Hytera

OWNER'S MANUAL
使用说明书

DIGITAL PORTABLE RADIO
数字手持终端

Hytera

Preface

Thanks for your favor in our product. To derive optimum performance from the product, please read this manual and the supplied Safety Information Booklet carefully before use.
This manual is applicable to the following model:
X1p

Copyright Information

Hytera is the trademark or registered trademark of Hytera Communications Co., Ltd. (the Company) in PRC and/or other countries or areas. The Company retains the ownership of its trademarks and product names. All other trademarks and/or product names that may be used in this manual are properties of their respective owners.

The product described in this manual may include the Company's computer programs stored in memory or other media. Laws in PRC and/or other countries or areas protect the exclusive rights of the Company with respect to its computer programs. The purchase of this product shall not be deemed to grant, either directly or by implication, any rights to the purchaser regarding the Company's computer programs. Any of the Company's computer programs may not be copied, modified, distributed, decompiled, or reverse-engineered in any manner without the prior written consent of the Company.

The AMBE+2™ voice coding technology embodied in this product is protected by intellectual property rights including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc. This voice coding technology is licensed solely for use within this product. The user of this technology is explicitly prohibited from attempting to decompile, reverse engineer, or disassemble the Object Code or in any other way convert the Object Code into a human readable form.

U.S. Patent Nos. #6,912,495 B2, #6,199,037 B1, #5,870,405, #5,826,222, #5,754,974, #5,701,390, #5,715,365, #5,649,050, #5,630,011, #5,581,656, #5,517,511, #5,491,772, #5,247,579, #5,226,084 and #5,195,166.

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 technology development. No part of this manual may be copied, modified, translated, or distributed in any manner without the express written permission of us.

If you have any suggestions or would like to learn more details, please visit our website at: http://www.hytera.com.

RF Radiation Information

The radio is not intended for use by general population in an uncontrolled environment. It is only for occupational use and only applied to work-related conditions.

The radio must be only used by users, who are fully aware of the hazards of the exposure and who are able to exercise control over their RF exposure to qualify for the higher exposure limits.

RF Radiation Profile

Radio Frequency (RF) is a frequency of electromagnetic radiation in the range at which radio signals are transmitted. RF technology is widely used in communication, medicine, food processing and other fields. It may generate radiation during use.

RF Radiation Safety

In order to ensure user health, experts from relevant industries including science, engineering, medicine and health work with international organizations to develop standards for safe exposure to RF radiation. These standards consist of:

- United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J;
- American National Standards Institute (ANSI)/ Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992;
- Institute of Electrical and Electronic Engineers (IEEE) C95. 1 – 1999;
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998;

FCC Regulations

Federal Communication Commission (FCC) requires that all radio communication products should meet the requirements set forth in the above standards before they can be marketed in the U.S, and the manufacturer shall post a RF label on the product to inform users of operational instructions, so as to enhance their occupational health against exposure to RF energy.

Operational Instructions and Training Guidelines

To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standards and guidelines, users should transmit no more than 50% of the time and always adhere to the following procedures:

Your radio radiates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.

FCC Statement

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 and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct.

The interference by one or more of the following measures:

- Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

Operation is subject to the following two conditions: 1. This device may not cause harmful interference, and 2. This device must accept any interference received, including interference that may cause undesired operation.

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

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 1999/5/EC. Please note that the above information is applicable to EU countries only.

Contents

Documentation Conventions ---- **2**
Instructional Icons ---- 2
Notational Conventions ---- 2
Key Operation ---- 2
Checking Items in the Package ---- **2**
Product Introduction ---- **2**
Product Controls ---- 2
Programmable Keys ---- 3
Before Use ---- **4**
Charging the Battery ---- 4
Assembling Accessories ---- 4
Status Indication ---- **5**
LCD Icon ---- 5
LED Indicator ---- 5
Menu Navigation ---- **6**
Basic Operations ---- **6**
Powering On/Off ---- 6
Adjusting the Volume ---- 6
Selecting a Zone ---- 6
Selecting a Channel ---- 6
Switching the Channel Mode ---- 7
Locking/Unlocking the Keypad ---- 7
Using the Bluetooth Devices ---- 7
Call ---- **8**
Private Call ---- 8
Group Call ---- 8
All Call ---- 9
Calls on Analog Channels ---- 9
Sending Morse codes ---- 9
Receiving Vibration ---- 9
Phone ---- 9
Time-out Timer (TOT) ---- 9
Busy Channel Lockout ---- 10
Pseudo Trunking ---- 10
Functions and Operations ---- **10**
Home Screen ---- 10
Managing the Contacts ---- 10
Message ---- 11
Work Orders ---- 11
Call Logs ---- 11
VOX ---- 12
MIC AGC ---- 12
Audio Feedback Suppression ---- 12
LQO ---- 12
Rent ---- 12
Scan ---- 12
Roam ---- 13
Adjust Power Level ---- 13
Talk Around ---- 13
Monitor ---- 13
Squelch Off ---- 13
Adjust Squelch Level ---- 13
One Touch Call ---- 13
Telemetry ---- 14
Priority Interrupt ---- 14
Emer Alarm ---- 15
Man Down ---- 18
Lone Worker ---- 18
Covert Mode ---- 18
Scramble /Encrypt ---- 18
Radio Registration Service ---- 19
GPS ---- 19
Radio Set ---- 19
Programming ---- 20
Device Info ---- 20
Battery Power Indicator ---- 20
Troubleshooting ---- **21**
Care and Cleaning ---- **21**
Optional Accessories ---- **22**
Appendix ---- **23**
Input Method ---- 23
Signaling Introduction ---- 23
5-Tone ---- 23
2-Tone ---- 24

Documentation Conventions

For your better understanding of this manual, please read the following icons first.

Instructional Icons

Icon	Description
Note	Indicates references that can further describe the related topics.
Caution	Indicates situations that could cause data loss or equipment damage.
	Indicates functions that are available on digital channel only. Indicates functions that are available on analog channel only. Functions marked with no function icons are available on both analog and digital channels.

Notational Conventions

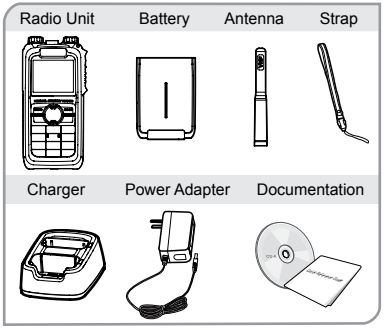
Convention	Description
" "	The quotation marks enclose the name of a software interface element. For example, click "OK".
Bold	The text in boldface denotes the name of a hardware button. For example, press the **PTT** key.
->	The symbol directs you to access a multi-level menu. For example, to select "New" from the "File" menu, we will describe it as follows: File -> New.

Key Operation

Operation	Definition
Short press	To press a key and release it quickly.
Long press	To press a key and remain holding it down for a predefined period (2 seconds by default).
Hold	To press a key and remain holding it down.

Checking Items in the Package

Please unpack carefully and check that all items listed below are received. If any item is missing or damaged, please contact your local dealer.

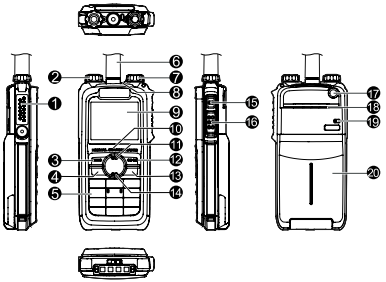


Note: The frequency band is marked on the label of antenna; if not, please refer to the label on the terminal for frequency band information.

Product Introduction

This section introduces the mechanical structure and the programmable features of this product.

Product Controls



No.	Part Name	No.	Part Name
1	Accessory Jack	11	Up Key
2	Radio On-Off/Volume Control Knob	12	Back Key
3	OK/Menu Key	13	P2
4	P1	14	Down Key
5	Numeric Keypad	15	SK1 (Side Key 1)
6	Antenna	16	PTT Key
7	Channel Selector Knob	17	TK (Top Key)
8	LED	18	Speaker
9	LCD Display	19	Microphone 2
10	Microphone 1	20	Battery

Programmable Keys

For enhanced convenience, you may request your dealer to program the keys **SK1**, **TK**, **P1** and **P2** as shortcuts to the functions listed below: For detailed introductions of the functions, please go to the chapter - Functions and Operations.

No.	Shortcut Key	Function
1	Zone Up	To select a desired zone quickly.
2	Zone Down	
3	Keypad Lock	To lock or unlock the keypad quickly.
4	Contact List	To access the menu “Contact List” quickly.
5	Message	To access the menu “Message” quickly.
6	Call Logs	To access the menu “Call Logs” quickly.
7	Adjust Power Level	To adjust power level quickly.
8	Talk Around	To enable or disable the Talk Around feature quickly.
9	Monitor	To enable or disable the Monitor feature quickly.
10	Monitor Momentary	
11	Squelch Off	To enable or disable the Squelch feature quickly.
12	Squelch Off Momentary	
13	Home Screen	To quickly return to the previous menu or home screen.
14	Scan	To enable or disable the Scan feature quickly.
15	Nuisance Temporary Delete	To temporarily ignore unwanted channel activity.
16	Adjust Squelch Level	To access the menu “Squelch Level” quickly.
17	Battery Power Indicator	To check the battery strength promptly.
18	Man Down	To activate or deactivate the Man Down function.
19	Scrambler / Encrypt	To enable or disable the Scrambler or Encryption feature quickly.
20	Lone Worker	To enable or disable Lone Worker feature quickly.
21	One Touch Call 1 – 5	To make appropriate services quickly.
22	Status List	To access the menu “Status List” quickly (for 5-Tone).
23	Telemetry Button 1 – 3	To monitor remote equipment.
24	DTMF Keypad	To enable or disable the DTMF keypad quickly. With the DTMF keypad, you can enter a number via the keypad to make a phone call.
25	Phone List	To access the menu “Phone List” quickly.
26	Roam	To enable or disable the Roam feature quickly.
27	Priority Interrupt	To terminate the ongoing activity on the current channel, so as to initiate a new call or data service.
28	VOX	To enable or disable the VOX feature quickly.
29	BT	To enable or disable the BT feature quickly.
30	GPS Report	To upload GPS data to the system immediately.
31	Option Board	To enable or disable the Option Board function.
32	Morse Code	To send Morse code.
33	Receiving Vibration	To enable or disable the Receiving Vibration feature quickly.
34	Emergency On	To activate the emergency alarm.
35	Emergency Off	To deactivate the emergency alarm.
36	Preset Channel 1 – 4	To switch the channel quickly. The target channel, preset by the dealer, is a channel from any zone.
37	LQO	To enable or disable LQO (Loudness and Quality Optimizer) quickly.
38	Covert Mode	To enable or disable the Covert mode quickly.

Note:

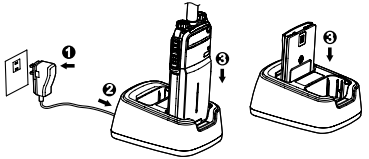
- Long and short press of a key can be assigned with different functions by your dealer.
- The **TK** is programmed as the **Emergency On/Off** key by default, and is programmable by your dealer.

Before Use

Charging the Battery

Caution: Make sure the radio is powered off during charging.

Use only the charger and battery specified by Hytera. Charger LED can indicate the charging process. The following figure shows steps for charging.



1. Connect the power adapter to AC socket. See arrow ① .
2. Plug the power adapter into the rear jack of the charger. See arrow ② .
3. Place the radio with the battery attached, or the battery alone, into the charger.

During charging, the LED on the charger will indicate the charging status. Charging begins when the charger LED glows red. When charging is complete, the charger LED glows green.

See the following table for details.

Note:

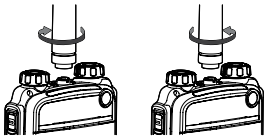
- To achieve optimal battery performance, please charge the battery for 3 hours before initial use.
- Be sure to read the Safety Information Booklet, to get necessary battery safety information.

LED	Charging Status
The LED flashes red slowly.	Standby (no load)
The LED glows red.	Charging
The LED glows orange.	90% charged
The LED glows green.	Fully charged
The LED flashes red rapidly.	Failure

Assembling Accessories

Assembling the Antenna

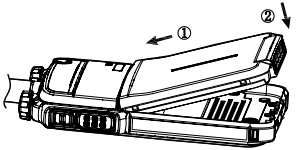
Turn the antenna clockwise to fasten it.



To remove the antenna, rotate it counter-clockwise.

Assembling the Battery

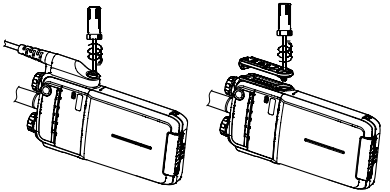
1. Insert the battery into top of the radio. See arrow ① .
2. Slightly press the bottom of the battery until a click is heard. See arrow ② .



To remove the battery, turn off the radio first. Slide the lock in the direction (see arrow ①) to loosen the battery latch, then raise the battery latch and remove the battery (see arrow ②).

Assembling the Audio Accessory

1. Open the accessory jack cover as the arrow shows.
2. Align the plug with the accessory jack.
3. Tighten the screw on the plug.

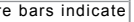


To remove the accessory, loosen the screw first.

Caution: Please attach the accessory properly; otherwise, waterproof performance of the radio may get affected.

Status Indication

LCD Icon

Icon Name	Icon	Radio Status
Operation Mode Icon	**DM**	Direct Mode: Under this mode, radios communicate with each other directly.
	RM	Repeater Mode: Under this mode, radios communicate with each other via a repeater.
RSSI Icon		More bars indicate better signal strength.
Message Icon		New message/unread message
		InBox is full.
Scan Icon		The radio is scanning.
		Scanning pauses on a non-priority channel.
		Scanning pauses on Priority Channel 1.
		Scanning pauses on Priority Channel 2.
Roam Icon		The radio is roaming.
Tx Power Icon		Low Tx power for the current channel
		High Tx power for the current channel
Battery Power Icon		More bars indicate more battery power.
Monitor Icon		The Monitor feature is active.

Icon Name	Icon	Radio Status
Speaker Icon		The speaker is unmuted.
Emergency Icon		The Emergency mode (other than secret emergency) is active or an emergency alarm is received.
VOX Icon		The VOX feature is active.
Accessory Icon		An accessory is connected.
GPS Icon		The GPS feature is active, and valid GPS data is received.
		The GPS feature is active, but no valid GPS data is received.
Scrambler/ Encrypt Icon		The Scrambler/ Encrypt feature is active.
Missed Call Icon		You have missed call(s).
DTMF Keypad Icon		The DTMF keypad is enabled.
Work Order Icon		One or more new work orders are received.

LED Indicator

The top LED will help you easily identify the current radio status.

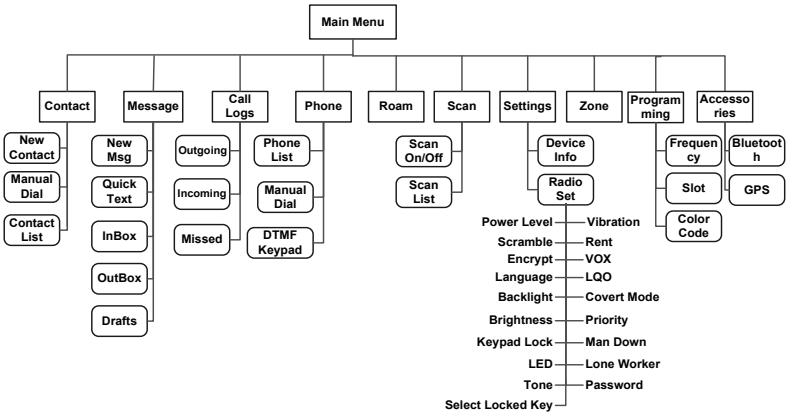
LED Indication	Radio Status
The LED flashes green	Powering on
The LED glows red	Transmitting
The LED glows green	Receiving
The LED flashes orange slowly	Scanning
The LED flashes orange rapidly	Emergency
The LED glows orange	No voice is being transmitted or received on the channel after a call is established. Within such period, you can hold the **PTT** key to talk.
The LED glows blue and then turns to flash every 3s.	The LED glows blue when the BT is being powered on, and turns to flash every 3s when the BT is powered on without any BT device connected.
The LED flashes blue every 2s.	BT devices are connected.

Menu Navigation

The following figure shows an overall menu structure of the radio. You can customize these menus as per your requirements via your dealer.

Press the **Menu** key to enter the main menu, then enter the submenus or options via the **Up/Down** key and press the **OK** key to complete the configuration. The introductions of the menu operations mainly introduce the path to the menus.

This radio supports menu reset function, that is, if you do not operate the menu for a predefined time period, the radio will automatically return to the home screen. However, you can modify the reset time or cancel the reset feature via your dealer.



Basic Operations

Powering On/Off

Rotate the **Radio On-Off/Volume Control** knob clockwise/counter-clockwise until a click is heard to turn the radio on/off.

Adjusting the Volume

After turning the radio on, rotate the **Radio On-Off/ Volume Control** knob clockwise to increase the call volume, or counter-clockwise to decrease it.

Selecting a Zone

A zone is a group of channels exhibiting the same property, and is programmed by your dealer. The radio supports up to 64 zones, each with a maximum of 16 channels. You may select a zone through any of the following methods:

- Through menu selection
  Go to the menu “Zone”, and use the **Up/Down** key to select your desired zone.
- Through the function keys
  You may quickly toggle to your desired zone by pressing the programmed **Zone Up** or **Zone Down** key.

Selecting a Channel

After turning the radio on, rotate the **Channel Selector** knob to select a desired channel. You can also switch to the designated channel by pressing the programmed **Preset Channel** key.

If the Channel Notify function is active, you will hear

the corresponding channel number when switching to any channel.

Switching the Channel Mode

Each channel can be programmed as either analog channel or digital channel. If the current zone includes both analog and digital channels, you may switch between digital and analog channels.

Locking/Unlocking the Keypad

When the keypad is not in use, you can lock the keypad to prevent accidental keypad operation. The following methods are available for you to lock or unlock the keypad:

- Key Combination
  Use "**OK**+ (*␣)" to lock or unlock the keypad.
- Programmable Key
  Press the programmed **Keypad Lock** key to lock or unlock the keypad.
- Menu Selection
  Go to "Settings -> Radio Set -> Keypad Lock", and then select "Enable" or "Disable".
  - Enable: The keypad will be locked automatically if no operation is made within the Keypad Lock Time, which can be configured via the **Up/Down** key (range: 5 – 60s).
  - Disable: The keypad will not be locked automatically. However, you can lock or unlock the keypad via the key combination or **Keypad Lock** key mentioned above.

Note: Except **P1** and **P2**, other keys on the keypad are lockable by default. Besides, you can decide other keys and knobs to be locked via the menu "Settings -> Radio Set -> Select Locked Key". The Select Locked Key includes the following options: **TK**, **Channel Selector** knob, **P1**, **P2**, **SK1** and **Volume** knob.

Using the BT Devices

Caution: Use the BT devices specified by the Company: wireless earpiece EHW02 and wireless ring PTT POA47. When using the devices, please place the radio as required below.

- When the radio is worn, put it and the BT devices on the same side with its front case (the side with LCD) outwards.
- When the radio is not worn, put it at most 2m away from the BT devices with its front case towards the devices.

Before use, turn on the BT devices first and then connect them to the radio in the following steps:

1. Activate the BT feature by pressing the programmed **BT** key or via the menu "Accessories -> BT -> On/Off".
   When the BT feature is active, the LED flashes blue.

Note: The wireless PTT and earpiece must be searched and connected separately. As the searching and connecting operations are the same, we take the wireless PTT as an example below.

2. Search the BT devices.
   - Go to "Accessories -> BT -> Paired Devices".
   - Select "Search PTT" to start searching. When the wireless PTT is found, enter "Device List" and you will see the alias of the wireless PTT.
3. Connect the BT devices.
   - Press the **OK** key to select the device.
   - Press the **OK** key to connect the wireless PTT. When the connection is done, the prompt "Connect Success!" will pop up on the LCD.

Call

To ensure optimal volume of the receiving radio, hold the palm microphone approximately 2.5 to 5 centimeters away from your mouth.

Private Call

Initiating a Call

You may transmit a private call through any of the following methods. When the radio transmits a private call, the icon will appear on the LCD.

Transmitting a call to the preset contact

In the home screen, hold the **PTT** key to transmit a private call to the private call contact preset for the current channel.

Note: Your dealer may preset a contact for each digital channel. The preset contact could be a private call contact, a group call contact or an all call contact.

Transmitting a call through Contact List or Call Logs

1. Go to “Contact -> Contact List”, or go to “Call Logs” and access the Outgoing/Incoming/Missed list.
2. Use the **Up/Down** key to select the private call contact you want to call.
3. Hold the **PTT** key to transmit the private call.

Through manual input

1. Go to “Contact -> Manual Dial”.
2. Input a private call contact you want to call.
3. Hold the **PTT** key to transmit the private call.

Note:

- If your radio supports both Private Call Manual Dial and Group Call Manual Dial, you can switch between them by pressing [# ⇧]. The LCD will display the appropriate ID.
- If the Default Numeric Key Selection feature is enabled by your dealer, you can enter a private call number in the home screen, and then hold the **PTT** key to transmit the private call. However, if the DTMF keypad is enabled, the number entered in the home screen is a phone number. You can dial the phone number through the menu “Manual Dial” only.

Receiving and Responding to a Call

When a private call is received, your radio will display the icon .

You may hold the **PTT** key within the preset time period to call back. If you do not respond to it, your radio will provide appropriate indications.

Note:

- If the Display Missed Call feature is enabled by your dealer, your radio will display the missed call icons and .
- If the Display Missed Call feature is not enabled, your radio will display the missed call icon only.

Group Call

Initiating a Call

You may transmit a group call through any of the following methods. When the radio transmits a group call, the icon will appear.

Transmitting a call to the preset contact

In the home screen, hold the **PTT** key to transmit a group call to the group call contact preset for the current channel.

Transmitting a call through Contact List

1. Go to “Contact -> Contact List”.
2. Use the **Up/Down** key to select the group call contact you want to call.
3. Hold the **PTT** key to transmit the group call.

Through manual input

1. Go to “Contact -> Manual Dial”.
2. Input a group call contact you want to call.
3. Hold the **PTT** key to transmit the call.

Note:

- If your radio supports both Private Call Manual Dial and Group Call Manual Dial, you can switch between them by pressing [# ⇧]. The LCD will display the appropriate ID.
- If the Default Numeric Key Selection feature is enabled by your dealer, you can enter a group call number in the home screen, and then hold the **PTT** key to transmit the call. However, if the DTMF keypad is enabled, the number entered in the home screen is a phone number. You can dial the group call number through the menu “Manual Dial” only.

Receiving and Responding to a Call

When a group call is received, your radio will display the icon .

You may hold the **PTT** key within the preset time period to call back.

All Call

Initiating a Call

Two methods are available for transmitting an all call: transmitting a call to the preset contact; transmitting a call through Contact List. They are the same as those in the foregoing “Transmitting a Group Call”. When transmitting an all call, the icon will appear.

Note: You can transmit an all call only when it is enabled by your dealer.

Receiving a Call

When an all call is received, your radio will display the icon .

Note: You cannot respond to a received all call.

Calls on Analog Channels

To transmit a call on the analog channel, hold the **PTT** key, and speak into the microphone. To receive, release the **PTT** key.

Sending Morse codes

Morse code is a method of transmitting textual information as a series of on-off tones, lights or clicks that can be understood by the receiving party. It is usually used for secret communication.

When pressing the **PTT** key, press the programmed **Morse Code** key to transmit a Morse code. Release the **Morse Code** key to stop the transmission. Different length of the press makes different Morse codes. You can transmit the signals with Morse code combination. If the Signaling Side Tone is enabled, both the transmitting and receiving parties will hear the tone during the transmission of the Morse code.

Receiving Vibration

When receiving an audio signal, the radio will keep vibrating until receiving ends, with the received voice muted.

You can enable or disable this feature via the programmed **Receiving Vibration** key.

Phone

If the repeater is connected with a PSTN gateway, the radio can communicate with the phone via it.

Initiating a Call

1. Access the phone system.
   - Live Dial: Hold the **PTT** key, and enter the access code with keypad. Then release the **PTT** key. The radio beeps and displays the dialing information. When the phone system is accessed successfully, the radio goes to the DTMF keypad mode.
   - Buffer Dial:
     Enter the DTMF keypad mode. The following methods are available to enter this mode.
     - Go to “Main Menu -> Phone –> Manual Dial” to enter the DTMF keypad mode.
     - Enable the DTMF keypad by pressing **DTMF Keypad** key or going to “Phone -> DTMF Keypad” menu. Then the number entered via the numeric keypad in the home screen is the DTMF code.

     Access the phone system: Enter the access code via the keypad and then press the **PTT** key. The radio beeps and displays the dialing information. When the phone system is accessed successfully, the radio goes to the DTMF keypad mode again.
2. Make the phone call.
   - Live Dial: Hold the **PTT** key and enter the phone number via the keypad. Release the **PTT** key after the complete number is entered.
   - Buffer Dial: Enter the phone number via the keypad and then hold the **PTT** key.

Note: Whichever dialing method you take, now you can press the **Back** key and select the contact via “Phone -> Phone List” menu, and then press the **PTT** key.

3. After the call is established, you can hold the **PTT** key to talk, and release it to listen.
   To end the call, you can send the de-access code (the input method is the same as that for the access code) to exit the phone system.
   If the phone is hung up, the call will be ended and the phone system will be exited too.

Receiving a Call

Upon the receipt of a phone call, the radio will display icon or .

You may hold the **PTT** key within the preset time period to call back. If you do not respond to it, your radio will provide appropriate indications. The indication information is the same as that for the private call.

Time-out Timer (TOT)

TOT aims to prevent any user from occupying a

channel for an extended period. If the preset time expires, the radio will automatically terminate transmission and keep beeping. To stop beeping, please release the **PTT** key. You must wait for a certain time (preset by your dealer) to initiate another transmission.
If the pre-alert function is set by your dealer, your radio will alert you to the TOT expiration in advance.

Note: This feature is null in Emergency mode.

Busy Channel Lockout

If enabled (via the programming software), this feature can prevent your radio interfering with other transmitting terminals on the same channel. If you hold the **PTT** key while the channel is in use, your radio will keep beeping and display "Channel Busy!", alerting you to transmission prohibition. When the channel is free, you can press and hold the **PTT** key to transmit.

Pseudo Trunking

This feature can be enabled via the programming software. If your radio operates on a channel with this feature enabled and one time slot is already occupied, it can transmit and receive on the other free slot.

Functions and Operations

This manual introduces all features of this product. You can learn its available functions from your dealer.

Home Screen

The feature allows you to quickly return to the previous menu or the home screen.
In the editing screen, press the **P2** key, and the radio exits the screen and returns to the previous menu immediately; in other screens, press this key and the radio returns to the home screen immediately.

Managing the Contacts

You can have management of your contacts via the menu "Contact" in the radio.

Contact List

You can save up to 512 entries of private call contact information in the list. To access this menu, select "Contact -> Contact List" or press the shortcut key for Contact List.

Control Services

You can send to a private call contact the following commands: Alert Call, Radio Check, Remote Monitor, Radio Enable or Radio Disable. See the "Manual Dial" below for details.

Editing a Contact

You can edit the number and alias of each private call contact.

Viewing a Contact

You can view details of each contact.

Deleting a Contact

You can delete a private call contact. However, please note that you can not delete the contact when there is only one entry left in the list or the private call contact preset on the currently used channel.

New Contact

You can add a private call contact to the contact list. The number and alias of each contact must be unique, and the available number range is 1 – 16776415.

Note:

- You can press the [# ⇧] key to switch the input method when editing the alias.
- Besides adding new contacts, you can also save the unidentified numbers from the Call Logs into the contact list.

Manual Dial

You can manually input the required ID for calling. On a digital channel, if your radio supports both private call and group call, you can switch between them by pressing [# ⇧]. The LCD will display appropriate ID. For a private call ID, you can select any of the following options:

Supplementary Service	Description
Alert Call	You can send an alert call to a private call contact. The called party will see the alert and can call you back.

Radio Check	You can send a Radio Check command to a private call contact, so as to confirm whether it is powered on or running on the current channel without disturbing it.
Remote Monitor	You can enable the microphone of a private call contact, and monitor its activities or background voice remotely.
Radio Enable	You can enable the radio of a private call contact remotely and allow it to be used normally.
Radio Disable	You can disable the radio of a private call contact remotely and disallow it to be used normally. The disabled radio can be monitored remotely, but other features will be locked out. It can only be revived by reprogramming through the CPS or through the Radio Enable command.

Message

Sending a message

1. Go to “Message -> New Msg”.
2. After editing the text, press the **OK** key.
3. Select the contact or input the contact number manually.
4. Press the **OK** key to send the message. When the message is sent successfully, the radio will display “Send Success!” on the LCD.

You can send the Quick Text or forward the message saved in the InBox, OutBox or Drafts. See the detailed introductions of the submenus of Message respectively.

New Msg

You can create a new text message (256 characters at most) and save it to Drafts, or send it to a private call contact or a group call contact.

Quick Text

Under this option there are some text messages (25 entries at most) preset by your dealer. You can choose to edit and send any entry.

InBox

The radio saves the received messages into the InBox and gives every message a corresponding icon to show whether it is read.

- : Read message
- : Unread message

The InBox can save up to 20 received messages. When it is full, the icon will appear, and the earliest message will be overwritten by the latest one automatically.

- For each message, you can choose to perform any of these operations: Reply, Forward, View Details and Delete.
- To delete all messages in the InBox, select “Message -> Inbox -> Delete All”.

OutBox

The following icons will appear to indicate whether the message is sent successfully.

- : Message is sent successfully.
- : Failed to send message

The radio can save up to 20 sent messages. When the OutBox is full, no icon will appear on LCD to alert you. In addition, the earliest message will be overwritten by the latest one automatically.

- For each message, you can choose to perform any of these operations: Resend, Forward, View Details and Delete.
- To delete all messages in the OutBox, select “Message -> Outbox -> Delete All”.

Drafts

The Drafts can save up to 20 draft messages. When the Drafts is full, the earliest message will be overwritten by the latest one automatically.

For each message, you can choose to perform any of these operations: Send, Save and Delete.

- After the message in the Drafts is sent, it will be removed from the Drafts and be saved to the Outbox.
- To delete all messages in the Drafts, select “Message -> Drafts -> Delete All”.

Work Orders

This feature is programmed by the dealer. It enables the radio to receive work orders from the third party and reply it with the current work status. Please contact your dealer for details.

Call Logs

The radio can save up to 10 private call entries in the Outgoing/Incoming/Missed list respectively. When the Outgoing/Incoming/Missed list is full, the earliest entry will be overwritten by latest one automatically.

You can press the **Menu** key to enter “Main Menu -> Call Logs” menu, or enter the “Call Logs” menu

directly via the shortcut key for Call Logs.

After accessing a list and selecting an entry, you can perform any of these operations: hold the **PTT** key to initiate a call; add it to Contact List; or delete it. To delete all entries in the Outgoing/Incoming/Missed list at a time, select “Call Logs -> Outgoing/Incoming/Missed -> Delete All”.

VOX

This feature allows you to transmit the voice with no need to press **PTT**.

When VOX is enabled, the icon will appear.

Enabling or disabling the VOX Feature

Press the programmed **VOX** key to toggle the VOX function on or off.

You can also toggle it on or off via the “Settings -> Radio Set -> VOX” menu.

Adjusting the VOX Gain Level

You can set the sensitivity of microphone transmission via the “Settings -> Radio Set -> VOX -> Gain Level” menu. The higher gain value indicates lower sensitivity.

- Internal: the VOX transmission sensitivity of internal microphone
- External: the VOX transmission sensitivity of external microphone

Caution: Please adjust the VOX Gain Level properly on your actual requirements.

MIC AGC

This feature can be enabled via the programming software. Your radio will control the audio gain during transmission, providing improved audio with appropriate volume for the receiving radio.

Audio Feedback Suppression

This feature can be enabled via the programming software. It can weaken the noise caused by short-distance communication, so as to improve the voice quality.

LQO

This feature enables the radio to adjust the audio quality automatically in standby mode to fit different using environments, as well as making the heard voice clear.

You can enable or disable the LQO feature by pressing the programmed **LQO** key or via the menu “Settings -> Radio Set -> LQO”.

Rent

Your dealer can rent the radio to you. If you are renting the radio, when the rental expires, you are not allowed to go on using the radio.

You can check the remaining rental time of the radio via the menu “Settings -> Radio Set -> Rent -> Rent Query”.

If the Rent Pre-Alert feature is enabled, the radio will give a tone periodically to remind you how much time is left for the rental.

Scan

The Scan feature allows you to listen to communication activities on other channels so that you can keep a close track of your team members.

Operation

- To enable the feature, you can select “On” from the menu “Scan”, press the programmed **Scan** key in the home screen, or switch to a channel for which the Auto Scan feature is enabled via the programming software.
- After the feature is enabled, your radio will scan according to the scan list set for the channel on which scanning starts. The scanning process is as follows:
  - During scanning, the LCD displays the icon , and the LED flashes orange slowly.
  - When activities are detected on a channel, the radio will stay on the channel to receive current activities. If your radio stays on a non-priority channel, the LCD will display the icon ; if on Priority Channel 1 or Priority Channel 2, the LCD will display the icon P_1 or P_2 accordingly.

    If you don’t want to hear activities on the channel, press the programmed **Nuisance Temporary Delete** key to remove the channel from the scan list temporarily.

    If you want to continue staying on the channel, press the programmed **Monitor** or **Squelch Off** key during scan stay.

    To exit the scanning process, you can select “Off” from the menu “Scan”, or press the programmed **Scan** key again.

Scan Set

You can request your dealer to create a scan list for each channel. Each list may contain 32 channels at most (either digital channel or analog channel is OK).

You can have the following configuration to the Scan List: Go to “Scan -> Scan List”.

- Adding a Channel
  To include a new channel into the active scan list.
- Editing Priority Channel
  To set the selected channel as a priority channel or non-priority channel. If you are interested in activities on a channel, you can set it as a priority channel, which will be scanned more frequently than a non-priority channel.
  Each scan list may contain two priority channels at most.
  P1 indicates Priority Channel 1, and P2 indicates Priority Channel 2.
- Deleting a Channel
  To remove a channel from the active scan list. However, the first channel in the list can not be deleted.

Roam

This feature allows the radio to communicate between sites in the IP Multi-site Connect system. If enabled, the radio can communicate via any site in the IP Multi-site Connect system, thus ensuring seamless communication in the system.
Operation:
Enable or disable Roam feature via the “Roam” menu.
Press the programmed **Roam** key to enable or disable the feature.

Adjust Power Level

With this feature, you may switch power levels quickly. Generally, we recommend you to adopt low power for battery saving. However, if you cannot communicate with radios located at a distant place with low power, please select high power.
Press the programmed **Adjust Power Level** key to switch between high power and low power (from low power to high power: a high-pitched tone sounds; from high power to low power: a low-pitched tone sounds).

Note: Power level should be set for each channel respectively.

Talk Around

You can continue to communicate in DM mode by pressing the programmed **Talk Around** key, when your repeater malfunctions, or when your radio is out of the repeater’s range but within talking range of other radios.
Press the programmed **Talk Around** key to enable the feature (a high-pitched tone sounds). To disable the feature, press this key again (a low-pitched tone sounds).

Monitor

To adjust match conditions for signal receiving, you can enable the Monitor feature.

- Press the programmed **Monitor** key to enable the feature, and the radio displays icon . To disable the feature, press this key again.
- Hold the programmed **Monitor Momentary** key to enable the feature, and the radio displays icon . To disable the feature, release this key.

Squelch Off

If the Squelch Off feature is enabled, the speaker will keep unmuted no matter whether carrier is present.

- Press the programmed **Squelch Off** key to enable the feature. Then the radio displays the icon and sounds background noise. To disable the feature, press this key again.
- Hold the programmed **Squelch Off Momentary** key to enable the feature. Then the radio displays the icon and sounds background noise. To disable the feature, release this key.

Adjust Squelch Level

This feature allows you to adjust the squelch threshold required for the radio to be unmuted.
Generally, the higher squelch level requires stronger signal for the radio to be unmuted. If the squelch level is set to “Open”, the speaker will keep unmuted irrespective of the satisfaction of decoding conditions.
Press the programmed **Adjust Squelch Level** key to switch among “Tight”, “Normal” and “Open”. You can also switch among these levels via the menu “Settings -> Squelch Level”.
When switching from “Tight” to “Open”, a low-pitched tone sounds followed by the background noise; from “Open” to “Normal”, a high-pitched tone sounds with the background noise fading; from “Normal” to “Tight”, a high-pitched tone sounds.

One Touch Call

You can request your dealer to set the **One Touch Call** key. By pressing the programmed key, you can make corresponding services detailed as below:

- Services on the analog channel: to send calls to the 5-Tone or 2-Tone contact.
- Services on the digital channel:
  - To send group calls or messages to the group call contact.
  - To send private calls, messages or make control services to the private call contact.
    The control services contain: Alert Call, Radio Check, Remote Monitor, Radio Enable or Radio Disable.

    Alert Call

    You can send an alert call to a private call contact. The called party will see the alert and can call you back.

    Radio Check

    You can send a Radio Check command to a private call contact, so as to confirm whether it is powered on or running on the current channel without disturbing it.

    Remote Monitor

    You can enable the microphone of a private call contact, and monitor its activities or background voice remotely.

    Radio Enable

    You can enable the radio of a private call contact remotely and allow it to be used normally.

    Radio Disable

    You can disable the radio of a private call contact remotely and disallow it to be used normally.

Operation:

Service	Operation
To send private calls/group calls on the digital channel.	Press the **One Touch Call** key and then hold the **PTT** key.
To send calls on the analog channel. Sending a Message To make control services on the digital channel.	Press the **One Touch Call** key.

Telemetry

This feature allows you to remotely supervise the device connected with a radio. With this feature, you can control the device and view its status in the case that you are away from the device.

The method for supervising the device is programmable by your dealer. The available methods are:

- To supervise the device via the radio
  If a device is connected with a radio, you can use another radio to supervise the device. All the radios involved should be configured with the Telemetry feature. For example, the dealer enables the Telemetry feature for both Radio A and Radio B, and assigns the Telemetry feature to the **SK1** key on Radio A. To supervise the Device C, connect it with Radio B, and press the **SK1** key on Radio A.
- To supervise the device via a third-party software
  If the Telemetry feature is enabled for the radio by your dealer, you can supervise the device connected with the radio via third-party software.

Priority Interrupt

Manual Priority Interrupt

You can have the priority of interruption by pressing the programmed **Priority Interrupt** key. By pressing this key, you can terminate the ongoing activity (a call, Call Hold Time or remote monitoring) on the current channel, so as to initiate a new call or data service.

Call Hold Time: the duration the radio stays at in-call status after the end of the call. There are two types: Group Call Hold Time and Private Call Hold Time. Within the time, you can hold the **PTT** key to directly call back.

Auto Priority Interrupt

The Auto Priority Interrupt is enabled by the dealer. It is designed to ensure the priority given to the specified services. Such services will trigger the interruption automatically.

Emergency Priority Interrupt

This function is designed for users to report an emergency alarm in time. Carrying this function would interrupt the active call on the current channel. To carry out the function, any of the following ways is available:

- Press the programmed **Emergency On** key.
- Hold the **PTT** key in Emergency mode.
- Auto Emergency Call

Call Back Priority Interrupt

With the feature enabled, you can hold the **PTT** key to interrupt a receiving call and call back. For example, user A is receiving a call from user B. This

function allows user A to interrupt the call and talk back to user B by pressing the **PTT** key.

Message Priority Interrupt

During a call on the channel, this function allows you to send a short message which will also interrupt the call.

Radio Disable Priority Interrupt

During a call on the channel, this function allows you to send a radio disabling command which will also interrupt the call. The disabled radio can be monitored remotely, but other features will be invalid. It can only be revived by reprogramming through the CPS or through the revive command.

All Call Priority Interrupt

During a call on the channel, this function allows you to transmit an all call which will interrupt the ongoing call.

Emer Alarm

In case of an emergency, you can use the feature to ask for help from your companion or control center. The emergency alarm has the highest priority. You can make emergency operation even when your radio is transmitting or receiving.

Caution:

Any of the two situations below will occur when the emergency alarm initiator exits the Emergency mode:

- The initiator presses the programmed **Emergency Off** key or **Power Off** key to exit the Emergency mode.
- When exiting this mode in other ways (as introduced below), the radio can only exit the emergency alarm on the current channel temporarily, and will continue to give the alarm when it returns to this channel; moreover, when the radio switches to another channel which is also designed with the Emergency feature, it will give an alarm on that channel, too.

The Emergency feature is enabled by your dealer. Before use, you may need to know the following concepts.

Emergency Type

Different types will have different indications:

Emergency Type	Description
Siren Only	In Emergency mode, the radio will sound shrill alarm tone and display icon .
Regular	In Emergency mode, the radio will give audible and visible indication.
Silent	In Emergency mode, the radio won't give any audible or visible indication.
Silent with Voice	In Emergency mode, the radio won't give any audible or visible indication, but will receive voice ACK from the companion or control center automatically.

Emergency ID Type

Your radio supports three Emergency ID types. You can select one of them via your dealer:

Emergency ID Type	Description
None	No signaling is used when the radio sends alarm information.
HDC1200	HDC1200 signaling is used when the radio sends alarm information.
5-Tone	5-Tone signaling is used when the radio sends alarm information.

Emergency Mode

Except “Siren Only”, other emergency types support the following three Emergency modes. You can select one of them via your dealer (Note: For the following operation methods, we take the “Regular” type as an example).

Emergency Mode	Description
Alarm	In this mode, you can send alarm information to your companion or control center by pressing the programmed **Emergency On** key, but you cannot talk with them.
Alarm with Call	In this mode, you can send alarm information by pressing the programmed **Emergency On** key. When the icon appears, you can hold the **PTT** key to speak into the microphone. Your voice and background noise to be transmitted automatically.
	Note: If the Alarm with Call To Follow feature is enabled by your dealer, you can speak into the microphone without holding the **PTT** key.

Emergency Mode	Description
Emergency Call	In this mode, press the programmed **Emergency On** key to go to the Revert Channel, and you can hold the **PTT** key to speak into the microphone when the icon appears. Your voice and background noise to be transmitted automatically. **Note:** If the Alarm with Call To Follow feature is enabled by your dealer, you can speak into the microphone without holding the **PTT** key. This mode will be unavailable when the Emergency ID is not sent or 5-Tone Emergency ID is sent.

Operation Methods for Analog Emergency

Alarm (None, 5-Tone & HDC1200)

Initiating an emergency alarm:

Press the programmed **Emergency On** key to send alarm information.

- None, HDC1200: The radio displays icon and text information “Sending Alarm”, with the LED glowing red.
- 5-Tone: The radio sends the ID first (the icon and text information “Sending ID” will be displayed), and then transmits the emergency alarm (the icon and text information “Sending Alarm” will be displayed), with the LED glowing red.

Note: As for None and 5-Tone emergency ID type, if “Local Emergency Alarm” is enabled via the programming software, the radio will give an alarm tone.

Exiting the emergency alarm:

The emergency alarm initiator exits the Emergency mode in any of the following ways:

- Press the programmed **Emergency Off** key.
- Turn the radio off.
- Once the Alarm Cycles expire, the radio will exit the Emergency mode automatically.
- Hold the **PTT** key to exit the Emergency mode. The radio will transmit the voice on the channel where the radio operates before entering the Emergency mode (for HDC1200 only).

The emergency alarm receiving party exits the Emergency mode in any of the following ways:

- None: When an alarm is received, the receiving party can press any key to exit the emergency alert. When the alarm initiator exits the Emergency mode or when the Alarm Cycles expire, the receiving radio will exit the emergency alert automatically.
- 5-Tone: When an alarm is received, the receiving party can press any key to exit the emergency alert.
- HDC1200: When an alarm is received, the receiving party can exit the emergency alert by pressing the **TK** key within 2s after pressing the **Back** key, or switching the channel or powering off the radio.

Alarm with Call (None, 5-Tone & HDC1200)

Initiating an emergency alarm:

1. Press the programmed **Emergency On** key to send alarm information.
   - None, HDC1200: The radio displays icon and text information “Sending Alarm”, with LED glowing red.
   - 5-Tone: The radio sends the ID first (the icon and text information “Sending ID” will be displayed), and then transmits the emergency alarm (the icon and text information “Sending Alarm” will be displayed), with the LED glowing red.

Note: As for None and 5-Tone emergency ID type, if “Local Emergency Alarm” is enabled via the programming software, the radio will give an alarm tone.

2. If the Alarm with Call to Follow feature is enabled, you can speak into the microphone to make an emergency call when the radio displays the icon .
3. And when a call is received, the icon appears.
4. If the preset Voice Cycles expire, you can hold the **PTT** key to make the emergency call again (the radio displays the icon , with the LED glowing red). After the emergency call is transmitted, release the **PTT** key to receive (the radio displays the icon , with the LED flashing orange rapidly). And when a call is received, the icon appears (for HDC1200 only).

Exiting the emergency alarm:

The emergency alarm initiator exits the Emergency mode in any of the following ways:

- Press the programmed **Emergency Off** key.
- Turn the radio off.

- After the preset Alarm Cycles and Voice Cycles expire, the radio will exit the Emergency mode automatically (for None and 5-Tone only).

The emergency alarm receiving party exits the emergency alarm in any of the following ways:

- None: When the alarm is received, the receiving party can press any key to exit the emergency alert. When the alarm initiator exits the Emergency mode or when the Alarm Cycles expires, the receiving radio will exit the emergency alert automatically.
- 5-Tone: When an alarm is received, the receiving party can press any key to exit the emergency alert.
- HDC1200: When an alarm is received, the receiving party can exit the emergency alert by pressing the **TK** key within 2s after pressing the **Back** key, or switching the channel or powering off the radio.

Call Only (HDC1200)

Initiating an emergency alarm:

Press the programmed **Emergency On** key to go to the Emergency Channel, and the radio displays the icon .

If the Alarm with Call to Follow feature is enabled, you can speak into the microphone to make an emergency call when the radio displays the icon .

And when a call is received, the icon appears.

If the preset Voice Cycles expire, you can hold the **PTT** key to make the emergency call again (the radio displays the icon , with the LED glowing red).

After the emergency call is transmitted, release the **PTT** key to receive (the radio displays the icon , with the LED flashing orange rapidly). And when a call is received, the icon appears.

Exiting the emergency alarm:

To exit the Emergency mode, press the programmed **Emergency Off** key or power off the radio.

The emergency receiving party cannot exit the emergency alert until the initiator exits.

Note: Your dealer may set the number of alarm cycles and alarm duration (None, 5-Tone), number of polite retries and impolite retries (HDC1200), number of voice cycles, duration of each transmission and TX interval.

Operation Method for Digital Emergency

Emergency Alarm

Initiating an emergency alarm:

Press the programmed **Emergency On** key to send alarm information. The radio displays icon and text information “Sending Alarm”, with LED glowing red.

Exiting the emergency alarm:

The emergency alarm initiator exits the Emergency mode in any of the following ways:

- Press the programmed **Emergency Off** key.
- Turn the radio off.
- Once the Alarm Cycles expire, the radio will exit the Emergency mode automatically.

When an alarm is received, the receiving party can exit the emergency alert by pressing the **TK** key within 2s after pressing the **Back** key, or switching the channel or powering off the radio.

Alarm with Call

Initiating an emergency alarm:

1. Press the programmed **Emergency On** key to send alarm information. The radio displays icon and text information “Sending Alarm”, with the LED glowing red.
2. Hold the **PTT** key (the LCD displays the icon , with the LED glowing red) and speak into the microphone to transmit the emergency call.

Note: If your dealer has enabled the Alarm with Call To Follow, you can speak into the microphone without pressing the **PTT** key when the LCD displays the icon . If the preset Voice Cycles expire, you can hold the **PTT** key to make the emergency call again.

3. And when a call is received, the icon appears. When the icon appears, you can hold the **PTT** key (the icon appears with the LED glowing red) to speak into the microphone.

Exiting the emergency alarm:

To exit the Emergency mode, press the programmed **Emergency Off** key or power off the radio.

When an alarm is received, the receiving party can exit the emergency alert by pressing the **TK** key within 2s after pressing the **Back** key, or switching the channel or powering off the radio.

Emergency Call

Initiating an emergency alarm:

1. Press the programmed **Emergency On** key to go to the Emergency Channel, and the radio displays the icon .
2. Hold the **PTT** key (the icon appears,

with the LED glowing red) and speak into the microphone to transmit the emergency call.

Note: If your dealer has enabled the Alarm with Call To Follow, you can speak into the microphone without pressing the **PTT** key when the icon appears. If the preset Voice Cycles expire, you can hold the **PTT** key to make the emergency call again.

3. And when a call is received, the icon appears. When the icon appears, you can hold the **PTT** key (the icon appears with the LED glowing red) to speak into the microphone.

Exiting the emergency alarm:

To exit the Emergency mode, press the programmed **Emergency Off** key or power off the radio.

The emergency receiving party cannot exit the emergency alert until the initiator exits.

Note: Your dealer may set the number of polite retries and impolite retries, number of voice cycles, duration of each transmission and TX interval.

Man Down

With the feature enabled, the radio will give a tone if it tilts to a certain gradient (defined by the dealer) or stay motionless until the preset period expires. And the radio will enter the Emergency mode automatically if you don't make proper operation on it within the period when the tone continues. To exit the Emergency mode, please move it or place it upright.

You can enable or disable the Man Down feature by pressing the programmed **Man Down** key or via the menu "Settings -> Radio Set -> Man Down".

The radio gives a high-pitched tone when the Man Down feature is enabled and a low-pitched tone when the feature is disabled.

Lone Worker

This feature is ideal for persons who work lonely. If you encounter an incident and cannot operate your radio within the preset time period, your radio will alarm automatically to summon help from your companion.

1. To enable the feature,
   Go to "Main Menu -> Settings -> Radio Set -> Lone Worker" and select "Enable"; or
   press the programmed **Lone Worker** key (a high-pitched tone sounds); or
   turn on the radio if the feature is enabled via the programming software.
2. If you cannot operate your radio within a preset response period, your radio will give alerts before this period expires (dependent on the settings by your dealer). At this time, you can terminate such alerts by rotating a knob or pressing a key. When the response period expires, your radio will trigger the current emergency system automatically.
3. To disable the feature,
   Go to "Main Menu -> Settings -> Radio Set-> Lone Worker" and select "Disable"; or
   press the programmed **Lone Worker** key (a low-pitched tone sounds).

Note: If the Lone Worker feature is not disabled before your radio is powered off, it will remain enabled when powered on again.

Covert Mode

When Covert Mode is enabled, the radio will close any visible indications on it, such as the LED, Vibration, etc, which are set by your dealer. This feature is mainly used in special missions.

To enable or disable the Covert mode, you can press the programmed **Covert Mode** key, or enter the menu "Settings -> Radio Set -> Covert Mode".

Scramble /Encrypt

The Scramble feature can encrypt your audio signals to prevent eavesdropping. Thus privacy of your communication is guaranteed.

This Encrypt feature can encrypt your audio signals to prevent eavesdropping. Thus privacy of your communication is guaranteed.

- On an analog channel, go to "Main Menu -> Settings -> Radio Set -> Scramble" and select "Enable" or "Disable"; on a digital channel, go to "Main Menu -> Settings -> Radio Set -> Encrypt" and select "Enable" or "Disable".
- Press the programmed **Scramble/Encrypt** key to enable Scramble or Encrypt on the current channel (a high-pitched tone sounds); press the key again to disable the feature (a low-pitched tone sounds).
- If the Scramble/Encrypt feature is enabled for a channel via the programming software, switch to the channel to enable the feature, or exit the channel to disable the feature.

Setting of Encryption Key

The radio can contain up to 30 encryption keys. You can create an encryption key

by defining its key ID, alias, length and value, and then save it. See the details in the following table.

Item	Description
Key ID	The ID consists of numbers only, in the range of 1 – 255.
Key Alias	The alias can contain 16 characters at most, composed of Chinese characters, English letters, numbers and symbols. **Note:** The key alias cannot be the same with the key ID.
Key Length	This is used to define the length of the key.
Key Value	The value can consist of numbers and letters A-F (within the predefined key length).
Save	Save the created key to the key list. **Note:** If you need to delete a key, please request your dealer for help.

Radio Registration Service

This feature can be enabled via the programming software. Your radio will automatically register in the system within a certain period after power-on. Then it can acquire online information of other radios via accessing specific servers within the valid registration period.

GPS

With the enabled GPS feature, when the system requires GPS information, your radio will upload its positioning information to the system in the method set by the dealer.

You can upload the GPS information by pressing the **GPS Report** key programmed by the dealer.
You can configure GPS via the menu “Accessories -> GPS” in the radio.

GPS On/Off

This option allows you to set whether to enable the GPS feature.

Note: Enabling the GPS feature will shorten the operating time of the battery.

Position

With this option, you can view longitude, latitude, time, date, speed, altitude and SA (satellite) information of your radio.

GPS Text Msg

If the GPS feature is enabled, you can send the GPS text message to your desired contact. To install the units, please do as follows:

1. Select “GPS Msg”, and press the **OK** key to access the menu “Contact List”.
2. Use the **Up/Down** key to select a desired contact.
3. Press the **OK** key to send the GPS message to the selected contact.

Time Zone

You can choose your time zone to correct the received GPS time. We recommend you to set the time zone before your initial use of this feature.
You can select a desired time zone via the User Define method as per your actual needs. The available time zone options are the same as those for the PC. For example, if the time at your location is 5.45 hours earlier than GMT, then you can select “GMT+5.45” as your time zone.

Radio Set

You can optimize your radio performance by setting it according to actual needs and your preferences.
Enter “Settings -> Radio Set” menu to set the items as introduced below:

Power Level

This menu is to set the TX power level to High or Low. High power can extend the coverage, enabling you to communicate with farther radios.
Alternatively, you can toggle the power level by pressing the programmed **Adjust Power Level** key in the home screen.
On the LCD, High power is indicated by [H] and Low power is indicated by [L].

Language

To set the language used in the radio interface.

Backlight

This menu allows you to set the backlight. Activating the backlight can illuminate the LCD and the keypad, so as to facilitate your operation under dim light conditions.

- Off: The backlight will always remain off.
- On: The backlight is on all the time.
- Timed: If no operation or signal transmission/ receipt occurs within the time preset by the dealer, the backlight will be turned off automatically.

Brightness

This option allows you to set the display brightness. You can raise or lower it using the **Up/Down** key.

LED

This menu allows you to set whether to turn on LED indicator. Generally, the LED indicator can indicate TX/RX, Scan/Roam status, Low Battery, etc. The indications of the LED are set by the dealer.

Tone

You can select the tones on actual requirements.

Tone	Description
Radio Silent	This feature disables all the tones.
Talk Permit	This option decides whether the tone will be given during transmission. The following options are available: Disable (no tone indication for transmission), Digital Only (tone indication for transmission on digital channels only), Analog Only (tone indication for transmission on analog channels only), and Enable (tone indication for transmission on both analog and digital channels).
TextMsg	The tone given when the radio receives a message.
Keypad	The tone given when you are operating the keypad.
Low Battery	The tone given when the radio is in low battery status. Then you will need to replace the battery.
Call End	The tone given upon a call ending.
Group Call	The tone given when the radio receives a group call.
Private Call	The tone given when the radio receives a private call.
Voice End	This option decides whether the radio sounds an alert tone after it stops receiving.
Channel Notify	The announcement given when you are switching the channels via the **Channel Selector** knob. The radio announces the channel number only if the channel is switched via the **Channel Selector** knob or **Channel Up/Channel Down/ Preset Channel** key.
Signaling Side Tone	The continuous tone given when the radio is transmitting the signaling. It is available for call in HDC1200/5-Tone/2-Tone system.
Emer Alarm	The tone given when an emergency alarm is received.
Priority Channel	The tone given when the radio observes the priority channel.
Alert Call	The tone given when an alert call is received.
Power on	The tone given when the radio is powered on.

Vibration

This option is to set whether to enable the Vibration feature. With this feature enabled, the radio can give vibration indications upon the receipt of a message, private call or alert call.

Password

To set the power-on password for the radio.

Option Board

When the option board is enabled, it allows a third party to achieve further development with the radio. For example, use the radio to send a message to some other equipment.

Programming

You can modify the frequency, color code and slot information for the current channel.

- Frequency: You can set the TX/RX frequency within the required range.
- Color Code: It is used to identify a system. Radios to communicate with each other must be assigned with the same color code.
  Value range: an integer between 0 and 15.
- Slot: You can select the slot for calls and data transmission.

Device Info

With this option, you can view basic information of your radio, including Radio Alias, Serial Number, Model Name, Frequency Range, Firmware Version, Radio Data Version, Boot Loader Version, etc.
Go to “Main Menu -> Settings -> Device Info”.

Battery Power Indicator

This feature allows you to know the current battery strength.
Hold the programmed **Battery Power Indicator** key, and the radio will give a specific indication to represent the current battery strength. Release this key to exit.

Indication	Battery Power Icon	Battery Power
LED glows green.		High
LED glows orange.		Medium
Red LED glows.		Low
LED glows red and the low battery alert sounds.		Insufficient

Troubleshooting

Phenomena	Analysis	Solution
Power-on failure	The battery may be improperly installed.	Remove the battery and attach it again.
	The battery may run out.	Recharge or replace the battery.
	The battery may suffer from poor contact caused by dirtied or damaged battery contacts.	Clean the battery contacts. If the problem can not be solved, contact your dealer or authorized service center for inspection and repair.
During receiving, the voice is weak, discontinuous or totally inactive.	The battery power may be too low.	Recharge or replace the battery.
	The volume may be set to a low level.	Increase the volume.
	The antenna may get loose or improperly installed.	Power off the product, and re-install the antenna.
	The speaker may be blocked or damaged.	Clean surface of the speaker. If the problem can not be solved, contact your dealer or authorized service center for inspection and repair.
You can not communicate with other members.	The frequency or signaling may be inconsistent with that of other members.	Set your TX/RX frequency and signaling to the same as that of other members.
	The channel type (digital/analog) may be set inconsistently.	Make sure all members are on the same digital/analog channel.
	You may be too far away from the group members.	Move towards other members.
Irrelevant communication or noise is heard on the channel.	You may be interrupted by products using the same frequency.	Change the frequency, or adjust the squelch level.
	The product may be set with no signaling.	Set signaling for all member products to avoid interference at the same frequency.
The noise is too loud.	You may be too far away from other members.	Move towards other members.
	You may be at an unfavorable position. For example, your communication may be blocked by high buildings or frustrated in the underground areas.	Move to an open and flat area, and try again.
	You may suffer from external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.
The GPS cannot locate your position.	No GPS signal is received.	Move to an open and flat area, and restart the product.
The BT device cannot be paired.	The device has low power.	Recharge the BT device.
	The device is too far away from the radio.	Move it towards the radio.

If the above solutions can not fix the problems for you, or you may have some other queries, please contact us or your local dealer for more technical support.

Care and Cleaning

To guarantee optimal performance as well as a long service life of the product, please follow the tips below.

Product Care

- Do not pierce or scrape the product.
- Keep the product far away from substances that can corrode the circuit.
- Do not hold the product by its antenna or earpiece cable directly.
- Attach the accessory jack cover when the product is not in use.

Product Cleaning

Caution: Power off and remove the battery before cleaning.

- Clean up the dust and fine particles on the product surface and charging piece with a clean and dry lint-free cloth or a brush regularly.
- Use neutral cleanser and a non-woven fabric to clean the keys, control knobs and front case after long-time use. Do not use chemical preparations such as stain removers, alcohol, sprays or oil preparations, so as to avoid surface case damage.
- Make sure the product is completely dry before use.

Optional Accessories

The following items are the main optional accessories for the radio, and please consult your local dealer for more information of other accessories.

Li-Ion Battery (1100mAh) BL1103	Programming Cable (USB Port) PC45	Vehicle Adapter for Charger CHV09	Battery Optimizing System MCA05-X	Wireless Earpiece EHW02	Li-Ion Battery Adapter POA53
Belt Clip Charger CH04L01	Covert Vest NCN009	Plastic Carrying Case with Clip PCN005	Wireless Ring PTT POA47	Remote Earbud ESN14	Remote Swivel Earset EHN20
Remote C-Earset EHN21	Remote Earset with transparent acoustic tube EAN22	Digital Covert Wireless Earpiece with Inductive Neckloop EWN08	3-Wire Surveillance Earpiece with Transparent Acoustic Tube (beige) EAN21	Digital Covert Wireless Earpiece with Inductive Neckloop and Remote Controller EWN07	Digital Covert Wireless Earpiece with Inductive Neckloop EWN08

Caution : Use the accessories specified by the Company only. If not, Hytera shall not be liable for any losses or damages arising out of use of unauthorized accessories.

Appendix

Input Method

You can enter aliases, numbers or messages using the keypad. The radio supports these input methods: Chinese Pinyin (simplified), English and Number.

Chinese Pinyin (Simplified)

1. Press [# ⇧] to switch to Chinese Pinyin mode.
2. Enter the pinyin through alphanumeric keys; then a list of possible combinations and corresponding characters will appear.
3. Use the **Up/Down** key to choose the right pinyin.
4. Press the **OK** key to highlight the characters, and choose the right character using the **Up/Down** key.
5. Press the **OK** key to enter the selected character.

You can repeat the above steps to continue.

English

1. Press [# ⇧] to switch to uppercase English or lowercase English mode.
2. Press the key which bear your desired letter repeatedly until the letter appears.

You can repeat the above steps to continue.

Number

1. Press [# ⇧] to switch to Number mode.
2. Enter the numbers through alphanumeric keys [0 +] to [9 WXYZ].

Special Character

To enter common punctuations and special characters, press [1 !<].

To input a space, press [* ␣].

Note: You can use the **Up/Down** key to move the cursor leftward/rightward in the entered text.

Signaling Introduction

The radio supports the following signaling. You can ask your dealer to make appropriate settings on your radio. For detailed information, please consult your dealer.

HDC1200

The HDC1200 signaling is compatible with the MDC1200 signaling, and realizes functions such as PTT ID (Encoding & Decoding), Emergency (Encoding & Decoding) and Selective Call (Encoding & Decoding).

Encoding:

1. Hold the **PTT** key during normal voice communication to send PTT ID.
2. Go to the menu “Contact List” and select a required contact. Then hold the **PTT** key to send a selective call (Private Call/Group Call/All Call).

For encoding, the radio will provide the following indications:

- PTT ID/Selective Call: Your dealer can program whether the radio sounds side tone during encoding or beeps after encoding.
- Selective Call: During encoding, the LED glows red, and the LCD displays the appropriate call icon (Private Call: ; Group Call: ; All Call:). After encoding, the LED glows orange.

Decoding:

For decoding, the radio provides the following indications:

- PTT ID: After decoding, the LCD displays the icon and ID or alias of the transmitting party.
- Selective Call: After decoding, the radio provides the following indications:
  - **Tone:** The radio will give the tone by default.
  - **LED:** The LED glows green.
  - If your dealer enables the Display Decode ID feature, the radio will display the appropriate call icon (Private Call: ; Group Call: ; All Call:) and alias of the transmitting party (ID of the transmitting party will be displayed if it is not in the contact list). If your dealer does not enable the Display Decode ID feature, the radio will display the appropriate call icon only.

5-Tone

This radio can realize various types of calls through 5-Tone signaling.

Encoding:

1. Request your dealer to configure the correct format and type for the encoding contents.
2. When the format consists of fields for variable information, you need to fill in such fields by manual entry or menu operation.
   When the format consists of fixed codes only, you do not have to edit such fields or save such data.
3. Press the **PTT** key or the programmed **One Touch Call 1 – One Touch Call 5** keys to send the 5-Tone signaling.

During encoding, the radio sounds a side tone, the LED glows red, and the LCD displays the contact information (or “Five Tone Call”) and an appropriate call icon (Private Call: ; Group Call:). If Auto Reset is enabled (by your dealer), your radio will enter the Auto Reset mode after successful encoding, with the LED glowing orange, until the Auto Reset Time expires.

Decoding:

Your radio can automatically decode the 5-Tone signaling when receiving any matched one.

During decoding, the LED glows green. After successful decoding, the LCD displays the contact information (or “Five Tone Call”), an appropriate call icon (Private Call: ; Group Call:), and the decoded status message. If Auto Reset is enabled (by your dealer), your radio will enter the Auto Reset mode, with the LED glowing orange, until the Auto Reset Time expires.

2-Tone

With this signaling, the radio can transmit and receive 2-Tone calls.

Encoding:

1. Request your dealer to configure the correct format and type for the encoding contents.
2. Press the **PTT** key or the programmed **One Touch Call 1 – One Touch Call 5** keys to send the 5-Tone signaling.
   During encoding, the radio sounds a side tone, the LED glows red, and the LCD displays the call icon with contact information above it. If Auto Reset is enabled (by your dealer), your radio will enter the Auto Reset mode after successful encoding, with the LED glowing orange, until the Auto Reset Time expires.

Decoding:

Your radio can automatically decode the 2-Tone signaling when receiving any matched one.

During decoding, the LED glows green. After successful decoding, the LCD displays the call icon and the call type (selective call, alert call w/voice, alert call) below the icon according the decoding type.

If Auto Reset is enabled (by your dealer), your radio will enter the Auto Reset mode, with the LED glowing orange, until the Auto Reset Time expires. The radio cannot enter the Auto Reset mode if it is an alert call.

Hytera

致用户

非常感谢您对我们产品的青睐！为了确保您最大限度地享用本产品所带来的各项便利，请于使用前详细阅读本手册和《安全信息手册》。

本手册适用于以下机型：

X1p

版权信息

Hytera 为海能达通信股份有限公司（以下简称“我司”）在中华人民共和国和世界其他国家和 / 或地区的商标或注册商标。我司仅对自有商标及产品名称享有所有权，本手册中可能提及的其他商标和产品名称为各自所有者所有。

本手册介绍的产品中可能包括存储于内存或其他媒介中的计算机程序。我司对此等程序享有的专有权利受中华人民共和国或其他国家及相关国际法的保护。购买本产品并不意味着我司以明示或暗示方式向购买者授予有关此等电脑程序的权益。未经我司事先书面授权，任何企业、组织或个人不得对计算机程序进行任何形式的复制、更改、散发、反编译和反向工程。

本产品嵌入的 AMBE+2™ 语音编解码技术受知识产权保护，包括 Digital Voice Systems, Inc. 的专利权、版权和商业秘密。该语音编解码技术经单独授权供该产品使用。明确禁止该技术使用者对其进行反编译、逆向工程或反汇编目标代码，或以任何其他方式将目标代码转换成可读取的格式。

美国专利号：#6,912,495 B2, #6,199,037 B1, #5,870,405, #5,826,222, #5,754,974, #5,701,390, #5,715,365, #5,649,050, #5,630,011, #5,581,656, #5,517,511, #5,491,772, #5,247,579, #5,226,084 和 #5,195,166。

免责声明

本手册在编制过程中力求内容的准确性与完整性，但对于可能出现的错误或疏漏，我司不承担任何责任。由于技术的不断发展，我司保留不予通知而更改产品设计与规格的权利。未经我司事先书面授权，不得以任何形式对本手册进行复制、修改、翻译和散发。

如需更多信息或对本手册有任何建议，欢迎访问我们的网站：http://www.hytera.com，或拨打我司服务热线 400-830-7020。

射频辐射信息

本机仅限于能够满足射频能量辐射要求的职业应用。使用者必须清楚了解射频辐射危害并可采取相应措施，满足射频辐射限定要求。

射频辐射常识

射频指可以辐射到空间的电磁频率，是通讯、医疗、食品加工等领域广泛使用的一种技术，在使用过程中会产生一定的射频辐射。

射频辐射安全

为了确保用户的身心健康，来自科学、工程、医药、健康和工业的专家们与相关组织共同研究制定了射频辐射标准和准则，如下所示：

- 美国联邦通信委员会联邦政府法规汇编第 47 卷第 2 部分 J 子部分；
- 美国国家标准协会 (ANSI)/ 电气和电子工程师协会 (IEEE) 标准 C95.1-1992 版；
- 电气和电子工程师协会标准 C95.1-1999 版；
- 国际非电离辐射防护委员会 (ICNIRP) 于 1998 年颁布的标准；

美国联邦通信委员会监管要求

按照美国联邦通信委员会的监管要求，本产品必须符合美国联邦通信委员会射频辐射限制规定，否则不能在美国市场上销售。并要求制造商可通过在产品上张贴标签的方式，告知用户应注意的事项，提高用户的防辐射意识。

射频辐射控制及操作说明

为了使产品发挥最佳性能及确保符合上述标准中有关职业或受控环境中的辐射限制要求，发送时间不得超过额定因数的 50%，且需遵照下列说明：

仅在发射（讲话）时产生射频能量辐射，接收（收听）和待机时均不会产生。

欧盟指令符合性声明

本产品经独立第三方机构认证，符合欧盟指令“1999/5/EC”中的相关要求。请注意，本声明仅适合欧盟国家。

目录

阅读约定 2
标识符号 2
界面元素 2
按键操作 2
包装清单 2
熟悉本产品 2
部件介绍 2
可编程键 3
用前准备 3
充电 3
安装附件 4
状态指示 4
LCD 图标 4
LED 指示灯 5
菜单导航 5
基本操作 6
开机与关机 6
调节音量 6
选择区域 6
选择信道 6
数模切换 6
键盘锁定与解锁 6
使用蓝牙设备 6
呼叫 6
个呼 6
组呼 7
全呼 7
模拟信道呼叫 7
发射莫尔斯码 7
接收振动 8
电话 8
超时禁发 8
繁忙信道锁定 8
虚拟集群 8
功能与操作 8
待机界面 8
管理联系人 8
短消息 9
工作任务 10
呼叫记录 10
声控 10
麦克风自动增益控制 10
声反馈抑制 10
音质音量优化 10
租赁 10
扫描 10
漫游 11
功率级别调整 11
脱网 11
监听 11
静噪打开 11
静噪级别调整 11
一键呼叫 11
遥测 12
优先打断 12
紧急报警 12
倒放 14
单独工作 14
隐蔽模式 15
扰频 / 加密 15
对讲机注册服务 15
GPS 15
设置对讲机 16
编程 16
查看本产品信息 16
电池电量指示 17
故障处理 17
保养与清洁 18
保修条款 18
选购配件 19
附录 20
输入法 20
信令介绍 20
五音 20
两音 20

阅读约定

本手册介绍了本产品的所有功能，请通过您的经销商，了解您购买的产品可使用的功能。
使用本手册前，请阅读如下约定，方便您更好的理解手册内容。

标识符号

符号	意义
备注	表示对正文内容的补充、说明和强调。
注意	表示可能导致设备损坏或数据丢失的事项。
	表示数字信道独有的功能，只能在数字信道上使用。 表示模拟信道独有的功能，只能在模拟信道上使用。 未用图标区分的功能在数字信道和模拟信道上都可使用。

界面元素

格式	意义
“ ”	该符号表示软件界面控件名称，例如：单击“确定”。
【 】	该符号表示硬件界面控件名称，例如：按【PTT】键。
->	该符号用于对多级菜单进行逐级指引，例如：选择“文件”菜单下的“新建”，表示为：“文件 -> 新建”。

按键操作

操作	定义
短按	按下某按键并快速松开。
长按	按下某按键达预编程时间（默认为 2 秒）后松开。
按住	一直按住某按键。

包装清单

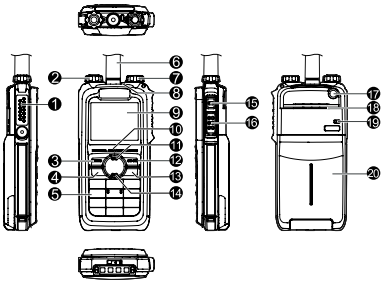
包装盒内含有以下物品。如有任何物品丢失或损坏，请与您所购产品的经销商联系。

备注：天线频段请参考天线底部色环标签内容。若标签未注明频段，则参考主机标签上的具体频段。

熟悉本产品

您可通过本节熟悉本产品的外部结构、可编程键功能。

部件介绍



编号	部件名称	编号	部件名称
1	附件接口	11	上移键
2	电源开关 / 音量控制旋钮	12	返回键
3	确认 / 菜单键	13	P2 键
4	P1 键	14	下移键
5	数字键盘	15	SK1（侧键）
6	天线	16	PTT 键（发射键）
7	信道选择旋钮	17	TK（顶部键）
8	LED 指示灯	18	扬声器
9	LCD 显示屏	19	麦克风 2
10	麦克风 1	20	电池

可编程键

为了提升操作便利性，本机的 4 个可编程键【SK1】、【TK】、【P1】和【P2】，可由您的经销商编程为功能快捷键，如下表所示。各功能的详细介绍请见“功能与操作”章节的相应内容。

编号	快捷键名称	用途
1	区域上调	快速选择区域。
2	区域下调	
3	键盘锁	快速锁定或解锁键盘。
4	联系人列表	一键进入“联系人列表”菜单。
5	短消息	一键进入“短消息”菜单。
6	呼叫记录	一键进入“呼叫记录”菜单。
7	功率级别调整	快速调整发射功率。
8	脱网	快速开启或关闭脱网功能。
9	监听	快速开启或关闭监听功能。
10	暂态监听	
11	静噪打开	快速开启或关闭静噪功能。
12	暂态静噪打开	
13	待机界面	快速返回至上一级菜单或待机界面。
14	扫描	快速开启或关闭扫描功能。
15	噪声信道临时删除	暂时删除不感兴趣的活动信道。
16	静噪级别调整	一键进入“静噪级别”菜单。
17	电池电量提示	快速查看电池电量。
18	倒放	快速开启或关闭倒放功能。
19	扰频 / 加密	快速开启或关闭扰频或加密功能。
20	单独工作	快速开启或关闭单独工作。
21	一键呼叫 1 ～ 5	快速发起业务。
22	状态列表	快速进入“状态浏览”菜单（五音信令专有）。
23	遥测	监控远程设备。
24	DTMF 键盘	快速进入或退出 DTMF 拨号模式。DTMF 拨号模式下，用户在对讲机键盘上输入号码进行电话拨号。
25	电话列表	一键进入电话联系人列表菜单。
26	漫游	快速开启或关闭漫游功能。
27	优先打断	打断当前信道上正在进行的语音呼叫、呼叫保持时间和远程监听，使信道空闲，以便进行新的呼叫或数据业务。
28	声控	快速开启或关闭声控功能。
29	蓝牙	快速开启或关闭蓝牙功能。
30	GPS 上传	立即向系统上传 GPS 数据。
31	可选板	启用或禁用当前信道的可选板。
32	莫尔斯码	发射莫尔斯码。
33	接收振动	快速开启或关闭接收振动功能。
34	紧急报警开启	开启紧急报警。
35	紧急报警关闭	关闭紧急报警。
36	预设信道	快速切换信道，目标信道由经销商写频配置，可以是任意区域的一个信道。
37	音质音量优化器	快速开启或关闭音质音量优化器。
38	隐蔽模式	快速开启或关闭隐蔽模式。

备注：

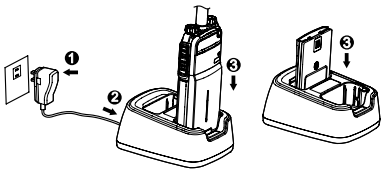
- 同一按键的短按和长按可实现不同功能，具体由经销商设置。
- 【TK】键出厂时预设为“紧急报警开启”和“紧急报警关闭”快捷键，您可通过经销商设为其他功能快捷键。

用前准备

充电

注意：充电时请务必保证本产品处于关机状态。

请使用我司指定的充电座对电池进行充电，充电座的指示灯显示充电状态（见下表）。充电示意图如下图所示。



1. 将电源适配器的插头插入电源插座，如图示步骤①；
2. 将电源适配器的另一端插入充电座背面的插孔，如图示步骤②；
3. 将电池或装有电池的本产品正确插入充电座，如图示步骤③；

充电座上的指示灯显示充电状态。指示灯亮红灯时，表示充电开始。指示灯变为绿灯时，表示充电完成。具体如下表所示。

备注：

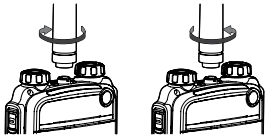
- 为获得最佳电池性能，首次充电时，请充满 3 小时。
- 请参阅《安全信息手册》，以获取必要的电池安全信息。

指示灯显示	当前充电状态
红色 LED 慢闪	待机（空载）
红色 LED 长亮	正在充电
橙色 LED 长亮	已充满 90%
绿色 LED 长亮	电池充满
红色 LED 快闪	故障

安装附件

安装天线

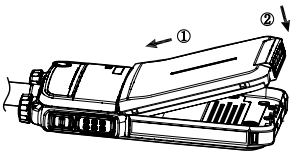
沿顺时针方向旋转天线直至旋紧。



如需卸下天线，逆时针旋转即可。

安装电池

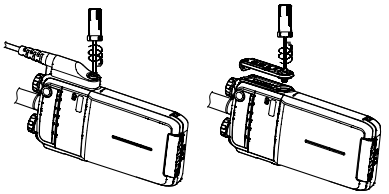
1. 按①所示插入电池；
2. 轻压电池底部，直至听到“咔嗒”一声②。



如需卸下电池，请先关闭本产品。按①所示箭头方向拨动卡扣以松开电池推钮，然后将底部电池推钮往上提起并取出电池。

安装音频附件

1. 按箭头所示方向打开附件接口盖；
2. 将附件插头对准附件接口；
3. 将附件插头上的螺钉拧紧。



如需取下附件，拧松螺钉即可。

注意：请正确安装附件，否则本产品的防水性能可能会受到影响。

状态指示

LCD 图标

图标名称	图标显示	本产品状态
工作模式图标	DM	直通模式：本产品与其他终端之间直接通信
	RM	中转模式：本产品与其他终端通过中转台的转发进行通信
信号强度图标		信号条数越多，信号越强
消息图标		接收到短消息，或者有未读短消息
		收件箱的存储空间已满
扫描图标		扫描状态
		扫描停留于非优先信道
		扫描停留于优先信道 1
		扫描停留于优先信道 2
漫游图标		漫游状态
发射功率图标	L	当前信道功率为低功率
	H	当前信道功率为高功率
电池电量图标		条数越多，电池电量越多
监听图标		已开启监听功能
扬声器图标		已开启扬声器
紧急报警图标		紧急报警状态（秘密报警除外）或接收到紧急报警
声控图标		已开启声控
附件图标		已连接附件

图标名称	图标显示	本产品状态
GPS 图标		已开启 GPS 功能，且收到有效 GPS 数据
		已开启 GPS 功能，但未收到有效 GPS 数据
扰频 / 加密图标		已开启扰频或加密功能
未接来电图标		有未接听的呼叫
DTMF 键盘图标		已开启 DTMF 键盘
工作任务图标		有新的工作任务

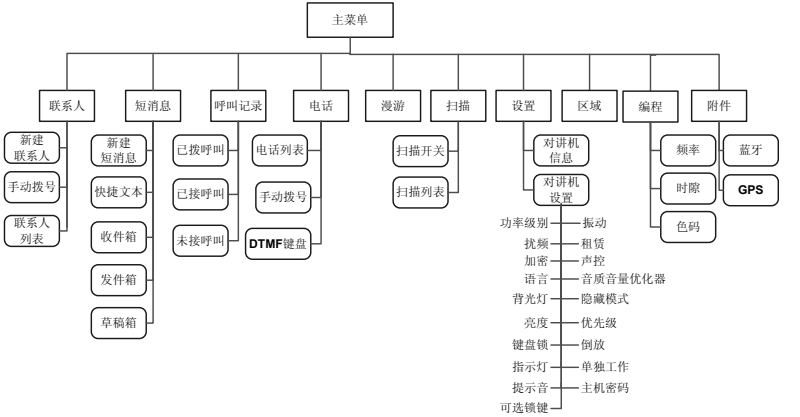
LED 指示灯

本产品顶部 LED 指示灯让您轻松掌握本产品当前的操作状态。

指示灯状态	本产品状态
绿灯闪烁	正在开机。
红灯长亮	正在发送。
绿灯长亮	正在接收。
橙灯慢闪	正在扫描。
橙灯快闪	紧急状态。
橙灯长亮	呼叫建立成功后，业务信道上无语音发射和接收，此时您可以按住【PTT】键通话。
蓝灯长亮后间隔 3s 闪烁	正在开启蓝牙时蓝灯长亮，成功开启蓝牙后蓝灯间隔 3s 闪烁（此时未连接蓝牙设备）。
蓝灯间隔 2s 闪烁	已连接蓝牙设备。

菜单导航

本产品菜单结构如下图所示，展现的是本产品的所有菜单项，您可通过经销商配置是否显示各菜单项。
您需要先按【菜单】键进入主菜单，再通过【上移】键 /【下移】键定位到您需要的子菜单或选项后按【确认】键进行确认，以完成您的设置。本文档介绍菜单操作时，仅介绍菜单项的顺序，例如，进入联系人列表的路径为“联系人 -> 联系人列表”。
本产品菜单具有自动复位功能，如您在预编程时间（由经销商配置）内没有对菜单进行任何操作，本产品将自动返回待机界面。您可以通过经销商修改自动复位时间、取消自动复位。



基本操作

开机与关机

如需开机，请顺时针旋转【电源开关 / 音量控制】旋钮直到听到“咔嗒”声。如需关机，请逆时针旋转此旋钮直到听到“咔嗒”声。

调节音量

开机后，顺时针旋转【电源开关 / 音量控制】旋钮可增大语音接收音量，逆时针旋转可减小语音接收音量。

选择区域

区域是一个信道组，即您可将具有相同属性的信道列入一个区域中，这样便于您对现有信道进行有效管理。本机支持 64 个区域，每个区域最多包含 16 个信道。您可通过以下两种方式选择区域：

- 通过菜单选择
  进入“区域”菜单后，按【上移】/【下移】键来选择所需区域，然后按【确认】键切换至所选区域。
- 通过编程键选择
  若经销商为您设置了【区域上调】/【区域下调】快捷键，则按此快捷键可切换至所需区域。

选择信道

开机后，旋转【信道选择】旋钮即可选择所需信道。你也可以通过按【预设信道】快捷键，切换到指定信道。如果经销商开启了信道播报功能，此处切换信道时本产品将播报信道号。

数模切换

本产品中的每个信道都可由经销商配置为模拟信道或数字信道。若当前区域包含数字信道和模拟信道，您变换信道切换至模拟信道或数字信道。

键盘锁定与解锁

当您无需使用键盘时，可锁定键盘以防止误操作键盘。您可通过以下方式来锁定或解锁键盘：

- 组合键
  按“【确认】+ [*⌴]”来锁定或解锁键盘。
- 编程键
  若经销商设置了【键盘锁定】快捷键，您可按该键来锁定或解锁键盘。
- 菜单选择
  进入“设置 -> 对讲机设置 -> 键盘锁”，选择“允许”或“禁止”即可。
  - 允许：若在键盘自动锁定时间内无任何对讲机操作，键盘将自动锁定。选择允许后您可通过【上移】/【下移】键设置键盘自动锁定时间，时间范围为 5~60 秒。
  - 禁止 ：键盘不会自动锁定。但您可通过上述组合键或【键盘锁定】键来锁定或解锁键盘。

备注：默认的锁定键盘范围是面板上除【P1】和【P2】以外的按键，您可以选择其它需要锁定的键或旋钮，即可选锁键，菜单路径：设置 -> 对讲机设置 -> 可选锁键。可选锁键包括以下键：TK、信道旋钮、P1、P2、SK1、音量旋钮。

使用蓝牙设备

注意：建议您使用我司指定的蓝牙设备：无线耳机 EHW02 和无线指环 PTT POA47。

使用蓝牙设备时，请按以下说明正确放置主机。

- 当主机佩戴在身上时，主机与蓝牙设备佩戴在身体的同侧，且主机正面（LCD 显示屏所在面）朝外。
- 其它情况下，将主机放置在距离蓝牙设备不超过 2 米的地方，且主机正面面向蓝牙设备。

请先开启蓝牙设备，再按照以下步骤连接到蓝牙设备才能使用蓝牙功能。

1. 按【蓝牙】快捷键开启蓝牙。或通过菜单来实现，菜单路径：附件 -> 蓝牙 -> 开启 / 关闭。
   成功开启蓝牙后，LED 闪烁蓝灯。

备注：蓝牙 PTT 和蓝牙耳机需要分开搜索和连接，操作方法相同，本操作过程中以蓝牙 PTT 为例。

2. 搜索蓝牙设备。
   - 进入“附件 -> 蓝牙 -> 匹配设备”菜单。
   - 选择“搜索 PTT”开始搜索，搜索到蓝牙 PTT 时，进入“设备列表”中并在该列表中显示蓝牙 PTT 的名称。
3. 连接蓝牙设备。
   - 按【确认】键选择该设备。
   - 按【确认】键连接 PTT 部件，连接成功时，LCD 显示“连接成功”。

呼叫

为了保证接收方对讲机的最佳接收音量，发射时请保持麦克风距离嘴大约 2.5 到 5 厘米。

个呼

发起呼叫

您可通过以下方式发起个呼。个呼发起时，LCD 显示 图标。

对预设联系人发起呼叫

在待机界面下，按住【PTT】键即可对当前数字信道上预设的个呼联系人发起个呼。

备注：您可通过经销商为每个数字信道预设一个联系人，该联系人可以是个呼联系人，也可以是组呼或全呼联系人。

通过“联系人列表”或“呼叫记录”发起呼叫

1. 选择“联系人 -> 联系人列表”，或选择“呼叫记录”进入已拨 / 已接 / 未接呼叫列表。
2. 用【上移】/【下移】键选择您想要呼叫的个呼联系人。
3. 按住【PTT】键即可发起个呼。

通过手动拨号发起呼叫

1. 选择“联系人 -> 手动拨号”，进入拨号界面。
2. 输入您想要呼叫的个呼号码。
3. 按住【PTT】键即可发起个呼。

备注：

- 本产品同时允许个呼手动拨号和组呼手动拨号时，您可按 [# ⇧] 键切换，LCD 显示呼叫类型（个呼 ID/ 组呼 ID）。
- 本产品允许数字键盘输入时，您可直接在待机界面输入个呼号码，再按【PTT】键发起个呼。但本产品开启 DTMF 键盘时，在待机界面输入的是电话号码，您只能从手动拨号菜单中进行拨号。

接收和回复呼叫

接收到个呼后，LCD 显示 图标。
在预设时间内按住【PTT】键可发送回呼。如未进行回呼，则显示未接呼叫提示以提醒您。

备注：

- 经销商为本产品开启“显示未接呼叫”功能后，您可在 LCD 上看到未接呼叫提示图标 和弹出式的未接呼叫提示（图标 ）。
- 如果经销商没有为本产品开启“显示未接呼叫”功能，您在 LCD 上仅看到未接呼叫提示图标 。

组呼

发起呼叫

您可通过以下方式发起组呼。组呼发起时，LCD 显示 图标。

对预设联系人发起呼叫

在待机界面下，按住【PTT】键即可对当前数字信道上预设的组呼联系人发起组呼。

通过“联系人列表”发起呼叫

1. 选择“联系人 -> 联系人列表”。
2. 用【上移】/【下移】键选择您想要呼叫的组呼联系人。
3. 按住【PTT】键即可发起组呼。

通过手动拨号发起呼叫

1. 选择“联系人 -> 手动拨号”，进入拨号界面。
2. 输入您想要呼叫的组呼号码。
3. 按住【PTT】键即可发起组呼。

备注：

- 本产品同时允许个呼手动拨号和组呼手动拨号时，您可按 [# ⇧] 键切换，LCD 显示呼叫类型（个呼 ID/ 组呼 ID）。
- 本产品允许数字键盘输入时，您可直接在待机界面输入组呼号码，再按【PTT】键发起组呼。但本产品开启 DTMF 键盘时，在待机界面输入的是电话号码，您只能从手动拨号菜单中进行拨号。

接收和回复呼叫

接收到组呼后，LCD 显示 图标。
在预设时间内按住【PTT】键可发送回呼。

全呼

发起呼叫

发起全呼的方式有两种：对预设联系人发起呼叫、通过“联系人列表”发起呼叫。具体方式同上述“发起组呼”。发起全呼时，LCD 显示 图标。

备注：只有当经销商为您开启全呼功能后，您才可发起全呼。

接收呼叫

接收到全呼后，LCD 显示 图标。

备注：您无法对接收到的全呼进行回复。

模拟信道呼叫

在模拟信道上，如需发射，请按住【PTT】键并对着麦克风讲话。如需接收，请松开【PTT】键。

发射莫尔斯码

莫尔斯码是一种信号代码，这些代码通过不同的排列顺序来表达不同的英文字母、数字和标点符号，常用作暗号。

按【PTT】键的同时，按住【莫尔斯码】快捷键，本产品发射莫尔斯码，松开【莫尔斯码】快捷键停止发射。本产品根据按键时间的长短发射不同的莫尔斯码，用户通过莫尔斯码的组合来发送信号。发射莫尔斯码时，如果本产品开启了信令侧音，则收发双方均能听到声音。

接收振动

接收语音时，本产品振动，直到语音接收结束，喇叭或耳机不会将接收的语音播放出来。
您可通过按【接收振动】快捷键开启或关闭本功能。

电话

中转台连接 PSTN 网关设备接入 PSTN 后，本产品通过该中转台可与电话进行通信。

发起呼叫

1. 接入电话系统。

- 即时拨号方式
  按住【PTT】键通过数字键盘输入入网码后再松开【PTT】键，LCD 显示拨号信息，同时您可听到类似电话拨号的“嘟嘟”声。接入电话系统成功时，LCD 进入 DTMF 拨号模式。
- 存储拨号方式
  进入 DTMF 拨号模式。有以下几种方式。
  - 通过“电话 -> 手动拨号”，进入 DTMF 拨号模式。
  - 先按【DTMF 键盘】快捷键或通过“电话 -> DTMF 键盘”，开启 DTMF 键盘。此时，您在待机界面下通过数字键盘的则是 DTMF 码。

  接入电话系统：通过数字键盘输入入网码后，按【PTT】键，LCD 显示拨号信息，同时您可听到类似电话拨号的“嘟嘟”声。接入电话系统成功时，LCD 重新进入 DTMF 拨号模式。

2. 输入电话号码进行拨号。

- 即时拨号方式：按住【PTT】键并通过数字键盘输入完整的电话号码后再松开【PTT】键。
- 存储拨号方式：直接通过数字键盘输入电话号码，再按【PTT】键。

备注:无论哪种拨号方式，您在此时，均可按“返回”，再通过“电话 -> 电话列表”选中联系人再按【PTT】键。

3. 通话接通后，如果您需要跟对方通话，则按住【PTT】键讲话，松开【PTT】键接听对方讲话。
   如果您想要结束通话，可输入出网码（输入方法同入网码）退出电话系统。
   对方挂断电话时也可结束通话，退出电话系统。

接收呼叫

本产品接收到电话呼叫时，LCD 显示 或 图标。在预设时间内按住【PTT】键可发送回呼。如未进行回呼，则 LCD 显示未接呼叫提示。具体提示方式同个呼。

超时禁发

此功能可防止用户过久地占用信道。如果连续发射时间超过经销商设定的时间，本产品则会停止发射并且响警告音。若要停止警告音，请松开【PTT】键。如需再次发射，请间隔一段时间后（具体由经销商设置）再次按住【PTT】键。
若经销商写频设定预警告功能，则在超时禁发所设定时间快到前给出预告警提示，告诉您发射即将被禁止。

备注:处于紧急报警模式时，本功能无效。

繁忙信道锁定

此功能可通过写频软件开启，以防止干扰同一信道上正在发射的其他用户。当您在其他用户占用该信道时按住【PTT】键，本产品将发出“嘟”音并显示“信道繁忙”，提示您此时无法发射。当该信道空闲时，按住【PTT】键才能进行发射。

虚拟集群

此功能可通过写频软件开启。当您的本产品在开启此功能的信道上工作时，如果某一时隙已被占用，您还可在另一个空闲时隙上进行发射和接收。

功能与操作

待机界面

此功能可使您快速返回到上一级菜单或待机界面。
在编辑界面下，按【P2】键，本产品将退出编辑界面，并返回到上一级菜单。在其他菜单界面下按此键，本产品将直接返回到待机界面。

管理联系人

您可通过本产品的“联系人”菜单，管理您的联系人。

联系人列表

联系人列表用于保存个呼联系人信息，最多可以储存 512 条记录。您可以从“联系人”菜单进入“联系人列表”，或按【联系人列表】快捷键可以快速进入“联系人列表”。

补充业务

您可对联系人列表中的某个联系人（仅个呼联系人）的对讲机进行如下操作：呼叫提示、对讲机检查、远程监听、对讲机激活或对讲机遥毙。详见下述“手动拨号”部分。

编辑联系人

您可以修改联系人列表中的某个联系人（仅个呼联系人）的号码、别名。

查看联系人

您可以查看联系人的详细信息。

删除联系人

您可对联系人列表中的联系人（仅个呼联系人）进行删除。联系人列表中至少有两条记录才可进行删除操作，且您无法删除当前信道的预设联系人。

新建联系人

此菜单可使您创建新联系人（仅个呼联系人）至联系人列表。所有联系人的别名和号码必须是唯一的，输入联系人号码的范围为 1~16776415。

备注：

- 在输入联系人别名时，您可以通过 [# ⇑] 键切换输入法。
- 除了通过本菜单创建联系人以外，您还可以将呼叫记录中的未存储号码保存到联系人列表中。

手动拨号

您可直接输入所需的呼叫 ID 进行呼叫。在数字信道下，如果本产品同时允许个呼和组呼，您可通过按键盘 [# ⇑] 键进行切换，LCD 显示呼叫类型（个呼 ID/组呼 ID）。

对于个呼呼叫 ID，您还可执行以下选项：

补充业务	描述
呼叫提示	向某个联系人发起呼叫提示，对方看到提示后可直接进行回拨。
对讲机检查	在不干扰对方的情况下，对某个联系人发起对讲机检查，以确认对方是否开机或在当前信道使用。
远程监听	远程激活某个联系人的麦克风，秘密监听对方的语音和背景音信息。
对讲机激活	向某个联系人发送激活命令，使其对讲机恢复正常使用。
对讲机遥毙	向某个联系人发送遥毙命令，使其对讲机无法正常使用。被遥毙的对讲机可以被远程监听，但其它功能无法使用，此时只能通过 CPS 软件重新写频或通过激活指令来激活对讲机。

短消息

发送短消息

1. 选择“短消息 -> 新建短消息”，进入短消息编辑窗口。
2. 编辑短消息内容后按【确认】键。
3. 选择联系人或手动输入联系人号码。
4. 按【确认】键发送短消息。发送成功后，界面将提示“发送成功”。

您也可以直接使用快捷文本进行发送，还可以将收件箱、发件箱、草稿箱中的短消息进行转发。详见短消息中各子菜单的介绍。

新建短消息

进入此菜单后，您可以编辑新的短消息，该短消息最多可以输入 256 个字符。完成编辑后，您可以将该短消息直接保存到草稿箱或者发送给个人或组。

快捷文本

此菜单中有经销商为您预先设定好的短消息，本产品最多支持 25 条快捷短消息。您可选择一条快捷短消息直接发送，或对快捷短消息进行编辑后再发送。

收件箱

本产品会将接收到的短消息保存在收件箱中。每条短消息前有相应图标显示该短消息是否已读。

- ：已读的短消息。
- ：未读的短消息。

本产品最多可存储 20 条已接收的短消息。若收件箱已满，则在 LCD 上会显示 图标，如果有新的已收短消息，则最早的短消息将自动被覆盖。

- 您可对收件箱中的任一短消息进行如下操作：回复、转发、详情、删除。
- 如果您想删除收件箱中的所有短消息，请选择“短消息 -> 收件箱 -> 删除全部”。

发件箱

本产品会将发送的短消息保存在发件箱中。发件箱中的每条短消息前有相应图标显示该短消息发送是否成功：

- ：短消息发送成功。
- ：短消息发送失败。

本产品最多可存储 20 条已发送的短消息。当发件箱已满时，在 LCD 上不会显示相关图标进行提示。若有新的已发短消息，则最早的短消息将自动被覆盖。

- 您可对收件箱中的任一短消息进行如下操作：重发、转发、详情、删除。
- 如果您想删除发件箱中的所有短消息，请选择“短消息 -> 发件箱 -> 删除全部”。

草稿箱

本产品会将已经编辑好的短消息保存在草稿箱中。本产品最多可存储 20 条草稿消息。当草稿箱已满时，如有新的短消息保存到草稿箱中，则最早的短消息将自动被覆盖。

您可对草稿箱中的任一短消息进行如下操作：发送、保存、删除。

- 当您将草稿箱中的短消息发送出去后，本产品会此短消息保存到发件箱中，并删除草稿箱中的这条短消息。
- 如果你想删除草稿箱中的所有短消息，请选择“短消息 -> 草稿箱 -> 删除全部”。

工作任务

本功能需要通过经销商写频开启。开启本功能后，本产品可以接收第三方发送的工作任务，并向第三方回复工作任务的状态。具体请咨询您的经销商。

呼叫记录

本产品最多可以分别存储 10 条已拨 / 已接 / 未接呼叫记录。当呼叫记录已满时，若有新的呼叫记录，则最早的记录将自动被覆盖。

操作方法：您可通过【菜单】键进入“呼叫记录”菜单，路径：“呼叫记录”；也可通过【呼叫记录】快捷键快速进入此菜单。

您可对呼叫记录列表中的任一条呼叫记录进行如下操作：按【PTT】发起呼叫、添加到联系人列表、删除。要删除所有已拨 / 已接 / 未接呼叫记录，选择“呼叫记录 -> 已拨呼叫 / 已接呼叫 / 未接呼叫 -> 删除全部”。

声控

声控是指语音可直接触发 PTT 发射：麦克风检测到的语音达到触发声控发射的大小时，对讲机自动发射该语音，即通话过程中用户无须按住【PTT】键可直接讲话。

声控开启时，LCD 显示 Ⓥ 图标。

开启或关闭声控

按【声控】快捷键，开启或关闭声控功能。

您也可以在“设置 -> 对讲机设置 -> 声控”中，开启或关闭声控。

调整声控增益级别

您也可以在“设置 -> 对讲机设置 -> 声控 -> 增益级别”中调整麦克风声控发射的灵敏度。声控增益级别的数值越大，增益级别越高，灵敏度越低，触发声控发射的语音音量越大。

- 内部声控增益级别：内部麦克风声控发射的灵敏度。
- 外部声控增益级别：外部麦克风声控发射的灵敏度。

注意：请根据当前环境、用户正常讲话音量等，正确调整声控增益级别，以免频繁意外触发声控（灵敏度过高）或很难触发声控（灵敏度过低）。

麦克风自动增益控制

此功能可通过写频软件开启。功能开启后，您的对讲机发送语音时，会对输出信号语音部分进行增益控制，使其输出强度始终保持在一定范围内，接收方能听到音量适中的语音。

声反馈抑制

此功能可通过写频软件开启。功能开启后，可减轻终端近距离通话而产生的啸声，从而提高语音音质。

音质音量优化

开启本产品音质音量优化器后，本产品会根据外部环境的变化自动调整接收语音的输出音量，并使语音更加清晰。

操作方法：按【音质音量优化器】快捷键，开启或关闭音质音量优化器功能。您也可以通过菜单来实现，菜单路径：设置 -> 对讲机设置 -> 音质音量优化器。

租赁

经销商可以将对讲机出租，通过写频开启租赁和配置租期，按租期收取费用。租期到达时，用户不能再使用对讲机。

如果您是租用的本产品，您可以通过菜单查询本产品的剩余租期，菜单路径：设置 -> 对讲机设置 -> 租赁 -> 租赁查询。

如果经销商开启了租赁预提示功能，本产品将定期响租赁预提示音，以便您及时了解剩余租期并有效使用本产品。

扫描

扫描功能可助您收听其他信道上的通信活动，从而了解相关组员当前的活动状况。

操作方法

- 您可以通过“扫描”菜单选择开启扫描。或在待机界面下，按【扫描】快捷键即可开启扫描。或若某个信道已启用“自动扫描”功能，则切换至该信道时，对讲机会自动开启扫描。
- 开启扫描后，对讲机将根据开启扫描时所在信道上设置的扫描列表进行扫描。扫描过程如下：
  - 扫描时，屏幕上显示 ⟳ 图标，LED 慢闪橙灯。
  - 扫描到某个信道上有活动时，对讲机将停留在该信道上进行收听。若扫描停留于非优先信道，屏幕上显示 ⟳ 图标。若停留于优先信道 1 或 2，则显示图标 P_1 或 P_2。
    若您无需收听该信道上的活动，在扫描停留时按【噪声信道临时删除】快捷键将该信道暂时删除。
    若您想继续收听该信道上的活动，在扫描停留时按【监听】/【静噪打开】快捷键。
    若要退出扫描，再次按【扫描】键即可，或通过“扫描”菜单选择关闭扫描。

扫描设置

您可通过经销商为每个信道创建一个扫描列表，每个扫描列表最多包含 32 个信道，可以既包含数字信道也包含模拟信道。您通过本产品对扫描列表进行如下设置。菜单路径：扫描 -> 扫描列表。

- 增加信道
  在当前扫描列表中增加一个新的信道。
- 设优先信道
  您可将当前所选信道设置为优先信道或非优先信道。若需重点关注某个信道上的活动，可将其设置为优先信道。优先信道的扫描频率要高于非优先信道。
  每个扫描列表中最多可以设置两个优先信道。P1 表示优先信道 1，P2 表示优先信道 2。
- 删除信道
  删除当前扫描列表中的某个信道，但您无法删除扫描列表中的第一个信道。

漫游

漫游是指对讲机能够在多个基站下通信，这些基站必须属于同一 IP 互联系统中。开启漫游功能后，对讲机可在同一 IP 互联系统的任意基站下通信，从而保证了 IP 互联系统的通信连续性。

开启 / 关闭漫游功能的操作方法：

- 通过“漫游”菜单，开启或关闭漫游功能。
- 按【漫游】快捷键，开启或关闭漫游功能。

功率级别调整

此功能可实现功率级别的快速切换。当通信距离满足您的需求时，可选择低功率以节约电量。而当低功率无法使您与距离较远的其他对讲机通信时，请选择高功率。

按【功率级别调整】快捷键，使当前信道的发射功率在高、低之间切换（切换至高功率时，响升调提示音；切换至低功率时，响降调提示音）。

备注：每个信道的功率级别需分别设置。

脱网

如遇中转台故障或超出中转台的覆盖范围，但两部终端均处于对方的通讯范围内，此时，您可按【脱网】快捷键转换至直通模式，实现两部终端直接通话。

按【脱网】快捷键即可开启脱网功能（响升调提示音）；再次按该键即可关闭此功能（响降调提示音）。

监听

开启“监听”功能可调整信号接收匹配条件。

- 按【监听】快捷键开启此功能，此时 LCD 显示 图标，再次按该键即可退出。
- 按住【暂态监听】快捷键开启此功能，此时 LCD 显示 图标，松开该键即可退出。

静噪打开

开启“静噪打开”功能时，无论是否有载波，本产品始终打开喇叭。

- 按【静噪打开】快捷键开启此功能，此时 LCD 显示 图标，并响“沙沙”的背景噪音。再次按该键即可退出。
- 按住【暂态静噪打开】快捷键开启此功能，此时 LCD 显示 图标，并响“沙沙”的背景噪音。松开该键即可退出。

静噪级别调整

您可通过调整静噪级别来调整接收信号时所需要的信号强度。

一般情况下，静噪级别越高，要求接收到的信号强度也越高。若设置为“常开”，无论解码条件是否满足，直接打开喇叭放出背景音。

按【静噪级别调整】快捷键即可在“加强”、“常开”、“正常”间依次切换。您也可以通过菜单来实现，菜单路径：“设置 -> 静噪级别”。

由“加强”切换至“常开”时，响降调提示音且有背景音；由“常开”切换至“正常”时，响升调提示音且背景音消失；由“正常”切换至“加强时，响升调提示音。

一键呼叫

您可以通过经销商设置【一键呼叫】快捷键，按该快捷键即可发起相应的业务。具体业务分类如下：

- 模拟信道上的业务：对五音联系人或两音联系人发起呼叫。
- 数字信道上的业务：
  - 对组呼联系人，可发起组呼或发送文本消息。
  - 对个呼联系人，可发起个呼、发送文本消息、发起补充业务。
    补充业务包括：呼叫提示、对讲机检查、远程监听、激活、遥毙。
    呼叫提示
    您可向某个联系人发起呼叫提示，对方看到提示后可直接进行回拨。
    对讲机检查
    您可在不干扰对方的情况下，对某个联系人发起对讲机检查，以确认对方是否开机或在当前信道使用。
    远程监听
    您可远程激活某个联系人的麦克风，秘密监听对方的语音和背景音信息。
    对讲机激活
    您可向某个联系人发送激活命令，使其对讲机恢复正常使用。

对讲机遥毙

您可向某个联系人发送遥毙命令，使其对讲机无法正常使用。

操作方法：

业务	操作方法
数字信道上的个呼、组呼	按【一键呼叫】快捷键后再按【PTT】键
模拟信道上呼叫业务 发送文本消息 数字信道上的补充业务	按【一键呼叫】快捷键

遥测

遥测是指远程监控与对讲机连接的设备，您在远离设备的情况下，也能够随时查看设备的运行状态并对设备进行控制。

您可通过以下两种方式监控远程设备，具体由经销商定义。

- 通过对讲机监控远程设备。
  外部设备与对讲机连接时，您可通过其他的对讲机监控该设备，本过程涉及的对讲机都需要配置遥测功能。例如，经销商为对讲机 A 和对讲机 B 配置了遥测功能，并为 A 的【SK】键关联遥测功能。将外部设备 C（例如，音箱）与 B 连接，当您按下该【SK】键时可监控 C。
- 通过第三方软件监控远程设备。
  经销商为对讲机配置遥测功能后，您可通过第三方软件监控与对讲机连接的外部设备。

优先打断

手动优先打断

通过按【优先打断】快捷键进行打断。可打断当前信道上正在进行的语音呼叫、呼叫保持时间和远程监听，使信道空闲，以便进行新的呼叫或数据业务。

呼叫保持时间包括组呼保持时间和个呼保持时间，这个保持时间是指呼叫结束后，呼叫状态的保持时间，在这个时间内，用户可直接按【PTT】键回呼。

自动优先打断

自动优先打断包括以下两种，均由经销商为您开启。此类优先打断是为了保证指定业务的优先，由该优先业务来触发打断，而非用户手动操作进行打断。

报警优先打断

本功能保证了报警的及时性。开启本功能后，信道上正在进行语音呼叫时，本产品可在该信道上进行报警，该报警将打断该语音呼叫。报警优先打断的触发方式有以下三种：

- 按“紧急报警开启”快捷键
- 紧急报警模式下，按【PTT】键
- 自动紧急呼叫

回呼优先打断

开启本功能后，本产品接收呼叫时，用户可以按 PTT 回呼，该回呼将打断该呼叫的接收。例如，用户 A 与用户 B 的呼叫过程中，A 正在接收 B 的讲话，A 想打断 B 的讲话以回呼时按住 PTT 讲话即可。

短消息优先打断

开启本功能后，当前信道上有正在进行的语音呼叫时，用户可使用本机发送短消息，该短消息将打断该语音呼叫。

遥毙优先打断

开启本功能后，当前信道上有正在进行的语音呼叫时，您可使用本机发送遥毙命令，该遥毙命令将打断该语音呼叫。被遥毙的对讲机可以被远程监听，但其它功能无法使用，此时只能通过 CPS 软件重新写频或通过激活指令来激活对讲机。

全呼优先打断

开启本功能后，当前信道上有正在进行的语音呼叫时，用户可使用本机起全呼，该全呼将打断该语音呼叫。

紧急报警

遇到紧急情况时，您可通过此功能来向同伴或控制中心寻求帮助。紧急报警有最高优先权，无论对讲机处于发射或接收状态，您都可进行报警。

注意：

报警发起方退出报警模式有两种情况：

- 按【紧急报警关闭】快捷键或关机可退出整机报警。
- 其他方式（见下文介绍）退出报警模式时，仅能暂时退出当前信道上的报警，重新选择该信道时，报警继续；并且，如果其他信道上有报警功能，切换到该信道时，对讲机重新进行报警。

报警功能的开启由经销商为您配置。使用本功能前，您需要了解以下概念。

报警类型

不同的报警类型，对讲机提示报警的方式不同，具体如下表所示。

报警类型	说明
仅鸣笛	报警时，对讲机只发出尖锐的报警音，同时屏幕上会显示 图标。
正常	报警时，对讲机会给出可听和可视提示。
秘密	报警时，对讲机不会给出任何可听提示或可视提示。
秘密有语音	报警时，对讲机接收到来自同伴或控制中心的语音时会给出可听提示，但不会给出可视提示。

报警 ID 类型

本对讲机支持以下几种报警 ID 类型，您可通过经销商任选其一。

报警 ID 类型	说明
无信令	发送报警时不带任何信令。
HDC1200	发送报警时使用 HDC1200 信令。
五音	发送报警时使用五音信令。

报警模式

除报警类型是“仅鸣笛”以外，其他报警类型支持以下几种报警模式，您可通过经销商任选其一（备注：以下操作方法以“正常”报警类型为例）。

报警模式	说明
紧急警报	在此模式下，您只能通过按【紧急报警开启】快捷键向同伴或控制中心发送报警信息，不能与对方进行通话。
警报呼叫	在此模式下，按【紧急报警开启】快捷键向同伴或控制中心发送报警信息。当屏幕上显示 图标时，您可按住【PTT】键对着麦克风讲话，您的话音和周围的背景音将被发送至接收方。 **备注：**如果经销商为您开启自动紧急呼叫，欲向对方讲话时，您无需按住【PTT】键便可对着麦克风讲话。
紧急呼叫	在此模式下，按【紧急报警开启】快捷键进入报警发射信道，当屏幕上显示 图标时，您可按住【PTT】键对着麦克风讲话，您的话音和周围的背景音将被发送至接收方。 **备注：**如果经销商为您开启自动紧急呼叫，欲向对方讲话时，您无需按住【PTT】键便可对着麦克风讲话。 无信令和五音信令报警时，无此报警模式。

模拟模式下的报警操作方法

紧急警报（无信令、五音和 HDC1200）

发起报警：

按【紧急报警开启】快捷键发送报警信息。

- 无信令、HDC1200：此时红灯长亮，屏幕上显示 图标及“发送警报”字样。
- 五音：此时红灯长亮，主机先发送报文（屏幕上显示 图标及“发送 ID”字样），后发送警报（屏幕上显示 图标及“发送警报”字样）。

备注:对于无信令和五音报警,若通过写频启用“本地紧急警报”,本产品将会响报警音。

退出报警：

报警发起方退出报警模式有以下几种方式：

- 按【紧急报警关闭】快捷键。
- 关机。
- 报警循环次数用完后，对讲机将自动退出紧急报警模式。
- 按住【PTT】键退出报警模式，对讲机返回报警进入前所在信道发送语音。（仅 HDC1200）

报警接收方退出报警有以下几种方式：

- 无信令：接收到报警后，接收方按任意键可退出报警提示。并且，报警发起方退出报警模式或报警循环次数用完后，接收方将自动退出报警提示。
- 五音：接收到报警后，接收方按任意键可退出报警提示。
- HDC1200：接收到报警后，接收方可先按【返回】键再按【TK】键（两次按键间隔时间不超过 2 秒）、切换信道或关机退出报警提示。

警报呼叫（无信令、五音和 HDC1200）

发起报警：

1. 按【紧急报警开启】快捷键发送报警信息。
   - 无信令、HDC1200：此时红灯长亮，屏幕上显示 图标及“发送警报”字样。
   - 五音：此时红灯长亮，主机先发送报文（屏幕上显示 图标及“发送 ID”字样），后发送警报（屏幕上显示 图标及“发送警报”字样）。

备注:对于无信令和五音报警,若通过写频启用“本地紧急警报”,本产品将会响报警音。

2. 若设置了“自动紧急呼叫”功能，当屏幕上显示 图标时，可对着麦克风讲话，发送紧急呼叫。
3. 接收到呼叫后，屏幕上显示 图标。
4. 当所设定的“紧急呼叫次数”用完后，若需要再次发起紧急呼叫，可按住【PTT】键（红灯长亮，屏幕上显示 图标）。讲话完毕后松开【PTT】键进行接收（屏幕上显示 图标，橙灯快闪）。接收到呼叫后，屏幕上显示 图标。（仅 HDC1200）

退出报警：

报警发起方退出报警模式有以下几种方式：

- 按【紧急报警关闭】快捷键。
- 关机。
- 当所设定的报警音次数和紧急呼叫次数用完后，对讲机将自动退出紧急报警模式。（仅无信令和五音）

报警接收方退出报警有以下几种方式：

- 无信令：接收到报警后，接收方按任意键可退出报警提示。并且，报警发起方退出报警模式或报警循环次数用完后，接收方将自动退出报警提示。
- 五音：接收到报警后，接收方按任意键可退出报警提示。
- HDC1200：接收到报警后，接收方可先按【返回】键再按【TK】键（两次按键间隔时间不超过 2 秒）、切换信道或关机退出报警提示。

紧急呼叫（HDC1200）

发起报警：

1. 按【紧急报警开启】快捷键进入报警信道，屏幕上显示 图标。
2. 若设置了“自动紧急呼叫”功能，屏幕上显示 图标时，可对着麦克风讲话，发送紧急呼叫。
3. 接收到呼叫后，屏幕上显示 图标。
4. 当所设定的“紧急呼叫次数”用完后，若需要再次发起紧急呼叫，可按住【PTT】键（红灯长亮，屏幕上显示 图标）。讲话完毕后松开【PTT】键进行接收（屏幕上显示 图标，橙灯快闪）。接收到呼叫后，屏幕上显示 图标。

退出报警：

报警发起方若要退出报警模式，按【紧急报警关闭】快捷键或关机即可。

报警接收方不能手动退出报警提示，报警发起方退出报警模式后，报警接收方自动退出报警提示。

备注：可通过写频设定紧急警报次数和紧急警报音持续时间（无信令、五音）、礼貌发射次数和非礼貌发射次数(HDC1200)、紧急呼叫次数、每次发送时间、发送间隔。

数字模式下的报警操作方法

紧急警报

发起报警：

按【紧急报警开启】快捷键发送报警信息。此时红灯亮，屏幕上显示 图标及“发送警报”字样。

退出报警：

报警发起方退出报警模式有以下几种方式：

- 按【紧急报警关闭】快捷键。
- 关机。
- 报警循环次数用完后，对讲机将自动退出紧急报警模式。

接收到报警后，接收方可先按【返回】键再按【TK】键（两次按键间隔时间不超过 2 秒）、切换信道或关机退出报警提示。

警报呼叫

发起报警：

1. 按【紧急报警开启】快捷键发送报警信息。此时红灯长亮，屏幕上显示 图标及“发送警报”字样。
2. 按住【PTT】键（红灯长亮，屏幕上显示 图标）对着麦克风讲话，发送紧急呼叫。

备注：如果经销商为您开启自动紧急呼叫，您无需按住【PTT】键，在屏幕上显示 图标时对着麦克风讲话即可。当“紧急呼叫次数”用完后，若需要再次发起紧急呼叫，可按住【PTT 键】。

3. 接收到呼叫后，屏幕上显示 图标。屏幕上显示 图标时，可按住【PTT】键（红灯长亮，屏幕上显示 图标）对着麦克风讲话。

退出报警：

报警发起方若要退出报警模式，按【紧急报警关闭】快捷键或关机即可。

接收到报警后，接收方可先按【返回】键再按【TK】键（两次按键间隔时间不超过 2 秒）、切换信道或关机退出报警提示。

紧急呼叫

发起报警：

1. 按【紧急报警开启】快捷键进入报警信道，屏幕上显示 图标。
2. 按住【PTT】键（红灯长亮，屏幕上显示 图标）对着麦克风讲话，发送紧急呼叫。

备注：如果经销商为您开启自动紧急呼叫，您无需按住【PTT】键，在屏幕上显示 图标时对着麦克风讲话即可。当“紧急呼叫次数”用完后，若需要再次发起紧急呼叫，可按住【PTT 键】。

3. 接收到呼叫后，屏幕上显示 图标。屏幕上显示 图标时，可按住【PTT】键（红灯长亮，屏幕上显示 图标）对着麦克风讲话。

退出报警：

报警发起方若要退出报警模式，按【紧急报警关闭】快捷键或关机即可。

报警接收方不能手动退出报警提示，报警发起方退出报警模式后，报警接收方自动退出报警提示。

备注：您可通过经销商写频设定礼貌发射次数、非礼貌发射次数、紧急呼叫次数、每次发送时间和发送间隔。

倒放

功能开启后，若您的对讲机倾斜至一定的角度（由经销商配置）或者持续保持静止状态达预设时间，将会发出提示音。如果您在提示音持续期间内没有处理（如果是倾斜，则需要扶正对讲机；如果是静止状态，则需要移动对讲机），您的对讲机将自动报警。若要取消报警，请移动或扶正您的对讲机。

操作方法：按【倒放】快捷键开启或关闭倒放功能，您也可通过菜单来实现，路径：设置 -> 对讲机设置 -> 倒放。

开启倒放时本产品响升调提示音；关闭倒放时本产品响降调提示音。

单独工作

此功能非常适合单独工作的人员使用。若在单独工作

期间遇到意外情况，不能在预设时间内操作对讲机，对讲机将自动进行报警，告知同伴或控制中心以获取帮助。

1. 开启单独工作
   通过“设置 -> 对讲机设置 -> 单独工作”，选择开启此功能。或
   按【单独工作】快捷键开启此功能（响升调提示音）。或
   若此功能已通过写频软件开启，开机即可开启此功能。
2. 若您在预设的响应时间内未操作对讲机，对讲机将在该响应时间到达前进行提示（视经销商设置）。此时，您可通过有效的物理操作（旋钮或按键操作）结束提示。响应时间到达后，对讲机将自动开启当前信道的报警系统。
3. 关闭单独工作
   通过“设置 -> 对讲机设置 -> 单独工作”，选择关闭此功能。或
   按【单独工作】快捷键关闭此功能（响降调提示音）。

备注：若您未在关机前关闭单独工作功能，则下次开机时该功能仍然有效。

隐蔽模式

开启隐蔽功能后，终端关闭自身可视或可听的提示（如指示灯、振动和提示音等，具体由经销商设置）。常用于执行特殊任务需要隐蔽的情景下。

操作方法 按【隐蔽模式】快捷键，开启或关闭隐蔽模式。您也可以通过菜单来实现，路径：设置 -> 对讲机设置 -> 隐蔽模式。

扰频 / 加密

扰频功能可实现语音加密，使没有此功能的用户无法接收到您的真实语音，从而使您的通信得到保密。

加密功能可实现语音加密，使没有此功能或密钥不匹配的用户无法接收到您的真实语音或短消息，从而使您的通信得到保密。

- 在模拟信道上，进入“设置 -> 对讲机设置 -> 扰频”，选择开启或关闭扰频。在数字信道上，进入“设置 -> 对讲机设置 -> 加密”，选择开启或关闭加密。
- 按【扰频 / 加密】快捷键可在当前信道开启扰频或加密（响升调提示音）；再次按该键关闭此功能（响降调提示音）。
- 若某个信道已通过写频软件启用扰频或加密功能，则切换至该信道时，对讲机会自动开启扰频或加密；退出该信道则关闭此功能。

密钥设置

本产品最多支持 30 个密钥。您可按以下方法新建密钥。新建一个密钥，通过对密钥 ID、别名、长度和值进行逐步设置，然后保存。

项目	描述
密钥 ID	ID 由数字组成，范围为 1~255。
密钥别名	别名由中文、英文、数字及符号组成，最多可输入 16 个字符。 **备注：**密钥别名与密钥 ID 不能相同。
密钥长度	设置新建的密钥的长度。
密钥值	密钥值由数字以及字母 A~F 组成，不可超过设定的长度。
保存	将新建的密钥添加至密钥列表。 **备注：**如需删除密钥，请联系您的经销商通过写频软件进行删除。

对讲机注册服务

此功能可通过写频软件开启。功能开启后，您的对讲机将在开机后的一定时间内自动在系统注册，注册成功后可通过访问特定服务器在有效注册时间内获取其他对讲机的在线信息。

GPS

功能开启后，如果系统要求上传 GPS 信息，您的对讲机自动将其位置信息传输到系统。具体的上传方式由经销商配置。

如果经销商为您配置了【GPS 上传】快捷键，您可以按该键立即上传 GPS 信息。

您可通过本产品设置 GPS。菜单路径：附件 -> GPS。

GPS 开关

您可通过此项设置是否开启 GPS 功能。

备注：开启 GPS 功能会缩短电池工作时间。

位置查看

您可通过此项查看本机的经度、纬度、时间、日期、速度、海拔和卫星数。

GPS 文本消息

开启 GPS 功能后，您可发送 GPS 文本消息至所需的联系人。具体操作如下：

1. 选择“GPS 消息”，按【确认】键进入“联系人列表”.
2. 用【上移】/【下移】键滚动至所需的联系人 .
3. 按【确认】键即可将 GPS 消息发送至该联系人。

时区

您可选择自己所在的时区来校正所收到的 GPS 时间。我们建议您在初次使用本功能前，先对该项进行设置。

您也可以通过“自定义”的方式，选择您需要的时区，这些时区更精确，时区选项同电脑上可选择的时区相

同。例如，您所在位置的时间比 GMT 中央时区早 5.45 个小时，此时，您可选择自定义的时区“GMT+5.45”。

设置对讲机

您可以根据自己的喜好和实际需求对本产品进行如下设置，使其发挥最大效能。

设置方法：进入“设置 -> 对讲机设置”菜单，选择相应的设置项进行设置即可。

功率级别

设置本产品的发射功率级别：高功率或者低功率。高功率可以扩大本产品的信号覆盖范围，与距离较远的对讲机也能进行通信。

您也可以待机界面下，按【功率级别调整】快捷键在高 / 低功率之间快速切换。

LCD 显示 H 图标时，表示高功率；显示 L 图标时，表示低功率。

语言

设置本产品 LCD 界面的语言。

背光灯

设置是否开启背光灯，开启背光灯可以点亮 LCD，用户在光线不足的情况下仍可以操作本产品。

- 关闭：背光灯一直关闭。
- 开启：背光灯一直打开。
- 定时：如果本产品在预设时间（由经销商设置）内无任何操作，也没有接收和发射信号，则在预设时间后，本产品自动关闭背光灯。

亮度

调整 LCD 的显示亮度。您可以通过【上移】/【下移】键增加或减少显示亮度。

指示灯

选择是否开启指示灯。常见的指示灯有：发射 / 接收指示灯、扫描 / 漫游状态指示灯、电池低电量指示灯等。开启或关闭本产品中哪些功能的指示灯由经销商设置。

提示音

您可根据需要选择需要启用的提示音。

提示音	描述
对讲机静音	静音开启时，将关闭所有提示音，此时其他提示音设置均无效。
呼出提示音	设置本产品在发射时是否响提示音。有如下选项可供选择：禁止（发射时不响提示音）、仅数字（只有在数字信道上发射时才响提示音）、仅模拟（只有在模拟信道上发射时才响提示音）、允许（在数字信道和模拟信道上发射时都响提示音）。
消息提示音	本产品接收到短消息时发出提示音。
按键提示音	您在操作本产品按键时本产品发出提示音。
低电提示音	本产品处于低电状态时发出提示音。此时，为了不影响正常工作，请您及时更换电池。
通话结束音	本产品通话结束后发出提示音。
组呼提示音	本产品接收到组呼时发出提示音。
个呼提示音	本产品接收到个呼时发出提示音。
语音结束音	本产品接收语音结束时，是否给出提示音。
信道播报	本产品信道切换时是否播报信道号。该信道播报音仅在通过【信道旋钮】、【信道上调】/【信道下调】/【预设信道】快捷键切换信道时有效，区域切换或信道跳转时的信道切换无效。
信令侧音	本产品在发送信令时是否发出连续的提示音。适用于 HDC1200 信令、五音信令、两音信令系统下的呼叫。
紧急报警	本产品接收到紧急报警呼叫时，是否发出提示音。
优先信道	本产品扫描到优先信道时是否发出提示音。
呼叫提示	本产品接收到呼叫提示时，是否发出提示音。
开机提示	本产品开机时，是否发出提示音。

振动

选择是否开启振动功能。功能开启后，本机可对短消息、个呼和呼叫提示进行振动提示。

主机密码

设置本产品的开机密码。

可选板

对讲机中装有可选板时，第三方可通过该可选板控制对讲机，也可实现对讲机功能的二次开发。例如，第三方使用对讲机向第三方设备发送短信。

编程

您可修改当前信道的频率、色码和时隙信息。

- 频率：设置接收频率和发射频率。请使用本产品频段范围内的频率。
- 色码：色码可以标示一个系统，需要相互之间通信的终端必须设置相同的色码。
  取值范围：0 ～ 15 的整数。
- 时隙：选择语音通话和数据传输的时隙。

查看本产品信息

查看本产品的相关信息，包括：对讲机别名、序列号、机型名称、频率范围、主机版本、数据库版本、下载程序版本、最后编程日期等。

菜单路径：设置 -> 设备信息。

电池电量指示

此功能可使您了解电池剩余电量。

按住【电池电量提示】快捷键，本产品将给出不同提示来表示当前电池电量。松开该按键即可退出。

提示	电池电量图标	电池电量
绿灯亮		高
橙灯亮		中
红灯亮		低
红灯亮 + 低电提示音		不足

故障处理

故障描述	原因分析	解决方法
无法开机	电池可能未正确安装	取出电池并重新装入。
	电池电量可能已经耗尽	充电或更换电池。
	电池触点污浊或受损而导致接触不良	清洁电池触点。如仍不能解决问题，请联系经销商或我司指定维修点进行检修。
接收信号时声音小、断续或无声	电池电压过低	充电或更换电池。
	音量较小	调大音量。
	天线松动或安装不到位	关机后重新安装天线。
	扬声器堵塞或受损	进行简单的外部清洁。如仍不能解决问题，请联系经销商或我司指定维修点进行检修。
无法与组内其他成员通话	所用频率或信令设置与组内其他成员不同	设置与组内其他成员相同的频率和信令。
	数字、模拟信道设置不当	设置相同的数字信道或模拟信道。
	距离组内其他成员太远	尽量靠近其他成员。
信道中出现其他通话声或杂音	受到同频用户的干扰	更改为新的频点，或调整静噪级别。
	未设置信令	对组内所有对讲机进行信令设置，以防止同频干扰。
噪声较大	与其他成员之间的通讯距离过远	靠近其他成员。
	所处位置不佳，如受高大建筑物阻挡，或位于地下室等	移至开阔平坦地后，开机重试。
	受外界环境或电磁干扰	避开可能引起干扰的设备。
GPS 无法定位	所处位置不佳，以致接收不到 GPS 信号	移至开阔平坦地后重试。
蓝牙设备无法配对	蓝牙设备电量不足	为蓝牙设备充电。
	蓝牙设备与主机距离太远	将蓝牙设备移近主机。

如上述方法仍未解决您的问题，或您遇到一些其他的故障，请联系当地经销商或我司以获取更多的技术支持。

保养与清洁

为了保证本产品发挥其良好性能，以及延长其使用寿命，请熟悉以下内容，以便更好地对本产品进行日常保养与清洁。

保养

- 请勿用硬物穿刺或刮花本产品。
- 请勿将本产品存放于含有腐蚀电子电路物质的环境。
- 携带或使用本产品过程中，请勿用手提天线或耳机线。
- 当不使用附件时，请盖好附件接口盖。

清洁

注意：在您进行清洁之前，请关机并取出电池。

- 请定期使用洁净干燥的无绒布或毛刷拭去本产品表面及充电极片附着的粉尘。
- 本产品的按键、控制旋钮和机壳极易变脏。可用中性洗涤剂和无纺布对其进行清洁，请勿用去污剂、酒精、喷雾剂或石油制剂等化学药剂进行清洁，以避免产品表面和外壳受损。
- 清洁之后，务必保证本产品彻底干燥，否则请勿使用。

保修条款

我司承诺，凡我司生产的产品，自购买之日起，在正常使用、操作与维护条件下，出现材料或制造工艺方面的缺陷，可享受以下规定的保修服务。

保修的范围与期限

主机	24个月
标配附件（包括电池、充电座）	12个月

保修的申请

如申请我司产品保修服务，必须提供有效的我司产品保修卡或有效购机发票原件作为凭证。保修期内，我司产品的相关标志，包括序列号码标签等，应保持清晰完整且不得撕毁。

- 产品保修卡是指由我司或我司授权的经销商填写并盖章的完整保修卡。保修卡上填写内容应包含产品名称、产品制造序列号（编号）、购买产品日期、销售单位等有效信息。
- 有效购机发票是指财税部门统一监制的发票，是产品售出的重要凭证。发票上应填写产品名称、产品制造序列号（编号）、销售日期、购机金额等有效信息。

注意事项

- 防爆终端必须寄回我司客服总部进行维修。
- 防水终端（防水级别达 6 级及以上）必须寄回我司客服总部、我司授权维修站或经我司授权的经销商维修站进行维修。
- 请将产品包装好，附上所需凭证及详细的故障说明寄至原购点或我司指定的售后服务点。您也可以通过拨打我司的服务热线 400-830-7020 获得帮助。

本服务保证条款不包括以下情形：

- 正常及常规磨损。
- 不可抗力所造成的故障或损坏。
- 非材料或加工问题所造成的天线故障或损坏。
- 超出保修有效期限，购买日期无法鉴定。
- 未按说明书要求使用、维护及保养所造成的故障或损坏。
- 在非正常和非常规情况下使用本产品所造成的故障或损坏。
- 主机上的我司相关标志或序列号码标贴被撕毁，序列号被抹除或无法辨认。
- 未经我司授权的改装、拆卸、使用非原装的附件或电池，或未经我司授权的情况下对产品进行软件升级、固件拆动等所造成的故障或损坏。
- 如下情况的电池：
  - 电池外壳密封有任何人为破损或启封现象。
  - 在产品规定之外的设备或维护条件下，进行充电或使用而造成的故障或损坏。

特别说明

- 在法律允许的限度内，我司在任何情况下都不对超过产品购买价格的损失承担责任，同时不对任何使用损失、时间损失、商业损失、利润或收入损失、不能使用产品而导致的附带的、特殊的或继发性损坏承担负责。
- 由于采用本产品所使用的环境、系统等各不相同，我司在本保修条款下不对整个系统的覆盖范围、覆盖区域或运行状况承担责任。
- 本维修条款是根据国家相关保修条例所制定的，由于技术发展与市场调整等因素，条款内容也将进行相应的修改，具体修改请以我司客户服务中心发布的维修条款变动通知为准。其他未尽事宜请以国家相关条例为准。

选购配件

本产品主要的选购附件已包含在如下列表中，如需更多附件信息，请咨询您当地的经销商或拨打我司服务热线 400-830-7020。

锂离子电池 (1100mAh) BL1103	编程连接线 (USB 口) PC45	座充车载电源适配器 CHV09	电池分析仪 MCA05-X	无线耳机 EHW02	锂电适配器 POA53
携带式充电器 CH04L01	隐藏式背心 NCN009	携带夹 PCN005	无线指环 PTT POA47	分体耳塞式耳机 ESN14	分体可调节耳挂式耳机 EHN20
分体 C 型耳挂式耳机 EHN21	分体式透明管耳机 EAN22	无线数字隐形耳机 (扁平式感应器) EWN08	三线透明管监控耳机 (米色) EAN21	无线线控数字隐形耳机 (项圈式感应器) EWN07	三线透明管双 PTT 线控耳机 (米色) EAN19

注意：请使用我司指定的配件。若擅自使用未经许可的配件，则由此所导致的一切后果，由用户自行负责。

附录

输入法

您可通过本产品的键盘输入用户别名、号码和短信等。本产品支持英文输入法、中文简体拼音输入法、数字输入法。

中文简体拼音输入法

1. 按 [#⇧] 键切换至拼音输入法。
2. 按数字键依次输入拼音字母，LCD 显示备选拼音及其对应的备选汉字。
3. 按【上移】/【下移】键选择所需拼音。
4. 按【确认】键将高亮条移至中文汉字区，再按【上移】/【下移】键选择所需汉字。
5. 按【确认】键输入所选汉字。

重复以上步骤完成输入。

英文输入法

1. 按 [#⇧] 键切换至大写或小写英文输入法。
2. 反复快速按字母所在的数字按键直至所需字母出现。

重复以上步骤完成输入。

数字输入法

1. 按 [#⇧] 键切换至数字输入法。
2. 按数字键 [0 +] 至 [9 WXYZ] 可输入相应的数字。

输入特殊字符

按数字键 [1 !<] ，可输入一些最常用的标点和特殊字符。

要输入空格，请按 [*␣] 键。

备注：在已输入文本显示区域，按【上移】/【下移】键可左移 / 右移光标。

信令介绍

本机支持如下信令，您可通过经销商对其进行设置。具体实现的功能及操作方法，请咨询经销商。

HDC1200

HDC1200 信令可兼容 MDC1200，并实现 PTT ID（编解码），紧急报警（编解码），选呼（编解码）等功能。

发码：

1. 发起普通语音呼叫时，按住【PTT】键发送 PTT ID。
2. 进入“联系人列表”菜单，选择所需联系人后，按住【PTT】键发送选呼（个呼 / 组呼 / 全呼）。

其中，发码提示如下：

- PTT ID/ 选呼：发码时是否响侧音，发完码后是否响短哔音都由经销商配置。
- 选呼：发码时，红灯长亮，LCD 显示相应选呼图标（个呼：、组呼：、全呼：）。发完码后，橙灯长亮。

解码：

解码提示如下：

- PTT ID：解码后，LCD 显示 图标，并给出发送方的身份标识 ID 或别名。
- 选呼：解码后，有如下提示信息：
  - 提示音：给出默认提示音。
  - LED 提示：绿灯亮。
  - LCD 显示：若经销商启用了“显示解码 ID”，则显示相应选呼图标（个呼：、组呼：、全呼：）和发送方别名（若 ID 不在联系列表中，则显示 ID）。若未启用“显示解码 ID”，则只显示相应选呼图标。

五音

通过五音信令，本机能够选择性地实现各种呼叫功能。

发码：

1. 通过经销商为发码内容配置正确的格式和类型。
2. 当发送格式中存在可变信息时，您需要通过菜单选择或手动输入的方式对相应信息进行填充。
   当发送格式为固定编码时，则无需进行信息填充或数据存储。
3. 按【PTT】键或已编程的【一键呼叫 1】-【一键呼叫 5】键进行发码。
   发码时，红灯长亮，响侧音，且 LCD 显示相应呼叫图标（个呼：、组呼：），图标上方会显示联系人信息或“五音呼叫”。如果配置了自动复位，成功发码后，本机将进入自动复位状态，橙灯长亮，直到自动复位结束。

解码：

当本机收到匹配的五音信令时，您无需执行任何操作即可进行解码。

解码过程中，绿灯长亮。解码成功后，LCD 显示相应呼叫图标（个呼：、组呼：），图标上方会显示联系人信息或“五音呼叫”，图标下方显示接收到的状态信息。如果配置了自动复位，本机将进入自动复位状态，橙灯长亮，直到自动复位结束。

两音

通过两音信令，本机能够发起和接收两音呼叫。

发码：

1. 通过经销商为发码内容配置正确的格式和类型。
2. 按【PTT】键或已编程的【一键呼叫 1】-【一键呼叫 5】键进行发码。
   发码时，红灯长亮，响侧音，且 LCD 显示呼叫图标，图标上方会显示联系人信息。如果配置

了自动复位，成功发码后，本机将进入自动复位状态，橙灯长亮，直到自动复位结束。

解码：

当本机收到匹配的两音信令时，您无需执行任何操作即可进行解码。

解码过程中，绿灯长亮。解码成功后，LCD 显示呼叫图标 ，图标下方根据信令系统的解码类型，显示呼叫类型（选呼、语音呼叫提示或呼叫提示）。

如果配置了自动复位，本机将进入自动复位状态，橙灯长亮，直到自动复位结束。呼叫类型是呼叫提示时，不会进入自动复位。

Hytera
is the trademark or registered trademark of Hytera Communications Corp., Ltd.
© 2012 Hytera Corp., Ltd. All Rights Reserved.

Address: HYT Tower, Hi-Tech Industrial Park North, Beihuan RD., Nanshan District, Shenzhen, China
Postcode:518057
http://www.hytera.com

Hytera
是海能达通信股份有限公司的商标或注册商标
©2012 Hytera Corp., Ltd. 版权所有

地址:深圳市南山区北环大道9108号
邮编:518057
服务热线：400-830-7020
http://www. hytera. com