



Thank you for purchasing this Radio.

We believe this easy-to-use radio will provide stable and reliable communication for you.

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.

## 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 reach.

---

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 or wet nor on unsteady surfaces.

---

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

---

Do not transmit when the antenna is not installed.

---

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

---

## FEATURES

- 100 channels, phrase-lock technology, NC control, easy operation
- Output power: 10W
- Adopting newest polymer Li-ion battery
- Adopting imported PC material in case to make it solid&abradable
- Voice prompt (Chinese or English)
- PC programmable
- Bright LCD backlight for easy operation in the dark
- Jacklight
- CTCSS/DCS
- Channel display ( Full frequency / Channel / Frequency)
- Time-out-timer(TOT)
- Various step frequencyHigh/
- Low power selective
- Wide/Narrow bandwidth
- Easy channel save setting
- Frequency difference setting
- Key voice prompt selective switch
- Easy keypad lock
- Channel save and delete
- Channel scan
- Multi scan function

## CONTENTS

SUPPLIED ACCESSORIES .....	01
CHARGING NOTES (1) (2) .....	02-03
ATTACHING/RELEASING BATTERY PACK .....	04
INSTALLING ANTENNA .....	05
INSTALLING BELT CLIP .....	05
INSTALLING EXTERNAL SPEAKER/MICROPHONE .....	06
DIAGRAM .....	07
LCD DISPLAY .....	08
LCD ICON EXPLANATION .....	08
BASIC OPERATION .....	09-10
FAST MENU OPERATION FLOW .....	11-12
Function Instruction .....	13-20
CTCSS .....	21
DCS .....	21-24
SPECIFICATIONS .....	25

## SUPPLIED ACCESSORIES

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

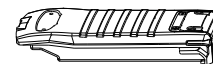
### STANDARD SUPPLIED ACCESSORIES

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

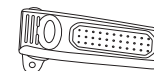
### STANDARD SUPPLIED ACCESSORIES



Antenna



Polymer Li-ion battery pack (7.2V)



Belt clip



Battery charger



Adapter



User's manual

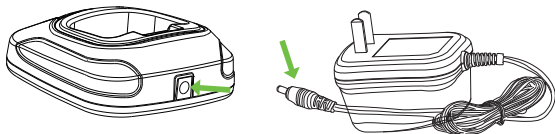
## CHARGING NOTES (1)

Charging the Li-ion battery pack:

- Battery packs are not charged when they are shipped. Charge them before using.
- Initially charging the battery pack after purchase or extended storage (longer than 2 months) will not bring the battery pack to its greatest capacity, which can be done only after repeated charging and discharging two or three times.
- The average use time of battery pack is 15 hours
- After the battery is charged to its highest capacity, and then use it 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.

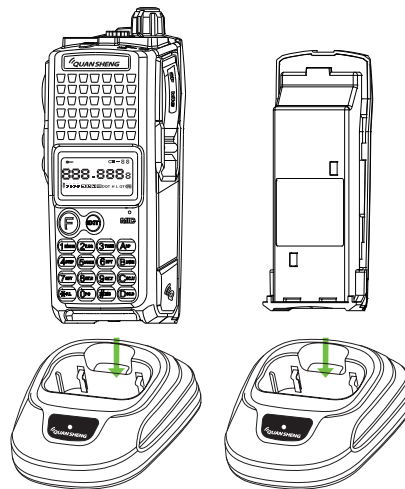
## CHARGING NOTES (2)

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



## CHARGING NOTES (2)

- 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 it's greatest capacity, the GREEN LED light displays.

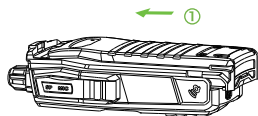


- After the GREEN LED light displays, take the battery pack or the portable radio out of the charger.



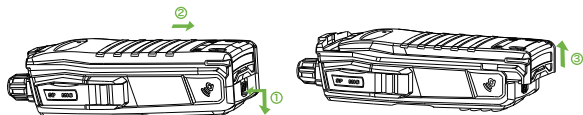
## ATTACHING BATTERY PACK

- Slide the battery pack into the back of the radio in the direction of the arrow(①), then lock it with the battery releasing button. Slide the battery pack until the battery releasing button makes a “clicking” sound.



## RELEASING BATTERY PACK

- Turn off the radio before releasing the battery pack.
- Push the battery releasing button in the direction of the arrow(①).
- Slide the battery pack in the direction of the arrow(②), and take off the battery pack lightly.



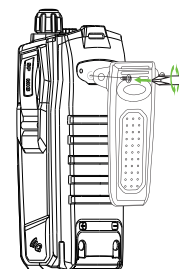
## INSTALLING ANTENNA

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



## INSTALLING BELT CLIP

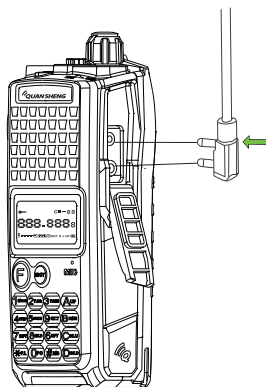
- Attach the belt clip with the supplied screws by a phillips screw driver.



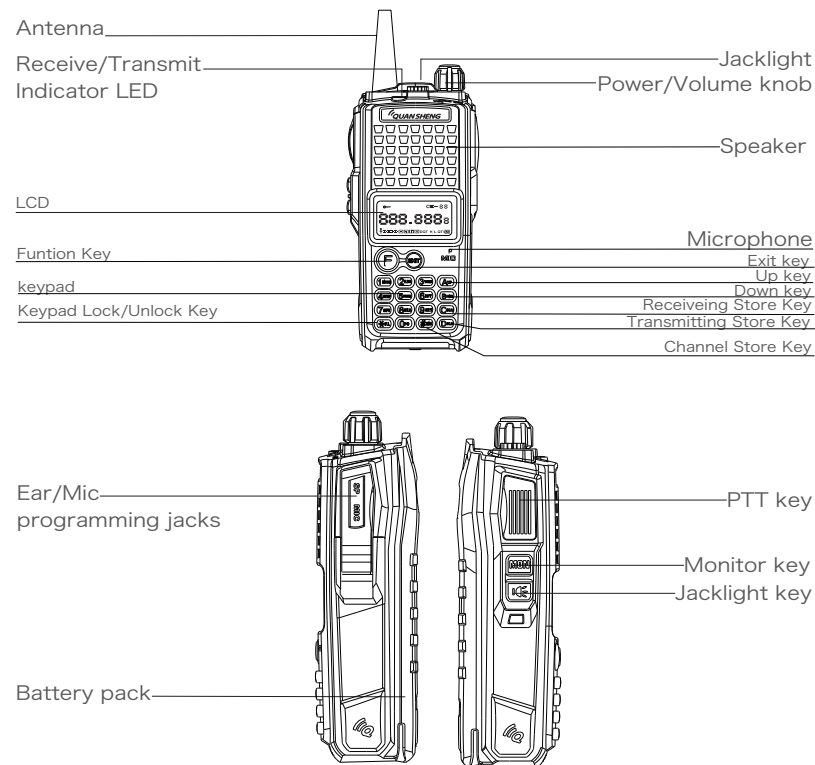
## INSTALLING EXTERNAL SPEAKER/MICROPHONE

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

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

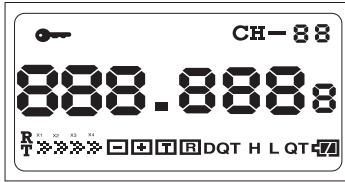


## DIAGRAM



## LCD DISPLAY

You could check the different designated symbols in the LCD. The following chart helps you to understand them.



## LCD ICON EXPLANATION

<b>QT</b>	It refers to CTCSS, which will appear when transmitting, and it means transmitting CTCSS.
<b>DQT</b>	It refers to DCS, which will appear when transmitting, and it means transmitting DCS.
	It appears under frequency pattern, which means the transmitting frequency is receiving frequency plus one frequency difference. Frequency differences can be set in Menu 25.
	It appears under frequency pattern, which means the transmitting frequency is receiving frequency minus one frequency difference. Frequency differences can be set in Menu 25.
	It refers that the current channel transmits CTCSS.
	It refers that the current channel receiving CTCSS.
<b>H</b>	The current transmitting power is high.
<b>L</b>	The current transmitting power is low.
	Signal strength indication, R means receiving, T means transmitting
	Shows the dump energy of the battery. It will blink when the the battery is nearly exhausted. Transmitting is forbidden at this time.
	It appears when the keypad is locked. Hold #/LOCK key to relieve.
<b>CH-88</b>	Under channel pattern, Under frequency and channel name display pattern, it refers to the channel NO, And it refers to the prior menu NO. when setting the menu.

## FUNCTION INSTRUCTION

### PTT key

- To make a call, press and hold the "PTT" Key, then speak to the microphone in normal tone. Pls keep the microphone 3-4CM away from your lips, to make good communications.
- Release "PTT" to receive.

### MON key

- Long hold to turn on the squelch, release to turn it off.

### Jacklight Key

- Short hold to turn on jacklight, press again to turn it off.

### Function (F) key / Exit key.

- Press "F" key to enter Function interface.
- Press Exit key to exit

### A key

- Full frequency pattern, short hold and frequency goes upwardly, "F+A" in MHz upwardly.
- Channel Pattern, short hold and channel goes upwardly.
- Frequency pattern, short hold and channel goes upwardly.

### B key

- Full frequency pattern, short hold and frequency goes downwardly, "F+A" in MHz downwardly.
- Channel Pattern, short hold and channel goes downwardly.
- Frequency pattern, short hold and channel goes downwardly.

### C key

- "F+C" key scan upwardly
- Full frequency pattern, scan frequency.
- Channel pattern or frequency pattern, scan channel.

## FUNCTION INSTRUCTION

### D key

- “F+D” key scan downwardly.
- Full frequency pattern, scan frequency.
- Channel pattern or frequency pattern, scan channel.

### # key

- Save key.
- # key+C key receiving save.
- # key+D key transmitting save.

**NOTE:** It is effective under full frequency pattern.

### 0 key

- For switch of high/low power.
- Press “F+0”, LCD display “L” means low power, “H” means high power.

### \* key

- For keypad lock setting.
- Press “F+\*” , LCD display a key symbol means keypad locked, diappear means unlocked.

### Power/Volume Knob

- Turn the Power/Volume knob clockwise to turn the power on.  
Turn the Power/Volume knob counter-clockwise to turn the power off.
- Turn the Power/Volume knob clockwise to volume up, otherwise the volume is down.




### Indicator LED

- Transmitting: the red light glitters.
- Receiving: the green light glitters.

## FAST MENU OPERATION FLOW

Feature	Function Set	LCD Display	Parameter	Selectable	Page
Channel number display setting	F+1		Press “F+1” to choose.	Full frequency / Channel / Frequency	P13
Receiving CTCSS	F+2		Full frequency operation	50 CTCSS 208DCS	P13
Transmitting CTCSS	F+3		Full frequency operation	50 CTCSS 208DCS	P14
Step frequency	F+4		Full frequency operation	6.25/5/10/12.5/25.0KHZ	P14
Voice prompt	F+5		Full frequency operation	Press “F+5” to choose turning ON/OFF.	P15
Frequency offset direction setting	F+6		Full frequency operation	Press “F+6” choose Frequency upardly/downwardly / Full frequency.	P15
Frequency Deviation	F+7		Full frequency operation	Access frequency difference pattern to write the frequency difference.	P16
Receiving CTCSS inquiry	F+8		Channel / Frequency pattern operation	Input CTCSS/DCS in the channels, and you could check the receiving CTCSS/DCS.	P16
Transmitting CTCSS inquiry	F+9		Channel / Frequency pattern operation	Input CTCSS/DCS in the channels, and you could check the transmitting CTCSS/DCS.	P17
High/Low power setting	F+0			Press “F+0” to choose high or low power	P17

## FAST MENU OPERATION FLOW

Feature	Function Set	LCD Display	Parameter	Selectable	Page
Keypad Lock setting	F+*			Press "F+*" to choose unlock or lock	P17
Megabytes step upwardly setting	F+A		Full frequency operation	Press "F+A" , frequency goes upwardly in MHz	P18
Megabytes step downwardly setting	F+B		Full frequency operation	Press "F+B" , frequency goes downwardly in MHz	P18
Scan upwardly setting	F+C		Full frequency pattern, scan frequency Channel pattern or frequency pattern, scan channel.	Press "F+C" to scan upwardly	P18
Scan downwardly setting	F+D		Full frequency pattern, scan frequency Channel pattern or frequency pattern, scan channel.	Press "F+D" to scan downwardly	P18
Receiving channel save	#+C		Full frequency operation	Press # key, the channel light blisters Press A key or B key to input digit, then you could choose the saving channel NO.	P19
Transmitting channel save	#+D		Full frequency operation	Press # key, the channel light blisters Press A key or B key to input digit, then you could choose the saving channel NO.	P20
Channel Delete				Press EXIT and turn on the power at the same time, then release, memory elimination.	P20
Jacklight				Press Jackligh key, it is on, press again to turn it off.	P20

## Function Instruction

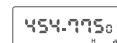
### Channel number display setting

The function can set the display mode of LCD

Operation steps are as follows :

1. Under standby mode, press "F+1" key cyclically to choose channel number display.

2. Display mode: 1. Full frequency display:



2. Channel number display:



3. Frequency display:



**Note:** If choose channel number display and frequency display, it is effective to save.

### Receiving CTCSS

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

Operation steps are as follows :

1. Under full frequency mode, press "F+2" key cyclically to choose CTCSS or DCS.

Press "F+2" key cyclically Close CTCSS The LCD displays:



Press "F+2" key cyclically CTCSS The LCD displays:



Press "F+2" key cyclically DCS The LCD displays:



## Function Instruction

2. Receiving CTCSS/DCS, letter R in LCD flashing, press Key A or Key B to choose the frequency. Press key EXIT to standby.

**Note:** Details see attached CTCSS list. (P21-24)

### Transmitting CTCSS

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

Operation steps are as follows :

1. Under full frequency mode, press "F+3" key cyclically to choose CTCSS or DCS.

Press "F+3" key cyclically Close CTCSS The LCD displays:



Press "F+3" key cyclically CTCSS The LCD displays:



Press "F+3" key cyclically DCS The LCD displays:



2. Transmitting CTCSS/DCS, letter T in LCD flashing, press Key A or Key B to choose the frequency. Press key EXIT to standby.

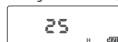
**Note:** Details see attached CTCSS list. (P21-24)

### Step frequency

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

Operation steps are as follows :

1. In frequency mode, press "F+4" key to enter step frequency. The LCD displays:



## Function Instruction

2. Enter step frequency, then press key" 4" to choose the step frequency. You can set 6.25/5/10/12.5/25.0KHZ step frequency.

3. After setting, press key EXIT to standby.

### Voice prompt

Using voice prompt will be more convenient for users to setup.

Operation steps are as follows :

1. In channel mode, press "F+5" key cyclically to choose voice prompt ON/OFF.

### Frequency offset direction setting

Using this function, you may set different receiving and transmitting frequencies. In general, it is used for repeater.

Operation steps are as follows :

1. In frequency mode, press "F+6" key cyclically to choose plus frequency or minus frequency.

Slip frequency pattern: 1. Plus frequency, the LCD displays:



2. Minus frequency, the LCD displays:



3. Close frequency offset, the LCD displays:



**Note:** You should set different frequency deviation according to the repeaters selected. This function is invalid in channel pattern or frequency pattern.


## Function Instruction

### Frequency Deviation

Using this function, you can set the deviation between receiving and transmitting frequency. In general, it is used for repeater.

The frequency deviation of this radio is : 0-70MHZ.

Operation steps are as follows :

1. In frequency mode, press "F+7" key to enter deviation frequency. 
2. Enter frequency deviation, input your desired deviation frequency. If you want to input the frequency deviation 5MHZ, please input number 0. 5. 0. 0. 0 directly.
3. Press key EXIT to standby.

**Note:** Details see frequency offset direction setting.

### Receiving CTCSS inquiry

This function can be used for CTCSS frequency inquiry.

Operation steps are as follows :

1. In channel mode, press "F+8" key to display receiving CTCSS.

Letter R flashing means receiving CTCSS. The LCD displays:

CTCSS or DCS, the LCD displays:  

No CTCSS, the LCD displays: 

## Function Instruction

### Transmitting CTCSS inquiry

This function can be used for CTCSS frequency inquiry.

Operation steps are as follows :

1. In channel mode, press "F+9" key to display transmitting CTCSS.

Letter T flashing means transmitting CTCSS. The LCD displays:

CTCSS or DCS, the LCD displays:  

No CTCSS, LCD display: 

### High/Low power setting

You can change High/Low power.

Steps as follows:

1. Press "F+0" key to choose High or Low power

High power : LCD display: 

Low power : LCD display: 

### Keypad Lock setting

Keypad could be locked or unlocked.

Steps as follows:

1. Press "F+\*" key to lock or unlock keypad.

## Function Instruction

### Megabytes step setting

Step upwardly in megabytes.

Steps as follows:

1. Press “F+A” key.

Step downwardly in megabytes.

Steps as follows:

1. Press “F+B” key

### Scan upwardly setting

It can scan other frequency.

Steps as follows:

1. Press “F+C” key, it can scan frequency upwardly. Press EXIT to exit out.

### Scan downwardly setting

It can scan other frequency.

Steps as follows:

1. Press “F+D” key, it can scan frequency downwardly. Press EXIT to exit out.

### Channel save setting

You can input & save frequency and other parameter.

Steps as follows:

1. Press “#” .
2. Press A or B to choose channel, or input the channel number, such as if save on channel 25, input number 2 and 5. The radio have 100 channels. (CH0-99)

## Function Instruction

3. For example: save on channel 1 (same frequencies) receiving frequency 465.875 MHz CTCSS 71.9 Hz transmitting frequency 465.875 MHz CTCSS 71.9 Hz. save on channel 2 (different frequencies) receiving frequency 465.575 MHz transmitting frequency 460.575MHz CTCSS 88.5Hz.

### Save channel 1

1. Input number 465875 under frequency mode.

2. Press F+2, then press A or B to choose 71.9 Hz, LCD display:



3. Press EXIT to exit the CDCSS setting.

4. Press F+3, then press A or B to choose 71.9 Hz, LCD display:



5. Press EXIT.

6. Press “#” , then press A to choose channel 01 or input number 01, press C to save the receiving channel.



7. Press “#” , then press A to choose channel 01 or input number 01, press C to save the launching channel.



8. If no CTCSS, no necessary to set steps b,c, d,e.

### Save channel 2

1. Input number 465575 under frequency mode.

2. Press “F+2” , then press A or B to choose 88.5 Hz, LCD display:



3. Press EXIT to exit the CDCSS setting.

4. Press “F+6” to set, LCD display:





## Function Instruction

5. Press “F+7” , input number 05000.
6. Press EXIT.
7. Press “#” , then press A or B to choose channel 02 or input number 02, press C to save the receiving channel.
8. Press “#” , then press A or B to choose channel 02 or input number 02, press D to save the transmitting channel.

### Channel delete setting

It can delete all channel information.

Steps as follows:

1. Press EXIT, and turn on the power at the same time, release the button, delete all channel information.

**NOTE** :Delete the channel alertly for unnecessary troubles of saving again.

### Low Power indication

- Battery icon twinkling, it means low power, pls change the battery.
- If power lower than 5.5V, you will hear voice prompt, then the power will be off automatically.

### Jacklight

Press() , the jacklight is ON. Press it again, the jacklight is OFF.

## CTCSS

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

DCS

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

DCS

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

## DCS

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

## SPECIFICATIONS

### GENERAL

Frequency Range	VHF: 136~174MHz / UHF: 400~470MHz
Step (Frequency)	5/6.25/10/12.5/25KHz
Rated Voltage	DC7.2V (Rechargeable <b>Polymer</b> Li-ion battery)
Frequency Stability	±2.5ppm
Operating Temperature	-20°C ~+50°C
Working Manner	Same frequency single operation or different frequency single operation
Antenna Impedance	50Ω
Dimensions(H*W*D)	138mmX62mmX37mm (without antenna)

### TRANSMITTER

Output Power	10W
Modulation Mode (W/N)	16KΦF3E/11KΦF3E
Maximum Frequency Deviation (W/N)	≤5KHz/≤2.5KHz
Stray Power	≤7.5μW
Adjacent Channel Power	≤-65dB/≤-60dB
S/N (W/N)	≥-45dB/≥-40dB
CTCSS/DCS Frequency Deviation (W/N)	0.7±0.1KHz/0.4±0.1KHz
Modulation Sensitivity	8-12mV
Emission Current	≤2.8A (High)

### RECEIVER

Sensitivity	-122dB (12dB SINAD)
Audio Power	1W
Audio Distortion	< 10%
Intermodulation (W/N)	≥65dB/≥60dB
Adjacent Channel Selectivity(W/N)	≥65dB/≥60dB
Spurious Rejection	≥65dB
Receiving Current	≤380mA

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