

Digital Radio

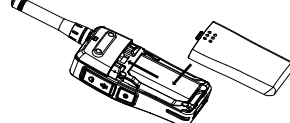
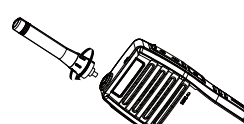
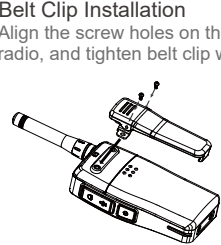
QUICK START GUIDE

- Do not expose the radio to direct sunlight for a long time or place it near the heating Radio.
 - If you wear a portable radio, make sure the antenna is at least 2.5 cm away from your body when the radio is transmitting.
- WARNING:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CAUTION:
Use the approved charger to charge the battery. The remaining lithium-ion battery is limited to 30% pursuant to the new lithium battery shipment regulation approved by International Air Transport Association (IATA). Before use, charge the battery. It is recommended that the radio remain powered off during charging.
Use of battery not recommend or replaced with incorrect type of battery may result in a risk of fire and explosion or personal injury.
Maximum ambient temperature around the power supply equipment including charger must not exceed 40°C (104°F) and device operating temperature not exceed 55°C (131°F).

RF Exposure Compliance and Control Guidelines and Operating Instructions
To control your exposure and ensure compliance with the occupational/controlled environment

- Les instructions de sensibilisation des utilisateurs doivent accompagner l'appareil lors de leur transfert à d'autres utilisateurs.
 - N'utilisez pas cet appareil si les exigences opérationnelles décrites ici ne sont pas remplies.
- Mode d'emploi:
Ne transmet pas plus que le facteur de marche nominal de 50% du temps. Pour transmettre (parler), appuyez sur le bouton Push-To-Talk (PTT). Pour recevoir des appels, relâchez le bouton PTT. La transmission 50% du temps, ou moins, est importante car cette radio génère une exposition mesurable à l'énergie RF uniquement lors de la transmission (en termes de mesure pour la conformité aux normes).
Tenez la radio en position verticale devant le visage avec le microphone (et les autres parties de la radio, y compris l'antenne) à au moins 2,5 cm du nez. Garder la radio à la bonne distance est important car les expositions RF diminuent avec la distance de l'antenne. L'antenne doit être tenue à l'écart des yeux.
Lorsqu'il est porté sur le corps, placez toujours la radio dans un clip, un support, un étui, un harnais de corps approuvé pour ce produit. L'utilisation d'accessoires approuvés par le corps est importante car l'utilisation d'accessoires non approuvés par d'autres fabricants peut entraîner des niveaux d'exposition qui dépassent les limites d'exposition aux RF des

3. Close the battery cover properly.
- 
- Note: To remove the battery pack, please turn off the radio first.
- Antenna Installation**
Note: Do not hold the radio by the antenna, as it may reduce radio performance and service life of antenna.
- 
- Belt Clip Installation**
Align the screw holes on the belt clip with those on the radio, and tighten belt clip with screws.
- 

VOLUME CONTROL
Press [+] or [-] key to increase or decrease the volume, which is adjustable from level 0 to 9.
Note: When you press [+] again under the maximum radio volume, the speaker will prompt an error sound. When the volume is adjusted to the minimum by pressing [-] key, the radio is mut

TRANSMITTING/RECEIVING
Press and hold the [PTT] key to transmit the signal of the current channel and the red LED indicator is on. Release the [PTT] key to receive the signal from the same channel, the speaker will make a call sound and the green LED indicator will be on when a signal is received.

PRECAUTIONS FOR RADIO OPERATION

- When the radio is transmitting, keep the radio in a vertical position, and keep the microphone 2.5-5 cm away from the mouth. When transmitting, the radio should be at least 2.5 cm away from the head or body.
- Do not turn on/off the radio repeatedly during use, and adjust the volume to a level suitable for your hearing.

1. Before using the radio for communication, please set the transmitter and receiver to the same frequency point.

READING/Writing PASSWORD SETTING

- To prevent information leakage, you can set the reading and writing password through programming software.
- Each time you read or write, you must enter the correct 8-digit password before operating.
- To cancel the password, clear the password and confirm.
- To change the password, input the old password first, and then enter the new password to rewrite.
- When you forget the password, you can resume the factory settings or re-burn it.

SETTING SUB-AUDIO FREQUENCY

- The sub-audio frequency supports CTCSS, DCS positive code, DCS reverse code, standard sub-audio and non-standard sub-audio.
- Only when the transmitting sub-audio and receiving sub-audio are the same can they talk to each other.
- A radio with sub-audio can transmit to radio without, but cannot receive signal without sub-audio.

CHANNEL SPACING

- There are two types of channel spacing: 12.5K, 12.5 is narrow-band
- Radios with same frequency point and different channel spacing can talk to each other.

emergency call is sent. Receiver side also will receive an alert tone after receiving the emergency call.

DIGITAL ENCRYPTION

- Add key through programming software, which only supports basic encryption, maximum 8 characters.
- Supported characters include: numbers, uppercase letters, lowercase letters.
- The same encryption template must be configured for transmitter and receiver for normal intercom, otherwise the speech content cannot be heard clearly.
- The main purpose is to prevent the content of the speech from being monitored by other people at the same frequency.

COLOR CODE

- For digital channels, the color code must be same to call.
- The color code range of this product can be set: 0-15.

CONTACTS

- Contacts are only valid for digital channels.
- There are three kinds of contacts: private call, group call and all call, which need to be configured through the programming software.

4. The radio voice announcement is defaulted to English

OPTIONAL ACCESSORIES
The main accessories of the Radio are included in the product packaging box. For more information about accessories, please consult your local dealer.
Note: Please use the accessories specified by our company. If you use unauthorized accessories, you shall be responsible for all the consequences.

DISCLAIMER
This manual strives for the accuracy and completeness of its content during the preparation. Repeated review has been carried out, and the company will not assume any responsibility for errors or omissions that may occur during the output and printing process. In addition, due to the continuous development of technology, the company reserves the right to change the product design and specification without prior notice.

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TO USERS

Thank you for purchasing our product! This Manual (contains both analog and digital radios) is designed to make you quickly grasp the use of the device. In order to avoid physical injury or property loss due to improper operation, please read this Manual carefully before using the device.

NOTICE

The device meets the requirements of FCC PART 90 and PART 15. Local laws and regulations shall be complied with when setting up or using the equipment, and corresponding qualifications and relevant procedures shall be obtained if necessary. Consulting the relevant authorities is suggested.

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.

exposure limits always adhere to the following procedures. Guidelines:

- Do not remove the RF Exposure Label from the device.
- User awareness instructions should accompany device when transferred to other users.
- Do not use this device if the operational requirements described herein are not met.

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, release the PTT button. Transmitting 50% of the time, or less, is important because this radio generates measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance).
- Hold the radio in a vertical position in front of face with the microphone (and the other parts of the radio, including the antenna) at least one inch (2.5 cm) away from the nose. Keeping the radio at the proper distance is important because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes.
- When worn on the body, always place the radio in approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of other manufacturer's non-approved accessories may result in exposure levels, which exceed the occupational/controlled environment RF exposure limits.

environnements professionnels / contrôlés.

- Si vous n'utilisez pas d'accessoire porté sur le corps et n'utilisez pas la radio dans la position d'utilisation prévue devant le visage, assurez-vous que l'antenne et la radio sont maintenues à au moins 2,5 cm (un pouce) du corps lors de la transmission. Il est important de garder la radio à la bonne distance, car les expositions RF diminuent avec l'éloignement de l'antenne.

INFORMATION CONCERNING SAR FOR FCC

Max. SAR Level(s) Reported	Limit (W/Kg)
1.35 W/kg 1g Head SAR 1.92 W/kg 1g Body SAR	8.0

Accessory Installation

- Open the accessory connector cover.
- Align the plug of the accessory (matching headset or programming cable) with the accessory connector.
- Insert the plug of the accessory properly into the accessory connector.

2. For the analog channel that requires intercom, please set the transmitter and receiver to the same sub-audio frequency.

3. If encryption is enabled for the digital channel that requires intercom, please set the transmitter and receiver to the same password.

4. For the digital channel that requires intercom, please set the transmitter and receiver to the same color code.

5. Transmit/receive at high/low power (switch by P1/P2 key).

6. After inserting the headset, press the [PTT] key to transmit and receive speech through the headset.

7. Transmit with VOX headset after enabling VOX (turn on/off VOX through side key and insert the VOX headset).

MENU SELECTION

- The [Menu] key were set to (i) switch channel, (ii) set high/low power, and (iii) turn on/off scanning. Continue press menu button to enter to next function.
- If the radio is not operated for 3 seconds or [PTT] key is pressed, it will exit the menu mode.

CHANNEL SELECTION

Press the [Menu] key once to enter the channel selection menu, and then press the [4] or [-] key to select the channel. The current channel number will be broadcast every time you select. There are 1-16 channels to choose from. Press [PTT] key to save after switching the channel.

SETTING/CHANGING FREQUENCY

- Frequency range: 430MHz -470 MHz (base on models)
- The frequency can be set to any value within this range.
- In DM mode, you can talk only when the transmitting frequency and receiving frequency are the same.
- In DMR repeater mode, the transmitting frequency and receiving frequency are different, but it needs to be supported by repeater.

HIGH/LOW POWER SETTING

Users can set the power level of each channel to high or low. High power can achieve communication with the radios which are relatively far away, and low power can achieve communication with radios which are close.

- Switch the current channel to "High/Low Power" by [Menu] key.
- When switching between high and low power, the voice prompt "High/Low".
- Press the preset "High/Low Power" key to switch between high (2W) or low (0.5W) transmission power.

TOT FUNCTION

In order to prevent some users from occupying the same channel for a long time, users can set to enable the TOT function. When the user's continuous transmission time on the current channel reaches the set time, the radio will stop

CALL PROMPT (PRIVATE CALL ONLY)

- Configure one touch call through programming software for private call contacts.
- After writing to the radio, press the side key to trigger the call prompt.
- After the transmitter triggers the call prompt, the receiver's red indicator will flash.

ONE TOUCH CALL (PRIVATE CALL ONLY)

- Configure one touch call through programming software.
- After writing to the radio, press the side key to trigger the one touch call.
- The transmitter's red indicator stays on for a few seconds, and then press the [PTT] key to transmit.
- The receiver's green indicator stays on for a few seconds, and then it can receive normally.

REMOTE MONITOR (PRIVATE CALL ONLY)

- Configure one touch call through programming software to select remote monitor.
- Press the preset side key to monitor the other party remotely.
- After successful monitoring, the green indicator will always be on, and the sound around the other party can be clearly monitored.

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GUARANTEE CARD

Model Number: _____
Serial Number: _____
Purchasing Date: _____

Dealer: _____ Telephone: _____
User's Name: _____ Telephone: _____
Address: _____ Post Code: _____

REMARKS:

- This guarantee card to be kept by the user, no replenishment if lost.
- This guarantee card to be filled & chopped by the dealer, or it is invalid.
- Don't alter the guarantee card, please confirm the serial number on the guarantee card is same as that on the machine.
- Warranty void if seal broken.
- 1 year guarantee for product, 6 months for charger, battery and antenna.
- The user can get repairing service from the following ways:
 - Go to the shop where you buy the machine
 - Our local repairing agent

CHOP BY DEALER

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.

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 received, including interference that may cause undesired operation.

ISED/C RSS warning
This product meets the applicable Industry Canada technical specifications. / Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

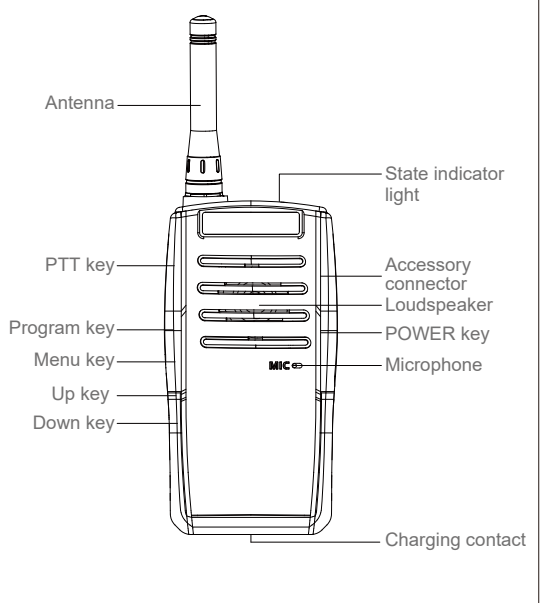
EU Regulatory Conformance
As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the following directives: 2014/53/EU, 2011/65/EU, and 2012/19/EU. Please note that the above information is applicable to EU countries only.

European Union (EU) Waste of Electrical and Electronic Equipment (WEEE) directive:
The European Union's WEEE directive requires that products sold into EU countries must have the crossed out trash bin label on the product (or the package in some cases). As defined by the WEEE directive, this cross-out trash bin label means that customers and end-users in EU countries.

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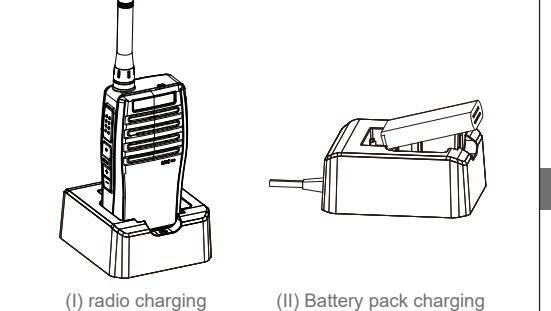
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PRODUCT CONTROL



Charging Function

- This product can support both radio charging and battery pack charging.
- When charging base is used for charging, the indicator is red during charging and changes to green after full charging.



Charging Precautions:

- Please use the matching charging base of the model for charging.
- When charging the device, it is recommended to turn off the radio first.
- To obtain the best battery performance, please charge for at least 5 hours for the first time.
- Do not charge the battery pack for a long time, otherwise

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CHANNEL SCANNING

Press the [Menu] key twice to enter the channel scanning menu, then press the [4] key to start channel scanning, and the speaker will give a voice prompt "Scan". When a valid signal is scanned and received, press [4] key again to continue scanning. In scanning mode, press [-] key to exit the scanning function, and the speaker will give a voice prompt "Scan Off".

- The scan list can contain analog channels, digital channels and relay channels*.
- After configuring the scan list, the scan switch should be turned on.
- The scanning can also be turn on/off through the [Program] key.
- During scanning, the channels scanned include the channels in the scan list and the current main channel.
- When any channel in the scan list is transmitting a signal, it will stay on that channel to receive signal.

* Support DMR system only.

MONITORING MODE

- Configure the [Program] key to monitoring function through programming software.
- Analog channel: Press and hold the [Program] key to enter monitoring mode and release the key to exit the mode.

transmitting and the speaker will give a time-limit prompt tone. You can set the time limit for transmitting by programming software. OFF, 30-300 seconds are available. When OFF is selected, the user can keep on transmitting.

VOX FUNCTION

When voice control function is enabled, the radio will automatically transmit after the microphone picks up enough sound input, and exit the transmit mode after speaking stops.

- Preset the [Program] key to [VOX On/Off] key through programming software.
- The side key is equipped with a VOX switch and has an "On"/"Off" prompt sound. VOX levels can be preset through programming software: Level 1, Level 2, and Level 3, where Level 3 is the most sensitive. When the radio VOX function is on, the preset VOX level is used.
- After VOX is enabled, it is valid on both analog and digital channels.
- VOX needs to insert the VOX headset, and the speech can be directly transmitted by speaking to the headset MIC without needing to press the [PTT] key. On the contrary, iVOX transmits directly by obtaining the sensitivity through the radio MIC. If the sensitivity of radio is low, VOX transmission will not be triggered. The speech can be transmitted only after the sensitivity reaches the transmission threshold.
- VOX delay detection time refers to the waiting time

4. Remote monitoring time can be set to 10s-120s.

SQUELCH STEP (SQ)

- SQ is only valid for analog channels.
- After SQ is set to 0, the speaker will automatically turn on and be in the monitoring state.
- The higher the SQ step, the better the noise floor suppression effect.
- SQ can be configured through programming software and cannot be switched in other ways.

TAIL TONE ELIMINATION

- Only valid for analog channels.
- When the tail tone elimination function is enabled, the receiver will not have tail tone after the transmission is completed; otherwise, there will be tail tone.
- There are two types of tail tone elimination: 55Hz and 62Hz.

POWER SAVING FUNCTION

To extend battery life, the user can enable power saving mode. When the power saving function is enabled, if no valid signal is received or no key operation is performed within 5 seconds, the radio will automatically enter the power saving mode. In the power saving mode, the user can press [PTT] key to transmit or the radio can receive

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SAFETY INFORMATION

In order to use the radio safely and efficiently, please read the following safety information:

- The radio can only be maintained by professional technicians. Do not disassemble the radio without permission.
- Only the batteries and chargers specified by our company can be used.
- To avoid problems caused by electromagnetic interference and electromagnetic compatibility, please turn off the radio in places where the "Please turn off the radio" sign is displayed, such as hospitals and other health care places. When taking the flight, please turn off the radio if the crew requests to do so.
- In vehicles with airbags, do not place the radio in the area where airbag deployment may be involved.
- Please turn off the radio before entering flammable or explosive environment.
- Do not replace or charge the battery in a flammable or explosive environment.
- Please turn off the radio before approaching the blasting area and the detonator area.
- Do not use the radio with damaged antenna. A damaged antenna may cause minor burns when it comes into contact with the skin.

RF RADIATION INFORMATION

- This product is limited to occupational applications that can meet RF energy radiation requirements. The user must be fully aware of the RF radiation hazards and can take corresponding measures to meet the RF radiation limitation requirements.
- Radio frequency (RF) refers to the electromagnetic frequency that can be radiated into space. It is a widely used technology in the fields of communication, medical treatment, and food processing. It will generate certain RF radiation during use.

EXPOSURE RF COMPLIANCE ET LIGNES DE CONTRÔLE ET INSTRUCTIONS OPÉRATIONNELLES

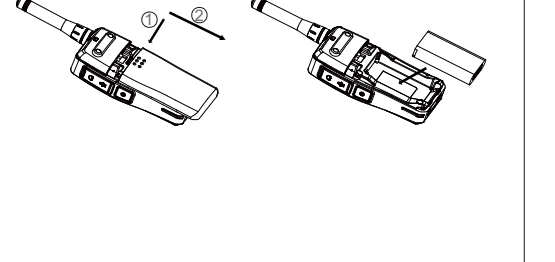
contrôle et Instructions opérationnelles
Pour contrôler votre exposition et garantir le respect des limites d'exposition dans un environnement professionnel / contrôlé, suivez toujours les procédures suivantes.
Des lignes directrices:
• Ne retirez pas l'étiquette d'exposition RF de l'appareil.

LED Indicator

Radio Status	LED Indication
Standby	Green Slow Flash
Low Battery	Red Fast Flash
Transmit (TX)	Solid Red
Receive (RX)	Solid Green
Programming Mode (Read from Radio)	Red Fast Flash
Programming Mode (Write to Radio)	Green Fast Flash

Battery Installation

- Press the dots on the battery cover and slide to remove the battery cover.
- Attaching the lithium ion battery pack to battery compartment.



it will shorten the battery pack life. When the battery is fully charged, please stop charging in time.

- The charger can only be used to charge the battery pack of the product. Do not use it to charge other battery packs, otherwise the charger and battery pack may be damaged.
- The battery pack should be stored in a cool and dry place after being fully charged. Do not expose the battery pack near the fire or to the sun, otherwise there are safety risks.
- During charging, it is not recommended to transmit the radio.
- The battery pack may slightly heat up during charging, which is a normal phenomenon.

POWER ON/OFF

To turn on radio, press and hold [Power] key 2 seconds, radio will broadcast the current channel number and battery power. To turn off radio, press and hold the [Power] key to turn off the radio and prompt tone will be sounded.

BATTERY CHECK

Press the [Power] key to check current channel number and battery level status.

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PROGRAM KEY

- Configure the functions of [Program] key through programming software.
- The [Program] key includes the following functions: Scan On/Off, High/Low Power Switch, iVOX/VOX On/Off, Monitoring Mode, One Touch Call, Emergency Alarm, etc.
- Write the set parameters to the radio and press the corresponding [Program] key to enter the corresponding function.

DEVICE NAME CONFIGURATION AND MODIFICATION

- Enter the basic setting interface of programming software to enter the device name with any 16 characters.
- Device name can support: Letters, numbers, Chinese, special characters, etc.

DEVICE ID

- The device ID is related to the private call contact, and the ID range is 1-16776415.
- When using a private call contact to call the other party, enter the device ID of the other party and then call.

after VOX is transmitted.

DTMF FUNCTION

- The DTMF interface of the programming software can configure the DTMF function, such as side tone, duration, interval time, online telegram code, offline telegram code, transmission start tone, transmission end sound, transmission start and end sound.
- After the transmitter turns on the side tone, when the [PTT] key is pressed to transmit, the transmitter itself will also give DTMF sound.
- DTMF coded content only supports numbers 0 - 9, letters: ABCD, and characters: * #.

EMERGENCY CALL

- Configure functions of the emergency call through programming software, such as alarm channel, re-transmission times, and tone type.
- Emergency call supports the digital channel and analog channel.
- Set the side button as the "Emergency Call" button in the "programmable button".
- When Analog or Digital channel triggers emergency call, an emergency call code will be sent. Emergency call will be automatically transmitted after remaining re-transmit call becomes 0, and automatic emergency calls will repeat transmit twice.
- The transmitter will sound the alert tone after the

normally when an intercom signal is detected. The power saving function can be enabled/disabled by programming software.

- The power saving function supports three ratios (ratio of sleep to wake up), i.e. 1:1, 1:2 and 1:4.
- After the power saving function is enabled, both the analog channels and digital channels can enter the power saving mode normally in standby state.
- When a signal is received during sleep, it will wake up quickly.

LOW VOLTAGE ALARM FUNCTION

- When the battery voltage is lower than 3.3V, the radio will prompt "Please charge" once (every 20 seconds) and the red LED indicator will flash quickly. At this time, the radio cannot transmit and stays in standby and receiving modes only. Please replace with a new battery or charge the battery.
- When the battery voltage is lower than 3.0V, the radio will shut down automatically. Please replace with a new battery or charge the battery.

LANGUAGE SETTINGS

- Language supports: Chinese and English.
- Language can be set by programming software.
- After switching the language, all voice broadcast will be changed to the language.

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