power on, it will make it back to the initial setting.
- Choosing high power may improve the calling quality; low power may lower the radiation and usage of battery.

Receiving CTCSS/DCS Setting (RC)-----Menu 2

Using the function may set your personal private and prevents disturbance from others or matching with the code of other radios.

1. On standby mode, press (F) + (2), the LCD will displays "RC.***"(as picture 2)
2. Press (BAND) to change CTCSS/DCS, press OFF to turn it off.
   CTCSS: 67.0-254.1
   DCS: N023-N754 (Normal DCS)
   DCS: I023-I754 (Inverse DCS)
3. Press (▲) or (▼) to choose the code.
4. After setting, press (MR/VFO) to confirm, then it will automatically turn back to the standby mode.



Picture 2

NOTICE ⚠

- There are 50 groups DCS and 208 Normal/inverse DCS. See the attached list (P30-P31).
- On each channel, CTCSS/DCS may be used and set together.

Transmitting CTCSS/DCS Setting (TX) -----Menu 3.

Using the function may set your personal private and prevents disturbance from others or matching with the code of other radios.

1. On standby mode, press (F) + (3), the LCD displays"TC.***" (as picture 3).
2. Press (BAND) to shift between CTCSS/DCS (see Menu 2).
3. Press (▲) or (▼) to select.
4. After setting, press (MR/VFO) to confirm, and then it would automatically return to standby mode.

Picture 3

NOTICE ⚠

- There are 50 groups CTCSS and 208 Normal/inverse DCS. See attached list (P30-31).
- On each channel, CTCSS/DCS may be used together.

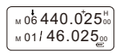
Fequency Deviation Setting (+/-)-----Menu 4

This function is a way used with repeater or other working stations.

1. On frequency mode, press F + 4, the LCD displays as picture 4.
2. By operating it repeatedly, you may select frequency deviation mode between (+) (-). Frequency deviation mode.

a. If trasmitting frequency is higher than receiving frequency , it is normal direction (+).
b. If trasmitting frequency is lower than receiving frequency, it is inverse direction (-).
c. Signal without (+) (-) means it has no setting.

3. After setting, the system will confirm automatically



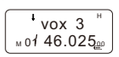
Picture 4

NOTICE ⚠

- Select correct frequency deviation direction according to the station you use.
- This function is invalid under channel status.

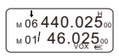
VOX Function-----Menu 5

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 more convenient for headset users.



Picture 5

1. On standby mode, press F + 5 to enter, the LCD displays as picture 5.
2. Press ▲ or ▼ to choose VOX level, which has levels (OFF~9), OFF.
   (1) is the lowest level, (9) is the highest level.
3. After setting is finished,press MR/VFO to confirm, then the system will automatically return to standby mode. (LCD displays as picture 6).



Picture 6

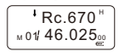
NOTICE ⚠

- The higher the level is , the higher the sensitivity of microphone is.
- When scanning, FM radio or dual watch, this function is invalid.

Research CTCSS/DCS Code (RC)-----Menu 6

Using this function may search and store the CTCSS/DCS code other radios send. When other stationshas the same frequency but different CTCSS/DCS.

1. On frequency mode, press F + 6 to enter, the LCD displays "RC.***" . (as picture7).



Picture 7

2. Code scanning is started.
3. Press BAND to change the code mode, after searching the code, it would stop automatically.
   Code mode: CTCSS: 67.0-254.1 (CTCSS)
   DCS: NO23-N754 (Normal DCS)
   DCS: I023-1754 (Inverse DCS)
4. After setting, press MR/VFO to confirm. Press【PTT】to return to standby mode.

NOTICE ⚠

- If one of the code modes doesn't search code, press BAND to change the code mode and search again.
- If you want to store to channel mode, press F + MR/VFO (see Menu 26).

Reverse (REV)-----Menu 7

When using this function, the receiving and transmitting frequency will reverse, together with the CTCSS/DCS set.

1. On standby mode, press F + 7 to enter, the LCD displays "R". (as picture8)
2. Operating it repeatedly means turning on or off.
3. After setting, the system will confirm automatically, and return to standby mode.

Picture 8

NOTICE ⚠

- REV is available only when in different frequencies. This function is invalid when in the same frequency.

Voice Scrambler (SCR)-----Menu8

This function may guarantee the secracy of your talk, that is: when in voice scrambler talking, other radios without voice scrambler can receive your signal but can't hear your talking content.

1. On standby mode, press F + 8 to enter, the LCD displays "SCR.OFF".
2. Press ▲ or ▼ to choose "ON" or "OFF".
3. After setting, press MR to confirm and it would automatically return to standby mode.

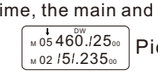
NOTICE ⚠

- Communication is available only when two radios have voice scrambler at the same time.
- Voice scrambler board is needed before voice scrambler.

Dual Watch Operation (DW)-----Menu9

Example: Main channel frequency is 460.125MHz, sub channel frequency is151.235MHz. Want to set dual watch, operates it as following:

1. On standby mode, press F + 9 to enter, the LCD displays DW (as picture 9).
2. Repeatedly press F + 9, you may choose"ON"or "OFF".
3. After setting, the system will automatically confirm. At this time, the main and sub channels have been in dual-watch.



Picture 9

4. If you want to return to standby mode, press + , the LCD will not show "DW".

Example: Main channel frequency is 460.125MHz, sub channel frequency is151.235MHz. Want to set dual watch, operates it as following:

1. On standby mode, press F + 9 to enter, the LCD displays DW (as picture 9).
2. Repeatedly press F + 9, you may choose"ON"or "OFF".
3. After setting, the system will automatically confirm. At this time, the main and sub channels have been in dual-watch.

Picture 9

4. If you want to return to standby mode, press F + 9, the LCD will not show "DW".

NOTICE ⚠

- If any channel or frequency receives signal, you must reply in 7 seconds. Otherwise the radio will return to dual-watch mode.
- If sub channel doesn't receive a signal, only the main channel can transmit normally.
- You should exit this function before changing the data and information of other frequencies and channels.

Channel Step (STP)-----Menu 10

Using this function may choose the correspond step frequency to the radio you want to set .

1. On standby mode, press F + 0 + 1 to enter, the LCD displays "STP.**".
2. Press ▲ or ▼ to choose. There are 5/6.25/10/12.5/15/20/25/30/50/100khz to choose.
3. After setting, press MR to confirm. Press F or PTT to return to standby mode.

NOTICE ⚠

- On channel mode, this function setting is invalid.

Frequency Deviation-----Menu 11

Using this function, you may set deviation between receving and transmitting.
Generally, only repeaters use this. The frequency deviation of this radio is : 0-69.995MHz
1. On standby mode, press F+0+2 to enter, the LCD displays "0.00000".
2. Press numbers to input the frequency deviation you want to set. If you want to input 5MHz, input 0,5,0,0,0.
3. After setting, press MR/VFO. Press F or【PTT】to return to standby mode.

NOTICE ⚠

- Setting direction of freqeuncy deviation, please see Menu 4.

Busy Channel Lock (BCL)-----Menu 12

When this function is on, you may prevent interrupting other radios that are talking. If the selected channel is being used by other radios, when you press【PTT】, the radio you use will beep, and LCD displays "BUSY". Release the【PTT】, "BUSY" wil disappear and return to receiving mode.

1. On standby mode, press F+0+3 to enter, the LCD displays "BCL.***".
2. Press ▲ or ▼ to choose"ON" or "OFF".
3. After setting, press MR/VFO to confirm, press F or【PTT】to return to standby mode

NOTICE ⚠

- The turning-on of this function may affect your normal talk.

Time-Out-Timer (TOT)---Menu 13

This function is to limit the continuous long-time transmitting. When the continuous transmitting time exceeds the time you set, the transmitting will be stopped, and you will hear a beep, LCD displays"OVER" (as picture 10).

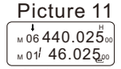
Picture 10

1. On standby mode, press F+0+4 to enter, the LCD shows "TOT.***".
2. Press ▲ or ▼ to choose time-limit level. The TOT of this radio may set 60-540seconds, and has 1-9 grades, level 1 is 60 seconds, level 2 is 120 seconds, infer from this. OFF is turning off.
3. After setting, press MR/VFO to confirm. Press F or【PTT】to return to standby mode.

Channel Display Mode (DSP)-----Menu 14

Picture 11

Using this function may choose the LCD display in your favor.
1. On channel mode, press F+0+5 to enter, the LCD displays"DSP.**"
2. Press ▲ or ▼ to choose, there are 3 display ways to choose.



Picture 12

a. CH: channel number display (as picture 11).
b. FR: channel frequency+channel number display (as picture 12).
c. NA: channel name+channel number display (as picture 13).

Picture 13

3. After setting, press MR/VFO to confirm, press F or【PTT】to return to standby mode.

NOTICE ⚠

- This function is invalid on frequency mode.
- The display of channel name can't be shown until channel name edit is finished, otherwise it would display as channel number. For steps of channel name edit, please see Menu (25).

Priority Scan (PCH)-----Menu15

Using this function may monitor the channel and frequency usage of other radios and check the activity of a prior channel/frequency.
Example: if the radio sets 5 channels, you want to set CH-00 as priority channel.
1. On channel mode, press F+0+6 to enter, the LCD displays "PCH.**".
2. Press ▲ or ▼ to choose "0" channel. LCD displays "PCH.0" or directly input number 0,0,0.

3. After setting is finished, press MR/VFO to confirm. Press F or【PTT】to return to standby mode.
4. If you want upward priority scan, press F + ▲ + F. LCD displays "PRI.T". LCD channel displays: 00→01→00→02→00→03 .....
If you want downward priority scan, Press F + ▼ + F. LCD displays"PRI.T". LCD channel displays: 00→05→00→04→03→02 .....

NOTICE ⚠
- This function is invalid in frequency state
- Scanning steps may refer to Menu (19)、(20).

Wide/Narrow Bandwidth (W/N)-----Menu 16

This fucntion is used to set the working band of radio.
1. On standby mode, press F + 0 + 7 to enter, the LCD displays "W/N.*".
2. Press ▲ or ▼ to choose W(wide 25k) or N(narrow 12.5K). After setting, press MR/VFO to confirm. Press F or【PTT】to return to standby mode.

NOTICE ⚠
- The radio normally uses wide band.

Channel Delete (DEL)-----Menu17

This function is used to delete channels and information of the radio.
1. On channel mode, press F + 0 + 8 to enter, the LCD displays "DEL. 0H"
2. Press ▲ or ▼ to choose the channel you want to delete, or directly input number.
Example: If you want to delete CH-01, then input 0,0,1.

3. After setting, press MR/VFO to confirm, it would remind you whether you would delete. LCD displays "DEL?"
4. If you want to delete, press MR/VFO to confirm again.

Picture 14

RESET---Menu18

1. On standby mode, press F + 0 + 9 to enter, the LCD displays"RESET" (as picture 14).
2. Press MR/VFO to confirm, it will remind you whether to reset. LCD displays"SURE?"
3. If you want to reset, press MR/VFO to confirm

NOTICE ⚠
- After resetting, the channels and information that the radio has stored will all be deleted and return to VFO mode.

Upward/Downward Scanning------Menu 19&20

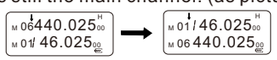
Using this function may monitor the frequency of other radios, and check the activity of a certain channel frequency.

1. On frequency mode, press F + ▲ or ▼ is general scanning. According to the step frequency you set, you may scan upward or downward.
2. On channel mode, press F + ▲ or ▼ is general scanning. According to the channel you set, you may scan upward or downward. Press F again, you may shift to priority scan.

NOTICE ⚠
- For priority scan, refer to Menu 15.

Main/Sub Channel Shift----Menu 21

Using this function may shift between main and sub channels when in frequency or channel mode. On standby mode, press (F)+(MAIN), the frequency or channel will shift the top or bottom row. But the "↓"of the upper row main channel will not shift, the frequency/channel that "↓"shows is still the main channel. (as picture 15)



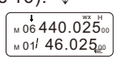
Picture 15

Transmitting 1750Hz Call Tone-----Menu 22

This function is used to turn on a transmitting signal by European users.

Cross-Band Receiving/Transmitting Working Shift-----Menu 23

1. On standby mode, press (F)+LED, the LCD displays "WX" (as picture 16). "↓ "shows receiving freqeuncy. Without "↓"is transmitting frequency.
2. Press (MAIN) to shift.
3. Then press (F)+LED to exit the setting of this funciton.

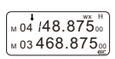


Picture 16

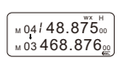
Example: If the frequency of main channel is 148.875, the frequency of sub channel is 468.875.

a. Press (F)+LED, "↓"shows on main channel 148.875 (as picture 17). Now 148.875 is receiving frequency,while 468.875 is transmitting frequency.

b. Press (MAIN), "↓"shows on sub channel 468.847 (as picture 18) shows. Now 468.875 is receiving frequency, 148.875 is transmitting frequency.



Picture 17



Picture 18

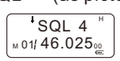
NOTICE ⚠

- FM radio: Only receiving is acceptable, see the FM radio frequency details Menu 33.
- Once this function is on, other functions are invalid until you exit, and you'll hear"beep".

Squelch Level Setting-----Menu 24

This function makes the squelch level"ON"or"OFF"via choose the signal level of radio.

1. On standby, press key (F) +【MON】, the LCD will displays"SQL ∗" (as picture 19).
2. Press key (▲)or(▼)to choose the squelch level from 0-9.



Picture 19

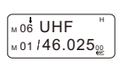
NOTICE ⚠

- Setting the high squelch level will make failure receiving of weak signal, contrarily, it will be interferred by other noise or signal if the squelch level is too low.

Channel Name Edit-----Menu 25

This function can enable you to edit your desired letters on the channel storing mode, it's convenient to distinguish other users.

1. On the main channel mode, press (F)+(BAND). (as picture 20).
2. Press(▲)or(▼)to choose the character,and then press(BAND)to set next character.
   The channel name makes up of the following:
   26 letters: A - Z 10 numbers: 0 - 9 4 symbols: (-) (+) (∗) (/)
3. Press(MR/VFO)to confirm and return to the standby mode.



Picture 20

NOTICE ⚠

- The channel name can edits as many as 6 characters. (Any 1-6 characters of channel name is acceptable).
- Choose the (-) symbol means this character is empty.
- For channel name display see Menu 14.

Channel Storing-----Menu 26

When the radio on the frequency working and standby mode, input the desired frequency and parameters.

1. Press key(F)+(MR/VFO), the LCD will displays"SAV**H". (as picture 21).
2. Press key(▲)or(▼)to choose the channel number.
3. Press key(MR/VFO)to save or not, the LCD will displays"SAVE?". (as picture 22).
4. Press key(MR/VFO)to save again.

Picture 21

Picture 22

Example: Channel 3 (same frequency).
Receiving frequency: 466.675MHz CTCSS: 71.9KHz
Transmitting frequency: 466.675MHz CTCSS: 71.9KHz
Channel 5 (different frequency)
Receiving frequency: 465.575MHz
Transmitting frequency: 460.575MHz CTCSS: 88.5KHz
First, storing channel 3:
a: The radio on frequency working mode, input key 4、6、6、6、7、5 ordinal.
b: Press key(F)+(2), and then press key(BAND)to enter the CTCSS mode(see Menu 2).
Press(▲)or(▼)to choose the receiving CTCSS 71.9, then press key(MR/VFO)to confirm.
c: Press key(F)+(3), and then press key(BAND)to enter the CTCSS mode(see Menu 3).
Press(▲)or(▼)to choose the transmitting CTCSS 71.9, then press key(MR/VFO)to confirm.
d: Press key(F)+(MR/VFO), and then press(▲)or(▼)to choose the channel number "SAV.3H".
e: Press key(MR/VFO)again to confirm. It doesn't operate the b and c step if you don't set the CTCSS.
Next, storing channel 5:
a: The radio on frequency working mode,input key 4、6、5、5、7、5.
b: Press key(F)+(3), and then press key(BAND)to enter the CTCSS mode
c: Press(▲)or(▼)to choose the transmitting CTCSS 88.5, and then press key(MR/VFO)to confirm.

d: Press key(F)+(4)repeatedly until the repeater shift direction shows (-). (see Menu 11).
e: Press key(F)+(0)+(2), and then input key 0、5、0、0、0 ordinal.
f: Press key(MR/VFO)to confirm.
g: Press key(F)+(MR/VFO),and then press(▲)or(▼)to choose the channel number "SAV.5H".
h: Press key(MR/VFO)again to confirm.

NOTICE ⚠

- Press key(MR/VFO)to shift the radio between frequency and channel mode after setting.

Frequency and Channel Mode Shift-----Menu 27

This function is mainly shift the frequency and channel mode of the radio.
Press key(MR/VFO)each time, the radio will shift between frequency and channel mode.

NOTICE ⚠

- The frequency and channel mode shift can be done only when the LCD shows a" ↓ "symbol.

Keypad Lock-----Menu 28

Press key(F) more than 2 seconds, keypad lock; operate again, keypad unlock. (as picture 23).

Picture 23

" ↓ "Symbol Switch-----Menu 29

Press key(MAIN)each time, the " ↓ "symbol will display in turn between the main frequency/channel and sub-
frequency/channel. Next you can change the frequency or data such as frequency、channel number、output power、 CTCSS/DCS code and so on.

Frequency Band Shift-----Menu 30

This function is convenient to choose the frequency band of the radio.

1. On the frequency mode,press key each time to choose the frequency band. The LCD displays "F*".

Scan list-----Menu 31

Using this function can choose the channel you setting is to scan or not.

1. On the channel mode, press key F + MR/VFO , the LCD displays "S", it means the channel accept scan.
2. Press key F + MR/VFO again to exit, the LCD will not displays"S", it means the channel you choose is not in scanning.

NOTICE ⚠

- For scan function see Menu 15、19、20.

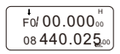
Jacklight-----Menu 32

Press key 【0】the jacklight turn on; operate it again, the jacklight turn off.

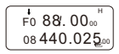
FM Radio-----Menu 33

On the frequency mode, input the FM frequency of the radio, the FM frequency range: 88-108MHz.Example: FM frequency: 88.1MHz

1. On the frequency mode . (as picture 24).
2. Input number key 0、8、8、1、0、0 directly. (as picture 25).



Picture 24



Picture25

NOTICE ⚠

- The FM frequency also can be stored in the channel.

PC Programmable

The radio can be programmed by computer. For operation details see QS PC software.

The Annunciation Of No Transmitting

1. If busy channel lock, LCD displays "BUSY".
2. If PLL unlock, LCD displays "LOST".
3. If the battery voltage is lower than normal, LCD displays "LOW".
4. If Time-Out-Timer, LCD displays "OVER".
5. If it is in the frequency: 470-519.995MHZ, LCD displays "DIS".

CTCSS

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

DCS

1	D023N	8	D047N	15	D073N	22	D131N	29	D156N	36	D223N
2	D025N	9	D051N	16	D074N	23	D132N	30	D162N	37	D225N
3	D026N	10	D053N	17	D114N	24	D134N	31	D165N	38	D226N
4	D031N	11	D054N	18	D115N	25	D143N	32	D172N	39	D243N
5	D032N	12	D065N	19	D116N	26	D145N	33	D174N	40	D244N
6	D036N	13	D071N	20	D122N	27	D152N	34	D205N	41	D245N
7	D043N	14	D072N	21	D125N	28	D155N	35	D212N	42	D246N

43	D251N	72	D446N	101	D732N	130	D145I	159	D325I	188	D526I
44	D252N	73	D452N	102	D734N	131	D152I	160	D331I	189	D532I
45	D255N	74	D454N	103	D743N	132	D155I	161	D332I	190	D546I
46	D261N	75	D455N	104	D754N	133	D156I	162	D343I	191	D565I
47	D263N	76	D462N	105	D023I	134	D162I	163	D346I	192	D606I
48	D265N	77	D464N	106	D025I	135	D165I	164	D351I	193	D612I
49	D266N	78	D465N	107	D026I	136	D172I	165	D356I	194	D624I
50	D271N	79	D466N	108	D031I	137	D174I	166	D364I	195	D627I
51	D274N	80	D503N	109	D032I	138	D205I	167	D365I	196	D631I
52	D306N	81	D506N	110	D036I	139	D212I	168	D371I	197	D632I
53	D311N	82	D516N	111	D043I	140	D223I	169	D411I	198	D654I
54	D315N	83	D523N	112	D047I	141	D225I	170	D412I	199	D662I
55	D325N	84	D526N	113	D051I	142	D226I	171	D413I	200	D664I
56	D331N	85	D532N	114	D053I	143	D243I	172	D423I	201	D703I
57	D332N	86	D546N	115	D054I	144	D244I	173	D431I	202	D712I
58	D343N	87	D565N	116	D065I	145	D245I	174	D432I	203	D723I
59	D346N	88	D606N	117	D071I	146	D246I	175	D445I	204	D731I
60	D351N	89	D612N	118	D072I	147	D251I	176	D446I	205	D732I
61	D356N	90	D624N	119	D073I	148	D252I	177	D452I	206	D734I
62	D364N	91	D627N	120	D074I	149	D255I	178	D454I	207	D743I
63	D365N	92	D631N	121	D114I	150	D261I	179	D455I	208	D754I
64	D371N	93	D632N	122	D115I	151	D263I	180	D462I		
65	D411N	94	D654N	123	D116I	152	D265I	181	D464I		
66	D412N	95	D662N	124	D122I	153	D266I	182	D465I		
67	D413N	96	D664N	125	D125I	154	D271I	183	D466I		
68	D423N	97	D703N	126	D131I	155	D274I	184	D503I		
69	D431N	98	D712N	127	D132I	156	D306I	185	D506I		
70	D432N	99	D723N	128	D134I	157	D311I	186	D516I		
71	D445N	100	D731N	129	D143I	158	D315I	187	D523I		

SPECIFICATIONS

GENERAL	
Frequency range	RX:136-174MHz, 400- 520MHz TX:144-148MHz, 420-450MHz
Frequency	5PPm
sensitivity	DC7.2V (rechargeable Li-ion battery)
Rated Voltage	200 channels
Memory channel	Inductively loaded antenna
Antenna disposition	50Ω
Antenna impedance	Same frequency single operation or different frequency single operation
Working manner	110mmX56mmX37mm

TRANSMITTER		RECEIVER	
Output power	10W/4W/1W	Sensitivity	-122dB(12dB SINAD)
Modulation mode (wide/narrow)	16KØF3E/11KØF3E	Audio frequency power	0.5W
Maximum	<5k/<2.5kHz	Audio distortion	<10%
Spurious radiation	<7uW	Blocking	⩾85dB
Modulation character	6dB	Intermodulation(wide/narrow)	⩾60dB ⩾55dB
Emission current	<2.8A(H10)	Adjacent channel selectivity	⩾65dB ⩾60dB
CTCSS/DCS deviation(wide/narrow)	0.75kHz±50Hz, 0.37kHz±30Hz	Spurious rejection	⩾65dB
Modulation sensitivity	12mV		
Modulation distortion	<5%		

■ All stated specifications are subject to change without notice or obligation.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

(2) this device must accept any interference received, including interference that may cause undesired operation.