



W80

Professional Two way Radio

User Manual

Preface

Thank you for purchasing our portable two way radio. This easy-to-use radio will deliver you secure, instant and reliable communications at peak efficiency. Please read this manual carefully before use. The information presented herein will help you to derive maximum performance from your radio.

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Precautions

Please follow the below suggestions and warning to assist you to carry out the responsibilities on warranty terms, and learn the safety before using the transceiver.

- 1.Please keep the transceiver and accessories out of the reach of children.
- 2.Do not disassemble the transceiver to avoid the possibility of damaging by a non-professional.
- 3.Please only use supplied battery pack and charger to avoid the possibility of damaging the transceiver.
- 4.Please only use supplied antenna to avoid the possibility of damaging the transceiver.
- 5.Neither expose the transceiver directly to the sunlight nor in the overheated places for a long time.
- 6.Keep the transceiver away from the dusty or humid places.
- 7.Clean the transceiver with a mild brush/cloth or detergents instead of the aggressive chemical.
- 8.Do not transmit before well installing the antenna.
- 9.If any abnormal odor or smoke is detected from the transceiver, please power it off immediately, then remove the battery pack from the transceiver. And contact your dealer.

Note:

All the above mentioned suggestions and warnings are compatible for all series transceivers and accessories. Please contact your dealer about any upset operation.

Manufacturer is not responsible for any safety or operation problems, which are caused by using the incompatible accessories or parts.

Unpacking And Checking Equipment

Carefully unpack the transceiver. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please contact the carrier or the dealers immediately.

NO	Item	Quantity
1	Radio Body	1
2	Antenna	1
3	Battery	1
4	Charger	1
5	Adaptor	1
6	Belt Clip	1
7	Hand Strap	1
8	User Manual	1

Battery Safety

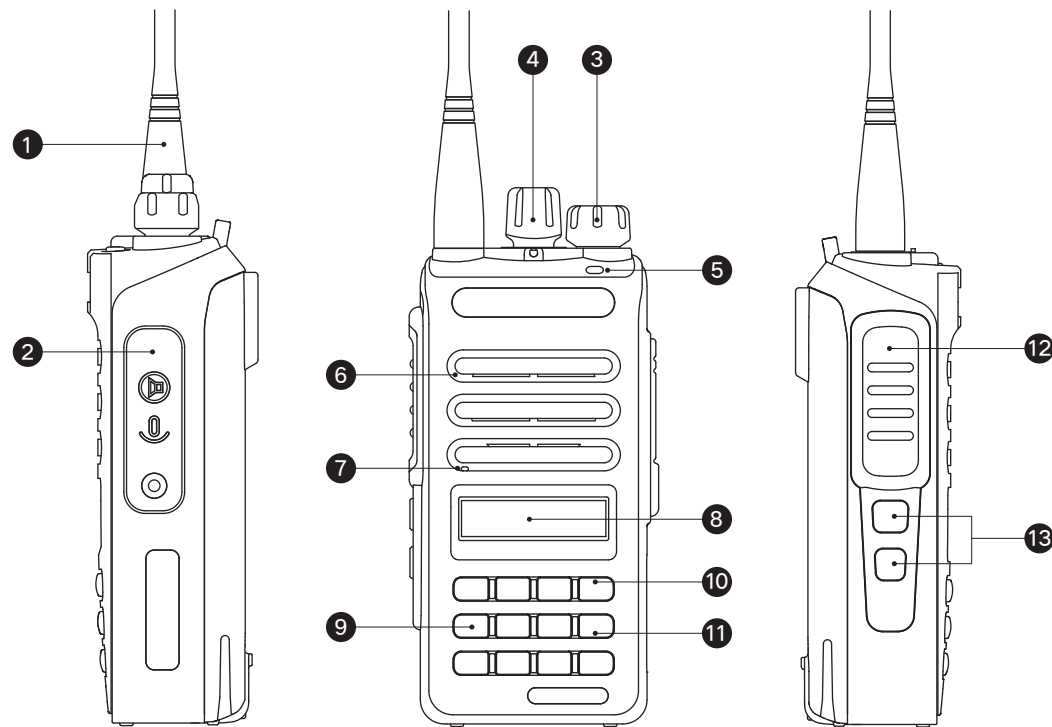
Please use our specified battery to charge transceiver, if using other brand batteries, it may explode and damage nearby subjects or people.

Notes:

- 1.Do not short the battery terminals or dispose of the battery by fire. Never attempt to remove the casing from the battery pack.
- 2.The ambient temperature should be between 5 and 40 ℃ while charging is in progress. Charging outside this range may not fully charge the battery.
- 3.Always switch OFF the transceiver equipped with a battery pack before charging. Using the transceiver while charging its battery pack will interfere with correct charging.
- 4.Do not plug/unplug the AC adaptor and battery during charging, to avoid interfering the charging program.
- 5.The battery pack life is over when its operating time decreases even though it is fully and correctly charged. Please replace the battery pack.
- 6.Do not recharge the battery pack if it is already fully charged. Doing so may cause the life of the battery pack to be shortened or the battery pack may be damaged.
- 7.Do not charge transceiver while the battery or any units were wet. Ought to dry it with cloth before charging, avoid damaging the unit.

Note: All batteries can cause property damage and/or bodily injury such as burns if a conductive material such as jewellery, keys, or beaded chains touches exposed terminals. The conductive material may complete an electrical circuit(short circuit) and become quite hot. Exercise care in handling any charged battery, particularly when placing it inside a pocket, purse, or other container with metal objects.

Product Overview



No.	Part Name	Description
1	Antenna	Receiving Signal
2	Accessory jack	Can be used to connect a speaker mic, earpiece or headset mic
3	Power On / Off, Volume Knob	Rotate to turn on/off, adjust the volume
4	Channel Selector Knob	Turn the knob to select a desired channel.
5	Status Indicator	Transmit: Red light is always on Receive: Green light is always on
6	Speaker	Sound from here when receiving
7	Microphone	When transmitting, please speak to the microphone at a distance of 5-10cm
8	LCD display	Display the current working status of the radio
9	Numeric Keypad	In frequency mode, input the frequency manually. In channel mode, input the channel number to switch channels. It can be used as a shortcut key to quickly enter the corresponding menu.
10	Function Key/ Exit / Keylock	Combined with the number keys to quickly enter the corresponding menu. /Exit Key(in menu status) / Keylock(in standby mode, long press to lock the keypad)
11	Menu Key	In standby mode, Short press to enter the menu
12	PTT Key	Press and hold down the PTT key to transmit, release it to receive.
13	Programmable Side Keys	Side key is the programmable key to which your dealer can assign long and short press function.

Before Use

Charging Operation

- 1.Plug the AC adaptor cable into the adaptor jack located on the rear of the charger.
- 2.Slide the battery pack or transceiver with a battery pack into the charger.
- 3.Plug the AC adaptor into AC outlet.
- 4.Make sure the battery pack is in contact with the charging terminals, the charger LED lights red and charging begins.
- 5.When the supplied charger LED lights green, charging is completed. Remove it or the transceiver equipped with it from the charger.

Installing/Removing Battery Pack

- 1.Match the top of the battery pack with the corresponding grooves on the radio.
- 2.Push the battery onto the bottom of the radio, buckle the safety lock.
- 3.To remove the battery pack, lift the safety lock and pull the battery pack away from the radio.

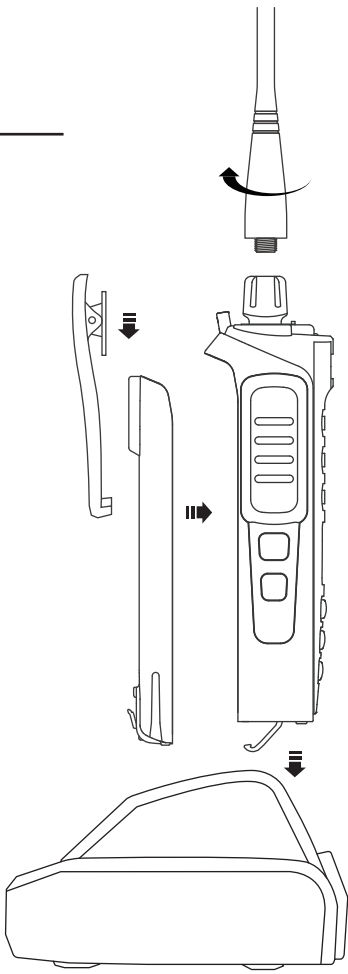
Installing/Removing Antenna

Screw the antenna onto the connector on the top of the transceiver by holding the antenna at its base and turning it clockwise until secure. Turn the antenna counter-clockwise to remove it.

Installing/Removing Belt Clip

Align the holder on the belt clip with the groove on the battery, and then press the belt clip downwards into place.

You can press the hold the belt clip spring plate and push the belt clip upwards to remove it.



LCD Display

Icon	Radio Status	Icon	Radio Status
FM	Turn on FM Radio	DW	Dual Watch
-	Frequency Offset Direction -	S	Battery Save
+	Frequency Offset Direction +	R	Frequency Reverse
L	Low Power	A	Keypad Lock
M	Middle Power	Battery Icon	Current Battery Indicator
H	High Power	Signal Icon	Receive Signal Strenght
DQT	QT Code (CTCSS)	SM	Scan Mode
DQT	DQT Code (DCS)	F	Function Shortcut Key
Voice Prompt Icon	Voice Prompt	128	Current Channel Number

Basic Operation

Powering On/Off

Switch ON the transceiver by turning the Power/Volume Knob clockwise.
Switch OFF the transceiver by turning the Power/Volume Knob counter-clockwise.

Adjusting the Volume

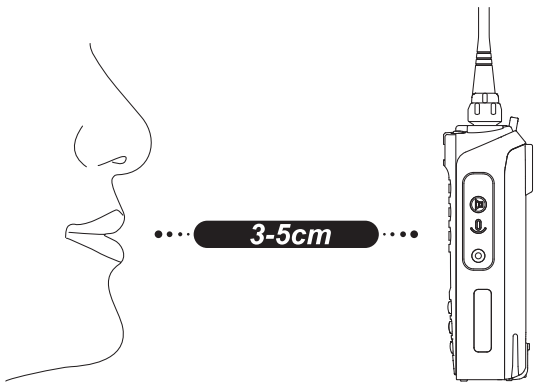
Rotate the Power/Volume knob to adjust the volume. Turn clockwise to increase the volume and counter-clockwise to decrease the volume.

Selecting a Channel

Rotate the Channel Selector Knob to select a desired channel. Turn clockwise to increase the channel and counter-clockwise to decrease the channel.

Push To Talk

To make a call, press and hold the PTT switch, then speak into the microphone using your normal speaking voice.
Hold the microphone approximately 5cm from your mouth.
Release PTT switch to receive.



Key Function

Key	Function
1 SQL	Adjust squelch level
2 VFO/MR	VFO/Channel Switch
3 TDR	A/B band Switch
4 RX.CT	RX CTCSS setting
5 TX.CT	TX CTCSS setting
6 CTCSS	CTCSS setting
7 RX.DCS	RX DCS setting
8 TX.DCS	TX DCS setting
9 DCS	DCS setting
0 FM	FM Radio

Key	Function
FUNC 	Function Key: Combined with the number keys to quickly enter the corresponding menu. Keylock: In standby mode, long press to lock the keypad. Exit: In menu operation, press to exit.
MENU	Men key: In standby mode, press to enter menu. Confirm key: In menu operation, press to confirm or enter to sub-menu.

Key Operation

Item	Shortcut Operation
Adjust Squelch Level	→ → → Rotate the Channel Knob to select a desired channel →
VFO/MR Switch	→ → → → → This transceiver has two options for the working mode: Frequency mode(VFO) and Channel model(MR). In frequency mode, input the frequency manually. In channel mode, input the channel number to switch channels. VFO MR
A/B Band Switch	→ → → → → This transceiver has dual channel standby function, which is distinguished by A/B characters in the upper left corner of the display.
RX CTCSS Setting	→ → → Rotate the Channel Knob to select parameter →

Key Operation

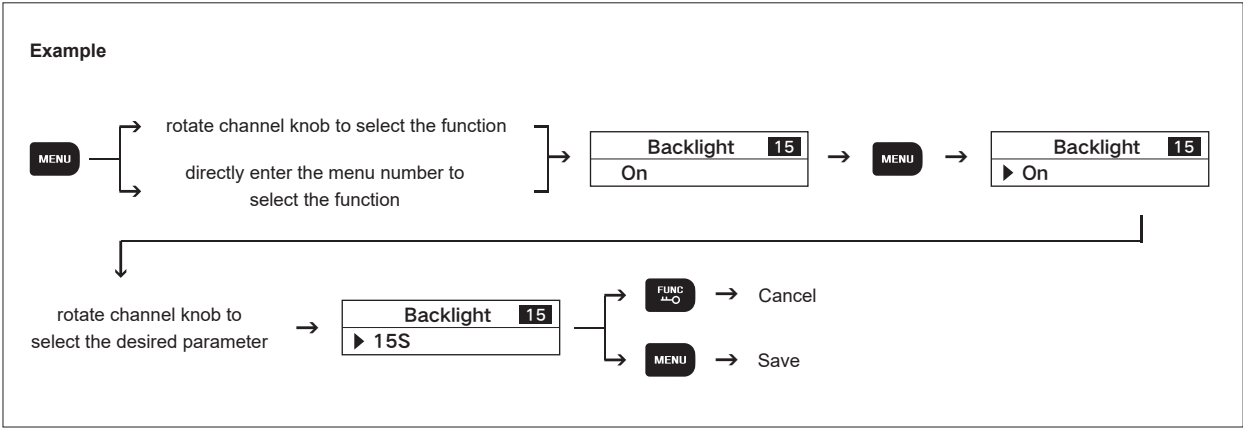
Item	Shortcut Operation
TX CTCSS Setting	→ → → Rotate the Channel Knob to select parameter →
CTCSS Setting	→ → → Rotate the Channel Knob to select parameter →
RX DCS Setting	→ → → Rotate the Channel Knob to select parameter →
TX DCS Setting	→ → → Rotate the Channel Knob to select parameter →
DCS Setting	→ → → Rotate the Channel Knob to select parameter →
FM Radio	→ → Rotate the Channel Knob to select FM radio frequency. Or press SK2 to automatically search a radio station. ↑ Press FUNC + 0 to exit FM radio ↓
Key Lock	→ Long press 3 seconds to lock → → long press 3 seconds again to unlock

Menu Operation

Your radio's features are arranged in menus, submenus, and lists. To access the items in a menu or list, rotate channel knob to select the desired parameter, press MENU key to confirm.

MENU Access

1. Press the MENU key to enter the menu;
2. Rotate the channel knob, or directly enter the menu number to select the desired menu;
3. Press MENU to enter the submenu;
4. Rotate the channel knob to select the desired parameter;
5. Press the MENU key to save the setting;
6. Press the FUNC key to exit the menu.



Menu

Channel Mode	Frequency Mode	Function	Option
1	1	Open Tone	None, Tone, Voice, Both
2	2	Channel Tone	None, Tone, Voice, Both
3	3	Battery Low Tone	Off, On
4	4	Disable Tx Tone	Off, On
5	5	Key Tone	Off, On
6	6	Tone Enable	Off, On
7	7	Voice Enable	Off, On
8	8	Tx Stop Tone	Off, On
9	9	Language	English, Chinese
10	10	Open Display	Voltage, Message, Picture, Model Name, None
11	-	Channel Display Mode	Channel Number, Channel Frequency, Channel Name
12	11	Keyboard Lock	Manual, 5S, 10S, 15S, 20S, 25S, 30S
13	12	Dual Wait	Off, On
14	13	Dual Wait Hold	None, 1S-60S
15	14	Double Tx	Busy, Edit
16	15	Backlight Mode	Always On, 5S, 10S, 15S, 20S, 25S, 30S
17	16	Brightness	1-7
18	17	Keyboard Lamp	Off, On
19	18	Carrier Led	Off, On

Menu

Channel Mode	Frequency Mode	Function	Option
20	19	Rx Bright	Off, On
21	20	Menu Timer	5S, 10S, 15S, 20S, 25S, 30S
22	21	Rx Save	Off, 1:1, 1:2, ... , 1:10
23	22	Save Super	None, 3S-15S
24	23	Save Delay	5-180S
25	24	SQ Level	0-9
26	25	TOT Timer	Off, 15S, 30S, ... , 600S
27	26	TOT Alarm	None, 1S, 2S, ... , 10S
28	27	VOX	On, Off
29	28	VOX Level	1-9
30	29	VOX Delay	0.5S, 1S, ... , 5S
31	30	Scan Mode	Carrier, Time, Search
32	-	Scan Tx Channel	Scan Channel, Selected, Selected+Talk Back, Priority, Priority+Talk Back
33	31	Scan Speed	100MS, 200MS, ... , 5000MS
34	32	Scan Rx Dwell	3S, 4S, ... , 30S
35	33	Scan Tx Dwell	3S, 4S, ... , 30S
36	-	Scan Channel Priority	None, Channel-001, Channel-002, ...
37	34	Open Message	Message upon Power on
-	35	Frequency Step	0.50K, 2.50K, 5.00K, ... , 100.00K

Menu

Channel Mode	Frequency Mode	Function	Option
-	36	Offset	0.00000-99.99500
-	37	Step Direction	Off, +, -
38	38	QT-DQT in Channels	Refer to Appendix1/2
39	39	QT-DQT Rx	Refer to Appendix1/2
40	40	QT-DQT Tx	Refer to Appendix1/2
41	41	Tx Power	High, Middle(Medium), Low
42	42	Phase Shift	120°, 180°, 240°
43	43	Eliminate Tail Tone	Off, On, Fixed Hz
44	44	Channel Bandwidth	Wide, Narrow
45	45	QT/DQT Mode	Normal, Special
46	46	Compander	Off, On
47	47	Scrambler	Off, On
48	48	Scrambler Type	Type-1, Type-2, ... , Type-8
49	49	Tx Admit	Allow Tx, Channel Free, Audio Matching, Audio Dismatching
50	50	Off Line	Off, On
51	51	Only Rx	Off, On
52	-	Channel Name	Current Channel Name
53	-	Scan Add	Off, On
54	52	DC Value	Current Battery Voltage

General Function Introduction

Tx Power

Power is an important factor affecting communication distance. The higher the transmission power, the longer the communication distance and the greater battery consumption. When the communication distance is not too far, the power can be appropriately lowered to save power.

SQ Level

The higher the squelch level, the stronger the squelch suppression capability, the less interference from noise or other irrelevant signals, and the lower the noise, but it is also more difficult to receive useful weak signals. You can choose the appropriate squelch level according to the actual situation to obtain better communication effects.

Frequency Step

Frequency step indicates the frequency value that changes each time the frequency is adjusted.

QT-DQT Setting

Using QT-DQT can avoid interference from irrelevant two-way radios. Only when both are on the same frequency and have set the same QT-DQT code can normal intercommunication be achieved. If the signals transmitted by other two-way radios do not contain these codes, the two-way radios set with these codes will mute these signals and will not hear the sounds of other signals.

TOT

Limit the transmission time each time to prevent any caller from occupying the channel for too long, effectively avoiding the phenomenon of accidentally occupying the channel and damage to the two-way radio due to long-time transmission.

VOX

Allows users to start transmitting directly by voice without pressing the PTT button. This function greatly improves the convenience of operation, allowing users to communicate more naturally without frequent manual operation of the two-way radios.

VOX Level

A lower VOX level means that the two-way radio is more sensitive to sound, that is, the voice control function will be triggered by a slight sound. A higher VOX level means that the two-way radio is less sensitive to sound, and a relatively loud sound is required to trigger the voice control function. In a noisy environment, selecting a higher VOX level can prevent the ambient noise from falsely triggering the sending function; in a quiet environment, selecting a lower VOX level can improve the convenience of using the two-way radio.

SCAN

Use the scan function to scan and receive signals on the corresponding channels in turn.

General Function Introduction

Scan Type

1. Time scan: Each channel is scanned at a fixed time. When a channel with a signal is scanned, after the time has passed, even if the signal has not disappeared, the two-way radio will continue to scan the next channel. That is, time scanning scans each channel according to time regardless of whether there is a signal on the current channel, and scans the next channel at the specified time.
2. Search Scan: When scanning is turned on, the radio stops scanning after it finds a channel with a signal. No matter whether the signal of the current channel disappears later, it will not continue to scan the next channel. That is, the search scan is based on the scanned channel. As long as the channel with a signal is scanned, the scan is over.
- 3.Carrier scan: Turn on the scan, and after the radio scans a channel with a signal, the scan will pause. After the signal disappears, the radio will continue to scan the next channel. That is, the carrier scan is based on whether there is a signal. If there is a signal, it will pause, and if there is no signal, it will continue to scan until we stop the scan manually.

Monitor

In monitoring mode, the receiving sensitivity of the two-way radio will be improved to capture the surrounding communication signals more clearly. You can understand the communication content of other team members or public channels around you without transmitting, so as to better grasp the overall situation and make timely responses.

BCL

The busy channel lock function is a technology to prevent interference. It can automatically lock the channel when other users are transmitting on the same channel to avoid signal conflicts. This function is particularly useful when multiple users use the same channel at the same time. Through the automatic locking mechanism, the communication is clear and orderly.

Power Saving

This function can make the standby time of the two-way radio longer. When the two-way radio has no transmission, reception or key operation for a certain period of time, it will automatically shut down for a period of time and then turn on for a period of time. However, the power saving mode may reduce the receiving sensitivity and response speed of the two-way radio. Therefore, when using the power saving function, it is necessary to balance the battery life and communication performance. When the battery power is limited or a long standby time is required, the power saving mode can be selected to extend the standby time; when the best communication performance is required, it is recommended to select the normal mode. In actual use, users can flexibly switch between these two modes according to the specific situation to achieve the best use effect.

CTCSS

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

DCS

DCS																					
1	D017N	23	D125N	45	D244N	67	D346N	89	D506N	111	D732N	133	D071I	155	D205I	177	D311I	199	D452I	221	D654I
2	D023N	24	D131N	46	D245N	68	D351N	90	D516N	112	D734N	134	D072I	156	D212I	178	D315I	200	D454I	222	D662I
3	D025N	25	D132N	47	D246N	69	D356N	91	D523N	113	D743N	135	D073I	157	D217I	179	D325I	201	D455I	223	D664I
4	D026N	26	D134N	48	D251N	70	D364N	92	D526N	114	D754N	136	D074I	158	D223I	180	D331I	202	D462I	224	D703I
5	D031N	27	D135N	49	D252N	71	D365N	93	D532N	115	D765N	137	D114I	159	D225I	181	D332I	203	D464I	225	D712I
6	D036N	28	D143N	50	D254N	72	D371N	94	D534N	116	D017I	138	D115I	160	D226I	182	D343I	204	D465I	226	D723I
7	D043N	29	D145N	51	D255N	73	D411N	95	D546N	117	D023I	139	D116I	161	D243I	183	D345I	205	D466I	227	D731I
8	D047N	30	D152N	52	D261N	74	D412N	96	D565N	118	D025I	140	D122I	162	D244I	184	D346I	206	D503I	228	D732I
9	D050N	31	D155N	53	D263N	75	D413N	97	D606N	119	D026I	141	D125I	163	D245I	185	D351I	207	D506I	229	D734I
10	D051N	32	D156N	54	D265N	76	D423N	98	D612N	120	D031I	142	D131I	164	D246I	186	D356I	208	D516I	230	D743I
11	D053N	33	D162N	55	D266N	77	D425N	99	D624N	121	D032I	143	D132I	165	D251I	187	D364I	209	D523I	231	D754I
12	D054N	34	D165N	56	D271N	78	D431N	100	D627N	122	D036I	144	D134I	166	D252I	188	D365I	210	D526I	232	D765I
13	D055N	35	D172N	57	D274N	79	D432N	101	D631N	123	D032I	145	D135I	167	D254I	189	D371I	211	D532I		
14	D065N	36	D174N	58	D305N	80	D445N	102	D632N	124	D036I	146	D143I	168	D255I	190	D411I	212	D546I		
15	D071N	37	D205N	59	D306N	81	D446N	103	D645N	125	D043I	147	D145I	169	D261I	191	D412I	213	D565I		
16	D072N	38	D212N	60	D311N	82	D452N	104	D654N	126	D047I	148	D152I	170	D263I	192	D413I	214	D606I		
17	D073N	39	D217N	61	D315N	83	D455N	105	D662N	127	D050I	149	D155I	171	D265I	193	D423I	215	D612I		
18	D074N	40	D223N	62	D325N	84	D462N	106	D664N	128	D051I	150	D156I	172	D266I	194	D425I	216	D624I		
19	D114N	41	D225N	63	D331N	85	D464N	107	D703N	129	D053I	151	D162I	173	D271I	195	D431I	217	D627I		
20	D115N	42	D226N	64	D332N	86	D465N	108	D712N	130	D054I	152	D165I	174	D274I	196	D432I	218	D631I		
21	D116N	43	D243N	65	D343N	87	D466N	109	D723N	131	D055I	153	D172I	175	D305I	197	D445I	219	D632I		
22	D122N	44	D244N	66	D345N	88	D503N	110	D731N	132	D065I	154	D174I	176	D306I	197	D446I	220	D645I		

Troubleshooting

The radio cannot be turned on.	Analysis: The battery may be installed improperly. Solution: Remove and reattach the battery.
	Analysis: The battery power may have run out. Solution: Recharge or replace the battery.
	Analysis: The battery may suffer from poor contact caused by dirtied or damaged battery contacts. Solution: Clean the battery contacts.
During receiving, the voice is weak, discontinuous, or totally inactive.	Analysis: The battery voltage may be low. Solution: Recharge or replace the battery.
	Analysis: The volume may be low. Solution: Rotate volume knob to increase the volume
	Analysis: The antenna may be loosened or installed improperly. Solution: Turn the radio off, and then reinstall the antenna.
	Analysis: The speaker may be blocked or damaged. Solution: Clean the surface of the speaker.
Communications with group members are unavailable.	Analysis: The frequency or signaling type may be inconsistent with that of other members. Solution: Set your TX/RX frequency and signaling to the same as that of other members.
	Analysis: The channel type (digital/analog) may be set inconsistently. Solution: Make sure all members are on the same digital/analog channel.

Troubleshooting

The radio cannot be turned on.	Analysis: You may be too far away from the group members. Solution: Move towards other members. Make sure call participants are within the communication range.
There are unknown voices or noises on the channel.	Analysis: You may be interrupted by radios using the same frequency. Solution: Change the frequency, or adjust the squelch level.
	Analysis: The radio may be set with no signaling. Solution: Set signaling for all member radios to avoid interference at the same frequency.
There is too much noise and hiss.	Analysis: The signal may be weak. Solution: Make sure call participants are within the communication range.
	Analysis: The radio may be in an unfavorable position. For example, the signal may be blocked by tall buildings or frustrated in the underground areas. Solution: Move to an open and flat area, and then restart the radio.
	Analysis: The radio may suffer from external disturbance or electromagnetic interference. Solution: Stay away from the equipment that may cause interference.
The press key can not be used.	Analysis: The key may fail to function temporarily. Solution: Restart the radio.

If the above solutions cannot solve your problems, or you may have some other queries, please contact us or your local dealer for more technical support.

Maintaining and Cleaning

To guarantee optimum performance as well as a long service life of the radio, follow the tips below to have a better daily maintenance.

- Do not disassembly the radio.
- Do not throw, crack, or hammer the radio.
- Do not pierce or scrape the radio, especially the interfaces.
- Do not expose the radio to the extreme temperature.
- Keep the radio away from substances that can corrode it, such as salty water, seawater or corrosive gases, to avoid causing damage to the product.
- Close the accessory connector cover when no accessory is in use.
- Do not connect the radio to the incompatible radio.
- Do not hold the radio by its antenna.

To avoid liquid penetration into the radio, follow the tips below:

- Do not expose the radio to the environment with high temperature and high humidity like sauna room and bathroom.
- Keep the radio away from salty water, seawater, ionized water, alcoholic beverage, lotion, or other impure water.
- Before connecting the accessory or charger to the radio, ensure the radio and the interface are dry.

If the radio is wet, follow the tips below:

- Do not turn on the radio.
- Do not connect the accessory or charger to the radio.
- Do not dry the radio by microwave, hair dry, or other external heat sources.
- Do not insert the cotton buds or tissue into the interface.
- Use the clean and soft cloth to dry the water on the radio surface, and then put the radio to the well-ventilated place until it is dry.