

For optimum performance from this product, please read this manual and the supplied Safety Information Booklet carefully before use.
Do not use this radio or charge the battery in an explosive environment, such as gas, dust, smoke, etc. Do not leave the radio in a dusty or wet environment. It is very important for the user to understand all instructions before using the radio.

Device Checking

Thank you for purchasing this portable transceiver.

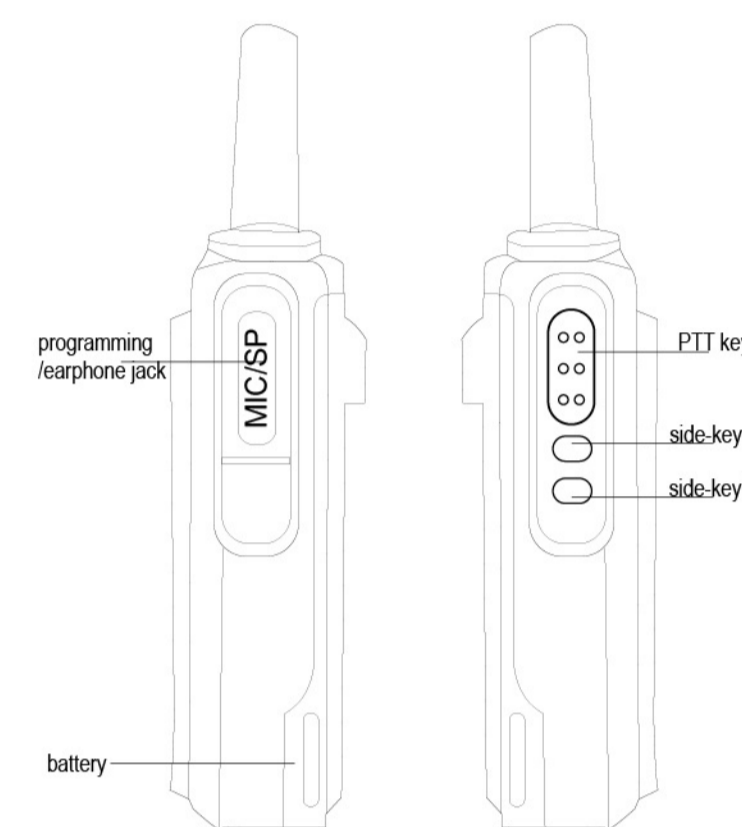
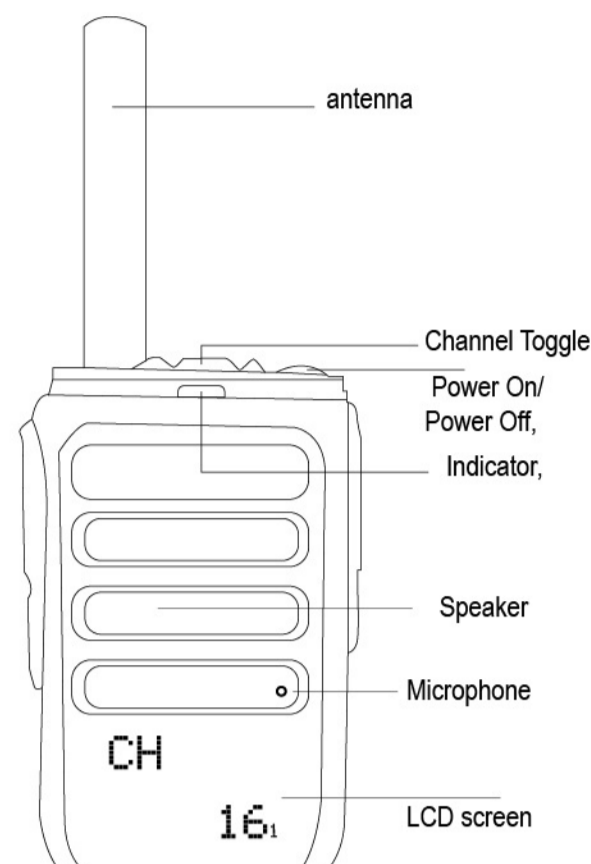
Before using:

1. Please check whether the packing box is damaged or not.
2. Please unpack packing box carefully, and confirm the following list of items are in the box. If any items are missing or have been damaged during shipment, please contact radio supplier immediately.

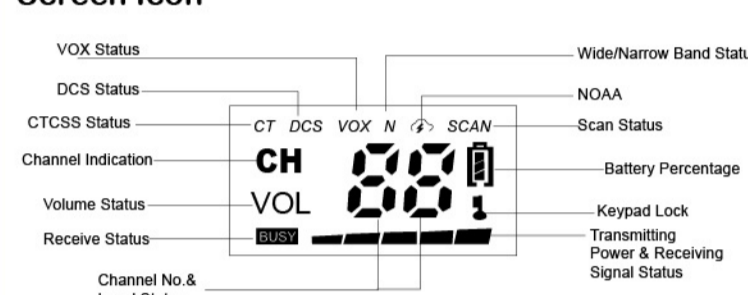
Supplied Accessories

ITEM	QTY
Transmitter	1
Antenna	1
Li-ion Battery	1
Charger	1
Belt Clip	1
Strap	1
Manual	1

Familiar with the Transmitter



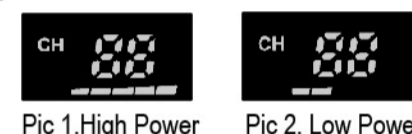
Screen Icon



Function and Operation Instruction

4.1 Transmitting

Press the PTT and transmit the signal at current channel, the indicator light turns red and the signal bar lights. If the transmitting power is high, the signal bar is fully lights, refer to Pic 1. If the transmitting power is low, the signal bar does not light fully, refer to Pic 2.



4.2 Receiving

When the device receives the same frequency signal and matches the same CTCSS, the indicator light turns green, the speaker has audio and the receiving status and

signal bar light at the same time, refer to Pic 3



Pic 3. Receiving Status

4.3 CTCSS/DCS Setting

Enable sidekey1 or sidekey2 to have CTCSS/DCS function via software, press the relevant key to enter the CTCSS/DCS manual setting. The screen will display the matched code with current channels, please refer to CTCSS/DCS table 5.1 & 5.2 CTCSS indicator and DCS indicator light at the same time, which means no CTCSS/DCS code at current channel, refer to Pic 4;

CTCSS indicator lights, which means having CTCSS code at current channel, refer to Pic 5;

DCS indicator lights, which means having DCS code at current channel, refer to Pic 6.

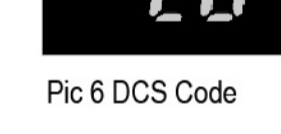
Changing the current CTCSS/DCS via channel switching key, long press the key to fast changing the code, then press side-key 1 to confirm the setting, press side-key 2 to cancel and exit the setting.



Pic 4 no CTCSS/DCS Code



Pic 5 CTCSS Code



Pic 6 DCS Code

4.4 Monitor

Enables side-key 1 or side-key 2 to Monitor function, press the relevant key to enter the receiving status, then monitor the same signal with the current channel.

4.5 Scanning

Programming side-key 1 or side-key 2 to Scan function, long press the relevant key to enter the scanning status, the Scan icon lights, and the scanning starts, refer to the scanning status of Pic 7.



Pic 7 Scanning Status

4.6 VOX

Programming the side-key 1 or side-key 2 to VOX function, press the relevant key to activate the VOX icon, then the function activates, prefer to Pic 8.



Pic 8 VOX Status

4.7 Power Selection

Programming the side-key 1 or side-key 2 to High power selection function, long press the relevant key to change the current power. Select the transmitting power accordingly to make sure that battery is used reasonably

4.8 Emergency Alarm

Programming the side-key 1 or side-key 2 to Emergency Alarm function, long press relevant key to transmit the alarm signal to the device which is with same frequency.

4.9 Keypad Lock

The keypad will be locked when the device unused for a certain time, and the keypad lock icon shows on the screen at the same time. Keypad can be unlocked by long pressing the channels switching key or pressing the PTT button.



Pic 9 keypad Lock icon

4.10 NOAA

Programming the device to open the NOAA function, the NOAA icon lights, prefer to Pic 10. When the device is under standby status, it will receive the NOAA signals at the same time. When the device receives the 105Hz alarm signals, the NOAA status will shown on the screen, receive and broadcast alarm signal, prefer to Pic 11. Press the PTT button to exit the NOAA status. Programming side-key 1 or side-key 2 to NOAA function, long press relevant key to enter NOAA signals, prefer to Pic 12. Switching the NOAA channels by channel selection key. When the device is standby for 15s, it will enter scanning status to scan 11 NOAA channel signals. Same operation to exit the NOAA.

After programming the side-key 1 or side-key 2, press the power button together with NOAA key to open or close NOAA. So set the NOAA if needed



Pic 10 active NOAA Pic 11 NOAA receiving status Pic 12 NOAA channel

CTCSS/DCS & NOAA Tables

5.1 CTCSS Table

No.	CTCSS Code	No.	CTCSS Code	No.	CTCSS Code	No.	CTCSS Code
1	87.0 Hz	11	87.4 Hz	21	136.5 Hz	31	192.8 Hz
2	71.9 Hz	12	86.0 Hz	22	141.3 Hz	32	203.5 Hz
3	74.4 Hz	13	103.5 Hz	23	146.2 Hz	33	219.7 Hz
4	77.0 Hz	14	107.2 Hz	24	151.4 Hz	34	218.1 Hz
5	79.7 Hz	15	110.9 Hz	25	156.7 Hz	35	225.7 Hz
6	82.5 Hz	16	114.8 Hz	26	162.7 Hz	36	233.6 Hz
7	85.4 Hz	17	118.8 Hz	27	167.9 Hz	37	241.8 Hz
8	88.5 Hz	18	123.0 Hz	28	173.8 Hz	38	250.3 Hz
9	91.5 Hz	19	127.3 Hz	29	179.9 Hz		
10	94.8 Hz	20	131.8 Hz	30	186.2 Hz		

5.2 DCS Table

No.	DCS Code	No.	DCS Code	No.	DCS Code	No.	DCS Code
1	D000N	29	D143N	43	D310N	64	D502N
2	D005N	30	D152N	44	D311N	65	D546N
3	D009N	31	D158N	45	D312N	66	D565N
4	D011N	32	D165N	46	D346N	67	D606N
5	D013N	33	D167N	47	D313N	68	D610N
6	D043N	34	D165N	48	D364N	69	D624N
7	D047N	35	D174N	49	D365N	70	D627N
8	D051N	36	D174N	50	D370N	71	D631N
9	D054N	37	D205N	51	D411N	72	D632N
10	D056N	38	D206N	52	D412N	73	D654N
11	D071N	39	D242N	53	D413N	74	D652N
12	D073N	40	D243N	54	D414N	75	D654N
13	D075N	41	D244N	55	D415N	76	D713N
14	D077N	42	D245N	56	D416N	77	D712N
15	D114N	35	D251N	57	D445N	78	D743N
16	D115N	36	D251N	58	D446N	79	D741N
17	D116N	38	D263N	59	D445N	80	D742N
18	D115N	39	D263N	60	D446N	81	D743N
19	D115N	40	D271N	61	D503N	82	D743N
20	D115N	41	D346N	62	D564N	83	D754N
21	D134N	42	D311N	63	D516N		

5.3 NOAA Table

No.	Frequency
1	162.55000MHz
2	162.40000MHz
3	162.47500MHz
4	162.42500MHz
5	162.45000MHz
6	162.50000MHz
7	162.52500MHz
8	161.65000MHz
9	161.77500MHz
10	161.75000MHz
11	162.00000MHz

Technical Specification

General	
Frequency Range	151.82MHz, 151.88MHz, 151.94MHz, 154.57MHz, 154.69MHz
Channel Capacity	5
Working Voltage	3.7V DC
Working Mode	same frequency simplex/different frequency simplex
Antenna	whip
Frequency Stability	±2.5ppm
Transmitter	
Output Power	2W
Modulation Mode	F3E
Minimum Frequency deviation (WIN)	±5KHz / ±2.5KHz
SNR (WIN)	45dB / 40dB
Transmitting Current	≤1300mA
Receive	
Sensibility (WIN)	0.22μV / 0.25μV 12dB SINAD
Inter modulation (WIN)	65dB / 60dB
Audio Distortion	<5%
Audio Power	≤1W (8 Ω)
Receiving Current	≤500mA
Standby Current	≤60mA

NOTE: Above parameters are subject to change without prior notice!

FCC Warning

Any Changes expressly or modifications not 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.

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.

SAR tests are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value.

Before a new model device is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC. Tests for each device are performed in positions and locations (e.g. at the ear and worn on the body) as required by the FCC.

This radio complies with FCC exposure limits for uncontrolled environment at operating duty factors of up to 50%. The device was test for typical body-worn operations and head face up operations keep the device at least 25mm from the face.