



**DUAL BAND
PROFESSIONAL RADIO**

PREFACE

Thank you for purchasing our dual band 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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Unpacking And Checking Equipment

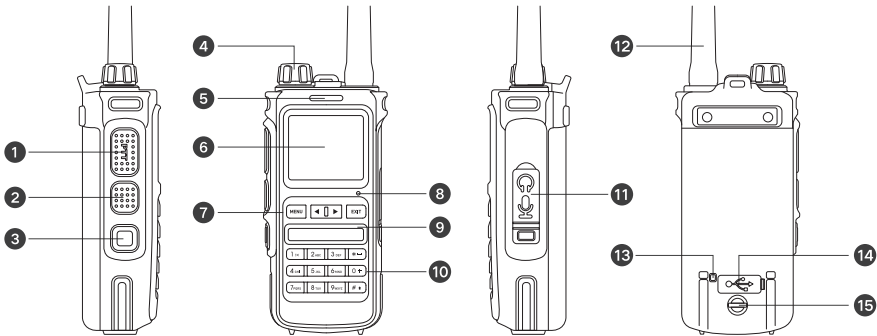
Carefully unpack the transceiver. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please contact the carrier or the dealers immediately.

Supplied Accessories

Item	Quantity
Antenna	1
Li-polymer Battery	1
Charger	1
Adaptor	1
Belt Clip	1
Hand Strap	1
User Manual	1

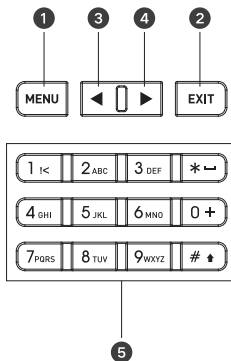
Note:
If you need to know more information about optional accessories.
Please contact us.

Product Overview



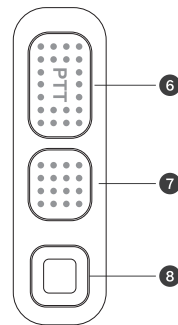
No.	Part Name	No.	Part Name	No.	Part Name
1	PTT-1	6	LCD Display	11	Accessories Jack
2	PTT-2	7	Function Keypad	12	Antenna
3	PF1 Key (Side Key)	8	Microphone	13	Charging Indicator
4	Power On/Off Volume Knob	9	Speaker	14	USB Charging Port
5	LED Indicator	10	Numeric Keypad	15	Battery Screw

Function Keypad



No.	Key	Function
①	【 MENU 】	Menu/Enter Key
②	【 EXIT 】	Exit/Delete Key Switch A/B Band in standby mode
③	【 UP 】	Press for 2 Seconds to up rapidly Change the Scan direction in scan status
④	【 DOWN 】	Press for 2 Seconds to down rapidly Change the Scan direction in scan status
⑤	【 Numeric Keypad 】	In Standby status: Input frequency in VFO mode Input channel number in Channel mode In Transmitting status: Input DTMF Code in transmitting status

Function Keypad

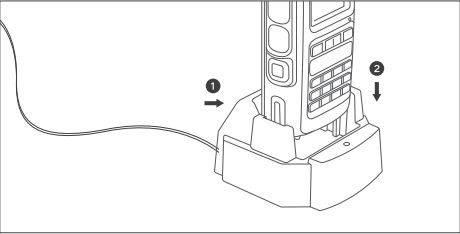


No.	Key	Function
⑥	【 PTT-1 】	Press PTT-1 key to transmitting A Band
⑦	【 PTT-2 】	Press PTT-2 key to transmitting B Band
⑧	【 Side Key 】	Short Press: FM/TX Power/Monitor/Scan Default: FM Long Press: FM/TX Power/Monitor/Scan Default: TX Power Note: Side Key can be setup in PC software.

Before Use

■ Charging the Battery Pack

Use only the charger and battery specified by the manufacturer. The charger LED indicates the charging progress.



- 1.As ① shown, Plug the AC adaptor into the AC outlet, and then plug the cable of the AC adaptor into the DC jack located on the back of the charger.
- 2.As ② shown, Plug the radio into the charger. Make sure the battery terminals are good in contact with charging terminals.

- 3.The indicator light turns to red, the charging begins.
- 4.The indicator light turns to green, the charging is completed.

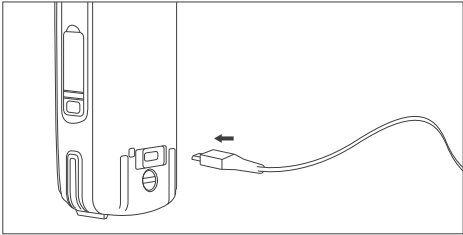
■ Charger LED indicator and charging status

LED indication	Charging status
Constant Green	Standby (no-load)
Constant Red	Charging
Constant Green	Fully charged

Before Use

■ USB Charging

Use only the USB charging cable specified by the manufacturer. Charger LED can indicate the charging status.



- 1.Plug the USB charging cable into the charging port on the back of the battery.
- 2.The indicator light turns to red, the charging begins.
- 3.The indicator light turns to green, the charging is completed.

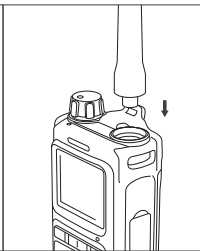
■ Battery LED Indicator and battery status

LED indication	Charging status
Constant Red	Charging
Constant Green	Fully Charged

Preparation

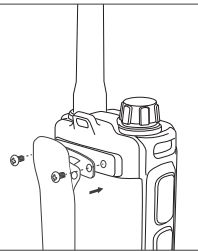
Installing/Removing the Antenna

Screw the antenna into the connector on the top of the transceiver by holding the antenna at its base and turning it clockwise until secure. Note: Turn the antenna counter-clockwise until you can remove it.



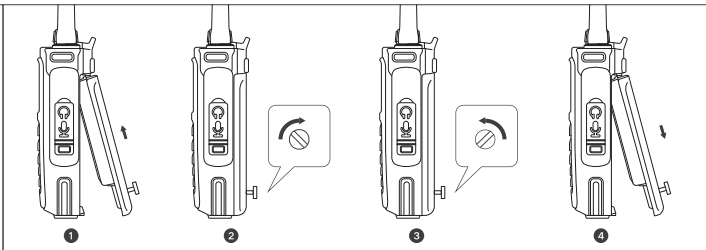
Installing/Removing the Belt Clip

1. Attach the belt clip above the corresponding holes on the back of the radio, and screw it clockwise with the two supplied screws.
2. Loosen the screws to remove the belt clip.



Installing/Removing the Battery

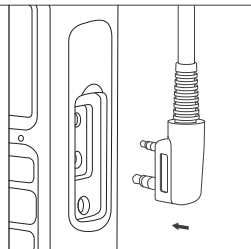
1. Match the two top grooves of the battery pack on the back of the radio and then push it.
2. Screw it clockwise to install the battery.
3. Unscrew counter-clockwise to remove the battery.



Preparation

Installing the Optional Speaker/Microphone(or Headset)

Insert the speaker/microphone (or headset) plugs into the speaker/microphone jacks.

















Status Indication

LED Indicator

The top LED indicator will help you easily identify current radio status.

Radio Status	LED Indicator
Transmitting	LED glows red
Receiving	LED glows green

LCD Icons

Icon	Radio status
	Signal Strength Level
	Low Power
	High Power
	DTMF activated
	CTCSS activated
	DCS activated
	Position: TX frequency = RX frequency + Offset frequency
	Negative: TX frequency = RX frequency – Offset frequency
	Dual watch/ dual reception functions activated
	Keypad lock function activated. Press 【*】 Key for 2 Seconds to unlock the keypad
	VOX function enabled
	Narrow Band selected
	Battery Level indicator
	A/B Band Direction, Operation frequency

Basic Operations

Powering On/Off

Turn the 【Power/Volume knob】 clockwise to switch the transceiver power ON till a click is heard.

Dual PTT

Press 【PTT-1】 to transmit in A Band.

Press 【PTT-2】 to transmit in B Band.

VFO/Channel Switch

In standby, long Press 【MENU】 Key to switch between VFO and channel mode.

If the channel list does not have a valid channel number, you cannot switch to channel mode.

Side Key

To program the side key function via program software.

Side key functions include: FM Radio/ Power Switch/Monitor/Scan/Search Frequency.

Battery Voltage

In standby, long press 【0】 Key to check the current battery voltage.

Keypad Lock/Unlock

In standby, long press 【*】 Key to lock/unlock keypad.

Dual Standby

After turn on dual standby function, you can wait two channels signals from Band A and Band B at the same time.

Operation: Menu— Setting— Dual Standby

VOX

This function is not necessary to push the PTT on the transceiver for a transmission. Transmission is

Basic Operations

activated automatically by detecting the radio voice. When finish speaking, the transmission automatically terminated and the transceiver will automatically receive signal. Be sure to adjust the VOX Gain level to an appropriate sensitivity to allow smooth transmission.

Operation: Menu---VOX Level---OFF/1/2/3

VOX Delay

When the VOX is enabled, set up the VOX delay to help to extend the transmission time to avoid stopping a transmission too early.

Operation: Menu-- Setting-- VOX Delay---0.5~2S

FM Radio

In standby, short press side key to turn on FM Radio. FM range: 65~76/76~108MHz.

Note: In FM Radio mode, press MENU key to switch an FM frequency, and program the FM frequency through the numeric keys. Long press 【#】 key to get it searching automatically.

Scan

In standby, long press 【#】 key to turn on scan function, it support channel list scan and frequency steps scan.

Operation: Menu--Setting--Scan mode--Time/Carrier/Search.

Time Operation (TO): Scanning will stop when it detects an active signal, and after 5s, it resumes scanning.

Carrier Operation(CO): Scanning will stop when it detects an active signal, until the active signal disappears, and after 5s, It resumes scanning.

Search Operation(SE): Scanning will stop after it detects an active signal.

Note: In channel mode, scanning the channel numbers in the channel list. In frequency mode, scanning in frequency steps.

Basic Operations

PTT-ID

This feature allows you to know who call you. Transmit ANI code or DTMF code through DTMF. DTMF code total 15 groups.

In the PC software---Edit---DTMF setting, each signal or A/B band can independently select the call code group to be sent.

In the PC software---Edit---DTMF---ANI Code to set ANI code.

Press to Send ----Transmit the code while push the PTT button.

Release to Send---Transmit the code while release the PTT button.

BOTH---Transmit the code while push or release the PTT button.

Note: Since the ANI code operation is independent of the DTMF code. If the ANI code conflicts with the DTMF code setting, the ANI code is sent.

DTMF(The DTMF Tone of transmitting code)

When input the DTMF code, two way radio emits the sound corresponding to the DTMF code.

Push to Dial

In transmission status, press keypad to send the corresponding DTMF Code.

Offset Frequency

Menu--Frequency Mode--Offset Frequency

Offset Direction

Position: TX frequency = RX frequency + Offset frequency

Negative: TX frequency = RX frequency - Offset frequency

Operation: Menu--Frequency Mode--Offset Direction

Basic Operations

Channel Memory

Stored required channel in the specified channel list. If the prefix “CH-” in the menu option indicates that the current channel is not empty. Up to 128 channels.

Operation: Menu—Channel Memory—CH—Memory

Channel Delete

Deleted unwanted channels. If Menu item is prefixed with "CH-", it means that it is currently a deleteable channel. Up to 128 channels.

Operation: Menu—Channel Memory—Ch—Delete

Channel Name Edit

Edit the name of the current channel, only supports English and numbers.

Operation: Menu—Channel Memory—CH—Name Edit.

Press 【#】 key to switch between upper and lower case.

Note: This function is only available in channel mode.

CTCSS/DCS Setting

RX CTCSS: Reception Continuous Tone Coded Squelch

RX DCS: Reception Digital Coded Squelch

TX CTCSS: Transmission Continuous Tone Coded Squelch

TX DCS: Transmission Digital Coded Squelch

Encryption: When you set Encryption ON, even you have the same DCS with other radios, you cannot hear others and others also cannot hear you, this function will guarantee privacy of your talk.

Menu Functions

Menu	Function/Description	Available settings
Radio Set	SQL(Squelch Level)	Level 0/1/2/3/4/5
	Transmit Power	High/Low
	Bandwidth	Wide 25K/Narrow 12.5K
	Busy Channel Lockout	ON/OFF
	TOT(Trans over time)	OFF/30/60/90/120/150/180/210/240s
VOX Level	Voice Operated Transmission	OFF/Level1/2/3
Setting	Battery Save	ON/OFF
	Dual Standby	ON/OFF
	Scan Mode	Time/Carrier/Search
	Back Light Time	Bright/5s/10s/15s/20s/30s/1min/2min/3min
	Beep Prompt	ON/OFF
	VOX Delay	0.5S/0.6S/....2.0S
	Menu Exit Time	5S/10S/15S...60S
	Keypad Auto Lock	ON/OFF
CTCSS/DCS	Receive CTCSS	OFF/67.0HZ...241.HZ

Menu Functions

Menu	Function/Description	Available settings
CTCSS/DCS	Receive DCS	OFF/D023N...D754I
	Transmit CTCSS	OFF/67.0HZ...241.HZ
	Transmit DCS	OFF/D023N...D754I
	Encryption	ON/OFF
Frequency Mode	Step	2.50/5.00/6.25/10.00/12.50/25.00/50KHz
	Direction	None/Plus/Minus
	Offset	00.000....69.990MHz
Channel Storage	CH-Memory	000,CH-001....CH-127
	CH-Delete	000,CH-001....CH-127
	CH-Edit Name	Name display can be set by PC software
About Machine	Hardware Version, Software Version, ANI CODE	
Reset	VFO Mode	Delete all the setting in VFO mode
	Reset All	Delete all settings

Troubleshooting

Phenomena	Analysis	Solution
Unable to communicate with other members.	You may be too far away from the group members.	Move towards other members.
Irrelevant communication or noise is heard on the channel.	You may be interrupted by radios using the same frequency.	Change the frequency, or adjust the squelch level.
	The radio may be set with no signaling.	Set signaling for all member radios to avoid interference at the same frequency. And change the signaling settings for all portable radios at the same time.
The noise is too loud.	You may be too far away from other members.	Move towards other members.
	You may locate in an unfavorable position. For example, your communication may be blocked by high buildings or frustrated in the underground areas.	Move to an open and flat area, and restart the radio to try again.
	You may suffer from external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.

Care and Cleaning

To guarantee optimal performance as well as a long service life of the product, please follow the tips below.

Do not puncture or scratch the product with hard objects.

Do not place the product in corrosive agents, solutions or water.

Do not handle the radio by its antenna or external microphone directly.

When not in use, keep the accessory jacks covered with the protective caps.



Power off the product, and remove the battery before cleaning.

Clean up the dust and fine particles on the product parts with a clean and dry lint-free cloth or a brush regularly.

Use a non-woven fabric with neutral cleanser to clean the keys, control knobs, and shell after long-time use. Do not use chemical preparations such as stain removers, alcohol, sprays or oil preparations.

Make sure the product is completely dry before use.