USER'S MANUAL

TWO WAY RADIO
CD-X9F

◇ Scrambler ◇ Frequency Hopping

◇ Voice Compandor

THANK YOU!

We are grateful that you chose our two way radio.
We believe this Two Way Radio will provide dependable and reliable communication to personal operating at peak efficiency. The transceivers incorporate the latest in advanced technology. As a result, We feel strongly that you will be pleased with the quality and features of this product!

Product safety and RF Exposure for Two Way Radio:

	Before using this Two way radio, please read the manual which contains important operating instructions for safe usage, RF Energy Awareness, control information and operational instructions for compliance with RF Energy Exposure limits in applicablenational and international standards, and also read the operational instructions for safe use.

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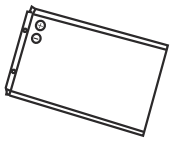
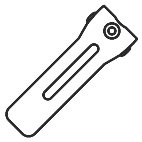
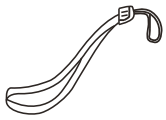
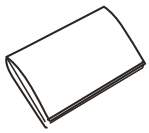
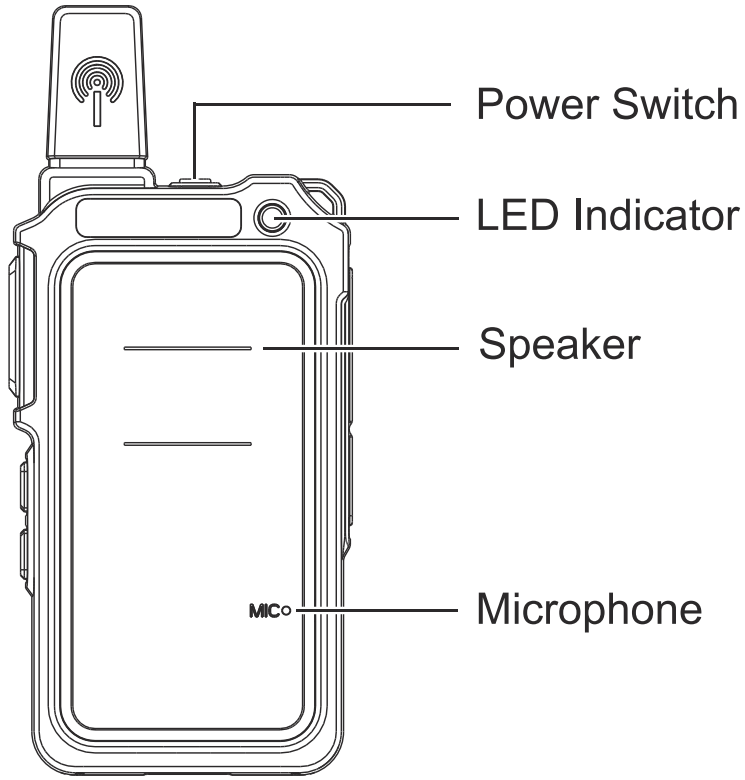
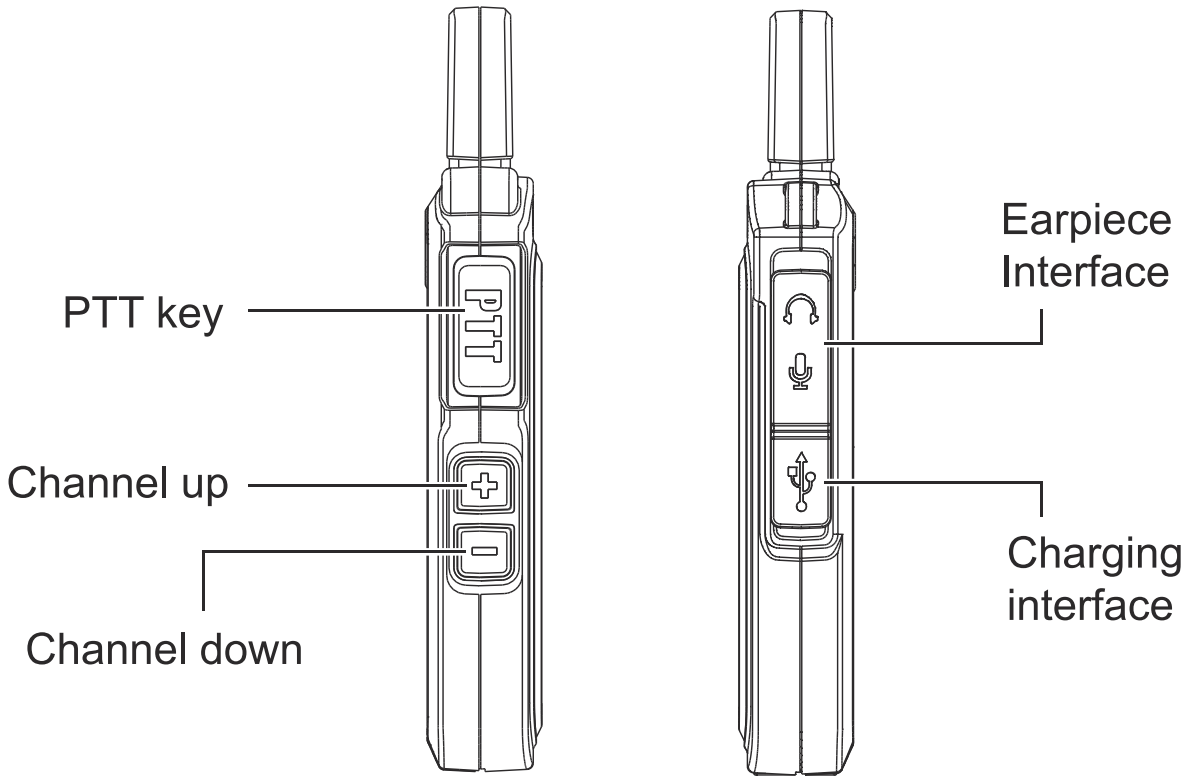
					
Two Way Radio	Li-ion Battery Pack	Belt clip	Strap	Micro-USB	User's Manual

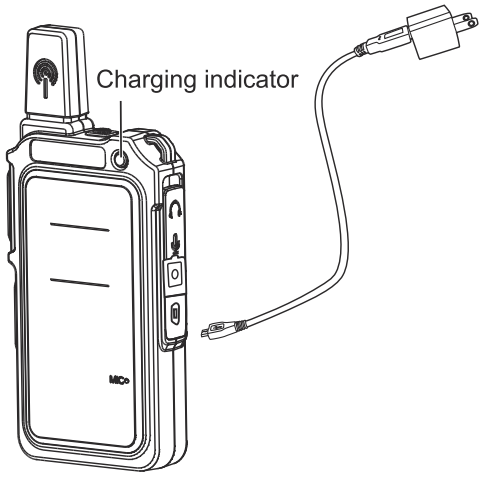
Getting start





Charging Precautions

Take out the charger, and then plug it into the AC power. Using the output plug into the transceiver charging jack. In this case transceiver indicator light blue(see radio's bottom). After charging full, the indicator is green.(As shown below）



Basic Operation and Function Description

Power Switch

Continue Press “ ⏻ ” button, radio switch on. Press this button “ ⏻ ” again more than 2S, radio switch off.

Transmit

Press the PTT key， then speak to the microphone with a normal tone. Release PTT key to receiving a message from another speaker when finishing talking.

Short press “ ⏻ ” key switch(under the main channel mode).

Shortly press “ + ” key, volume up. You will hear the "beep" tone.

Shortly press “ - ” key, volume down. You will hear the "beep" tone.
Short press “ ⏻ ” key switch(under the main volume mode).
Shortly press “ + ” key, to increase channel number.
Shortly press “ - ” key, to decrease channel number.

Key lock
Press the “ - “for 2s enter the key lock mode, press “ - “ the for 2s again out of the key lock mode.

Monitor Function
Press the “ + ” for 2s, Trun on Monitor, Release the “ + ”close the Monitor.

Low Voltage Warning
Flashing red when the battery is low, And prompt "please charge"

Scrambler
There are eight sets of scrambling groups available, scrambling encryption.

Frequency Hopping
Frequency hopping encryption, three frequency hopping modes are available, and can be used suited with other models.

Voice Companding
Turn on this feature to eliminate background noise.

Main Mode
The factory main mode is the audio mode, which can be programmed in the main channel mode via software. 5s no operate, it will automatically adjust back to the original mode.

VOX
VOX function frees your hand without pushing the PTT button for transmission. It uses voice to transmit, when the voice stops then transmitting stops automatically. Users can use programmable software to ON/OFF this function.

TOT
The purpose of the tot is to prevent any signal person from using a channel for an extended period of time.If the transmission continues out of set time, the transceiver will stop transmission and give out alarms. To stop the alarms, please release the PTT switch and the transceiver will resume the state of standby.

CTCSS (50)

67.0	69.3	71.9	74.4	77.0	79.7	82.5	85.4	88.5	91.5
94.8	97.4	100.0	103.5	107.2	110.9	114.8	118.8	123.0	127.3
131.8	136.5	141.3	146.2	151.4	156.7	159.8	162.2	165.5	167.9
171.3	173.8	177.3	179.9	183.5	186.2	189.9	192.8	196.6	199.5
203.5	206.5	210.7	218.1	225.7	229.1	233.6	241.8	250.3	254.1

DCS (210)

D023N	D025N	D026N	D031N	D032N	D036N	D043N	D047N	D051N	D053N
D054N	D065N	D071N	D072N	D073N	D074N	D114N	D115N	D116N	D122N
D125N	D131N	D132N	D134N	D143N	D145N	D152N	D155N	D156N	D162N
D165N	D172N	D174N	D205N	D212N	D223N	D225N	D226N	D243N	D244N
D245N	D246N	D251N	D252N	D255N	D261N	D263N	D265N	D266N	D271N
D274N	D306N	D311N	D315N	D325N	D331N	D332N	D343N	D346N	D351N
D356N	D364N	D365N	D371N	D411N	D412N	D413N	D423N	D431N	D432N
D445N	D446N	D452N	D454N	D455N	D462N	D464N	D465N	D466N	D503N
D506N	D516N	D523N	D526N	D532N	D546N	D565N	D606N	D612N	D624N
D627N	D631N	D632N	D645N	D654N	D662N	D664N	D703N	D712N	D723N
D731N	D732N	D734N	D743N	D754N					

D023I	D025I	D026I	D031I	D032I	D036I	D043I	D047I	D051I	D053I
D054I	D065I	D071I	D072I	D073I	D074I	D114I	D115I	D116I	D122I
D125I	D131I	D132I	D134I	D143I	D145I	D152I	D155I	D156I	D162I
D165I	D172I	D174I	D205I	D212I	D223I	D225I	D226I	D243I	D244I
D245I	D246I	D251I	D252I	D255I	D261I	D263I	D265I	D266I	D271I
D274I	D306I	D311I	D315I	D325I	D331I	D332I	D343I	D346I	D351I
D356I	D364I	D365I	D371I	D411I	D412I	D413I	D423I	D431I	D432I
D445I	D446I	D452I	D454I	D455I	D462I	D464I	D465I	D466I	D503I
D506I	D516I	D523I	D526I	D532I	D546I	D565I	D606I	D612I	D624I
D627I	D631I	D632I	D645I	D654I	D662I	D664I	D703I	D712I	D723I
D731I	D732I	D734I	D743I	D754I					

Technical Specifications

Gerneral	
Frequency Range	PMR:446.00625-446.19375MHz
	FRS: 462.5625MHz~462.7125MHz 467.5625MHz~467.7125MHz 462.5500MHz~462.7250MHz
Rated Voltage	3.7V DC
Memory Channel	16 / 22
Antenna Impedance	50Ω
Standard battery	1300mA
Working temperature	-20-40℃
Dimension (HxWxD)	122 x 50 x18mm
Transmitter	
Output Power	PMR:⩽0.5W
	FRS: 462.5625MHz~462.7125MHz (IC:≤0.5W,FCC:≤2W) 467.5625MHz~467.7125MHz(≤0.5W) 462.5500MHz~462.7250MHz(≤2W)
Modulation	11K F3E
Maximum Frequency Deviation	1⩽5KHZ / ⩽2.5KHz
Remanent Radiation Mode	⩽7uW
Electric Current	⩽1.2A
Modulation Distortion	⩽5% (300-3000Hz)
Receiver	
RF Sensitivity	⩽0.25uV / ⩽0.3uV
Audio Frequency Power	⩾200mW
Audio Distortion	⩽5%
Inter-Modulation	⩾60dB
Adjacent Channel Selectivity	⩾65dB
Spurious Rejection	⩾55dB

Warnings

RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE FOR PORTABLE TWO-WAY RADIOS

Before using this radio, read this guide which contains important operating instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulations.

This two-way radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. RF energy, which when used improperly, can cause biological damage.

All two-way radios are designed, manufactured, and tested to ensure they meet government-established RF exposure levels. In addition, manufacturers also recommend specific operating instructions to users of two-way radios. These instructions are important because they inform users about RF energy exposure and provide simple procedures on how to control it.

Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits:http://www.who.int/en/

Local Government Regulations

When two-way radios are used as a consequence of employment, the Local Government Regulations requires users to be fully aware of and able to control their exposure to meet occupational requirements. Exposure awareness can be facilitated by the use of a product label directing users to specific user awareness information. Your two-way radio has a RF Exposure Product Label. Also, your user manual, or separate safety booklet includes information and operating instructions required to control your RF exposure and to satisfy compliance requirements.

Radio License

Governments keep the radios in classification, business two-way radios operate on radio frequencies that are regulated by the local radio management departments (FCC, ISED, OFCOM, ANFR, BFTK, Bundesnetzagentur...).To transmit on these frequencies, you are required to have a license issued by them. The detailed classification and the use of

your two radios, please contact the local government radio management departments.
Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

Unauthorized modification and adjustment
Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority granted by the local government radio management departments to operate this radio and should not be made. To comply with the corresponding requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the local government radio management departments equipment authorization for this radio could violate the rules.

FCC Requirements:
This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference. (Licensed radios are applicable);
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (Other devices are applicable)
(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 A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE Requirements:
• (Simple EU declaration of conformity) Quanzhou Chierda Electronic Telecom Co., Ltd. declares that the radio equipment type is in compliance with the essential requirements and other relevant provisions of RED Direc-

tive 2014/53/EU and the ROHS Directive 2011/65/EU and the WEEE Directive 2012/19/EU; the full text of the EU declaration of conformity is available at the following internet address: www.chierda.com.

• Restriction Information

This product can be used in EU countries and regions, including: Belgium (BE), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and United Kingdom (UK).
For the warning information of the frequency restriction, please refer to the package or manual section.

• Disposal

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws in your area.
Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
Adapter shall be installed near the equipment and shall be easily accessible.

IC Requirements:

Licence-exempt radio apparatus
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage;
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Exposure Information

- DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio, and the antenna gain shall not exceed the specified gain by the manufacturer declared.
- DO NOT transmit for more than 50% of total radio use time, more than 50% of the time can cause RF exposure compliance requirements to be exceeded.
- During transmissions, your radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so.
- DO NOT operate the transmitter in areas that are sensitive to electro-magnetic radiation such as hospitals, aircraft, and blasting sites.
- Portable Device, this transmitter may operate with the antenna(s) documented in this filing in Push-to-Talk and body-worn configurations. RF exposure compliance is limited to the specific belt-clip and accessory configurations as documented in this filing and the separation distance between user and the device or its antenna shall be at least 2.5 cm.
- General population/uncontrolled Radio, this radio is designed for and classified as “General population/uncontrolled Use”.

RF Exposure Compliance and Control Guidelines and Operating Instructions

To control your exposure and ensure compliance with the occupational/ controlled environment exposure limits, always adhere to the following procedures.

Guidelines:

- User awareness instructions should accompany the device when transferred to other users.
- Do not use this device if the operational requirements described herein

Operating Instructions:

- Transmit no more than the rated duty factor of 50% of the time. To Transmit (Talk), push the Push to Talk (PTT) button. To receive calls (listen), release the PTT button. Transmitting 50% of the time, or less, is important because the radio generates measurable RF energy exposure only when transmitting in terms of measuring for standards compliance.
- Transmit only when people outside the vehicle are at least the recommended minimum lateral distance away from a properly installed according to installation instructions, externally mounted antenna.
- When operating in front of the face, worn on the body, always place the radio in a Retevis approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of Non-Retevis approved accessories may result in exposure levels, which exceed the IEEE/ICNIRP RF exposure limits.

Hand-held Mode

- Hold the radio in a vertical position with the microphone (and other parts of the radio including the antenna) at least 2.5 cm (one inch) away from the nose or lips. The antenna should be kept away from the eyes. Keeping the radio at a proper distance is important as RF exposure decreases with increasing distance from the antenna.

Phone Mode

- When placing or receiving a phone call, hold your radio product as you would a wireless telephone. Speak directly into the microphone.

Electromagnetic Interference/Compatibility

NOTE: Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

Avoid Choking Hazard

Small Parts. Not for children under 3 years.

Turn off your radio power in the following conditions:

- Turn off your radio before removing (installing) a battery or accessory or when charging battery.
- Turn off your radio when you are in a potentially hazardous

WARNING

environments: Near electrical blasting caps, in a blasting area, in explosive atmospheres (inflammable gas, dust particles, metallic powders, grain powders, etc.).

- Turn off your radio while taking on fuel or while parked at gasoline service stations.

To avoid electromagnetic interference and/or compatibility conflicts

- Turn off your radio in any facility where posted notices instruct you to do so, hospitals or health care facilities (Pacemakers, Hearing Aids and Other Medical Devices) may be using equipment that is sensitive to external RF energy.
- Turn off your radio when on board an aircraft. Any use of a radio must be in accordance with applicable regulations per airline crew instructions.

Protect your hearing:

WARNING

- Use the lowest volume necessary to do your job.
- Turn up the volume only if you are in noisy surroundings.
- Turn down the volume before adding headset or earpiece.
- Limit the amount of time you use headsets or earpieces at high volume.
- When using the radio without a headset or earpiece, do not place the radio's speaker directly against your ear

- Use careful with the earphone maybe possible excessive sound pressure from earphones and headphones can cause hearing loss

Note: Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing. The louder the radio's volume, the less time is required before your hearing could be affected. Hearing damage from loud noise is sometimes undetectable at first and can have a cumulative effect.

Avoid Burns

WARNING

Antennas

- Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with the skin when the radio is in use, a minor burn can result.

Batteries (If appropriate)

- When the conductive material such as jewelry, keys or chains touch exposed terminals of the batteries, may complete an electrical circuit (short circuit the battery) and become hot to

cause bodily injury such as burns. Exercise care in handling any battery, particularly when placing it inside a pocket, purse or other container with metal objects

Long transmission

- When the transceiver is used for long transmissions, the radiator and chassis will become hot.

Safety Operation

Forbid

- Do not use charger outdoors or in moist environments, use only in dry locations/conditions.
- Do not disassemble the charger, that may result in risk of electrical shock or fire.
- Do not operate the charger if it has been broken or damaged in any way.
- Do not place a portable radio in the area over an air bag or in the air bag deployment area. The radio may be propelled with great force and cause serious injury to occupants of the vehicle when the air bag inflates.

To reduce risk

- Pull by the plug rather than the cord when disconnecting the charger.
- Unplug the charger from the AC outlet before attempting any maintenance or cleaning.
- Contact Retevis for assistance regarding repairs and service.
- The adapter shall be installed near the equipment and shall be easily accessible

Approved Accessories

- This radio meets the RF exposure guidelines when used with the accessories supplied or designated for the product. Use of other accessories may not ensure compliance with the RF exposure guidelines and may violate regulations.
- For a list of Retevis-approved accessories for your radio model, visit the following website: www.chierda.com.

Cut along this line

Warranty Card

Product model: _____ Date of purchase: _____

Serial Number: _____

Seller: _____contact number: _____

Username: _____ contact number: _____

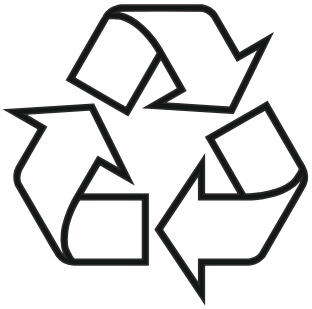
Address: _____ Zip code: _____

Warranty description:

1. The warranty card is saved by the customer as the warranty certificate, and the loss is not compensated.
2. This card must be stamped and dated for sale to take effect.
3. This card must not be altered. Please confirm that the warranty card serial number matches the purchase machine number, otherwise it will be invalid.
4. The warranty period is one year. Chargers, batteries, headphones, antennas and feeders are consumables, not covered by warranty.
5. Users can choose the following ways to get repair service:

a. At the original purchase office.

b. Our company is in the local special maintenance point.



RoHS
Compliant

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