

MaxTalker

WALKIE TALKIE



USER'S MANUAL

FEATURES

- LARGE CAPACITY BATTERY
- UHF/HF/FM/AMINOAA
- ONE KEY FLASHLIGHT ALARM
- ONE KEY FREQUENCY MATCH
- WATERPROOF
- TYPE-C



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PREFACE

Thank you for purchasing W70. It is a dual band/dual display/dual watch radio. Combining the latest technology in radio communication along with a sturdy mechanical frame, This product is the ideal and effective solution for the professionals who need to stay in touch with the working team (in construction sites, buildings, shows, trade fairs or hotels) or for leisure users that just want to keep up with friends and family.

IMPORTANT NOTICE

To help you ward off bodily injury or property loss that may arise from improper operation, please read all the information carefully before using our products. This contains instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulation.

SAFETY INFORMATION FOR RADIOS

Your wireless handheld portable transceiver contains a low power transmitter. When the talk button is pushed, it sends out radio frequency (RF) signals. The device is authorized to operate at a duty factor not to exceed 50%. In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless devices.

DISCLAIMER

The Company endeavors to achieve the accuracy and completeness of this manual, but no warranty of accuracy or reliability is given. All the specifications and designs are subject to change without notice due to continuous technological development. No part of this manual may be copied, modified, translated, or distributed in any manner without the prior written consent of the Company.

We do not guarantee, for any particular purpose, the accuracy, validity, timeliness, legitimacy or completeness of the third-party products and contents involved in this manual.

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1. GETTING STARTED

1.1 Regulations and Safety Warnings

FCC Licensing Information

This device complies with Part 97 and 15 of the federal Communications Commission (FCC) Rules.

Operation is subject to the condition that this device does not cause harmful interference. The radio operates on radio frequencies that are regulated by the Federal Communications Commission (FCC). To transmit on these frequencies, you are required to have a license issued by the FCC. To obtain forms, call the FCC forms hotline at: or go to <http://www.fcc.gov>. For questions concerning commercial licensing, contact the FCC at 1-888-CALL-FCC (1-888-225-5322).

Before filling out your application, you must decide which frequency you can operate on.

NOTICE: Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

FCC Regulatory Conformance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Verification of harmful interference by this equipment to radio or television reception can be determined by turning it off and then 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

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

EU Regulatory Conformance

As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the Directive 2014/53/EU. All applicable EU regulations are regarded (2006/66/EC, 2011/65/EU, (EU)2015/863, 2012/19/EU).

NOTE: It can be operating under 2000m.

WARNING! European Users should note that operation of this unit in Transmit mode requires the operator to have a valid Amateur Radio License from the respective Countries Amateur Radio Licensing Authority for the Frequencies and Transmitter Power levels that this Radio transmits on. Failure to comply may be unlawful and liable for prosecution. At this subject, refer to the "EU" specification guide 2014/53/EU.

Please note that the above information is applicable to EU countries only.

Compliance with RF Exposure Standards

The radio complies with the following RF energy exposure standards and guidelines:

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR §1.1307, 1.1310 and 2.1093
- American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95.1:2005; Canada RSS102 Issue 5 March 2015
- Institute of Electrical and Electronic Engineers (IEEE) C95.1:2005 Edition.

RF Exposure Information

WARNING! Read this information before using the radio. In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters.

Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of the radio

complies with the FCC guidelines and these international standards.

Never allow children to operate the radio without adult supervision and the knowledge of the following guidelines.

WARNING! It is up to the user to properly operate this radio transmitter to insure safe operation. Please adhere to the following:

Use only the supplied or an approved antenna. Unauthorized antennas, modifications, or attachments could impair call quality, damage the radio, or result in violation of FCC regulations. Do not use the radio with a damaged antenna.

If a damaged antenna comes into contact with the skin, a minor burn may result. Please contact your local dealer for a replacement antenna.

Hand-held Operation (Held-to-Face)

This device was evaluated for typical hand-held (held-to-face) operations with a 1 inch spacing from the front of the radio. For hand-held operation, the radio should be held 1 inch from the user's face in order to comply with FCC RF exposure requirements.

Body-worn Operation

This device was evaluated for body-worn operations with the supplied belt-clip accessory. (All necessary accessories are included in the package; any additional or optional accessories are not required for compliance with the guidelines.) Third party accessories (unless approved by the manufacturer) should be avoided as these might not comply with FCC RF exposure guidelines.

For more information about RF exposure, please visit the FCC web site at www.fcc.gov.

FCC Warnings

Replacement or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by our company may cause a violation of the technical regulations of part 95 of the FCC rules, or violation of type acceptance requirements of part 2 of the rules.

1.2 Main features

- Dual displayed,Dual watch,Dual band
- Operating modes:UHF/VHF,UHF/UHF,VHF/VHF
- CTCSS and DCS codes research
- Squelch adjustable in 9 levels
- 199 Programmable Channels
- 50 CTCSS tones and 105 DCS codes
- SOS Emergency function
- Built-in FM Radio(76.0-108.0MHz)
- VOX,Scan,Dual Watch functions
- 2pin Kenwood accessory jack
- Channel or frequency mode selection
- TOT(Time out timer)
- DTMF function
- Setting and storing of channel names
- Busy Channel Lockout function(BCL)
- VOICE:vocal indication of the function selected
- Frequency step:2.5/5/6.25/10/12.5/20.0/25.0/50.0KHz
- Frequency offset(adjustable):0-69.990MHz
- Power Save
- Air Band:108Mhz-136Mhz
- One Key Frequency Match
- NOAA Weather

About Range

This product series radios are designed to give you maximum range under optimum conditions.

- Maximum Range:Little to No sight Obstruction.
- Medium Range:Partial Obstruction to line of sight.
- Short Range:Major Obstruction to Line of Sight.

Optimum Conditions are:

- Over water
- Open rural areas without obstructions
- Flat areas where you can see the other person

To ensure you get maximum range:

- Be sure to use fresh or fully charged batteries -low batteries will cause low power conditions.
- Be sure to set your radio to use Hi power.

1.3 Maintenance

Your Two Way Radio is an electronic product of exact design and should be treated with care.

The suggestions below will help you to fulfill any warranty obligations and to enjoy this product for many years.

Do not attempt to open the radio for any reason!The radio's precision mechanics and electronics require experience and specialized equipment; For the same reason,the radio should under no circumstances be realigned as it has already been calibrated for maximum performance. Unauthorized opening of the transceiver will void the warranty.

- Do not store the Radio under the sunshine or in hot areas.
- High temperatures can shorten the life of electronic devices,and warp or melt certain plastics.
- Do not store the radio in dusty and dirty areas.
- Keep the Radio dry.Rainwater or damp will corrode electronic circuits.
- If it appears that the Radio diffuses peculiar smell or smoke,please shut off its power immediately and take off the charger or battery from the radio.
- Do not transmit without antenna.

2.BATTERY INFORMATION

2.1 Charging the Battery Pack

The Li-ion battery pack is not charged at the factory;please charge it before use.Charging the battery pack for the first time after purchase or extended storage(more than 2 months)may not bring the battery pack to its normal maximum operating capacity.Best operation will require fully charging/discharging the battery two or three times before the operating capacity will reach its best performance.The battery pack life may be depleted when it's operating time decreases even though it has been fully and correctly charged.If this is the case,replace the battery pack.

2.2 Charger Supplied

Please use the specified charger provided by our company.Other models may cause explosion and personal injury.After installing the battery pack,and if the radio displays low battery with a voice prompt,please charge the battery.

2.3 Use Caution with the Li-ion Battery

A.Do not short the battery terminals or throw the battery into a fire.Never attempt to remove the casing from the battery pack,as our company cannot be held responsible for any accident caused by modifying the battery.

B.The ambient temperature should be between 5°C-40°C(40°F-105°F)while charging the battery.Charging outside this range may not fully charge the battery.

C.Please turnoff the radio before inserting it into the charger.It may otherwise interfere with correct charging.

D.To avoid interfering with the charging cycle,please do not cut off the power or remove the battery during charging until the green light is on.

E.Do not recharge the battery pack if it is fully charged.This may shorten the life of the battery pack or damage the battery pack.

F.Do not charge the battery or the radio if it is damp.Dry it before charging to avoid damage.

WARNING!

When keys,ornamental chain or other electric metals contact the battery terminal,the battery may become damage or injure a human.If the battery

terminals are short circuited it will generate a lot of heat.Take care when carrying and using the battery.Remember to put the battery or radio into an insulated container.Do not put it into a metal container.

2.4 How to Charge

A.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.The indicator light blinks orange and is then ready to charge a battery.

B.Plug the battery or the radio into the charger.Make sure the battery terminals are good in contact with charging terminals The indicator light turns to red---charging begins.

C.It takes approximately 2-5 hours to fully charge the battery.When the lamp lights green,the charging is completed.

Remove the battery or the radio unit with its battery from socket.

When charging a radio(with battery)the indicating lamp will not turn into green to show the fully charged status if the radio is powered on.Only when the radio is switched off will the lamp indicate normal operation.The radio consumes energy when it is power-on,and the charger cannot detect the correct battery voltage when the battery has been fully charged.So the charger will charge the battery in constant voltage mode and fail to indicate correctly when the battery has been fully charged.

2.5 LED Indicator

STATUS	LED
No Battery	Green and red alternately flashing
Charge Normally	Red
Fully Charged	Green

NOTE:Trouble means battery too warm,battery short-circuited or charger short-circuited.

2.6 How to Store the Battery

a.If the battery needs to be stored,keep it in status of 80%discharged.

b.It should be kept in low temperature and dry environment.

c.Keep it away from hot places and direct sunlight.

- Do not short circuit the battery terminals.
- Never attempt to remove the casing from the battery pack
- Never store the battery in unsafe surroundings, as a short may cause an explosion.
- Do not put the battery in a hot environment or throw it into a fire, as it may cause an explosion.

3.INSTALLATION OF ACCESSORIES

Before the radio is ready for use we need to attach the battery pack, as well as charge the battery.

3.1 Installing the belt clip

a. At the back of the radio there are two parallel screws mounted above the battery, remove these and thread them through the holes on the belt clip as you screw them back into the radio body.

b. Removing the Belt Clip: Unscrew counter-clockwise to remove the belt clip.

3.2 Installing the battery pack

Before attaching or removing the battery make sure your radio is turned off by turning the power/volume knob all the way counter-clockwise.

a. Make sure the battery is aligned in parallel with the radio body with the lower edge of the battery about 1-2cm below the edge of the radio.

b. Once aligned with the guide-rails, slide the battery upward until you hear a click as the battery locks in place

Remove the battery pack

To remove the battery, press the battery release below the battery pack.

3.3 Installing the Additional Speaker/Microphone(Optional)

Pry open the rubber MIC-Headset jack cover and then insert the Speaker/Microphone plug into the double jack.

4.RADIO OVERVIEW

Keyboard Explanation



4.1Buttons and controls of the radio

1. Antenna

2. PTT Key: Transmit key, hold the key to speak at Channel, release the key after speaking, and receive incoming calls

3. [Key side 1] Short press the FM radio ON/OFF, long press to turn on the alarm function. This is the default factory setting. You can also customize the settings via PC program.

3. [Key side 2] Squelch. You can also customize the settings via PC program.

4. Menu Key/Confirm Key

5. Up/down knob

6. Exit/Cancell Key

7. : Short press to switch A/B band, Long press to enter One Key Frequency Match, press this button again to exit.

8. Lock/Unlock

9. Antenna

10. Power Switch/Volume control: Rotate to switch on/off the radio and adjust the volume

11. Keypad

12. Microphone

13. Kenwood Port/programming port

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MAIN CONTROLS AND PARTS OF THE RADIO



4.2 Main controls and parts of the radio

ICON	Description
H	High transmitting power (longest communication distance and largest power consumption)
L	Low transmitting power (most power efficient and relatively close distance).
DCS	This symbol indicates that the current tone is DCS.
CT	This symbol indicates that the current tone is CTCSS
+	The difference between the receive and transmit frequencies of a radio channel is +offset
-	The difference between the receive and transmit frequencies of a radio channel is -offset
	The symbol will appear when the keyboard is locked; Hold to unlock
	This symbol indicates that the VOX function is activated and the intercom will start transmitting; when the sound pressure level of the microphone reaches the set value
R	Reverse the receive and transmit frequencies in frequency mode/channel mode.
N	This symbol appears when the channel is operating in narrowband mode.
	Current battery power remaining; Full battery charge; Battery Remains; When the battery is about to run out, the outer frame of this icon flashes to show that the radio is unable to transmit at this time.
Frequency	Working Frequency on A/B band
Channel No.	The channel number of the A/B band in channel mode.

4.3 Status Indications

The status LED has a very simple and traditional design.

LED Indicator	Radio Status
Constant Red	Transmitting.
Constant Green	Receiving

4.4 Main keypad controls

- (MENU)key: It is used for activating the MENU, choose each MENU selection and confirm the parameter.
- Exit key(Switch Key) : It is used to return to the main menu or the previous menu. Press it for more than 2 seconds to Switch between channel mode and frequency mode.
- Short press to switch A/B band, Long press to enter One Key Frequency Match, press this button again to exit.



With these keys you can input the information or your selections on the radio. In Tx mode, push the number keys to send a corresponding DTMF code.

5. BASIC OPERATIONS

5.1 Power on the radio

• Turning the unit on

To turn the unit on, simply rotate the volume/power knob clockwise until you hear a "click". If your radio powers on correctly, there should be an audible double beep after about one second and the display will show a message or flash the LCD depending on settings for about one second. Then it will display a frequency or channel. If the Voice prompt is enabled, the voice will announce "frequency mode" or "channel mode".

• Turning the unit off

Turn the volume/power knob counter-clockwise all the way until you hear a "click". The unit is now off.

5.2 Adjusting the volume

To turn up the volume, turn the volume/power knob clockwise. To turn the volume down, turn the volume/power knob counter-clockwise. Be careful not to turn it too far, as you may inadvertently turn your radio off.

5.3 Channel selection

There are two modes of operation: Frequency(VFO) mode, and Channel or Memory(MR) mode. Press and hold  key for more than 2 seconds to switch between channel mode and frequency mode. (Note: First time it will enter CH-* Channel mode, Second time it will enter frequency mode.) For everyday use, Channel (MR) mode is going to be a whole lot more practical than Frequency (VFO) mode. However, Frequency (VFO) mode is very handy for experimentation out in the field. Frequency(VFO) mode is also used for programming channels into memory.

In Channel(MR) mode you can navigate up and down the channel by using Channel Switch Knob or the  keys.

Ultimately which mode you end up using will depend entirely on your use case.

5.4 Making a call

Channel mode call: After selecting a channel, hold down the [PTT] key to initiate a call on the current channel. Speak into the microphone with normal tone. Initiate a call, the red LED is on.

Frequency mode call: After selecting a frequency, hold down the [PTT] key to initiate a call on the current channel. Speak into the microphone with normal tone. Initiate a call, the red LED is on.

Receive a call: When you release the [PTT] key, you can answer it without any action.

When receiving a call, the green LED is on.

NOTE: To ensure the best reception volume, keep the distance between the microphone and the mouth at the time of transmission from 2.5cm to 5cm.

5.5 Frequency(VFO) mode

In Frequency(VFO) mode you can navigate up and down the band by using Channel Switch Knob or the  keys. Each press will increment or decrement your frequency according to the frequency step you've set your transceiver to.

You can also input frequencies directly on your numeric keypad with kilohertz accuracy. The following example assumes the use of a 12.5kHz frequency step.

Example. Entering the frequency 432.56250 MHz on display A

a. In standby mode, switch to the frequency(VFO) mode.

b. Enter [4][3][2][5][6][2][5][0] on the numeric keypad.

WARNING!

Just because you can program in a channel does not mean you're automatically authorized to use that frequency. Transmitting on frequencies you're not authorized to operate on is illegal, and in most jurisdictions a serious offence. However, it is legal in most jurisdictions to listen. Contact your local regulatory body for further information on what laws, rules and regulations apply to your area.

5.6 Channel (MR)mode

The use of Channel(MR)mode is dependent on actually having programmed in some channels to .

Once you have channels programmed and ready, you can use Channel Switch Knob or the  keys to navigate between channel.

In MR mode, the channel number will be displayed on the right.



6.ADVANCED FEATURES



One Key Frequency Match

1)The radio will act as a receiver. Press and hold the  key, and the screen will enter Copy mode.

2)If the transmitter continues to transmit and the unit receives an effective frequency(the strongest and stable signal), the received frequency will be displayed.If there is a CTCSS or DCS, the CTCSS or DCS value is displayed  and if there is no CTCSS or DCS, NONE is displayed.

3)You can press the  Menu key to save the search frequency and CTCSS or DCS to the channel 1, and then automatically enter the channel 2 frequency search. Press  key again to exit this function.

7.WORKING THE MENU SYSTEM

For a complete reference on available menu items and parameters, see Appendix C, Shortcut Menu operations.

Note: in channel mode, the setting of these features is not possible: CTCSS/DCS tones, wide/narrow bandwidth, PTT- ID, Busy channel lock out, channel name edit.

7.1 Basic use

Using the menu with arrow keys

A. Press the  key to enter the menu.

B. Use  keys to navigate between menu items.

C. Once you find the desired menu item, press [MENU] again to select that menu item.

D. Use  keys to select the desired parameter.

E. When you've selected the parameter you want to set for a given menu item;

a). To confirm your selection, press  and it will save your setting and bring you back to the Previous menu.

b). To cancel your changes, press  and it will reset that menu item and bring you out of the menu entirely.

F. To exit out of the menu at any time, press the  key.

7.2 FUNCTIONS AND OPERATIONS

7.21TX/RX 【Transmit and receive settings】

(1)Work Mode

You can select the working mode you need in this menu: MEMORY/VFO/CH, or you can press and hold  this key to switch manually.

(2)Step 【Step frequency】

This function lets you select the desired frequency step.

The selectable steps are the following:

5.0/6.25/10.0/12.5/25.0/50.0KHz/100KHz

Note: In channel mode, this function cannot be modified.

(3)Power

This function lets you select the High/Low power output according to using scenario.

(4)SQL 【Squelch level】

Thanks to this function you can adjust the squelch in 10 different levels: Level 0: opened squelch. With this setting, radio will detect all signals, also the weakest ones, but will also receive the background noise or undesired signals.

Levels 1-9: level 1 (lowest squelch level), level 9 (highest squelch level).

If the squelch is set to the highest level, the radio will receive the strongest signals only.

(5)Bandwidth 【Wide/Narrow bandwidth】

This function is used to set the working bandwidth of the radio. You can choose between wide or narrow bandwidth.

Wide:25KHz, Narrow:12.5KHz

(6)TOT 【Transfer-Over-Time】

The TOT function is used to prevent a too long transmission and limits the Tx time:TOT temporarily stops the transmission if the radio has been used beyond the max pre-set time (for example 30s,60s,90s,120s,150s,180s,210s,240s,270s,off).

Note:If this option is set to OFF,press and hold the PTT key to keep transmission.

(7)BCLO Busy Lockup

When this function is on,it may prevent other radios 'interference.If the selected channel is being used by other radios,when you press key PTT,your radio cannot transmit.

Release the PTT and transmit as soon as the frequency is no longer busy.

(8)Scramble

With this function only one received the same decryption program in order to obtain voice. To communicate with each other only to open the same scramble between loom,
If scrambling different,the machine can receive signals, but can not hear clearly what is said.

7.2.2.CTC/DCS

1.C-CTC/DCS

CTCSS and DCS are switched by the  key:

- D023N (D023N-D754N(Normal DCS))
- D023I (D023I-D754I(Inverse DCS))
- OFF
- 67.0 (67.0 to 254.1 Hz)

2.R-CTC/DCS 【Receiving CTCSS/DCS】

Receiving DCS(Rx DCS)

DCS codes are similar to access codes and can be added to channels,so as to create a sort of personal channel.They enable the radio to commu-

nicate with the users that are tuned on the same channel and have set the same DCS code. You can choose among:

D023N-D754N(Normal DCS),D023I-D754I(Inverse DCS)

Note:In radio there are 208 groups of normal and inverse DCS codes. This function cannot be amended in channel mode.

Receiving CTCSS (Rx CTCSS)

As DCS codes,the CTCSS codes can be added to the channels for creating new private channels.

Note:there are 50 groups of CTCSS tones.In channel mode the CTCSS tones cannot be changed.

3.T-CTC/DCS 【Transmitting CTCSS/DCS】

Transmitting DCS (Tx DCS)

In this Menu you activate DCS codes in tx mode.You can choose between normal R-DCS(D023N-D754N)and inverted R- DCS (D023I-D754D)

Note:the groups of DCS codes are 208. DCS codes cannot be changed in frequency mode.

Transmitting CTCSS(Tx CTCSS)

In this Menu you can set a CTCSS tone in tx mode. You can choose: CTCSS (67.0 to 254.1 Hz)

Note:there are 50 groups of CTCSS tones In frequency mode the CTCSS tones cannot be changed.

4. SPEC DQT 【Frequency Hopping】

Frequency hopping is a wireless communication technique that sends data packets on different frequencies to avoid interference and eaves-dropping.

5.SPEC Type 【Specific Type】

The difference between special sub-tones and standard sub-tones

Frequency range: Standard sub-tone frequencies are usually between 67.0Hz and 250.3Hz, while special sub-tones are not within this range.

Usually, only devices of the same brand use the same non-standard sub-tone values.

Compatibility: Using non-standard sub-tones may cause devices that do not support the sub-tones to be unable to communicate, so there may be obstacles in the interconnection of devices.

7.2.3 CHANNEL

01 Stor Channel 【Channel store】

When the radio is in frequency working mode or standby mode, input the desired frequency or parameters directly.

NOTES: If you want to set CTCSS tones, DCS codes or the frequency offset, you have to do it before storing the channel. The channels already stored are displayed as CH-XXX("CH" and -channel number), and other channels only display channel numbers.

02 Del Channel 【Channel Delete】

In this menu you can delete a channel of the radio.

7.2.4 SCAN

Thanks to this function, radio can SCAN in frequency or channel mode.

7.2.5 SET

01 Back Light

With this function you can adjust the auto off time of the display backlight (On/5s/10s/15s/off).

When the option is on, the backlight is always on, which will affect the battery standby time. Note: we suggest you setting 10s.

02 Voice

With this function, you activate a voice that informs you about any operation/selection you are doing.

03 Key Beep

When this function is enabled, every time a button is pressed, you will hear a beep tone.

04 Language

With this function, you can select the language of the LCD display and operation prompt.

05 Key Lock

When this feature is activated, the keypad will be automatically locked after 15s; this prevents accidental pressure of any keys.

The keypad lock can be manually activated/deactivated through the keypad: keep pressed  .

06 Batt.Saver

The battery saver feature enables a reduction in the consumption of the battery when the radio is in standby.

07 Offset 【Frequency offset】

In this MENU you can set the deviation between tx and rx. The frequency offset of this radio 00.00000-69.99750MHz.

08SFT-D 【Frequency offset direction】

Using this function, you can set the direction of the frequency offset in Rx and Tx. You have the following options:

OFF: None offset;

+: Positive offset;

- : Negative offset;

Note: you should set different frequency deviation according to the repeaters selected. This function is not enabled in channel mode.

09 Double Rx 【Dual Standby】

When this function is turned on, both segment A and segment B can maintain the receiving signal status at the same time.

10 TX.SL 【Priority transmit】

EDIT: Transmit on MAIN Channel

BUSY: Transmit on MOST RECENT receiving channel

11 STE 【Squelch tail elimination】

This function is used to eliminate squelch tail noise between handhelds that are communicating directly (no repeater). Reception of a 55 Hz or 134.4 Hz tone burst mutes the audio long enough to prevent hearing any squelch tail noise.

12 ROGER

When the PTT is released, the radio will beep to confirm to other users that you have finished your transmission and that they can start talking.

13 Warn Mode 【Alarm Mode】

This function can set the tone alarm/site alarm of the radio.

Keep pressed the Side Key 1 for 3 seconds to start the alarm tone. The following two options can be selected:

TONE: long press Side Key 1 to emits an alarm tone

TX TONE: the sending and receiving radios both emit the alarm tone.

14 APWR-OFF 【Auto Power Off】

You can set the automatic shutdown time in this function: OFF/4H/8H/16H/24H.

15 OpenMsg

Boot display settings: LOGO/Voltage

16 Channel Name

Select to turn on or off the display of channel name on the screen.

7.2.6 VOX

01 Vox Gain

This function allows hands-free conversations: just speak in the direction of the microphone and the communication will be automatically activated. You can choose among 6 levels: Off, 1, 2, 3, 4, 5. 5 is the highest level, 1 is the lowest one. If this option is set to Off, the VOX function is turned off.

Note: The higher is the level, the higher is the microphone sensitivity. The VOX function cannot be modified in SCAN and FM radio mode.

02 Vox Delay

Select the corresponding time to delay the voice-controlled transmission : 0S/1S/2S/3S.

7.2.7 RADIO 【FM RADIO】

01 Work Mode

You can select the working mode you need in this menu: VFO/CH, or you

can press and hold  this key to switch manually.

02 FM-R Watch

FM monitoring : ON/OFF

03 Stor Channel

This function is for FM radio frequency store.

First, select VFO as the working mode in 【Radio】 menu 01, return to the main interface, short press side button 1 to enter FM radio mode, select/manually enter the radio frequency you need, then enter the menu list 【Radio】, select 03 Stor Channel to enter, select the channel number you want to save again, and then press the confirm button to complete the saving.

Total 1~25 channel have. Tips: If in Channel Radio work mode, can't store FM Channel.

04 Del Channel

Select the FM radio channel you want to delete it. Total 1~25 channel have.

7.2.8 WEATHER

1	162.55000M	2	162.40000M	3	162.47500M
4	162.42500M	5	162.45000M	6	162.50000M
7	162.52500M	8	161.65000M	9	161.77500M
10	163.27500M				

Appendix A.-Trouble shooting guide

Phenomena	Analysis	Solution
You cannot turn on the radio.	The battery may be installed improperly	Remove and reattach the battery
	The battery power may run out.	Recharge or replace the battery.
	The battery may suffer from poor contact caused by dirty or damaged battery contacts.	Clean the battery contacts or replace the battery.
During receiving the voice is weak or intermittent.	The battery voltage maybe low.	Recharge or replace the battery.
	The volume level may be low.	Increase the volume.
	The antenna maybe loose or maybe installed incorrectly.	Turn off the radio and then remove and reattach the antenna.
	The speaker maybe blocked.	Clean the surface of the speaker.
	The frequency or signaling type maybe inconsistent with that of other members.	Verify that your TX/RX frequency and signaling type are correct.
You cannot communicate with other group members.	You may be too far away from other members.	Move towards other members.
You hear unknown voices or noise.	You may be interrupted by radios using the same frequency.	Change the frequency or adjust the squelch level.
	The radio in analog mode maybe set with no signaling.	Request your dealer to set signaling for the current channel to avoid interference.
You are unable to hear anyone because of too much noise and hiss.	You may be too far away from other members.	Move towards other members.
	You maybe in an unfavorable position. For example, your communication may be blocked by high buildings or blocked in an underground area.	Move to an open and flat area, restart the radio, and try again.
	It may be the result of external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.
The radio keeps transmitting	VOX may be turned on or the headset is not installed in place.	Turn off the VOX function. Check that the headphones are in place.

NOTE: If the above solutions cannot fix your problems, or you may have some other queries, please contact your dealer for more technical support.

Appendix B.-Technical Specifications

General	
Frequency Range	Rx)FM:76-108Hz AM:108-136MHz/350-390MHz (Tx/Rx)UHF:300-600MHz VHF:100-290MHz
Memory Channel	199
Operation Voltage	DC7.4V±10%
Battery Capacity	2100mAh (Li-Ion)
Frequency Stability	±2.5ppm
Operating Temperature	-20°C to+50°C
Mode of Operation	Simplex
Antenna Impedance	50ohm
Transmitter Part	
FM Modulation	11K0F3E@12.5KHz
Adjacent Channel Power	60dB@12.5KHz
Transmission current	≤1500mA
Receiver Part	
Receive Sensitivity	0.25μV(12dB SINAD)
Adjacent Channel Selectivity	≥55dB@12.5KHz
Inter Modulation and Rejection	≥55dB@12.5KHz
Conducted Spurious Emission	≤-57dB@12.5KHz
Rated Audio Power Output	1W@16ohms
Receive current	≤380mA
Rated Audio Distortion	≤5%

Note: The above parameters are subject to change without prior notice!

Appendix C.-DCS Table

Number	Code	Number	Code	Number	Code	Number	Code	Number	Code
1	D023N	2	D025N	3	D026N	4	D031N	5	D032N
6	D036N	7	D043N	8	D047N	9	D051N	10	D053N
11	D054N	12	D055N	13	D071N	14	D072N	15	D073N
16	D074N	17	D114N	18	D115N	19	D116N	20	D122N
21	D125N	22	D131N	23	D132N	24	D134N	25	D143N
26	D145N	27	D152N	28	D155N	29	D156N	30	D162N
31	D165N	32	D172N	33	D174N	34	D205N	35	D212N
36	D223N	37	D225N	38	D265N	39	D243N	40	D244N
41	D245N	42	D246N	43	D251N	44	D252N	45	D255N
46	D261N	47	D263N	48	D265N	49	D266N	50	D271N
51	D274N	52	D306N	53	D311N	54	D315N	55	D325N
56	D331N	57	D332N	58	D343N	59	D346N	60	D351N
61	D356N	62	D364N	63	D365N	64	D371N	65	D411N
66	D412N	67	D413N	68	D423N	69	D431N	70	D432N
71	D445N	72	D446N	73	D452N	74	D454N	75	D455N
76	D462N	77	D464N	78	D465N	79	D466N	80	D503N
81	D506N	82	D516N	83	D523N	84	D526N	85	D532N
86	D546N	87	D565N	88	D566N	89	D612N	90	D624N
91	D627N	92	D631N	93	D632N	94	D645N	95	D654N
96	D662N	97	D664N	98	D703N	99	D712N	100	D723N
101	D731N	102	D732N	103	D734N	104	D743N	105	D754N
106	D023i	107	D025i	108	D026i	109	D031i	110	D032i
111	D036i	112	D043i	113	D047i	114	D051i	115	D053i
116	D054i	117	D055i	118	D071i	119	D072i	120	D073i
121	D074i	122	D114i	123	D115i	124	D116i	125	D122i
126	D125i	127	D131i	128	D132i	129	D134i	130	D143i
131	D145i	132	D152i	133	D155i	134	D156i	135	D162i
136	D165i	137	D172i	138	D174i	139	D205i	140	D212i
141	D223i	142	D225i	143	D265i	144	D243i	145	D244i
146	D245i	147	D246i	148	D251i	149	D252i	150	D255i
151	D261i	152	D263i	153	D265i	154	D266i	155	D271i
156	D274i	157	D306i	158	D311i	159	D315i	160	D325i
161	D331i	162	D332i	163	D343i	164	D346i	165	D351i
166	D356i	167	D364i	168	D365i	169	D371i	170	D411i
171	D412i	172	D413i	173	D423i	174	D431i	175	D432i
176	D445i	177	D446i	178	D452i	179	D454i	180	D455i
181	D462i	182	D464i	183	D465i	184	D466i	185	D503i
186	D506i	187	D516i	188	D523i	189	D526i	190	D532i
191	D546i	192	D565i	193	D566i	194	D612i	195	D624i
196	D627i	197	D631i	198	D632i	199	D645i	200	D654i
201	D662i	202	D664i	203	D703i	204	D712i	205	D723i
206	D731i	207	D732i	208	D734i	209	D743i	210	D754i

Appendix D.-CTCSS Table

CTCSS CHART(Hz)									
Number	Frequency	Number	Frequency	Number	Frequency	Number	Frequency	Number	Frequency
1	67.0	2	69.3	3	71.9	4	74.4	5	77.0
6	79.7	7	82.5	8	85.4	9	88.5	10	91.5
11	94.8	12	97.4	13	100	14	103.5	15	107.2
16	110.9	17	114.8	18	118.8	19	123.0	20	127.3
21	131.8	22	136.5	23	141.3	24	146.2	25	151.4
26	156.7	27	159.8	28	162.2	29	165.5	30	167.9
31	171.3	32	173.8	33	177.3	34	179.9	35	183.5
36	186.2	37	189.9	38	192.8	39	196.6	40	199.5
41	203.5	42	206.5	43	210.7	44	218.1	45	225.7
46	229.1	47	233.6	48	241.8	49	250.3	50	254.1