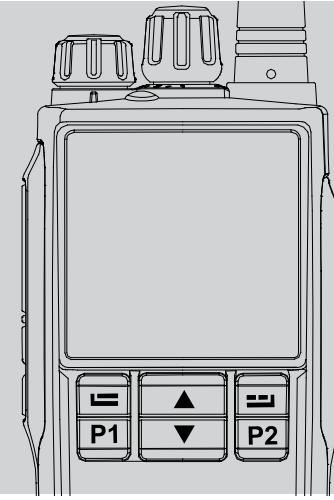




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# USER'S MANUAL

HANDHELD DIGITAL TERMINAL

## To users

Thank you for your favor with our products.

We are dedicated to providing high performance and high stability radio communication products. This two-way radio is no exception. The radio is a DMR dual-slot digital walkie-talkie developed and produced by my team with 1024 memory channels, full-color LCD display and full keyboard hand-tuning function. In order to make you fully understand the various advantages of the radio performance and use and maintenance methods, please read this manual carefully.

## Main Features

- Broadband walkie talkie

Support UV double segment, frequency range

UHF400.000-480.000MHz / VHF136.000-174.000MHz

- DMO True2-Slot dual time slot

Direct mode dual-slot communication achieves two groups of calls at a frequency point at the same time, so that the communication efficiency is doubled and frequency resources are saved

- Digital and analog compatible, smooth over

Support DMR digital and analog two communication modes to ensure that the original analog products smooth transition to digital products to meet different communication needs

- Digital signaling function

Rich calling modes that support DMR protocol, including single call, group call and all call; supports remote inhibit function and other applications

- SMS function

Supports SMS, text editing and draft in 250 characters in Chinese and English, so that text messages calls can be sent when voice call is inconvenient

- High sound quality

This digital two-way radio uses advanced AMBE +2TM voice processing technology to achieve high quality

- Manual writing-frequency

Supports channel / frequency mode, allows manual writing-frequency in frequency mode, and writing-frequency software can be used to set the required frequency without connecting the computer

- High/low power switch

Meets the power requirements of different call distances to save more energy

- Alarm function

Supports general alarm and silent alarm in emergency situations

- Digital mode supports the use of relays

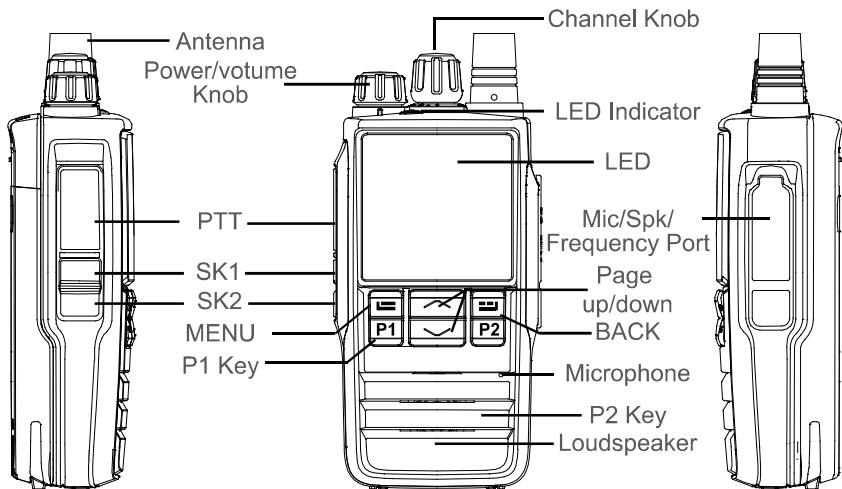
• Side buttons can be customized without changing the user's operating habits

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## Familiar with this Product

You can familiarize yourself with the external structure and the functions of programmable buttons of this product in this section.



[PTT]Transmit button	Switch between transmission and reception; when transmitting, press this button and speak to the microphone; release the button to receive.
Side button SK1	Short press is the monitor function (only analog channels are supported). Switch to the monitor squelch mode when this button is pressed, and return to the receive squelch mode when the button is pressed again.
Side button SK2	Long press for the power switch, select the high and low power.
Top button	Press this button to end the emergency alarm mode Press and hold this button to activate the emergency alarm mode to quickly establish an emergency call.

[MENU] button	Press it to activate the menu mode, enter the menu and press this button to select menu items.
	Press and hold it to enter the radio settings.
[▲]button	Channel mode, changing the channel backwards.
	Move left in SMS editing interface.
[▼]button	Channel mode, changing the channel forward.
	Move right in SMS editing interface.
[BACK]/[Clear] button	In standby mode, short press to switch between dual-segment single-standby or dual-segment dual-standby mode.
	Clear the entered information in input state.
P1 user-defined key	Short press this button to quickly switch between the upper and lower screens and switch between the A screen and the B screen.
	Press and hold this button to enter a digital contact.
P2 user-defined key	Short press for zone switching function.Quickly select the zone, allowing the user to switch between the two zone.
	Press and hold this button to lock on / off keyboard

## Programmable Buttons

In order to improve the operational convenience, the function shortcut keys provided by this product are [SK1] key, [SK2] key, [TK1] key. For the specific function, please consult the distributor. For the detailed description of each function, please refer to the corresponding contents of "Function and Operation".

No.	Shortcut name	Purpose
1	None	No function is assigned to the preset button.
2	Power adjustment	Quickly switch between high power and low power.
3	Emergency mode on	Quickly establish an emergency call. This is the recommended option for the orange button.
4	Emergency mode off	Quickly end an emergency call initiated outward.
5	Offline	Press this button to toggle the host between pass-through mode and transit mode.
6	Encryption	Quickly turn on/off encryption for channel (only for digital mode).
7	VOX	Quickly turn on or off the voice control function.
8	Push to talk 1	Call shortcuts, after pressing a one-click call, send the corresponding call, SMS or other application function.
9	Contact	Press this button to enter the digital contact list to initiate a call or call related services.
10	Area up	Press this button to switch to the previous area.
11	Area down	Press this button to switch to the next area.
12	Area switching	Quickly select areas that allow users to switch between the two areas.
13	Keypad lock	Quickly lock the numeric keypad (not including the PTT button).
14	Steady state monitoring	Switch to the monitor squelch mode when this button is pressed, and return to the receive squelch mode when the button is pressed again.

No.	Shortcut name	Purpose
15	Battery power indication	Quickly access to battery power. The user can check the battery status by LED. The battery power is sufficient if the LED is constantly in green, the battery power is still available if the LED is constantly in yellow, and the battery power is low if the LED is in red.
16	Scan on / off	Quickly turn the scan function on or off. Note: double-segment double-waiting scan does not work
17	Scan backup	Press this button
18	Recording switch	(Based on firmware) to quickly turn on/off the recording
19	Previous recording	(Based on firmware) to quickly play back the previous recording.
20	Next recording	(Based on firmware) to quickly play back the next recording.
21	Scheduling (1750Hz pilot)	Fast launch 1750 pilot signal
22	Temporary deletion of noise channels	When the scan is paused, pressing this button temporarily deletes the temporarily unwanted noise channel. The channel is not detected during the next scan detection. When the host restarts scanning, the channel will be restored in the scan list.
23	Time broadcast	Press this button to broadcast the current time.
24	Flashlight	Press this button to turn on the flashlight and press it again to turn off the flashlight.
25	Up and down screen switch	Quickly switch the upper and lower screen
26	Working alone	Press this button to switch between the individual work functions on and off.

#### Note:

The same button short press and long press can achieve different functions, specific by the dealer settings.

## Security and overview

### RF radiation information

This product is intended for professional applications that meet RF radiation requirements. Users must be aware of the hazards of RF radiation and take appropriate measures to meet the requirements of RF radiation limit.

### Common sense in RF radiation

RF refers to the electromagnetic frequency that can be radiated into space. It is a technology widely used in the fields of communication, medical treatment and food processing. It will produce some RF radiation during use.

### Control and operating instructions of RF radiation

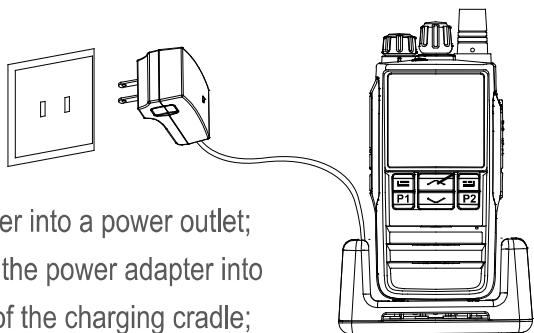
In order to maximize the performance of the product and to ensure compliance with the radiation limits in the relevant occupational or controlled environment of the above criteria, the sending time shall not exceed 50% of the rated factor and shall follow the instructions below:

- RF radiation is generated only during transmission (speech) rather than reception (listening) and standby.
- The distance between the terminal and the body during transmission should be at least 2.5 cm.

## Preparation before use

### Charging

Be sure to ensure that the product is off when charging. Battery into the charger may be charging red flashing constantly flashing, this is the battery power is too low, the charger to protect the battery pre-charge process, is a normal phenomenon, Generally continue for 30 seconds to turn the red light of the normal state of charge. Please use the charging seat specified by our company to charge the battery, the charging seat indicator shows the charging status.



1. Plug the power adapter into a power outlet;
2. Plug the other end of the power adapter into the socket on the back of the charging cradle;
3. Insert the battery or the battery-equipped product into the charging cradle correctly; the indicator light on the charging cradle shows the charging status. When the indicator light is red, it indicates the start of charging. When the indicator turns green, the charging is completed. The specific table below.

Indicator display	Current charge status
Red light	In charging
Green light	The charging is completed

Note:For best battery performance, charge for a minimum of 4 hours on first charge.

## Battery information

### •The first use of the battery

Since the battery is not fully charged at the factory, please charge the new battery before use. Under normal circumstances, the battery when used for the first time, need to charge 4 hours, lithium-ion battery charging using slow charge or fast charge can be performed when charging. It is recommended that the new battery be operated as above for the first three uses. When you find the battery power is low, you need to charge the battery.

### •Suitable battery type

Please use the specified battery for charging; use of other batteries may cause explosion, resulting in human injury.

### •Battery safety attention

1. Do not allow metal contacts (including coins, keys, jewelry, or other conductive metal) to be touched by the battery contacts or pole pieces. Otherwise, the battery may short circuit, discharge, heat or leak, which may result in damage to the item or personal injury. Therefore, be careful when handling any battery.
2. Do not short-circuit the battery terminals or discard the battery in a fire. Do not disassemble the battery pack. When the battery is discarded, please put into a dedicated battery recycling box.

## •Battery normal operation instructions

- >Please charge the battery indoors, battery charging at room temperature best.
- >Under normal circumstances, the charger indicator from red to green when the battery is fully charged, at this time the battery can be removed.
- >You can charge when Battery installed in the walkie-talkie, but when charging is best to turn off the walkie talkie, to ensure that the battery is fully charged.
- >Please do not charge the battery when the battery power is not used up (after the battery is exhausted, the voice prompt alarm will be given), which will shorten the service life of the battery.
- >Do not put a fully charged battery back on the charger to "power up" again, as this operation significantly reduces the cycle life of the battery.

## •Extend battery life

- >Battery performance will reduce below -20 °C temperature conditions. Prepare back-up batteries for use in colder weather. Please do not throw away cold batteries that cannot work. These batteries may be used at room temperature.
- >>Dusting the battery contacts may affect the battery life. Please wipe the contacts with a clean, dry cloth before inserting the batteries into the walkie-talkie.

## •Battery storage needs to know

1. Since the battery will have a self-discharge phenomenon, the battery when not in use for a long time, please fully charge the battery and then stored to avoid over-discharge of its battery to damage the battery.
2. When the battery is in storage, remove the battery to recharge when stored about 6 months. To avoid over-discharge of electrolyte affect battery capacity.
3. Pay attention to the temperature and humidity of the battery storage environment. Store the battery at room temperature in a cool, dry place to minimize self-discharge of the battery.

## •Battery Voltage & Power Indication

If the dealer has set the [battery power prompt] shortcut key for the product, you can press and hold the shortcut key to check the remaining battery power by LED indicator, tone and battery icon. Release the shortcut to cancel viewing the remaining battery power. The top right of the screen shows the current battery power icon is as follows:

Battery icon					
Battery power	High	Medium	Low	Insufficient	

## Status indication

### Description of LCD Icons

Icon name	Icon	Description of product status
Signal strength icon		The more signal bars, the stronger the signal is
Transmission power icon	<b>H</b>	The current channel transmits at high power
	<b>L</b>	The current channel transmits at low power
Direct mode slot icon	<b>CT</b>	The current sub-audio is CTCSS
	<b>DCS</b>	The current sub-audio is CDCSS
Speaker icon		Speaker is enabled, and reception is effective
Relay mode icon	<b>+</b>	The current transmission frequency is the reception frequency plus a frequency bias (positive bias)
	<b>-</b>	The current transmission frequency is the reception frequency minus a frequency bias (negative bias)
Scan icon		Currently in offline state
Non-priority channel		The scan is on and is in normal mode
Priority channel 1	<b>P1</b>	Scan stays on priority channel 1
Priority channel 2	<b>P2</b>	Scan stays on priority channel 2
Battery power icon		The more bars, the more battery power
VOX icon		Voice control is turned on
Pointer icon		Currently pointing to the main digital mode; press A/B button to switch the main channel up and down. When double-waiting is turned on and works in digital sub-channel, the icon is
		Currently pointing to the main analog mode; press A/B button to switch the main channel up and down. When double-waiting is turned on and works in analog sub-channel, the icon is

### LED Indicators

This product has LED indicators so you can easily grasp the current operating state.

Indicator status	Red on	Green on	Green flash
Product status	Transmitting	Receiving	Scanning

## Basic operation

### •Power on and off

To turn on the power, turn the [Power Switch / Volume Control] knob clockwise until you hear a "click" sound and a short beep sounds. To turn off the radio, turn the knob counterclockwise until you hear a click. In English language, if voice announcement is enabled, the channel is broadcast when the terminal is powered on or when switching channels.

Note: If you disable the tone function of this product, there will be no boot tone. If all LED's are disabled, the transmit / receive light does not come on during turning on. A short beep sounds to indicate successful boot detection.

### •Volume adjustment

Turn on the power, turn the [Power Switch / Volume Control] knob clockwise to increase the volume of voice reception, and turn counterclockwise to reduce the volume of voice reception. When adjusting the volume, the product LCD displays the corresponding length of the volume bar.

## •Selecting Zone

Zone is a channel group in which you can include channels with the same attributes (such as call type, digital mode and analog mode) in a region, which makes it easy for you to manage existing channels.

The unit supports up to 250 regions, and each zone contains up to 64 channels.

You can select a zone in two ways:

> Select by programming button:

If the dealer has set the [Zone Up] and [Zone Down] shortcuts for you, press this shortcut to switch to the desired area.

>Select through the menu:

1. Press the [MENU] key to enter the menu mode.
2. Press the [▲] / [▼] key to enter the area, and then press the [MENU] key to select the entry area list.
3. The current area is displayed on the screen and displayed as the area name.
4. Press the [▲] / [▼] key to enter the desired area, and then press the [MENU] key to select.
5. The screen immediately displays the selected area and returns to the selected area screen.

Note: The walkie-talkie must retain at least one area, and each area retains at least one channel.

## •Digital and analog channel switch

Each channel in this product can be configured by the dealer as either an analog channel or a digital channel. If the current region contains digital channels and analog

channels, you can switch channels to analog channels or digital channels.

## •Single / dual band mode switch

If the dealer has set the [up and down screen switching] shortcut key (Namely [A/B] key) for you, press this shortcut key to switch the upper screen or the lower screen.

When the radio is standby, press [A/B] key to switch the primary and secondary channels.

1. The black pointer  points to the primary channel and is the digital channel; the other channel is the secondary channel.

>If the black pointer  points to the primary channel and indicates that the channel is an analog channel; the other channel is the secondary channel.

2. Press [BACK] to switch to dual band single standby or dual band dual standby

>If the front of the sub-channel is displayed  , it indicates that the product is working in the mode of "dual band single standby ", and the sub-channel does not receive the signal at this time.

Note: The ARTS Auxiliary function does not work because the dual keep mode is in the primary and secondary channel scanning status, DTMF, auto-scan and work alone.

## •Select channel, user ID, group call ID

Power on and in channel mode, if you have more than one region in the radio, select the desired region and press [▲] / [▼] key to select the desired channel, user alias or ID, or the group alias or ID.

## •Receive and reply group calls

To receive a call from a user group, the transceiver must be configured to belong to the talk group.

When receiving a group call:

1. LED indicator light is green.
2. The top line of the screen displays status icons such as RSSI. In the display area below the top line: the first line shows the group alias, the group call icon is displayed in the middle and the received target band (ie CH A or CH B) is indicated, and the caller ID is displayed at the bottom (digital mode only).
3. Hold the walkie talkie in its upright position and at a distance of 1 to 2 inches (2.5 to 5.0 cm) from the mouth. If the "Channel Free Tone" function is enabled, when the transmitting radio releases the [PTT] button, you will hear a short beep indicating that the channel is idle and waiting for your answer.
4. Press the [PTT] key during the call hold time to reply to the call and the LED indicator lights up in red.
5. Release the [PTT] key to answer.
6. If there is no voice activity for the scheduled time period, the call is terminated.

Note: If the walkie talkie receives a group call and is not at home at this time, it remains on the current screen until the call is answered. .

## •Receive and reply single call

A single call is an individual walkie-talkie call to another individual walkie-talkie. There are two types of single call

types: the first type, the walkie talkie presence test is performed before the call is ready, and the other type is ready for the call immediately.

When receiving a single call:

1. LED indicator light is green.
2. The top line of the screen shows the status icons such as RSSI. In the display area below the top line, The first line shows a single call, the single call icon is displayed in the middle and the received target band (ie CH A or CH B) is indicated, and the user alias or ID is displayed at the bottom (digital mode only).
3. Hold the walkie talkie in a vertical position and keep it 1 to 2 inches (2.5 to 5.0 cm) from the mouth. If the "Channel Idle Tone" feature is enabled, when the transceiver intercepts the PTT key, you will hear a short beep indicating that the channel is free for you to answer.
4. Press the [PTT] key during the call hold time to reply to the call and the LED indicator lights up in red.
5. Release the [PTT] key to answer.
6. If there is no voice activity for the scheduled time period, the call is terminated.

## •Receive all call

All call is an individual walkie-talkie call to all walkie-talkies on the channel. It is used to publish important notices that require special attention from users.

When receiving all call:

1. LED indicator light is green.
2. The top line of the screen shows the status icons such as RSSI. In the display area below the top line: The first line displays the

full call, the full call icon is displayed in the middle and the received target band (ie CH A or CH B) is indicated, and the user alias or ID is displayed at the bottom (digital mode only).

3. After the termination of all calls, the walkie-talkie will return to the screen before receiving the call. If "channel idle tone" is enabled, you will hear a short tone when the walkie talkie releases the [PTT] key, indicating that the channel is ready for use and you cannot reply to all calls.

Note: When you receive an all call, if you switch to another channel, the transceiver stops receiving the full call. During a full call, you will not be able to use any of the pre-programmed keys until the call is ended.

### •Start a walkie-talkie call

You can choose a channel, user ID or talk group in the following ways:

- Rotating channel knob in channel mode
- Pre-programmed one-touch call button
- Address book list

### •Select channel to initiate a call

To initiate a call to a user group, the transceiver must be configured to belong to the talk group.◦

1. In channel mode, Rotating channel knob to select the channel using the activated talk group alias or ID.
2. Hold the walkie talkie in its upright position and keep it at a distance of 1 to 2 inches (2.5 to 5.0 cm) from the mouth.

3.Press [PTT] key to initiate a call, LED indicator light is red. The screen displays the talk group alias or ID, as well as the group call icon.

4. Release the [PTT] key to answer. When the target radio replies, the LED indicator will light green. The group call icon, call group alias or ID, and walkie talkie alias or ID is displayed on the screen.

5. If the Channel Idle Tone feature is enabled, when the target radio releases the PTT button, you will hear a short beep indicating that the channel is free for you to answer. Press the PTT key to answer, or if there is no voice activity for a predetermined period of time, the call is terminated.

6. The walkie talkie returns to the screen before receiving the call. You can also initiate a group call from your address book.

### •Start a single call

1. In channel mode, Rotating channel knob to select the channel using the activated talk group alias or ID.
- 2.Hold the walkie talkie in its upright position and keep it at a distance of 1 to 2 inches (2.5 to 5.0 cm) from the mouth.
3. Press [PTT] key to initiate a call, LED indicator light is red. The top line of the screen shows status icons such as RSSI. In the display area below the top line, the first line shows a single call, the single call icon is displayed in the middle, and the user alias or ID is displayed at the bottom (digital mode only).
- 4.Release the [PTT] key to answer. When the target radio replies, the LED indicator will light green.

5.If the "Channel Idle Tone" feature is enabled, when the target radio releases the [PTT] key, you will hear a short beep indicating that the channel is free for you to answer. Press the PTT key to answer, or if there is no voice activity for a predetermined period of time, the call is terminated.  
6.You will hear a short tone, the screen shows the call ended.

Note: You can also initiate a single call via digital contacts and manual dialing in your contacts, or make quick contact access via a keyboard entry to find the desired target walkie-talkie.

#### •**Initiate all call**

This feature lets you signal all users on the channel. The walkie-talkie must be programmed to allow you to use this feature.

1. In channel mode, Rotating channel knob to select the channel using the activated talk group alias or ID.
2. Hold the walkie talkie in its upright position and keep it at a distance of 1 to 2 inches (2.5 to 5.0 cm) from the mouth.
3. Press [PTT] key to initiate a call, LED indicator light is red. The screen displays the all-call group alias or ID, as well as the all-call icon.

Note: Channel users cannot reply to all calls..

#### •**Use the one-touch call button to initiate a group call or a single call**

One-touch calling features make it easy to group calls or single calls to predefined aliases or IDs. This function can

be assigned to short programming or long programming keys.

You can assign only one alias or ID to a one-touch call key, and the walkie talkie can have multiple programmed one-touch call keys.

1. Press the preprogrammed one-touch call button to initiate a group or single call to a predefined alias or ID.
2. Hold the walkie talkie in its upright position and keep it at a distance of 1 to 2 inches (2.5 to 5.0 cm) from the mouth.
3. Press [PTT] key to initiate a call, LED indicator light is red. The screen displays the talk group / user alias or ID, as well as the group call / callout icon.
4. Release the [PTT] key to answer. When the target radio replies, the LED indicator will light green.
5. If the "Channel Idle Tone" feature is enabled, when the target radio releases the [PTT] key, you will hear a short beep indicating that the channel is free for you to answer. Press the PTT key to answer, or if there is no voice activity for a predetermined period of time, the call is terminated.
6. The walkie talkie returns to the screen before receiving the call.

#### •**Analog channel call**

On the analog channel, hold down the [PTT] key and speak into the microphone, to transmit. Please release [PTT] key to receive.

#### •**Receive calls**

When the host computer has configured DTMF as the

receiving signaling system of the current channel, when decoding the code word is DTMF personal ID code, the decoding is successful. During the resetting time, it can talk to the other party. The reset time needs to be re-decoded.

### • PTT ID call

#### Make a call

In analog mode, you can program the radio to configure the DTMF on-line code and off-line code; and enable the up-down-line code on the analog channel. When enabled, the code will be sent each time the [PTT] key is pressed, and the code will be released when the [PTT] key is released.

### •Emergency Alarm Function

#### Emergency alarm

In the event of an emergency, you can use this feature to ask your fellow or control center for help. Emergency alarm has the highest priority, you can alarm whether the walkie talkie is transmitting or receiving.

Alarm initiator to exit the alarm mode, there are two cases:

- >Turn off the radio to exit the whole machine alarm.
- >Press the pre-programmed [emergency mode off] shortcut to exit the alarm
- >In other ways, when exiting alarm mode, the alarm on the current channel can only be temporarily exited. When reselecting the channel, the alarm will continue;  
The alarm function is enabled for you by the dealer  
(program path: "Edit -> Alarm -> Digital Emergency Alarm

System ->DMR System").

The radio prompts in different modes for different alarm types, as shown in the following table.

Alarm type	Description
Disable	Turn off alarm function (alarm disabled),
Only whistle	The terminal emits a sharp alarm tone and the control center does not receive an alarm signal.
Conventional	When alarms, the radio gives an audible and visual prompt.
Alarm whistle	After sending an emergency alert signal to the control center, a local alarm tone is sounded. In the alarm state, there are indications of sound and visualization.
Silent	When alarms, the radio will not give any audible or visual prompt. At the same time, no sound is made on any received audio.
Silence with voice	When alarms, the radio will not give any audible or visual prompt. However, the radio sounds when you press and hold the PTT button to initiate a call or respond to a call.

### Alarm Mode

Except the alarm type "Disable, Only whistle, alarm whistle", other alarm types support the following alarm modes. You can ask the dealer to select one of them

Note: The following methods use "Conventional" alarm type as an example).

Alarm mode	Description
Emergency alarm	In this mode, you can press and hold the [Emergency mode on] button to send an alarm tone to your partners or control center but can't talk to the other party.
Emergency alarm and call (alarm call)	In this mode, you can press and hold the [Emergency mode on] button to send an alarm tone to your partners or control center, and then press and hold the [PTT] button to speak to the microphone, and your voice and surrounding background sound will be sent to the receiver.
Emergency alarm and voice (emergency call)	In this mode, you can press and hold the [Emergency mode on] button to enter the alarm transmission channel. The product automatically activates the "emergency microphone" (without holding down the PTT button). You can speak to the microphone, and your voice and the surrounding background sound will be sent to receiver.

### • Send emergency alert

This feature allows you to send an emergency alert, which belongs to a non-voice signal and will trigger a prompt on another transceiver.

1. Press the preprogrammed [Alarm ] On button.
2. The screen displays Send Alert, alternating with walkie talkie ID. The LED is lit red and the emergency call icon appears on the home screen.

3. When an emergency alert confirmation is received, an emergency call tone sounds and the LED flashes green. The screen shows that the emergency alert was successful. >Or if the walkie talkie does not receive any emergency alert confirmation and a beep sounds after all retries are exhausted, the screen displays failed emergency alert.
4. The walkie-talkie exits the emergency alert mode and returns to the home screen. If your walkie talkie is set to "silent," it will not show any voice or visual cues in emergency call mode.

### • Receive emergency alert

1. The number of alerts received when an emergency alert was received, along with the alert that was received, alternating with the sender's alias or ID.
2. A beep sounds and the LED flashes orange.
3. If enabled, your transceiver will automatically acknowledge the emergency alert. When the walkie talkie receives an emergency alert, the screen displays a prompt that an emergency alert has been received, until an acknowledgement is sent and the emergency mode exits. You will not be able to receive any other prompts or show any other calls until you exit the screen for receiving an emergency alert.

Note: When an alarm sounds, the LED indicator flashes orange, and any key can be pressed to stop the alarm tone. The current emergency mode is released by switching channels or turning off the radio.

## • Send an emergency alert with voice follow

This feature allows you to send an emergency alert to another transceiver. After confirmation, your walkie talkie microphone is activated automatically, allowing you to communicate with other radios without pressing the [PTT] key. This activated microphone status is called "Emergency Microphone". If the [PTT] key is pressed during the pre-programmed emergency microphone launch, the transceiver ignores [PTT] press and remains in emergency mode.

1. Press the preprogrammed [Alarm On] button.
2. The screen displays send an alert, the LED is lit red and the emergency call icon is displayed.
3. When the alarm confirmation of another intercom is received, the message "send successfully" is displayed, the LED indicator lights up in red, the radio of the intercom automatically activates and emits a signal, and speaks clearly to the microphone until the end of the thermal mic.  
If the emergency alert request fails (such as the target radio that received the alert is not turned on or is not on the pre-programmed alert jump channel), the screen briefly displays "No Reply" and the walkie-talkie will continue to send emergency calls.
4. The hot mic duration ends and stops transmitting. The screen displays "Emergency Call" and the contact and intercom ID alternate. The LED indicator lights up in orange and is accompanied by a local alarm tone until the end of the reception duration.

5. After the number of emergency calls of the walkie-talkie is completed, it will automatically stay on the emergency call alarm interface.

Note: Press the pre-programmed [Emergency Mode Off] button, the screen displays "Cancel Alarm" and exits the emergency mode. Or cancel the current emergency mode by switching channels.

## • Receive an alert call

The walkie-talkie that receives the emergency call must be selected to the pre-programmed alarm-jump channel and the jump channel must be a group call.

1. Upon receiving an urgent alert request, the screen displays "Alarm Received" and is displayed alternately with the sender's alias or ID.
2. An alarm tone sounds and the LED indicator flashes orange.
3. The alarm tone stops, the LED indicator lights up in green, enters the receiving state, and listens to the other party's speech until the end of the hot microphone.
4. When an alarm tone sounds, the LED indicator flashes orange. Hold the intercom in a vertical position and keep it 1 to 2 inches (2.5 to 5.0 cm) from the mouth.
5. Press the [PTT] key to initiate the call, the LED indicator lights up in red, and the talk group icon appears on the screen.
6. Release the [PTT] button to answer.

Note: When an alarm sounds, the LED indicator flashes orange, and any key can be pressed to stop the alarm tone. The current emergency mode is released by switching channels or turning off the intercom.

#### • Initiate an emergency call

After the alarm is activated, the alarm code is not required to be sent for an impolite number and politeness, and the host immediately initiates an emergency call. Once confirmed, your walkie-talkie microphone is automatically activated, allowing you to communicate with other walkie talkies on the pre-programmed alarm jump channel without pressing the [PTT] key. This activated microphone state is called a "hot mic". During the pre-programmed hot mic duration, in addition to pressing the pre-programmed [emergency mode off] key to cancel the alarm, pressing any other button will remain in emergency mode. Until the end of the thermal mic.

1. Press the pre-programmed [Emergency Mode On] button.
2. The LED indicator lights up in red and the emergency call icon appears on the main screen.
3. The radio of the walkie-talkie automatically activates and emits a signal, speaking clearly to the microphone until the end of the thermal mic.
4. The hot mic duration ends and stops transmitting signals. The screen displays "Emergency Call" and the contact and intercom ID alternate, and the LED indicator lights up in orange until the end of the reception duration.

5. During the duration of the reception, you can answer the other party's call.

Note: Press the pre-programmed [Emergency Mode Off] button, the screen displays "Cancel Alarm" and exits the emergency mode.

#### • Receiving an emergency call

The walkie-talkie that receives the emergency call must be selected to the pre-programmed alarm-jump channel and the jump channel must be a group call.

1. Upon receiving an emergency alert, the screen displays the talk group icon and the sender's alias or ID alternately displayed.
2. The LED indicator lights up in green and listens to the other party until the transmitter's thermal mic duration ends.
3. With the LED off, hold the intercom away from the vertical position and keep it at a distance of 1 to 2 inches (2.5 to 5.0 cm).
4. Press the [PTT] key to initiate the call, the LED indicator lights up in red, and the talk group icon appears on the screen.

Note: Turn off the current emergency mode by switching channels or turning off the walkie-talkie.

#### • Restart emergency mode

It can happen in two situations:

> When the transceiver is in emergency mode and changes channel, it will exit emergency mode. If an emergency alert is activated on the new channel, the transceiver resumes the emergency call.

>Press the preprogrammed [Alarm On] key in the emergency call start / transmit state. This way the walkie talkie will exit the status and restart the emergency call.

### •Exit emergency mode

The transceiver exits emergency mode when one of the following happened:

- > Receive emergency alert confirmation (emergency alerts only), or
- > The number of major attempts to send an alert has been reached, or
- > Press Preprogrammed [Alarm Off ], or
- > Press the [PTT] key.

Note: If the radio is turn off, it will exist the emergency mode. When you turn on again, the radio won't start resume emergency mode

### • Individual Operation

This feature is ideal for people who work alone. If you encounter unexpected situations during individual operation, you can't operate the radio in preset time. The radio will automatically send alarm to your partner or control center for help.

1.Turn on individual operation

>Through writing frequency software, this function is turned on when the radio is started.

>Press the preset [Individual Operation] shortcut to enable this function.

2. If you do not operate the radio in the preset response time, the radio will prompt before the response time is up (depending on the dealer settings). At this point, you can end the prompt with a valid physical operation (knob or button operation). When the response time is up, the radio will automatically turn on the alarm system of the current channel.

3. Turn off individual operation

> Turn this function off by writing-frequency software.  
> Press the preset [Individual Operation] shortcut again to turn off this function.

Note: If you do not turn off the individual operation function before shutting down, the function is still active the next time you turn on the radio.

# Menu operation

## • Menu navigation

Press [MENU] key in digital mode or digital channel to enter the digital main menu; press [MENU] key in analog modem or analog channel to enter the analog main menu. The menu structure is shown as below, including all the menu items of the product. You can configure whether to display each menu item through the dealer. You need to first press [MENU] key to enter the main menu, then use [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to navigate the desired submenu or option and press [MENU] key to confirm and complete the setting . This document only describes the order of menu items when the menu operation is introduced.. For example, the path to the contact list is “Contacts” -> “Contacts List” . This product menu will auto reset if you do not operate on the menu during the preprogrammed time (configured by the dealer), the product automatically returns to the standby screen. You can ask dealer to modify the auto reset time and cancel auto reset.

## •How to use the menu

1. Press [MENU] to enter the menu mode, then press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] on left or right to access the menu function;
2. Press [MENU] key to select a function or enter a sub-menu;
3. Press [BACK] to return to last menu.

Note: The transceiver will automatically exit the menu and return to the main screen after a period of inactivity (the hang time is set by the programming software).

## •Contact list settings

Contact list provides "Address Book" for radios . Each entry corresponds to an alias or ID used to initiate the call. In addition, each entry is related to one of three types of call depending on the setting: group call, single call, all call. Your walkie talkie supports digital contacts..

The entry in the contact list shows the following information:

- Call name
- Call property
- Call ID

## •Group call from the contact lists

1. Press [MENU] key to enter the menu mode.
2. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to contact list, then press [MENU] key to select, the items will be arranged in alphabetical order.
3. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to digital contact list, then press [MENU] key to select, the items will be arranged in alphabetical order.
4. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] to the desired group name or ID.
5. Hold the walkie talkie in its upright position and keep it at a distance of 1 to 2 inches (2.5 to 5.0 cm) from the mouth.
6. Press [PTT] key to initiate a call, LED indicator light is red. The screen displays the talk group alias or ID, as well as the group call icon.

7. Release the [PTT] key to receive. When any user in the group responds, the LED will light green. You will see the group call icon user ID on the screen.  
8. If the "Channel Idle Tone" feature is enabled, when the target radio releases the [PTT] key, you will hear a short beep indicating that the channel is free for you to answer. Press the call key [PTT] to answer. If there is no voice activity during the preprogrammed group call hang-up time, the call is terminated.

#### • Single call from your contact list

1. Press [MENU] key to enter the menu mode.  
2. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to contact list, then press [MENU] key to select, the items are arranged in alphabetical order.  
3. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to digital contact list, then press [MENU] key to select, the items will be arranged in alphabetical order.  
4. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] to the desired user alias or ID. Or press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to dial manually, then press [MENU] key to select. If there is a user alias or ID dialed previously, the ID is displayed with the blinking cursor and the keyboard is used to edit this ID.  
Or press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to dial manually, then press [MENU] key to select, use keyboard to input a new ID.  
5. Hold the walkie talkie in its upright position and keep it at a distance of 1 to 2 inches (2.5 to 5.0 cm) from the mouth.  
6. Press [PTT] key to initiate a call, LED indicator light is red. The first line shows the user's alias or ID, the second

line shows the single and single call icons.  
7. Release the [PTT] key to answer. When the radio responds, the radio LED lights up green and the screen displays the ID of the transmitting user.  
8. If the "Channel Idle Tone" feature is enabled, when the target radio releases the [PTT] key, you will hear a short beep indicating that the channel is free for you to answer. Press the call key (PTT) to answer. If there is no voice activity during the preprogrammed single call hang-up time, the call is terminated.  
9. You will hear a short tone; the screen shows the termination of the call.  
If you release the PTT key while the walkie talkie is setting up a call, it exits without any hint and returns to the previous screen. walkie talkies can be preprogrammed to perform walkie-talkie presence detection prior to setting up a single call. If the target walkie talkie does not answer, you will hear a short beep, and the other party does not answer on the screen. The walkie-talkie returns to the menu before starting the walkie talkie presence test.

#### • Radio detection

In digital mode, you can initiate radio detection to a contact without interfering with each other to confirm whether the other party has turned on the unit or uses in the current channel.

### •Initiate radio detection

- 1.Press [MENU] key to enter the menu mode
2. Press [▲] / [▼] key to contact list, then press [MENU] key to select
- 3.Press [▲] / [▼] key to the desired user alias or ID, then press [MENU] key to select.  
    >Or press [▲] / [▼] key to manually dial, then press [MENU] key to select, flashing cursor appears, input the user ID you want to call, then press [MENU] key.
4. Press [▲] / [▼] key to “Radio Check” , the screen displays the radio check <User alias or ID>, and then press the [MENU] key to indicate that the call has been sent.
- 5.When the walkie talkie send radio detection, the LED indicator light is red.
- 6.If the target walkie talkie is active in the system, a prompt is emitted and the screen briefly shows “Radio check success” .

### •Call prompt

In digital mode, you can send call prompt to a contact, and the other party can call back directly.。

### •Initiate a call prompt

- 1.Press [MENU] key to enter the menu mode.
2. Press [▲] / [▼] key to contact list, then press [MENU] key to select
- 3.Press [▲] / [▼] key to the desired user alias or ID, then press [MENU] key to select.

- >Or press [▲] / [▼] key to manually dial, then press [MENU] key to select, flashing cursor appears, input the user ID you want to call, then press [MENU] key.
4. Press [▲] / [▼] key to “call alert” , the screen displays the call prompt: <User alias or ID>, and then press the [MENU] key to indicate that the call has been sent.
  - 5.When the walkie talkie send a call prompt, the LED indicator light is red.
  - 6.If you receive a call confirmation, a tone sounds and a call alert appears, and the LED indicator light is green.  
    >Or if no call alert confirmation is received, a beep sounds and the screen displays a call alert failure.

### •Receive call prompt

When you receive a call alert, the screen displays a call alert, alternating with the alias or ID of the calling walkie-talkie. Press the [BACK] key to exit.

### •Remote monitor

#### Initiate remote monitor

1. Press [MENU] key to enter the menu mode.
2. Press [▲] / [▼] key to contact list, then press [MENU] key to select
3. Press [▲] / [▼] key to the desired user alias or ID, then press [MENU] key to select.  
    >Or press [▲] / [▼] key to manually dial, then press [MENU] key to select, flashing cursor appears, input the user ID you want to call, then press [MENU] key.

4. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to “Remote monitor” , the screen displays the remote monitor <User alias or ID>, and then press the [MENU] key to indicate that the call has been sent.
5. When the walkie talkie send remote monitor, the LED indicator light is red.
6. “Remote moni success” displays if it is successful, and “Remote moni fail” displays if fails..

#### •Receive remote monitor

After receiving the remote monitor command, it automatically starts transmitting voice and surrounding environment background sound, and exits automatically when the transmission time is up.

Note: This function works only if the function is set and turned on by writing-frequency software.

#### •Receive remote monitor

In digital mode, you can send a remote inhibit command to a contact, so that the radio can't be used normally.

#### •Initiate remote kill

- 1.Press [MENU] key to enter the menu mode
2. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to enter contact list, then press [MENU] key to select
3. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to enter digital contact list, then press [MENU] key to select
4. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to the desired user alias or ID (Call attribute is single number)
5. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to enter application function,then press [MENU] key to select

6. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to remote kill, then press [MENU] key to select, the screen displays “Remote kill”
  7. When the radio sends a remote kill Command, the LED indicator lights up as a red light.
  8. If you receive the confirmation of the remote kill, the prompt tone will be issued and the "radio will be remote killed successfully".
- >Or if you do not receive the confirmation of the remote kill, a prompt is issued, and the screen shows that remote kill fails.

#### •Receive remote kill

After receiving the command of the remote kill, the LCD screen is displayed as a white screen, and shows “Remote kill” . When the radio is remote killed, it will not be effective by pressing any key, and the radio will still be dead after turn on again.

Note: This function works only if the function is set and turned on by writing-frequency software.

#### •Radio activationn

In digital mode, you can send an activation command to a contact to resume normal use of the two-way radio.

##### ▲Initiate radio activation

1. Press [MENU] key to enter the menu mode
2. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to enter contact list, then press [MENU] key to select
3. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to enter digital contact list, then press [MENU] key to select

4. Press [**▲**] / [**▼**] key to the desired user alias or ID  
(Call attribute is single number)
5. Press [**▲**] / [**▼**] key to enter application function, then press [MENU] key to select
6. Press [**▲**] / [**▼**] key to radio activation, then press [MENU] key to select, the screen displays "Radio Activation"
7. When the radio sends a radio activation command, the LED indicator lights up as a red light.
8. If you receive the confirmation of radio activation, the prompt tone will be issued and the "radio will be activated successfully".

>Or if you do not receive the confirmation of the radio activation, a prompt is issued, and the screen shows that radio activation fails.

#### **▲Receive radio activation**

After receiving the command of the remote kill, activate the prompt tone and turn off and turn on the radio again.

Note: The remote killed radio can also be activated by writing frequency software. This function only can work by setting up and opening the function by writing frequency software.

#### **●Call recording function**

Your walkie talkie can record all recent incoming, answered and unanswered calls. Use the call record function to view and manage recent calls.

#### **●Check the latest call number**

Select "call records" in the main menu, enter the Dialed call/answered call/ unanswered call list, and select contacts, then press [PTT] key to initiate a single call.

1. Press [MENU] key to enter the menu mode
2. Press [**▲**] / [**▼**] key to Call record, then press [MENU] key to select
3. The screen displays the "missed call/answered call/dialed call/deleted record" option, press [**▲**] / [**▼**] key to enter the required call list, then press [MENU] key to select.
4. The screen displays the most recent entries at the top of the list
5. Press [**▲**] / [**▼**] key to view the list, then press the [PTT] key to start the single call for the currently selected alias or ID.

#### **●Unanswered call screen**

Whenever a call is missed, the radio screen displays the number of unanswered calls and unanswered callers, press [MENU] key to check or [BACK] key check later.

Note: If you press [PTT] key when looking at the unanswered call number, the radio leaves the unanswered call screen and creates a single call.

1. The screen displays "missed calls" and the number of missed calls.
2. Press [MENU] key to enter the missed call list. The latest missed call entries are displayed at the top of the screen.
3. Press [MENU] to select to view, send information, or delete the entry.

### •Delete the call in the call list

1. Press [MENU] key to enter the menu mode
2. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to Call record, then press [MENU] key to select
3. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to Delete record,then press [MENU] key to select
4. The screen displays the "missed call/answered call/dialed call/deleted record" option, press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to enter the deleted record,then press [MENU] key to select.
5. The screen displays the "missed call /answered call / dialed call" option, press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to select the call that to be deleted,then press [MENU] key to choose.
6. The screen displays "clear the call record" and returns to the previous level menu.

### •Message function

The radio supports DMR data function, and can send and receive messages. It can store up to 100 incoming messages and 100 sent messages. The maximum length of each message is 220 characters, and the number of SMS lines can not exceed 50 lines.

The maximum length of each message is 220 characters, and the number of SMS lines can not exceed 50 lines.

### •Edit and send messages

User menu function:

1. Press [MENU] key to enter the menu mode
2. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to message, then press [MENU] key to select

3. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to writing message, then press [MENU] key to select
4. There is a scintillation cursor, input SMS with the keyboard, move one bit to the left by pressing [ $\blacktriangle$ ], move one to the right by [ $\blacktriangledown$ ], delete any useless character when the editing area has content, or return to the previous menu when the editing area has no content.
5. After writing the text message, press [MENU] key to return to the previous menu quickly and find contacts , then press [MENU] key to select.
6. Press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to the desired user alias or ID, then press [MENU] key to select  
Or press [ $\blacktriangle$ ] / [ $\blacktriangledown$ ] key to enter the manual dialing and input the target radio ID, then press [MENU] key to select
7. Screen display "SMS sending...",make sure that a message is being sent.
8. If the message is sent successfully, a prompt will be issued, and the screen will display "SMS is sent successfully".  
>Or if the message is not sent successfully, a high pitched tone will be issued, and the screen will display "SMS failure".

### •Send shortcut text

The radio supports at most 20 fast text messages programmed by agents. When you predefine SMS, you can edit it before sending every message.

User menu function:

1. Press [MENU] key to enter the menu mode

2. Press [▲] / [▼] key to message, then press [MENU] key to select
3. Press [▲] / [▼] key to shortcut message, then press [MENU] key to select
4. Press [▲] / [▼] key to the needed shortcut message, then press [MENU] key to select
5. Press [▲] / [▼] key to display text content with a scintillation cursor, input SMS with the keyboard, move one bit to the left by pressing [▲], move one to the right by [▼], delete any useless character when the editing area has content, or return to the previous menu when the editing area has no content.
6. After writing the text message, press [MENU] key to confirm the contents and select send and save.
7. After sending message, press [▲] / [▼] key to enter contacts, and press [▲] / [▼] key to the desired user alias or ID, then press [MENU] key to select  
 > Or press [▲] / [▼] key to enter the manual dialing and input the target radio ID, then press [MENU] key to select
8. Screen display "SMS sending...", make sure that a message is being sent.
9. If the message is sent successfully, a prompt will be issued, and the screen will display "SMS is sent successfully".  
 >Or if the message is not sent successfully, a high pitched tone will be issued, radio will return to resend selection screen.

#### ●Using one-calling key to send shortcut text

1. Press the preset [one-calling key] shortcut key to send a shortcut text to a predefined alias or ID.
2. Screen display "Message is sending...", make sure that a message is being sent.
3. If the message is sent successfully, a prompt will be issued, and the screen will display "SMS is sent successfully".  
 >Or if the message is not sent successfully, a high pitched tone will be issued, and the screen will display "SMS failure".

#### ●Manage unsuccessfully sending short messages

In the resend selection screen, you can choose the following options:

- Resend    • Forward    • Edit    • Delete

#### ●Resend message

1. Press [MENU] key to send the same message to the same user/call group alias or ID.
2. If the message is sent successfully, a prompt will be issued, and the screen will display "SMS is sent successfully".  
 >Or if the message is not sent successfully, a high pitched tone will be issued, and the screen will display "SMS failure".

#### ●Forward message

Select and forward message to another user/call group alias or ID.