## 335100427 RevA If this equipment does cause harmful interference to radio **TO USERS SAFETY INFORMATION** or television reception, which can be determined by turning the equipment off and on, the user is encouraged In order to use the radio safely and efficiently, please read Thank you for purchasing out product! This Manual to try to correct the interference by one or more of the (contains both analog and digital radios) is designed to the following safety information: **Digital Radio** following measures: make you quickly grasp the use of the device. In order to · The radio can only be maintained by professional · Reorient or relocate the receiving antenna. avoid physical injury or property loss due to improper technicians. Do not disassemble the radio without · Increase the separation between the equipment and operation, please read this Manual carefully before using receiver. · Only the batteries and chargers specified by our company Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. NOTICE · To avoid problems caused by electromagnetic interference Consult the dealer or an experienced radio/TV and electromagnetic compatibility, please turn off the radio technician for help. The device meets the requirements of FCC PART 90 and in places where the "Please turn off the radio" sign is This device complies with Part 15 of the FCC Rules. PART 15. Local laws and regulations shall be complied with displayed, such as hospitals and other health care places. Operation is subject to the following two conditions: when setting up or using the equipment, and corresponding When taking the flight, please turn off the radio if the crew **QUICK START GUIDE** 1. this device may not cause harmful interference, and. qualifications and relevant procedures shall be obtained if 2. this device must accept any interference received, necessary. Consulting the relevant authorities is suggested. • In vehicles with airbags, do not place the radio in the area including interference that may cause undesired where airbag deployment may be involved. operation. · Please turn off the radio before entering flammable or This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of explosive environment ISEDC RSS warning the FCC Rules. These limits are designed to provide • Do not replace or charge the battery in a flammable or This product meets the applicable Industry Canada reasonable protection against harmful interference in a explosive environment technical specifications. / Le présent matériel est residential installation. This equipment generates, uses and Please turn off the radio before approaching the blasting conforme aux specifications techniques applicables can radiate radio frequency energy and, if not installed and area and the detonator area. d'Industrie Canada. used in accordance with the instructions, may cause • Do not use the radio with damaged antenna. A damaged harmful interference to radio communications. However antenna may cause minor burns when it comes into there is no quarantee that interference will not occur in a contact with the skin. particular installation. (1) (2) (3) • Do not expose the radio to direct sunlight for a long time exposure limits always adhere to the following procedures. · If you are not using a body-worn accessory and are not cases). As defined by the WEEE directive, this cross-out or place it near the heating Radio. using the radio in the intended use position in front of the Guidelines trash bin label means that customers and end-users in EU • If you wear a portable radio, make sure the antenna is at · Do not remove the RF Exposure Label from the device. face, then ensure the antenna and the radio are kept at least 2.5 cm (one inch) from the body when transmitting. least 2.5 cm away from your body when the radio is · User awareness instructions should accompany device when transferred to other users. Keeping the radio at the proper distance is important RF RADIATION INFORMATION transmitting WARNING: Changes or modifications to this unit not · Do not use this device if the operational requirements because RF exposures decrease with increasing expressly approved by the party responsible for compliance described herein are not met. distance from the antenna. 1. This product is limited to occupational applications that could void the user's authority to operate the equipment. · Use only manufacturer's approved supplied or replace-Operating Instructions can meet RF energy radiation requirements. The user • Transmit no more than the rated duty factor of 50% of the ment antennas, batteries, and accessories. Use of must be fully aware of the RF radiation hazards and time. To transmit (talk), push the Push-To-Talk (PTT) non-manufacturer-name approved antennas, batteries, can take corresponding measures to meet the RF Use the approved charger to charge the battery. The button. To receive calls, release the PTT button. Transmitand accessories may exceed the FCC and IC RF radiation limitation requirements. ting 50 % of the time, or less, is important because this remaining lithium-ion battery is limited to 30% pursuant to exposure guidelines 2. Radio frequency (RF) refers to the electromagnetic the new lithium battery shipment regulation approved by radio generates measurable RF energy exposure only frequency that can be radiated into space. It is a widely · For a list approved accessories please consult your local International Air Transport Association (IATA), Before use. when transmitting (in terms of measuring for standards used technology in the fields of communication, medical charge the battery. It is recommended that the radio remain treatment, and food processing. It will generate certain · Hold the radio in a vertical position in front of face with the powered off during charging. EU Regulatory Conformance RF radiation during use. Use of battery not recommend or replaced with incorrect microphone (and the other parts of the radio, including the As certified by the qualified laboratory, the product is in EXPOSURE RF COMPLIANCE ET LIGNES DE CONTRÔLE ET INSTRUCTIONS OPÉRATIONNELLES antenna) at least one inch (2.5 cm) away from the nose. compliance with the essential requirements and other type of battery may result in a risk of fire and explosion or Keeping the radio at the proper distance is important relevant provisions of the following directives: 2014/53/EU, Maximum ambient temperature around the power supply 2011/65/EU, and 2012/19/EU. Please note that the above because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes. equipment including charger must not exceed 40 °C (104°F) information is applicable to EU countries only. When worn on the body, always place the radio in approved and device operating temperature not exceed 55°C (131°F). contrôle et Instructions opérationnelles clip, holder, holster, case, or body harness for this product. European Union (EU) Waste of Electrical and Pour contrôler votre exposition et garantir le respect des RF Exposure Compliance and Control Guidelines Electronic Equipment (WEEE) directive: Using approved body-worn accessories is important limites d'exposition dans un environnement professionnel and Operating Instructions The European Union's WEEE directive requires that because the use other manufacturer's non-approved / contrôlé, suivez toujours les procédures suivantes. To control your exposure and ensure compliance with the accessories may result in exposure levels, which exceed products sold into EU countries must have the crossed out Des lignes directrices: occupational/controlled environment the occupational/controlled environment RF exposure limits trash bin label on the product (or the package in some Ne retirez pas l'étiquette d'exposition RF de l'appareil. (7) LED Indicator · Les instructions de sensibilisation des utilisateurs doivent PRODUCT CONTROL environnements professionnels / contrôlés. accompagner l'appareil lors de leur transfert à d'autres Si vous n'utilisez pas d'accessoire porté sur le corps et **LED** Indication Radio Status utilisateurs. n'utilisez pas la radio dans la position d'utilisation prévue · N'utilisez pas cet appareil si les exigences devant le visage, assurez-vous que l'antenne et la radio Green Slow Flash Standby opérationnelles décrites ici ne sont pas remplies. sont maintenues à au moins 2,5 cm (un pouce) du corps Low Battery Red Fast Flash Mode d'emploi: lors de la transmission. Il est important de garder la • Ne transmet pas plus que le facteur de marche nominal radio à la bonne distance, car les expositions RF Antenna Transmit (TX) Solid Red de 50% du temps. Pour transmettre (parler), appuyez diminuent avec l'éloignement de l'antenne. Receive (RX) sur le bouton Push-To-Talk (PTT). Pour recevoir des INFORMATION CONCERNING SAR FOR FCC Programming Mode (Read from Radio) Red Fast Flash appels, relâchez le bouton PTT. La transmission 50% du State indicator light temps, ou moins, est importante car cette radio génère Programming Mode (Write to Radio) Green Fast Flash une exposition mesurable à l'énergie RF uniquement Limit (W/Kg) lors de la transmission (en termes de mesure pour la Max. SAR Level(s) Reported **Battery Installation** PTT key Accessory conformité aux normes). 1.35 W/kg 1g Head SAR 1.92 W/kg 1g Body SAR 1. Press the dots on the battery 2. Attaching the lithium connectoi · Tenez la radio en position verticale devant le visage cover and slide to remove the battery pack.to battery Loudspeaker avec le microphone (et les autres parties de la radio, y Program key POWER key compris l'antenne) à au moins 2,5 cm du nez. Garder la Menu key radio à la bonne distance est important car les Microphone expositions RF diminuent avec la distance de l'antenne. Up key L'antenne doit être tenue à l'écart des yeux. Down key · Lorsqu'il est porté sur le corps, placez toujours la radio dans un clip, un support, un étui, un étui ou 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 Charging contact fabricants peut entraîner des niveaux d'exposition qui dépassent les limites d'exposition aux RF des (11)(8) (9) it will shorten the battery pack life. When the battery is fully 3. Close the battery cover properly Charging Function Accessory Installation charged, please stop charging in time. 1. Open the accessory connector cover. 1. This product can support both radio charging and • The charger can only be used to charge the battery pack battery pack charging. THE RE 2. When charging base is used for charging, the indicator of the product. Do not use it to charge other battery Note: To remove the packs, otherwise the charger and battery pack may be is red during charging and changes to gre damaged charging. · The battery pack should be stored in a cool and dry place turn off the radio first after being fully charged. Do not expose the battery pack near the fire or to the sun, otherwise there are safety Antenna Installation 2. Align the plug of the accessory (matching headset or • During charging, it is not recommended to transmit the programming cable) with the accessory connector. radio. • The battery pack may slightly heat up during charging, Note: Do not hold the which is a normal phenomenon. radio by the antenna; as it may reduce radio performance and POWER ON/OFF service life of antenna. To turn on radio, press and hold [Power] key 2 seconds radio will broadcast the current channel number and battery Belt Clip Installation power. To turn off radio, press and hold the [Power] key to Align the screw holes on the belt clip with those on the (II) Battery pack charging (I) radio charging 3. Insert the plug of the accessory properly into the turn off the radio and prompt tone will be sounded. radio, and tighten belt clip with screws. accessory connector. **Charging Precautions: BATTERY CHECK** · Please use the matching charging base of the model for · When charging the device, it is recommended to turn off Press the [Power] key to check current channel number 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 (14)2. For the analog channel that requires intercom, please set **VOLUME CONTROL CHANNEL SCANNING PROGRAM KEY** the transmitter and receiver to the same sub-audio Press the [Menu] key twice to enter the channel scanning 1. Configure the functions of [Program] key through Press [+] or [-] key to increase or decrease the volume, 3. If encryption is enabled for the digital channel that menu, then press the [+] key to start channel scanning, programming software which is adjustable from level 0 to 9. requires intercom, please set the transmitter and receiver 2.The [Program] key includes the following functions: Scan On/Off, High/Low Power Switch, iVOX/VOX On/Off, Note: When you press [+] again under the maximum radio and the speaker will give a voice prompt "Scan". When a to the same password. valid signal is scanned and received, press [+] key again 4. For the digital channel that requires intercom, please set volume, the speaker will prompt an error sound. When the to continue scanning. In scanning mode, press [-] key to Monitoring Mode, One Touch Call, Emergency Alarm, volume is adjusted to the minimum by pressing [-] key, the the transmitter and receiver to the same color code. 5. Transmit/receive at high/low power (switch by P1/P2 key). exit the scanning function, and the speaker will give a voice prompt "Scan Off". 3. Write the set parameters to the radio and press the 6. After inserting the headset, press the [PTT] key to The scan list can contain analog channels, digital corresponding [Program] key to enter the corresponding transmit and receive speech through the headset. 7. Transmit with VOX headset after enabling VOX (turn TRANSMITTING/RECEIVING channels and relay channels\* function. 2. After configuring the scan list, the scan switch should be on/off VOX through side key and insert the VOX headset). Press and hold the [PTT] key to transmit the signal of the current channel and the red LED indicator is on. Release **DEVICE NAME CONFIGURATION AND** 3. The scanning can also be turn on/off through the MENU SELECTION **MODIFICATION** the [PTT] key to receive the signal from the same channel, [Program] key. 4. During scanning, the channels scanned include the the speaker will make a call sound and the green LED indicator will be on when a signal is received. 1.Enter the basic setting interface of programming 1. The [Menu] key were set to (i) switch channel, (ii) set channels in the scan list and the current main channel high/low power, and (iii) turn on/off scanning. Continue 5. When any channel in the scan list is transmitting a signal, software to enter the device name with any 16 PRECAUTIONS FOR RADIO OPERATION press menu button to enter to next function. it will stay on that channel to receive signal. characters. 2. If the radio is not operated for 3 seconds or [PTT] key is \* Support ĎMR system only. 2.Device name can support: Letters, numbers, Chinese, pressed, it will exit the menu mode. special characters, etc When the radio is transmitting, keep the radio in a vertical **MONITORING MODE** position, and keep the microphone 2.5-5 cm away from **CHANNEL SELECTION DEVICE ID** the mouth. When transmitting, the radio should be at least 2.5 cm away from the head or body 1.Configure the [Program] key to monitoring function · Do not turn on/off the radio repeatedly during use, and Press the [Menu] key once to enter the channel selection 1. The device ID is related to the private call contact, and through programming software adjust the volume to a level suitable for your hearing. menu, and then press the [+] or [-] key to select the channel. 2.Analog channel: Press and hold the [Program] key to the ID range is 1-16776415. 2. When using a private call contact to call the other party, 1. Before using the radio for communication, please set the The current channel number will be broadcast every time enter monitoring mode and release the key to exit the you select. There are 1-16 channels to choose from. Press enter the device ID of the other party and then call transmitter and receiver to the same frequency point. mode [PTT] key to save after switching the channel. (16) (17)transmitting and the speaker will give a time-limit prompt after VOX is transmitted. READING/WRITING PASSWORD SETTING **SETTING/CHANGING FREQUENCY** tone. You can set the time limit for transmitting by programming software. OFF, 30-300 seconds are **DTMF FUNCTION** 1. Frequency range: 430MHz -470 MHz (base on models) available. When OFF is selected, the user can keep on 1.To prevent information leakage, you can set the reading 2. The frequency can be set to any value within this range and writing password through programming software. 3. In DM mode, you can talk only when the transmitting 1. The DTMF interface of the programming software can 2.Each time you read or write, you must enter the correct configure the DTMF function, such as side tone, duration, frequency and receiving frequency are the same. 4. In DMR repeater mode, the transmitting frequency and 8-digit password before operating. **VOX FUNCTION** interval time, online telegram code, offline telegram code, 3.To cancel the password, clear the password and confirm. 4.To change the password, input the old password first, and receiving frequency are different, but it needs to be transmission start sound, transmission end sound, When voice control function is enabled, the radio will transmission start and end sound. then enter the new password to rewrite supported by repeater. automatically transmit after the microphone picks up 2. After the transmitter turns on the side tone, when the 5. When you forget the password, you can resume the [PTT] key is pressed to transmit, the transmitter itself will enough sound input, and exit the transmit mode after factory settings or re-burn it. HIGH/LOW POWER SETTING also give DTMF sound. 3. DTMF coded content only supports numbers 0 - 9, letters: ABCD, and characters: \* #. 1. Preset the [Program] key to [VOX On/Off] key through SETTING SUB-AUDIO FREQUENCY Users can set the power level of each channel to high or programming software. low. High power can achieve communication with the radios 2. The side key is equipped with a VOX switch and has which are relatively far away; and low power can achieve an "On"/"Off" prompt sound. VOX levels can be preset through programming software: Level 1, Level 2, and 1. The sub-audio frequency supports CTCSS, DCS positive **EMERGENCY CALL** communication with radios which are close code, DCS reverse code, standard sub-audio and non-standard sub-audio. 1. Switch the current channel to "High/Low Power" by Level 3, where Level 3 is the most sensitive. When the 1. Configure functions of the emergency call through [Menu] key. 2. Only when the transmitting sub-audio and receiving radio VOX function is on, the preset VOX level is used. programming software, such as alarm channel, When switching between high and low power, the voice prompt "High"/"Low". sub-audio are the same can they talk to each other 3. After VOX is enabled, it is valid on both analog and re-transmission times, and tone type. 3.A radio with sub-audio can transmit to radio without, but 3. Press the preset "High/Low Power" key to switch between 2. Emergency call supports the digital channel and analog VOX needs to insert the VOX headset, and the speech can be directly transmitted by speaking to the headset cannot receive signal without sub-audio high (2W) or low (0.5W) transmission power. 3. Set the side button as the "Emergency Call" button in the MIC without needing to press the [PTT] key. On the **CHANNEL SPACING** "programmable button" contrary, IVOX transmits directly by obtaining the sensitivity through the radio MIC. If the sensitivity of TOT FUNCTION 4. When Analog or Digital channel triggers emergency call, 1. There are two types of channel spacing: 12.5 K ,12.5 is an emergency call code will be sent. Emergency call will radio is low, VOX transmission will not be triggered narrow-band be automatically transmitted after remaining re-transmit The speech can be transmitted only after the sensitivity channel for a long time, users can set to enable the TOT 2.Radios with same frequency point and different channel call becomes 0, and automatic emergency calls will reaches the transmission threshold function. When the user's continuous transmission time on spacing can talk to each other repeat transmit twice. 5. VOX delay detection time refers to the waiting time the current channel reaches the set time, the radio will stop 5. The transmitter will sound the alert tone after the (20)(21)(22)(23) emergency call is sent. Receiver side also will receive an normally when an intercom signal is detected. The power 4. Remote monitoring time can be set to 10s-120s **CALL PROMPT (PRIVATE CALL ONLY)** saving function can be enabled/disabled by programming alert tone after receiving the emergency call **SQUELCH STEP (SQ)** 1. Configure one touch call through programming software 1. The power saving function supports three ratios (ratio of **DIGITAL ENCRYPTION** for private call contacts. sleep to wake up), i.e. 1:1, 1:2 and 1:4. 2. After the power saving function is enabled, both the 1. SQ is only valid for analog channels 2. After writing to the radio, press the side key to trigger the 1. Add key through programming software, which only 2. After SQ is set to 0, the speaker will automatically turn call prompt analog channels and digital channels can enter the supports basic encryption, maximum 8 characters. 3. After the transmitter triggers the call prompt, the receiver's on and be in the monitoring state. power saving mode normally in standby state. 2. Supported characters include: numbers, uppercase 3. The higher the SQ step, the better the noise floor red indicator will flash. 3. When a signal is received during sleep, it will wake up suppression effect. letters, lowercase letters. 3. The same encryption template must be configured for 4. SQ can be configured through programming software ONE TOUCH CALL (PRIVATE CALL ONLY) transmitter and receiver for normal intercom, otherwise and cannot be switched in other ways. LOW VOLTAGE ALARM FUNCTION the speech content cannot be heard clearly 1. Configure one touch call through programming software. 4. The main purpose is to prevent the content of the speech TAIL TONE ELIMINATION 2. After writing to the radio, press the side key to trigger the 1. When the battery voltage is lower than 3.3V, the radio from being monitored by other people at the same frequency will prompt "Please charge" once (every 20 seconds) 1. Only valid for analog channels. 3. The transmitter's red indicator stays on for a few seconds, and the red LED indicator will flash quickly. At this time, 2. When the tail tone elimination function is enabled, the and then press the [PTT] key to transmit. the radio cannot transmit and stays in standby and COLOR CODE receiver will not have tail tone after the transmission is 4. The receiver's green indicator stays on for a few seconds, receiving modes only. Please replace with a new completed; otherwise, there will be tail tone. and then it can receive normally battery or charge the battery. 3. There are two types of tail tone elimination: 55HZ and 1. For digital channels, the color code must be same to call. 2. When the battery voltage is lower than 3.0V, the radio 2. The color code range of this product can be set: 0-15. REMOTE MONITOR (PRIVATE CALL ONLY) will shut down automatically. Please replace with a new battery or charge the battery. POWER SAVING FUNCTION CONTACTS 1. Configure one touch call through programming software to **LANGUAGE SETTINGS** select remote monitor. To extend battery life, the user can enable power saving 1. Contacts are only valid for digital channels. 2. Press the preset side key to monitor the other party 2. There are three kinds of contacts: private call, group call mode. When the power saving function is enabled, if no 1. Language supports: Chinese and English and all call, which need to be configured through the valid signal is received or no key operation is performed 3. After successful monitoring, the green indicator will always 2. Language can be set by programming software.3. After switching the language, all voice broadcast will be within 5 seconds, the radio will automatically enter the programming software. be on, and the sound around the other party can be clearly power saving mode. In the power saving mode, the user changed to the language. can press [PTT] key to transmit or the radio can receive (24) (25)4. The radio voice announcement is defaulted to English **OPTIONAL ACCESSORIES GUARANTEE CARD** The main accessories of the Radio are included in the product packaging box. For more information about accessories, please consult your local dealer. Model Number: Note: Please use the accessories specified by our Serial Number: company. If you use unauthorized accessories, you shall be responsible for all the consequences. Purchasing Date: -Telephone:\_ DISCLAIMER Telephone:\_\_ User's Name: Post Code:\_ Address:\_ 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 REMARKS: any responsibility for errors or omissions that may occur 1. This guarantee card to be kept by the user ,no replenishment if lost. during the output and printing process. In addition, due to the continuous development of technology, the 2. This guarantee card to be filled & chopped by the dealer, or it is invalid. company reserves the right to change the product 3.Don't alter the guarantee card, please confirm the serial number on the guarantee card is same as design and specification without prior notice. that on the machine.

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4 Warranty void if seal broken

b.Our local repairing agent

5.1 year guarantee for product, 6 months for charger, battery and antenna

CHOP BY DEALER

6.The user can get repairing service from the following ways: a.Go to the shop where you buy the machine