

# PROFESSIONAL

FM Transceiver

**Tx Frequency range :**

144-148MHz & 420-450MHz

**Rx Frequency range :**

- FM: 65-108MHz
- AM: 108-136MHz
- VHF: 136-174MHz  
220-260MHz
- UHF: 350-390MHz  
403-470MHz  
470-520MHz

**USER'S MANUAL**



RECYCLABLE PACKAGING

## **THANK YOU!**

We are grateful for your choice of our walkie talkie. We believe that this easy-to-use walkie talkie will provide dependable and cost-effective communications for you.

The walkie talkie 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 it before use.

## **PRECAUTIONS**

1. Refer service to qualified technicians only.
2. Do not disassemble or modify the walkie talkie for any reason.
3. Do not expose the walkie talkie under direct sunlight long time or to extremely hot condition.
4. Do not place the walkie talkie on the unstable surface.
5. Keep the walkie talkie out of dust, moisture, and water.
6. Do not operate the walkie talkie or charge the battery pack under explosive conditions.

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## Unpacking and Checking Equipment

Welcome to use this radio transceiver.

Carefully unpack the transceiver, we recommend you to identify the items listed in the following table before discarding the packing material.

- If you find any defective or missing parts during shipment, please contact your dealer immediately.

### Supplied Accessories

ITEM	QUANTITY
Antenna	1
AC Adapter	1
Li-ion Battery Pack	1
Battery Charger	1
Belt Clip	1
Instruction Manual	1

## BATTERY PACK

### Charging Notices

The new or stored battery pack cannot reach its full capacity during the first charging. After two or three cycles of charging/discharging, the battery will achieve a full charge.

### Applicable Battery

**DANGER!** Use the specified battery for charging. Using the wrong battery could result in an explosion.

Do not short circuit the battery terminals, throw the battery into a fire, or disassemble the battery pack.

The battery pack cannot achieve a full charge if it is charged outside of the range of temperature (0 or 40 C) 32 or 104F.

Do not use the transceiver while charging the battery pack. It is recommended to power off the transceiver while charging.

Do not take out the battery or shut off the power source while charging.

Replace the battery pack when the operating time becomes short, even if the battery is fully charged.

**CAUTION!** Do not recharge a fully charged battery pack. This may result in damage to the battery pack.

Do not charge if the battery pack or transceiver is wet.

## WARNING

All batteries can cause property damage or bodily injury if conductive materials touch exposed terminals. Conductive materials may cause a short-circuit in the battery pack, becoming very hot. When placing a battery pack inside a pocket, purse, or other container with metal, exercise care.

### Charging Instructions

1. Plug the charger into an electric socket.
2. Insert the battery or transceiver into the drop (charging tray).
3. Ensure the battery's contacts connect with the drop properly (in charging tray). While charging, the LED indicator will be red.
4. The LED indicator will be purple when fully charged. Remove the battery or transceiver.

LED INDICATOR	CHARGING STATUS
Red	Charging
Purple	Full Charge

### Charging battery with Type C adapter

Use AC adapter compatible with battery to charge. The indicator light of adapter can display charging condition.

1. Insert Type C connector of cable into socket of battery correctly.
2. The LCD indicator will be red when charging.
3. The LCD indicator will be green when fully charged. Remove the charging cable from battery.

## INSTALLING ACCESSORIES

### Installing/Removing the Battery Pack

Push the battery pack and transceiver firmly together until it clicks into place.

Before removing the battery pack, turn the transceiver OFF.

Push down on the release latch while pulling the battery away from the transceiver.

### Installing/Removing the Belt Clip

Using a screwdriver, install the belt clip. Remove the screw to remove belt clip.

## INSTALLING/REMOVING ANTENNA

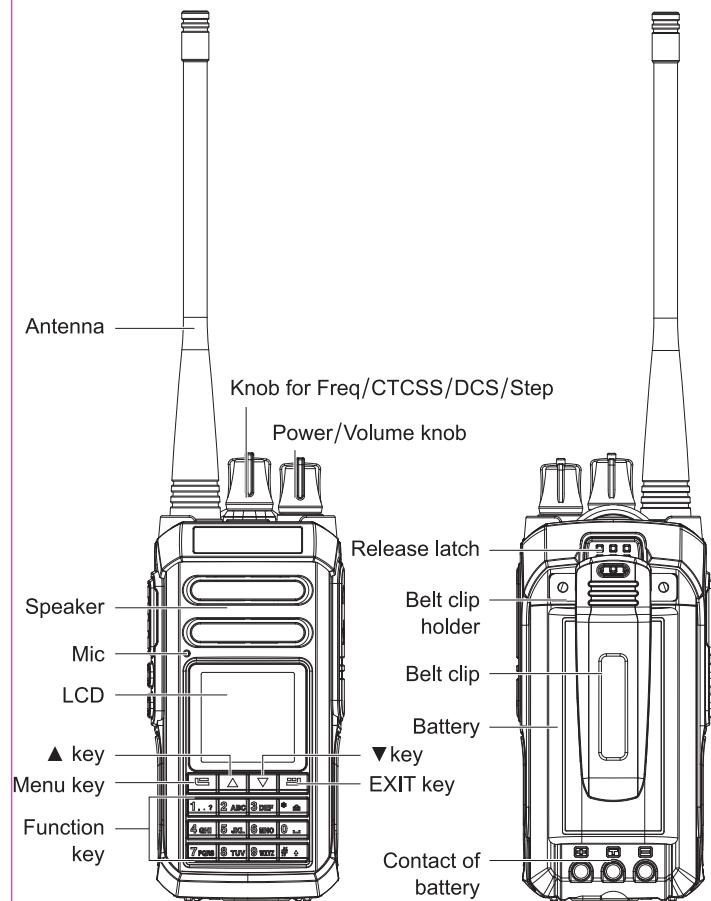
Screw the antenna into the connector on the top of the transceiver by holding the antenna at the base and turning it clockwise until secure.

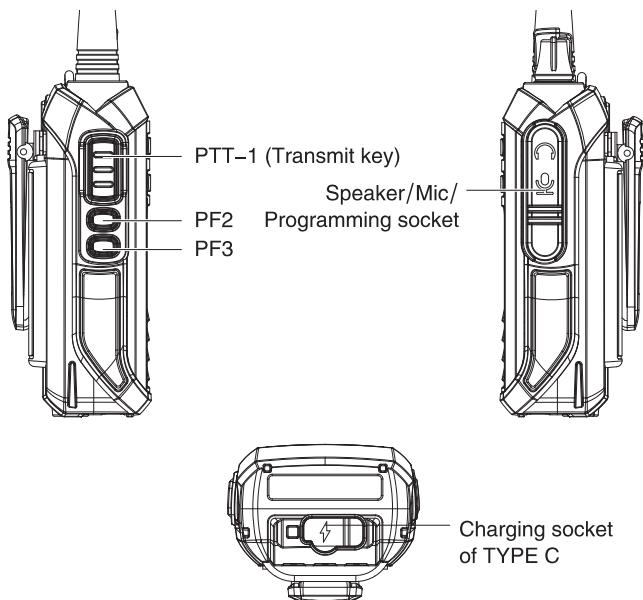
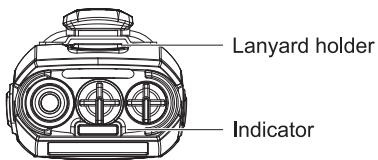
Turn the antenna counter clockwise to remove it.

### Installing the Optional Speaker Mic

Remove the cap and insert the two prongs into the jack.

## GETTING ACQUAINTED





## KEYPAD INSTRUCTIONS

### MENU KEY

Press: select menu. Press again to confirm the function once select.  
Press and hold menu key: to switch frequency mode or channel mode.

### ▲ key

Press and hold ▲ key up to 2 seconds: Quick forward. Change scanning direction under scanning mode.

### ▼ key

Press and hold ▲ key up to 2 seconds: Quick backward. Change scanning direction under scanning mode.

### EXIT key

Press: to switch between A band and B band. Press again to exit.

### Number key

Write message into menu. Directly put irregular CTCSS under irregular CTCSS editable status. Directly put standard CTCSS and send, under standard CTCSS.

### [ \* ] key

Press [ \* ] key to switch among Off-Set mode, Talk Around mode and normal mode. Press and hold the key to lock keyboard.

### [ # ] key

Press [ # ] key to edit DTMF sending code with keyboard. Press # key to end, when DTMF code less than 9 numbers. Send DTMF encode by pressing PTT button.

### PTT button

Press PTT button to transmit.

### PF2 button

FM radio/Monitor/Scanning/Frequency scanning/VOX.

### PF3 button

FM radio/Monitor/Scanning/Frequency scanning/VOX

## ICON INSTRUCTIONS

ICON	INSTRUCTIONS
CT	The current edit channel or the current transmit channel selects QT
DT	The current edit channel or the current transmit channel selects DCS
+	In full frequency, the current edit channel or the current transmit channel has offset in frequency direction
-	In full frequency, the current edit channel or the current transmit channel has offset in frequency direction
❖	Dual standby and dual display the frequency
Ø	VOX function of the current edit channel or the current transmit channel is turned on
R	Reverse frequency of TX/TX in frequency mode/ channel mode
T	TX/RX same frequency in Talk Around mode
N	The current edit channel or the current transmit channel selects narrowband
🔋	Battery level indicator. The icon flashes when low capacity of battery. TX is banned.
🔒	Key lock is activated. Press and hold # button to unlock.
H	The current edit channel or the current transmit channel is set to be high power
M	The current edit channel or the current transmit channel is set to be middle power
L	The current edit channel or the current transmit channel is set to be low power
♪	Tone of DTMF is on
AM	AM modulation mode for current frequency
🔊	Output power of TX
SC	Encryption is on

## MENU INSTRUCTIONS

First level Menu	Second level menu		Third level menu	Instructions
	No.	Function		
Menu bar	select			
Radio Set	1	Squelch level	OFF/ Level 1-9	The lower squelch level makes interference easier. The higher squelch level makes worse sensitivity. Medium level is suggested.
	2	Trans Power	High	High output power
			Middle	Middle output power
			Low	Low output power
	3	Bandwidth	Wide	Wide bandwidth 50k
			Narrow	Narrow bandwidth 12.5k
	4	Scramble	OFF	Scramble is off
			scramble level 1-8	Scramble encryption. In order to make your group members understand the contents of your call, all the members should startup scramble on their transceivers. When receiving, the sound signalings will return to normal on your transceiver.
	5	VOX Switch	OFF	VOX is off
			ON	Speak directly to radio without PTT when VOX is on
	6	VOX level	1-9 level	VOX sensitivity select
	7	VOX Delay	0.5 second-2.0 seconds	VOX delay time select
	8	Dual Standby	OFF	Dual Standby is off
			ON	Dual Standby is on
	9	Battery Save	OFF	Battery save is off
			Normal	1:1 battery save rate
			Super	1:2 battery save rate
			Deep	1:3 battery save rate

10	Busy Lockout	OFF	TX is allowed when the channel is occupied
		ON	TX is not allowed when the channel is occupied
11	TOT	OFF	
		30 seconds-240 seconds	Transmission time setting
12	TAIL	OFF	Tail tone elimination is off
		ON	Tail tone elimination is on
13	Tail Frequency	55Hz	
		50Hz	
14	R-Tone	1000hz 1450hz 1750hz 2100hz	Tone adjustment select
15	Scan Mode	Time	Stay a few seconds after the signal is received and then continue Scanning
		Carrier	After carrier signal is received, stay this frequency, until the signal disappears, continue scanning
		Search	When received the same carrier and tone, it will stay
16	PROGRE	OFF	Progre is off
		ON	Progre is on
17	RP-STE	OFF	When radio works through repeater, transmitting radio is in RX status after PTT is over. Due to delay of repeater, noise comes with the instantaneous signal from repeater. Adjust properly the time, till the radio doesn't receive noise. This function can be off if no need the noise to make sure whether repeater is on working or not.
		100 minutes-1000 minutes	
18	RPT-RL	OFF	When working through repeater and confirming whether repeater sends signal, the signal of radio is sent via repeater by the delay time of repeater TX over.
		100 minutes-1000 minutes	
19	RX END TAIL	OFF	RX end-tail is off
		MDC1200	RX end-tail sends by MDC1200

20	SOS Mode	On site	Send SOS directly
		Send Sound	Send SOS in tone
		Send code	Send SOS in code
Setting	1	Beep Prompt	OFF
			ON
	2	VOICE	OFF
			ON
	3	Keypad Lock	OFF
			5 sec-15 sec
	4	Back Light	Bright
			5 sec-20 sec
	5	Menu Outtime	5 sec-60 sec
			Select time range of menu automatical out
Freq Mode	6	Language	English
			Chinese
	1	Step	2.5KHz-50.0KHz
			Press ▲ and ▼ to select step value
	2	Direction	None
			Transmitting frequency and receiving frequency is the same.
			Plus
	3	Offset	Receiving frequency is the transmitting frequency plus the frequency difference frequency
			Minus
Channel Set	1	CH-Memory	001-256
			Select the channel number to store which is shown on display. It means channel stored if CH- is in front of number.
	2	CH-Delete	000-256
			Select the channel number to delete channel. It means channel without stored if no CH- is in front of number.

	3	MDF-A	NAME	Channel displays by channel name (channel name is programmed through programming software)
			FREQUENCY	Channel displays by frequency
			CHANNEL NUM.	Channel displays by channel number
	4	MDF-A	NAME	Channel displays by channel name (channel name is programmed through programming software)
			FREQUENCY	Channel displays by frequency
			CHANNEL NUM.	Channel displays by channel number
	1	RX CTCSS	OFF	NO CTCSS
			67.0HZ...254.1HZ	Select CTCSS or directly type irregular CTCSS on keypad
	2	RX DCS	OFF	NO DCS
			D023N...D754I	Select DCS or directly type irregular DCS on keypad
CTCSS DCS	3	TX CTCSS	OFF	NO CTCSS
			67.0HZ...254.1HZ	Select CTCSS or directly type irregular CTCSS on keypad
	4	TX DCS	OFF	NO DCS
			67.0HZ...254.1HZ	Select DCS or directly type irregular DCS on keypad
	5	FHSS CODE	OFF	
	6	Encryption	OFF	Encryption on
			ON	Encryption off
	7	Scan Subcode	CTCSS	CTCSS scanning on
			DCS	DCS scanning on
	8	Scan Memory	ALL	When scanning to the corresponding CTCSS and stop scanning, the indicator light flashes; Press the direction keys to continue scanning up or down; Press [EXIT] or any key to withdraw from the scan.
			DECODER	
			ENCODER	
	1	S-CODE	Code 1.....15	Select ID of the radio

Signaling	2	PTT-ID	OFF	DTMF OFF
			BOT	BOT indicates that the start code is transmitted immediately after the startof transmission
			EOT	EOT indicates that the end code is transmitted before the near endtransmission
			BOTH	BOTH indicates that the corresponding code is transmitted at the startand end of transmission
4	DTMFST	3	Dis-ANI	OFF ANI Display is ON ON ANI Display is OFF
			OFF	DTMF tone is OFF when transmitting
		DT-ST	DTMF tone of the key is sent when transmitting	
		ANI-ST	DTMF tone of ANI code is sent when transmitting	
		DT+ANI	Both DTMF tone of key and ANI code is sent	
Side Key	1	PF2	RADIO	FM RADIO 65-108MHz
			MONI	It's very helpful when you want to adjust the volume level and receivethe weak signals.
			SCAN	Scanning signals on the transceiver channels. When scanning, the transceiver checks for a signal on each channeland only stops if a signal is present.
			SEARCH	Search and detect the TX frequency and CTCSS/DCS code. Display them on LCD and ask user whether want to store.
		VOX	VOX	
		2	Long PF2	RADIO MONI SCAN SEARCH VOX
				SAME AS ABOVE

			RADIO	SAME AS ABOVE
			MONI	
			SCAN	
			SEARCH	
			VOX	
			RADIO	SAME AS ABOVE
			MONI	
			SCAN	
			SEARCH	
			VOX	
About	1	Software version		
	2	Hardware version		
	3	ANI CODE		
Reset	1	VFO Mode		Initialization of menu and VFO mode
	2	Reset All		Initialization of Radio

## Other functions and instructions

### 1. PTT

Press PTT to transmit A frequency when A band is on working.

Press PTT to transmit B frequency when B band is on working.

### 2. AM mode

When frequency is set during 108-136MHz, AM receiving mode is on working.

### 3. Scanning

#### ① Time Scanning mode (TO)

Stay a few seconds after the signal is received and then continue Scanning

#### ② Carrier Scanning mode (CO)

After carrier signal is received, stay this frequency, until the signal disappears, continue scanning

#### ③ Search Scanning mode (SE)

When received the same carrier and tone, it will stay

### 4. FM radio

① Press FM key to activate FM radio function. Frequency is shown on LCD

② Select frequency by pressing ▲ and ▼ button. Also can input frequency 65-108MHz by pressing number key. Automatically searching FM by pressing # key.

③ Press FM key again to turn off FM radio function

## 5. Frequency Searching

This function is set through PF2/3 button programmed by software. After the function is activated, this radio can search TX UHF frequency (including CTCSS/DCS) from transmitting radio. Restart searching by pressing ▲ and ▼ button. Continuous searching is supported. Press Menu key (green) to save searched channel.

**Note:** Only UHF band can be searched.

## 6. DTMF

### A. DTMF encode

Quick encode: Press number key, \*, #, MENU key, UP, DOWN, V/M and A/B key to send DTMF encoder with 0-9, ABCD \* #. Press and hold to send continuously. Release key to end sending. Edit encode and send: Press # key to access DTMF display. Input DTMF encode with 0-9, ABCD \* # on keypad. End with # when less than 9 numbers, Press PTT to send DTMF after input.

### B. DTMF decode

## TROUBLESHOOTING

Problems	Solutions
No Power Supply	<ul style="list-style-type: none"><li>• Battery Pack may be out of service.</li><li>• Please change the battery or charge it</li></ul>
Duration of the Battery is short even right after the charging	<ul style="list-style-type: none"><li>• Service life of the battery is coming to the end.</li><li>• Please change the battery</li></ul>
Fail to contact with others in the same group	<ul style="list-style-type: none"><li>• Please make sure that the frequency you use and your mute audio tone is the same as that of others</li><li>• Maybe the distance between you and your members are too long</li><li>• Make sure that whether you are standing in the valid area of other interphones</li></ul>
Voices from nonmembers	<ul style="list-style-type: none"><li>• Please change the mute audio tone.</li><li>• Please change all the tones of the interphones</li></ul>

**FCC STATEMENTS WARNING AND COMPLIANCE STATEMENT:**

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 including received interference that may cause undesired operation.

The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

Replacement of any transmitter component (crystal, semiconductor, etc) not authorized by the FCC equipment authorization for this radio could violate FCC rules.

**WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.**

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.

## WARRANTY CARD

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Purchasing Date: \_\_\_\_\_

Dealer: \_\_\_\_\_ Telephone: \_\_\_\_\_

User's Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Address: \_\_\_\_\_ Post Code: \_\_\_\_\_

### Remarks:

1. This guarantee card to be kept by the user, no replenish-ment if lost.
2. This guarantee card to be filled & chopped by the dealer, or it is invalid.
3. Don't alter the guarantee card, please confirm the serial number on the guarantee card is same as that on the machine.
4. One year warranty for walkie talkie. Accessories, such as charger, battery, antenna and belt clip, are not covered.
5. The user can get repairing service from the following ways: by contacting local dealer or distributor.

