

# PORTABLE TWO-WAY RADIO USER' S MANUAL

## TO USRE

Thank you for your favor with our products.

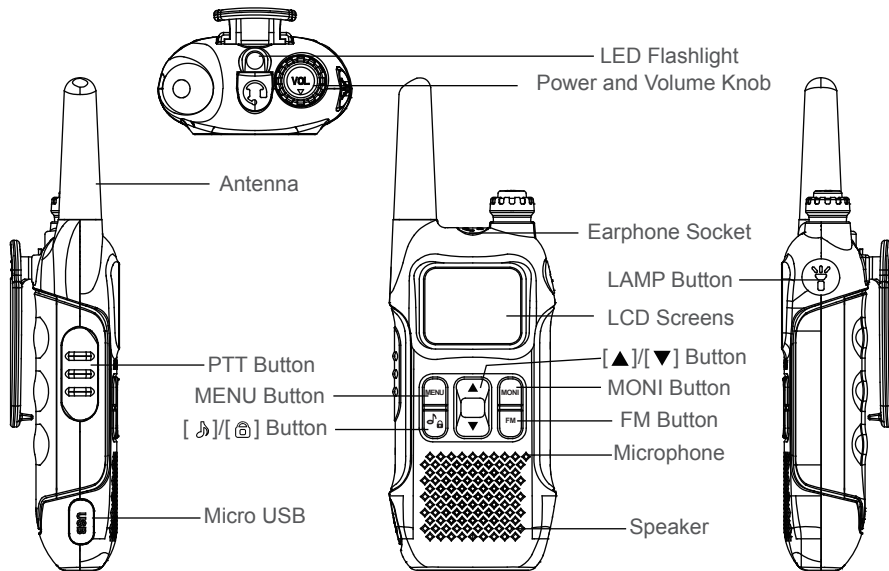
We believe that this easy-to-use products will provide dependable and cost-effective communications for you. Our professional two-way radios incorporate the latest in advanced technology and craft. So you will be pleased with the quality and features of our products. Please read this manual carefully to ensure you know how to properly operate the radio before use.

- LCD display monitor    ■ Frequency range: FRS
- 12.5KHz narrow band
- Output power: H:2W L: 0.5W    ■ 750HZ 1450HZ、2100HZ
- 50 Groups CTCSS, 105 Groups of standard DCS    ■ VOX
- 22 Channels    ■ Time-out timer(TOT)    ■ Keyboard Beep
- Key Screen backlight    ■ Battery saving function    ■ LED Flashlight
- Monitoring function    ■ Keyboard Locks    ■ FM Radio:87-108MHz
- Dual standby function    ■ Support USB charging function
- Restore factory settings    ■ Multiple working modes are available
- Weather forecast function    ■ 10 ringtone are available

Please read the following information in order to use this two-way radio safely and efficiently.

- 1.The maintenance work of the two-way radio can only be carried out by professional technical personnel; assembly/dis assembly without permission is prohibited;
- 2.To avoid problems caused by electromagnetic interference and/or electromagnetic compatibility, please turn off the two-way radio in places with the sign “Please turn off two-way radio”, such as hospitals and other health care facilities.
- 3.When taking airplane, please turn off the two-way radio when the crew request.
- 4.In automobile with airbags, do not place the two-way radio in the inflation area of the airbags.
- 5.Turn off the two-way radio before entering the flammable and explosive environment;
- 6.Do not replace or charge the battery in flammable and explosive environments;
- 7.Turn off the two-way radio before approaching the blasting area and detonator area;
- 8.Do not use the two-way radio if the antenna is damaged, or else it may cause minor skin burns;
- 9.Do not expose the two-way radio to direct sunlight or near the heating device.
- 10.While the portable two-way radio is transmitting, keep the radio in a vertical position and keep the microphone about 5cm from the mouth.
- 11.Keep the two-way radio at least 2.5cm from the head or body during transmitting.
- 12.If you are wearing the portable two-way radio on your body, make sure that the antenna is at least 2.5cm away from the body when the two-way radio is transmitting.
- 13.If the two-way radio has any odor or smoke, turn off the power immediately and contact your dealer.

## Familiar with the machine



**[Power and Volume]:** Power switch, adjust the volume.

**[PTT]:** When transmitting, press this button and speak to the microphone; release the button to receive.

**[FM]:** Press the button once to turn on the FM radio function, and then press the button again to turn off the FM radio function.

**[LAMP]:** Press to turn on the flashlight, press it again to make the flashlight flash, and press it again to turn off the flashlight.

**[MENU]:** Short press to enter menu setting function.

**[MONI]:** Monitoring Button, Short press for Monitoring function in normal mode ;In menu mode press this key to exit.

**[🔒 /Ringtone]:** Long press this button to turn on/off keypad lock, Short press for ringtone call. (Note: After the keyboard lock is opened, the function key and confirm key operations are invalid)

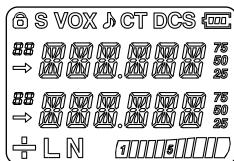
**[▲]:** Short press this button to up; Long press to switch A/B frequency.

**[▼]:** Short press this button to down; Long press to switch A/B frequency.

### Combination key function

Call Tone: Press and hold [PTT] button and[MONI]button to transmit 1750Hz tone signaling,Release the [MONI]button to exit;Press and hold [PTT] button and[FM]button to transmit 1450Hz tone signaling;Press and hold [PTT] button and[ @ ]button to transmit 1750Hz tone signaling.

## LCD icon and function description



Icon	Icon name	Description
	Receiving and Transmitting	Receiving display: , Transmitting display:
	Normal mode display frequency; PMR and FRS mode display channels	Display current channel, Press the[△]/[▽]button to select
	Battery level indicator	The more cells in the display, the more power the battery
	Channel number indication	01-22
	Frequency offset direction	When "+" is displayed, it represents positive difference frequency; when "-" is displayed, it represents negative difference frequency.Do not display for the same frequency transceiver.
VOX	VOX indication	VOX has been turned on
	Keypad lock indication	Keypad lock has been turned on(PTT button are not restricted)
	Field Strength	The signal intensity is displayed when receiving, the first five grids are displayed when low power is transmitted, and the full grid is displayed when high power is transmitted.
	Ringtone	1-10 Category



## LCD icon and function description

Icon	Icon name	Description
S	Dual Standby	
L	Low Power(Normal Mode)	When "L" is displayed, it represents low power transmission of the current channel; when is not displayed, it represents high power transmission.
N	Narrow Band (Normal Mode)	When "N" is displayed, it represents in the Narrow-band mode; when is not displayed, it represents in the broad-band mode
CT	CTCSS	CTCSS:50 Group(Normal Mode) 38 Group(FRS/PMR)
DCS	CDCSS	CDCSS:104 Group(Normal Mode) 83 Group(FRS/PMR)

### Brief of the Function

#### 1. Output Power:

Normal Mode: Low 0.5W and High 2W;

FRS/PMR: 0.5W

2. Frequency Range:409(China) 467(TaiWan,China) 446(Europe) 462(USA) 477(Southeast Asia) 325(Philippines) 476-477(Australia) 433(Russia) 444(Norway) 448-447(Korea) 464(South Africa)

3. Channel:Up to 22 Channels(Preset according to different countries or regions)

## Menu Item List

Menu	Display Character	Set Options
1	RXCODE (Receive CTCSS/DCS)	OFF, ctcss,dcs
2	TXCODE (Transmit CTCSS/DCS)	OFF, ctcss,dcs
3	SQL (Squelch level)	0--9 (Factory set to level 3)
4	LIGHT (Backlight)	OFF/ON /Key
5	BEEP (Keyboard Beep)	OFF/ON
6	VOX	OFF/1---5 level
7	PWR (Transmission power)	HIGH/LOW
8	TDR (Dual standby)	ON/OFF
9	narrow band	NARROW
10	SAVE(Power saving mode)	OFF/ON
11	TOT(Transmission time limit)	OFF/30/60/90/120/150/180S
12	BCLO(Busy channel lockout)	OFF/ON
13	RING(Ringtone)	OFF,10 ringtone are available
14	WEATHE(Weather forecast)	OFF/ON
15	VOICE(Language)	OFF/CHI(Chinese)/ENG(English)

### Select the RX CODE

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 01 and display RXCODE;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select the required code: OFF/67.0 - 754N;  
Note:CTCSS:67Hz-254.1Hz(50 group) DCS:023N-754N/023I-754I(104 group)
- 4) Press the[△]/[▽]button to select the CTCSS/DCS;
- 5) Press [MENU] button to confirm;
- 6) Press[PTT]or[MONI]button exit to the menu mode.

### Select the TX CODE

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 02 and display TXCODE;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select the required code: OFF/67.0 - 754N;  
Note:CTCSS:67Hz-254.1Hz(50 group) DCS:023N-754N/023I-754I(104 group)

- 4) Press the[△]/[▽]button to select the CTC/DCS;
- 5) Press [MENU] button to confirm;
- 6) Press[PTT]or[MONI]button exit to the menu mode.

### **Squelch Level**

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 03 and display SQL ;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:0/1/2/3/4/5/6/7/8/9.(The lowest level is 0,The highest level is 9 Usually set to level 3)
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode.

### **Backlight**

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 04 and display LIGHT;

- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:ON/OFF/KEY;
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode.

### Keyboard BEEP

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 05 and display BEEP;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:ON/OFF;
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode.

### VOX

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 06 and display VOX;

- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:OFF/1/2/3/4/5;
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode.

Note: The minimum sensitivity is 5,when background noise is high to use.

The highest sensitivity is 1,when background noise is low to use.

When VOX is opened,VOX icon appears in the upper left corner of the LCD.

### **Transmitting Power**

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 07 and display PWR;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:HIGH/LOW;
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode.

### Dual Standby

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 08 and display TDR;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:OFF/ON;
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode.

### Power Saving Mode

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 10 and display SAVE;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:ON/OFF ;
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode.

### Transmission time limit(TOT)

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽] button to select 11 and display TOT;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:OFF/30S/60S/90S/120S/150S/180S ;
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode




### **Busy Channel Lockout(BCLO)**

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 12 and display BCLO;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:ON/OFF ;
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode.

### **Ringtone**

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 13 and display RING;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select:OFF/1/2/3/4/5/6/7/8/9/10.

Note:Each time you select a call tone, you can listen to the call tone

- 4) Press [MENU] button to confirm;
- 5) Press[PTT]or[MONI]button exit to the menu mode.Press the  button to send the selected ring tone.

### Weather Forecast Menu Setting

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 14 and display WEATHE;
  - 2) Press the [MENU] button to enter the MENU item;
  - 3) Press the[△]/[▽]button to select:OFF/ON
  - 4) Press [MENU] button to confirm;
  - 5) Press[PTT]button exit to the menu mode.
- If the menu item is selected as ON, the radio enters the weather forecast mode.
- If the menu item is selected as OFF, the radio return to normal operation mode.

### Weather Forecast Channel Setting

In weather forecast receiving mode,Press the[△]/[▽]button to select weather forecast channel (CH 1 - CH 11).

Note:In weather forecast receiving mode, the radio receiving and transmitting function is deactivated.

CH1: 162.550	CH2: 162.400	CH3: 162.475	CH4: 162.425	CH5: 162.450
CH6: 162.500	CH7: 162.525	CH8: 161.650	CH9: 161.775	CH10:161.750
CH11:162.000				

## Language

- 1) Press the [MENU] button to enter into the MENU mode.press the[△]/[▽]button to select 15 and display VOICE;
- 2) Press the [MENU] button to enter the MENU item;
- 3) Press the[△]/[▽]button to select: OFF/CHI/ENG
- 4) Press [MENU] button to confirm;
- 5) Press[PTT]button exit to the menu mode.

-If the menu item is selected as OFF,the radio turn off the voice prompt.

-If the menu item is selected as CHI,the radio voice prompt is Chinese.

-If the menu item is selected as ENG,the radio voice prompt is English.

Note: In Normal Mode,the LCD display frequency and channel;

In PMR/FRS Mode, the LCD display channel number.

## CTCSS List for PMR Mode

Serial number	HZ	Serial number	HZ	Serial number	HZ	Serial number	HZ
0	OFF	12	100.0	24	151.4	36	233.6
1	67.0	13	103.5	25	156.7	37	241.8
2	71.9	14	107.2	26	162.2	38	250.3
3	74.4	15	110.9	27	167.9		
4	77.0	16	114.8	28	173.8		
5	79.7	17	118.8	29	179.9		
6	82.5	18	123.0	30	186.2		
7	85.4	19	127.3	31	192.8		
8	88.5	20	131.8	32	203.5		
9	91.5	21	136.5	33	210.7		
10	94.8	22	141.3	34	218.1		
11	97.4	23	146.2	35	225.7		

**CDCSS List for PMR Mode**

Serial number	Code	Serial number	Code	Serial number	Code	Serial number	Code
39	023	51	073	63	156	75	261
40	025	52	074	64	162	76	263
41	026	53	114	65	165	77	265
42	031	54	115	66	172	78	271
43	032	55	116	67	174	79	306
44	043	56	125	68	205	80	311
45	047	57	131	69	223	81	315
46	051	58	132	70	226	82	331
47	054	59	134	71	243	83	343
48	065	60	143	72	244	84	346
49	071	61	152	73	245	85	351
50	072	62	155	74	251	86	364

**CDCSS List for PMR Mode**

Serial number	Code	Serial number	Code	Serial number	Code
87	365	99	503	111	654
88	371	100	506	112	662
89	411	101	516	113	664
90	412	102	532	114	703
91	413	103	546	115	712
92	423	104	565	116	723
93	431	105	606	117	731
94	432	106	612	118	732
95	445	107	624	119	734
96	464	108	627	120	743
97	465	109	631	121	754
98	466	110	632		

## General

Frequency range	UHF:462 - 467MHz		
Memory channels	16 Groups	Operation temperature	- 20 — +50
Operation voltage	DC 3.7V	Mode of operation	Simplex
Frequency stability	± 2.5ppm	Antenna impedance	50

## Receiver

## Transmitter

Sensitivity	<0.16uv (12dB SINAD)	RF Power	2W
Squelch Sensitivity	<0.2uv	Maximum deviation	± 5KHz
Audio power	380mW	Spurious emission	- 60dB
Audio distortion	<10%	Transmission current	1000mA
Intermediation(W/N)	65dB	Preemphasis Character	6dB per octave
Receiver current	380mA		

## FCC Warning

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.

### RF Exposure Information:

This product is compliance to FCC RF Exposure requirements and refers to FCC website <https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm> search for FCC ID: 2AJGM-BFT8 to gain further information include SAR Values.

The device only supports simplex-mode and transmitting is no more than the rated duty cycle factor of 50% of the time. For hand-held operation, the radio should be held at least 25mm from the user's face. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with RF exposure requirements, and should be avoided.

Channel List

Channel	Frequency	Model	Channel	Frequency	Model
1	462.5625	FRS	12	467.6625	FRS
2	462.5875	FRS	13	467.6875	FRS
3	462.6125	FRS	14	467.7125	FRS
4	462.6375	FRS	15	462.5500	FRS
5	462.6625	FRS	16	462.5750	FRS
6	462.6875	FRS	17	462.6000	FRS
7	462.7125	FRS	18	462.6250	FRS
8	467.5625	FRS	19	462.6500	FRS
9	467.5875	FRS	20	462.6750	FRS
10	467.6125	FRS	21	462.7000	FRS
11	467.6375	FRS	22	462.7250	FRS





RECYCLED PACKAGING