Hytera

OWNER'S MANUAL
使用说明书

DMR PORTABLE RADIO
PD78X系列DMR手持对讲机

DMR
DIGITAL MOBILE RADIO ASSOCIATION

Preface

Thank you for purchasing Hytera DMR digital two-way radio. As a product built to the DMR standard, the radio is endowed with ergonomic design and comprehensive digital functions to deliver an advanced communication solution. With this radio, you can make use of digital functions to top the competition!

To derive optimum performance from your radio, please read this manual and the supplied Safety Information Booklet carefully before use.

Icon Information

The following icons are available through this manual:

Alert Icons

Caution: indicates situations that could cause damage to your radio.

Note: indicates tips that can help you make better use of your radio.

Function Icons

: 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.

Term Explanation

■ Key Operation

Short press: to press the key and release it quickly;

Long press: to press the key and remain holding it down for a predefined period (2 seconds by default);

Hold down: to press the key and remain holding it down.

■ Private Call

Private call is initiated by a single user to another user, involving the calling party and the called party only.

■ Group Call

Group call is initiated by a single user to a group, involving the calling party and all the group members.

■ All Call

All call is a call initiated to all the users on a channel. It is used to deliver important notices.

■ Squelch

This technology can remove excessive background noises, improving your communication quality.

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

RF Energy Exposure Compliance

Your radio is designed and tested to comply with a number of national and international standards and guidelines (listed below) regarding human exposure to radio frequency electromagnetic energy. This radio complies with the IEEE and ICNIRP exposure limits for occupational/controlled RF exposure environment at operating duty factors of up to 50% transmitting and is authorized by the FCC for occupational use only. In terms of measuring RF energy for compliance with the FCC exposure guidelines, your radio radiates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.

Your radio complies with the following of RF energy exposure standards and guidelines

● 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 Edition

● International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998

The highest reported SAR value ã Î.4Ǵ
W/kgÈ

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

EU Regulatory Conformance

Hereby, Hytera Communications Corporation Ltd., declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/95/EC.

CE 0678 ①

Notes: The above information is applicable to EU countries only.

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, and should transmit no more

than 50% of the time, although the hardware supports transmission up to 100% of the time in analog mode and up to 50% in digital mode.

Transmit and Receive

To transmit (talk), push the Push-To-Talk (PTT) key; to receive, release the PTT key.

FCC Licensing Information

FCC Licensing Requirements

A license from Federal Communications Commission is required prior to use. Your dealer will program each radio with your authorized frequencies, signaling codes, etc., and will be there to meet your communications needs as your system expands. Contact your dealer for more information.
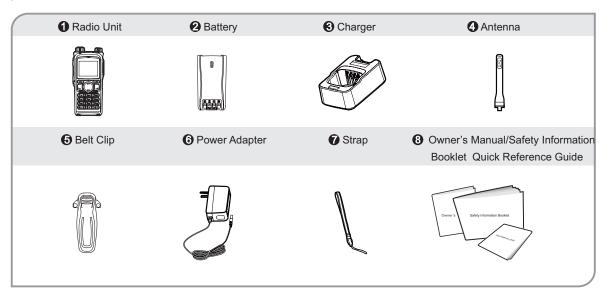
Contents

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 dealer.

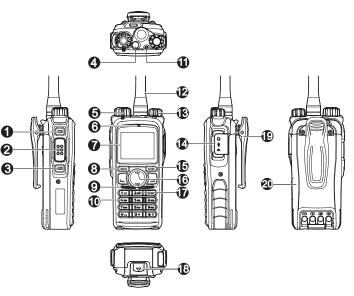| **❶** Radio Unit	**❷** Battery	**❸** Charger	**❹** Antenna
❺ Belt Clip	**❻** Power Adapter	**❼** Strap	**❽** Owner's Manual/Safety Information Booklet Quick Reference Guide
			Owner's Safety Information Booklet

Note: The antenna may vary with different frequency bands. And the frequency band is marked on the label of antenna; if not, please refer to the label on the radio unit for frequency band information.

Three pieces batteries contained in the package: Battery 1:Model:BL2503 DC7.4V 2500mAh/18.5Wh

Battery 2:Model:BL2411-Ex DC7.4V 2400mAh/17.7Wh

Battery 3:Model:BL2006 DC7.4V 2000mAh/14.8Wh

Radio Overview

Radio Controls

No.	Part Name	No.	Part Name	No.	Part Name	No.	Part Name
1	SK1 (Side Key 1)	6	Microphone	11	LED Indicator	16	Up Key
2	PTT Key	7	LCD Display	12	Antenna	17	Down Key
3	SK2 (Side Key 2)	8	OK/Menu Key	13	Radio On-Off/Volume Control Knob	18	Battery Latch
4	TK (Top Key)	9	Speaker	14	Accessory Jack	19	Belt Clip
5	Channel Selector Knob	10	Numeric Keypad	15	Back Key	20	Battery

Programmable Keys

For enhanced convenience, you may request your dealer to program the keys **SK1, SK2, TK3**, ⬜ and ⬜ as shortcuts to the functions listed below:

No.	Shortcut Keys	Description
1	Zone Up	Quick access to a desired zone
2	Zone Down	
3	Keypad Lock	To lock or unlock the keypad quickly
4	Contact List 🔵	Quick access to Contact List
5	Message 🔵	Quick access to the menu "Message"
6	Call Logs 🔵	Quick access to the menu "Call Logs"
7	Adjust Power Level	To adjust power level through one button press.
8	Talk Around	To directly communicate with other radios.
9	Monitor 🟣	To adjust the condition for incoming signal match.
10	Monitor Momentary 🟣	
11	Squelch Off 🟣	To always unmute speaker no matter whether carrier is present or not.
12	Squelch Off Momentary 🟣	
13	Home Screen	To quickly return to the previous menu or home screen.
14	Scan	To receive signals on other channels.
15	Nuisance Temporary Delete	To temporarily ignore unwanted channel activity.
16	Emergency	To summon help in emergent situations.
17	Adjust Squelch Level 🟣	To temporarily adjust the squelch threshold required for the radio to unmute.

Note: (1) Long and short press of a key can be assigned with different functions by your dealer.
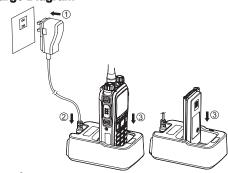(2) The TK is programmed as the Emergency key by default, and is programmable by your dealer.

Before Use

Charging the Battery

Use only the charger and battery specified by Hytera. Charger LED can indicate the charging progress.

Charge Diagram

Procedures

1. Connect the power adapter to AC source. See arrow ①.
2. Plug the power adapter into the rear socket of the charger. See arrow ②.
3. Place the radio with the battery attached, or the battery alone, into the charger.
4. The charging process initiates when LED glows red, and is completed when LED glows green.

Note: To achieve optimal battery performance, please charge the battery for 5 hours before initial use.

Charge Indicator

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

Caution: Be sure to read the Safety Information Booklet, to get necessary safety information.

Assembly and Disassembly

Attaching the Antenna

Turn the antenna clockwise to fasten it.

To remove the antenna, rotate it counter-clockwise.

Before Use

Attaching 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. Then slide the battery latch upwards to unlock the battery.

Attaching the Belt Clip
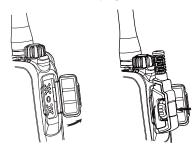
1. Remove the screws;
2. Align the screw holes on the belt clip with those on the radio's body, and then tighten the screws.

To remove the belt clip, loosen the screws.

Attaching AudioAccessoy/Programming Cable

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

To remove accessories, loosen the screw.

> ⚠ Caution: When you are using an external accessory, waterproof performance of the radio may get affected.

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Status Indicators

LCD Icons

■ Status Icons

Icon Name	Icon	Radio Status
RSSI	▽×	No signal;
	▽ ▽ı ▽ıı ▽ııı	More bars indicate better signal strength;
Message Icons	✉	New Message/Unread Message;
	✉	InBox is full;
Scan Icons	↻	Scanning is in progress;
	↻	Scanning pauses on a non-priority channel;
	P₁	Scanning pauses on Priority Channel 1;
	P₂	Scanning pauses on Priority Channel 2;
Tx Power Icons	L	Low Tx power for the current channel;
	H	High Tx power for the current channel;
Battery Strength Icons	▭ ▭ ▥ ▥	More bars indicate more battery power;
Monitor Icon	◁	The feature "Monitor" is active;
Speaker Icon	◁))	The speaker is unmuted;
Emergency Icon	⚠	The Emergency mode (other than secret emergency) is active or an emergency message is received
Accessory Icon	⌐o	An accessory is connected;

Status Indicators

■ Operation Mode Icons

Icon Name	Icon	Operation Mode
Operation Mode Icons	**DM**	Direct Mode Operation: Under this mode, radios communicate with each other directly.
	RM	Repeater Mode Operation: Under this mode, radios communicate with each other via a repeater.

LED Indicator

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

LED Indicator	Radio Status
LED flashes green.	Powering on
LED glows red.	Transmitting
LED glows green.	Receiving
LED flashes orange.	Scanning

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Basic Operations

Turning the Radio 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 volume, or counter-clockwise to decrease the volume.

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 32 zones, each with a maximum of 16 channels. You may select a zone through any of the following methods:

1. Through menu selection
    Go to the menu "Zone", and use the **Up/Down** keys to select your desired zone.
2. 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

Rotate the **Channel Selector** knob to select a desired channel.

Digital/Analog Switch

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

Locking/Unlocking the Keypad

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

1. Through key combination
    Use "OK+ ⟨ ∗ ↵ ⟩ " to lock or unlock the keypad.
2. Through the function key
    Press the programmed **Keypad Lock** key to lock or unlock the keypad.

> Note: When Keypad Auto Lock is enabled, the keypad will be locked automatically if no operation is made for the preset time period.

Basic Operations

3. Through menu selection
    Go to Settings -> Radio Setting -> Keypad Lock, and then select Enable or Disable.
    Enable: The keypad will be locked automatically if no operation is made for the preset time period.
    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.

Call

Transmitting a Private Call

You may transmit a Private Call through any of the following methods. When transmitting a Private Call, the icon will appear.

● **Transmitting a call to the preset contact**
In standby mode, pressing **PTT** key will transmit an individual call to the contact (a Private Call number) preset for the current channel.

> Note: Your dealer may preset a contact for each digital channel. The preset contact could be a Private Call number, a Group Call number or an All Call number.

● **Transmitting a call through Contact List or Call Logs**
    1) Go to Contact -> Contact List, or go to Call Logs -> Call List.
    2) Use the **Up/Down** key to select the Private Call number you want to call.
    3) Hold down **PTT** key to transmit a Private Call to the selected contact.

● **Transmitting a call through Manual Dial**
    1) Go to Contact -> Manual Dial.
    2) Input a Private Call number you want to call.
    3) Press **PTT** key to transmit a call.

Call

Transmitting a Group Call

You may transmit a Group Call through any of the following methods. When transmitting a Group Call, the icon will appear.
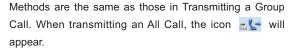
● **Transmitting a call to the preset contact**

In standby mode, pressing **PTT** will transmit a Group Call to the contact (a Group Call number) 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 number you want to call.

3) Hold down **PTT** to transmit a Group Call to the selected contact.

Transmitting an All Call

Methods are the same as those in 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 and Responding to a Call

● **Receiving a Call**

When a call is received, your radio will display the corresponding icon as follows: for a Private Call, for a Group Call and for an All Call.

● **Responding to a Private/Group Call**

After a Private Call or Group Call is received, you may press the **PTT** key within the preset time period to call back.

If you do not respond to a received Private Call, the radio will display the missed call icon .

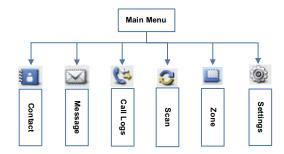> Note: You cannot respond to an All Call.

Calls on Analog Channels

To transmit on an analog channel, hold down the **PTT** and speak into the microphone. To receive, release the **PTT**.

> Note: To ensure an optimal volume for the receiving radio, hold the radio approximately 2.5 to 5 centimeters away from your mouth during transmission.

Menu Navigation

Contact

To access this item, press **Menu** key in idle mode and then select "Contact".

■ Contact List

You can save up to 200 entries in the list. To access this item, select "Contact -> Contact List" or press the shortcut key for Contact List.

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. In addition, the private contact preset on the digital channel cannot be deleted.

■ 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.

■ Manual Dial

You can manually input the private call number for calling.

Message

To access this item, press the **Menu** key in idle mode and then select "Message", or press the shortcut key for Message directly.

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■ **New Msg**

You can create your desired text message (256 characters at most) and send it to an individual user or to a talk group.

■ **Quick Text**

Under this option there are some text messages (10 entries at most) preset by your dealer. You can choose to edit and send any entry.

■ **InBox**

The InBox can save up to 20 received messages. When the InBox is full, the icon ✉ will appear, and the oldest entry 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 OutBox can save up to 20 sent messages. When the OutBox is full, the oldest entry 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 OutBox, select "Message -> OutBox -> Delete All".

Call Logs

To access this item, press the **Menu** key in idle mode and then select "Call Logs", or press the shortcut key for Call Logs directly.

This radio can save up to 10 entries in the Outgoing List, Incoming List and Missed List respectively. When the memory for call logs is full, the oldest entry will be over-written by latest one automatically.

After accessing a list and selecting an entry, you can perform any of these operations: hold down the **PTT** key

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to initiate a call; add it to Contact List; or delete it.

To delete all entries in Outgoing List, Incoming List or Missed List at a time, select "Call Logs -> Outgoing / Incoming /Missed -> Delete All".

Scan

To access this item, press the **Menu** key in idle mode and then select "Scan".

■ Scan On/Off

The function "Scan" allows you to listen to communication activities on other channels so that you can keep a close track of your team members. This option is used to enable or disable the function.

■ Scan List

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). After accessing the list, you can perform any of the following operations:

Adding a Channel

To include a new channel into the active scan list.

Editing Priority Channel

To set the selected channel as a non-priority or as a 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.

Zone

To access this item, press the **Menu** key in idle mode and then select "Zone".

This radio supports up to 32 zones. You can use this menu to select your desired zone.

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Settings

To access this item, press the **Menu** key in idle mode and then select "Settings".

```
        Settings
    1  Radio Set
    2  Device Info


    Select        Back
```

You can optimize your radio performance by customizing related parameters according to actual needs and your preferences.

■ Radio Set

Power Level

This option allows you to set transmit power level. Alternatively, you can change the power level by pressing the shortcut key for Adjust Power Level in idle mode.

There are two levels available: High (indicated by H) and Low (indicated by L). High power level enables you to communication with farther team members.

> Note: Power level should be set for each channel individually.

Squelch Level

This option allows you to select an appropriate squelch level. Alternatively, you can change the squelch level by pressing the shortcut key for Adjust Squelch Level in idle mode. There are three levels available: Tight, Normal and Open.

The default squelch level is "Normal", and generally used in low noise environment.

Generally, "Tight" is used in high noise environment. It requires stronger signal for the radio to unmute. If the squelch level is set to Open, the speaker will keep unmuted irrespective of the satisfaction of decoding conditions.

Language

To set the language in which all interface information is displayed. At the moment, this radio only supports two languages: Simplified Chinese and English.

Backlight

To set the backlight parameters. There are three options available: On, Off and Timer. The timer is programmed by your dealer. Available range: 5-60 seconds.

Brightness

To set the display brightness. You can increase or lower it using the **Up** or **Down** key.

Keypad Lock

To set whether to enable this function. When "Enable" is selected, you can use the Up or Down key to set the time range after which the keypad will be locked. Available range: 5-60 seconds.

LED

To set whether to enable LED indication.

Tone

To set tones for your radio. You can set the following tones:

Radio Silent: to set whether the radio will give tone indication. If Silent On is selected, all alerts will be off.

Talk Permit: to set whether the radio will give tone indication for transmission. The following options are available: Disable (the radio does not give any tone indication for transmission); Digital Only (the radio gives tone indication for transmission on the digital channel only), Analog Only (the radio gives tone indication for transmission on the analog channel only), and Enable (the radio gives tone indication for transmission on both analog and digital channels).

Private Ring: to set whether the radio will give tone indication when the radio receives a private call.

TextMsg Ring: to set whether the radio will give tone indication when the radio receives a message.

Keypad: to set whether the radio will give tone indication when you are making keypad operations.

■ **Device Info**

With this option, you can view the basic information of your radio, including serial number, radio model, frequency range, firmware version and etc.

Functions and Operations

Home Screen

The feature allows you to quickly return to the previous menu or the home screen.

Operation:

In the editing screen, press the programmed Home Screen key, and the radio exits the screen and returns to the previous menu immediately; in other screens, press the key, and the radio returns to the home screen immediately.

Scan

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

Operation:

1. To enable the feature, you can select "On" from the menu "Scan"; or
   Press the programmed **Scan** key in standby mode; or
   Switch to a channel for which the feature "Auto Scan" is enabled via the programming software.
2. 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, LCD displays icon ↻ , and LED flashes orange.

● 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, LCD will display icon ↻ ; if on Priority Channel 1 or Priority Channel 2, LCD will display icon P₁ or icon P₂ respectively.

● 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.

Talk Around

You can continue to communicate in DM mode by pressing the programmed **Talk Around** key, when your repeater malfunctions, or when your terminal is out of the repeater's range but within talking range of other terminals.

Operation:

Press the programmed **Talk Around** key to switch between DM mode and RM mode.

Monitor

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

Operation:

● Press the programmed **Monitor** key to enable the feature, and the radio displays icon 🔊 . To disable the feature, press this key again.

● Hold down 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 feature "Squelch Off" is enabled, your radio's speaker will keep unmuted no matter whether carrier is present.

Operation:

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

● Press the programmed **Squelch Off Momentary** key to enable the feature. Then the radio displays icon 🔊

and sounds background noise. To disable the feature, release this key.

Emergency

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

To enable the feature on a channel, an emergency system must be assigned to the channel via the programming software. In addition, the Emergency type and Emergency mode are settable via the programming software.

Emergency Type

For each Emergency mode, there are four Emergency types available. You can select one of them via your dealer:

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Emergency Type	Description
Siren Only	In Emergency mode, the radio will sound shrill alarm tone and display the 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 Mode

Your radio supports 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
Emergency Alarm 〰️	In this mode, you can send alarm information to your companion or control center by pressing the programmed **Emergency** key, but you cannot talk with them.
Emergency Alarm with Call 〰️	In this mode, you can send alarm information by pressing the programmed **Emergency** key. When icon 📞 appears, you can speak into the microphone, allowing your voice and background noise to be transmitted automatically (you do not need to hold down the **PTT** key).
Emergency Alarm with Voice to Follow ⊓⊔	In this mode, press the **Emergency** key to go to the Emergency Revert Channel. When icon 📞 appears, you can speak into the microphone, allowing your voice and background noise to be transmitted automatically (you do not need to hold down the **PTT** key).

Functions and Operations

Operation Methods for Analog Emergency

● **Emergency Alarm**

Operation: Press the programmed **Emergency** key to send alarm information. The radio displays icon and text information "Sending Alarm!", with LED glowing red. If "Local Emergency Alarm" is enabled via the programming software, an alarm tone will sound.

Two methods are available for you to exit the Emergency mode:

1. Once the Alarm Cycles expire, the radio will exit the Emergency mode automatically.
2. Long press the programmed **Emergency** key.

● **Emergency Alarm with Call**

Operation:

1. Press the programmed **Emergency** key to send alarm information. The radio displays icon and text information "Sending Alarm!", with LED glowing red. If "Local Emergency Alarm" is enabled via the programming software, an alarm tone will sound.
2. When icon appears, you can speak into the microphone to make an emergency call.

3. When icon appears, your radio is receiving. When a call is received, icon appears.

Two methods are available for you to exit the Emergency mode:

1. After the preset Alarm Cycles and Voice Cycles expire, the radio will exit the Emergency mode automatically.
2. Long press the programmed **Emergency** key.

> Note: Your dealer may set the number of alarm cycles, alarm duration, number of voice cycles, duration of each transmission and Tx interval.

Operation Methods for Digital Emergency

● **Emergency Alarm with Voice to Follow**

Operation:

1. Press the programmed **Emergency** key to go to the Emergency Revert Channel, and the radio displays the icon .
2. When the icon appears, you can speak into the microphone to make an emergency call.
3. When the icon appears, your radio is receiving. When a call is received, icon appears.

If the preset Voice Cycles expire, you can press the **PTT** key to make the emergency call again (the radio

displays the icon ![icon], with LED glowing red). After the emergency call is transmitted, please release the **PTT** key to receive (the radio displays icon ![icon]). When a call is received, icon ![icon] appears.

To exit the Emergency mode, long press the programmed **Emergency** key.

> Note: Your dealer may set the number of voice cycles, duration of each transmission and Tx interval.

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 down the **PTT** key while the channel is in use, your radio will keep beeping and display text information "Channel Busy", alerting you to transmission prohibition. To stop beeping, please release the **PTT** key. When the channel is free, you can press and hold down the **PTT** key to transmit.

Time-out Timer (TOT)

The purpose of TOT is 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 period (preset by your dealer) before you can press and hold down the **PTT** key to transmit again.

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.

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Troubleshooting

Phenomena	Analysis	Solution
The equipment can not be powered on.	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 signals, the voice is weak, discontinuous or totally inactive.	The battery strength 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 may be improperly installed.	Power off the radio, 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 communications or noises are heard on the channel.	You may be interrupted by radios using the same frequency.	Change the frequency, or adjust the squelch level.
	The radio may not be set with any signaling.	Set signaling for all member radios to avoid interference at the same frequency.

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Troubleshooting & Care and Cleaning

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 restart the radio.
	You may suffer from external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.

If the above solutions can not fix your problems, or you may have some other troubles, 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 your radio, please follow the tips below.

■ **Radio Care**

● Do not pierce or scrape the radio with any edged instruments or hard objects.

● Keep the radio far away from substances that can corrode the electronic circuit.

● Do not hold the radio by its antenna or headset cable directly.

● Attach the accessory jack cover when the radio is not in use.

■ **Radio Cleaning**

● Clean up the dust and fine particles on the radio 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 radio is completely dry before use.

⚠ **Caution:** Power off the radio and remove the battery before cleaning.

Optional Accessories

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

Remote Speaker Microphone (IP57) SM18N2

Earpiece with On-MIC PTT & Transparent Acoustic Tube EAN16

D-earset with In-Line Microphone EHN12

Earbud with On-MIC PTT ESN10

3-Wire Surveillance Earpiece with Transparent Acoustic Tube (beige) EAN17

Six-Unit Switching Power PS7002

Leather Carrying Case (swivel) LCY002

Programming Cable (USB Port) PC38

Note: Use the accessories specified by Hytera 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. This radio supports the following input methods: Chinese Pinyin (simplified), English and Number.

■ Chinese Pinyin (Simplified)

Operation:

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

Operation:

1. Press [# ↑] to switch to uppercase English or lowercase English mode;
2. Enter the English letters through alphanumeric keys; then a list of possible letters will appear;
3. Use the **Up/Down** key to choose the right letter;
4. Press the **OK** key to enter the selected letter.

You can repeat the above steps to continue.

■ Number

Operation:

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.

Hytera

致用户

非常感谢您使用 Hytera DMR数字对讲机。本产品是 Hytera 按照DMR标准精心打造的数字常规手持机。强大的数字功能、人性化的外观设计、卓越的通信品质，带给您全新的数字通信体验，使您在激烈的市场竞争中脱颖而出！

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此说明书和《安全信息手册》。

图标说明

本说明书中会使用以下图标，各图标含义如下：

使用提示图标

⚠️ 注意：表示可能会损坏对讲机的事项。

📝 备注：表示有助于您更好地了解和使用对讲机的事项。

功能区分图标

〰️ ：表示数字信道独有的功能，只能在数字信道用。

〰️ ：表示模拟信道独有的功能，只能在模拟信道用。

未用图标区分的功能在数字信道和模拟信道上都可使用。

术语说明

按键操作

短按：快速按下并松开。

长按：按住并保持预编程的持续时间（默认为2秒）。

按住：一直按住该按键。

个呼

个呼是对单个用户发起呼叫，仅主叫和被叫两个用户参与通话。

组呼

组呼是单个用户对组内的所有用户发起呼叫，整个组的所有用户都参与通话。

全呼

全呼是对信道上所有用户发起的呼叫，用于发布需要用户特别关注的重要通告。

静噪

该技术可滤除过度的背景噪声，用于解决通话质量和噪声问题。

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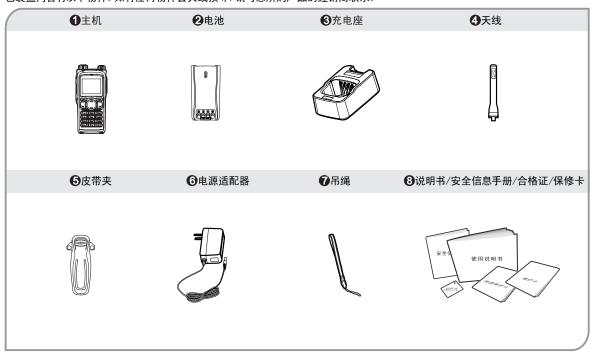如需更多信息或对本手册有任何建议，欢迎访问我们的网站：http://www.hytera.cn，或拨打Hytera免费服务热线400-830-7020。

目录

目录

检查包装内物品

包装盒内含有以下物件。如有任何物件丢失或损坏，请与您所购产品的经销商联系。

❶主机	❷电池	❸充电座	❹天线

❺皮带夹	❻电源适配器	❼吊绳	❽说明书/安全信息手册/合格证/保修卡
			使用说明书
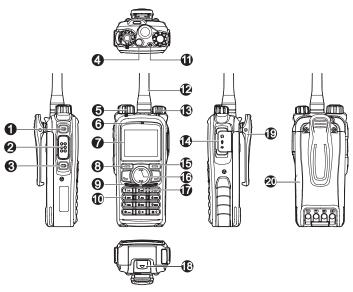
备注：天线频段请参考天线底部色环标签内容。若标签未注明频段，则参考主机标签上的具体频段。

熟悉本机

部件介绍

序号	部件名称	序号	部件名称	序号	部件名称	序号	部件名称
1	SK1（侧键1）	6	麦克风	11	LED指示灯	16	上移键
2	PTT键（发射按键）	7	LCD显示屏	12	天线	17	下移键
3	SK2（侧键2）	8	确认/菜单键	13	电源开关/音量控制旋钮	18	电池推钮
4	TK（顶部键）	9	扬声器	14	附件接口	19	皮带夹
5	信道选择旋钮	10	数字键盘	15	返回键	20	电池

可编程键

为了提升操作便利性，本机的5个可编程键【SK1】、【SK2】、【TK】、⬚、⬚，可由您的经销商编程为功能快捷键（见下表）。

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	键盘锁定	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	调整功率级别	快速调整发射功率
8	脱网	与其它终端直接通信
9	监听	调整信号接收匹配条件
10	暂态监听	
11	静噪打开	无论是否有载波，始终打开喇叭
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	收听其它信道上的通信活动
15	噪声信道临时删除	暂时删除不感兴趣的活动信道
16	紧急报警	紧急情况下寻求帮助
17	调整静噪级别	调整接收信号时所需要的信号强度

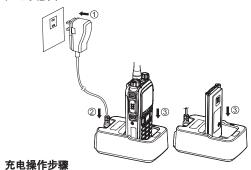备注： 1）同一按键的短按和长按可实现不同功能，具体由经销商设置。
2）【TK】键出厂时预设为"紧急报警"快捷键，您可通过经销商设为其它功能快捷键。

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用前准备

给电池充电

请使用Hytera指定的充电座对电池进行充电；充电座的指示灯可显示充电状态。

充电示意图

充电操作步骤

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对讲机正确插入充电座，如图示步骤③；
4. 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。

> 备注：为获得最佳电池性能，首次充电时，请充满5小时。

充电指示灯

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

> ⚠ 注意：请参阅《安全信息手册》，以获取必要的电池安全信息。

附件安装

安装天线

沿顺时针方向旋转天线直至旋紧。

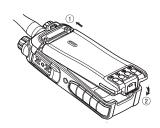如需卸下天线，逆时针旋转即可。

用前准备

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。
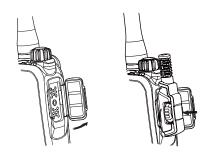

如需卸下电池，请先关闭对讲机。然后将底部电池推钮往上推起，并取出电池。

安装皮带夹

1. 卸下主机上的皮带夹螺钉；
2. 将皮带夹的螺钉孔对准主机上的螺钉孔，然后用螺钉锁紧。

如需卸下皮带夹，拧松螺钉即可。

安装音频附件/编程线

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：使用外部附件时，对讲机的防水性能可能会受影响。

状态指示

LCD图标

● 状态图标

信号强度图标	▼×	无信号;
	▼ ▼ ▼ᵢ ▼ᵢᵢ	信号条数越多,信号越强;
信息图标	✉	接收到短消息/有未读短消息;
	✉	收件箱存储空间已满;
扫描图标	↻	对讲机处于扫描状态;
	↻	扫描停留于非优先信道;
	P₁	扫描停留于优先信道1;
	P₂	扫描停留于优先信道2;
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	⚠	对讲机处于紧急报警状态（秘密报警除外）或接收到紧急报警;
附件图标	▮O	已连接附件。

● 工作模式图标

图标名称	图标	对讲机工作模式
工作模式图标	**DM**	直通模式: 对讲机与其它终端之间直接通信;
	RM	中转模式: 对讲机与其它终端通过中转台的转发进行通信。

LED指示灯

顶部LED指示灯让您轻松掌握对讲机当前的操作状态。

指示灯状态	对讲机状态
绿灯闪烁	正在开机
红灯亮	正在发送
绿灯亮	正在接收
橙灯闪烁	正在扫描

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】旋钮可增大音量，逆时针旋转可减小音量。

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到一个区域中，这样便于您对现有信道进行有效管理。本机支持32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：

1. 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。
2. 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

旋转【信道选择】旋钮即可选择所需信道。

数模切换

对讲机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，您可使用【信道选择】旋钮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。您可通过以下三种方式来锁定或解锁键盘：

1. 通过组合键
   按"【确认】＋ ⌨★ "来锁定或解锁键盘。
2. 通过编程键
   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。

备注：如经销商为您设置"自动上锁"功能，则在写频软件预先设定的时间段内无任何对讲机操作，键盘将自动锁定。

3. 通过菜单选择
   进入"设置->话机设置->键盘锁"，选择"允许"或"禁止"即可。
   允许：若在预设的时间段内无任何对讲机操作，键盘将自动锁定；
   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。

呼叫

发起个呼

您可通过以下方式发起个呼。个呼发起时，对讲机显示 图标。

● 对预设联系人发起呼叫

在待机界面下，按【PTT】即可对当前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"呼叫记录列表"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【PTT】即可对所选择的联系人发起个呼。

● 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【PTT】即可发起个呼。

发起组呼

您可通过以下方式发起组呼。组呼发起时，对讲机显示 图标。

● 对预设联系人发起呼叫

在待机界面下，按【PTT】即可对当前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【PTT】即可对所选择的联系人发起组呼。

发起全呼

发起全呼的方式同上述"发起组呼"。全呼发起时，对讲机显示 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。

接收和回复呼叫 🎧

接收呼叫

接收到呼叫后，您的对讲机将显示相应的图标。如为个呼，显示 📞 图标；如为组呼，显示 📞 图标；如为全呼，显示 📞 图标。

回复个呼/组呼

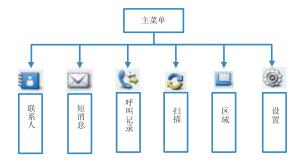接收到个呼/组呼后，在预设时间内按下【PTT】可发送回呼。

若接收到个呼后未进行回呼，则显示未接呼叫提示图标 📞 以提醒用户。

> 📝 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。

> 📝 备注 : 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。

菜单导航

```
                        ┌──────────┐
                        │  主菜单   │
                        └──────────┘
     ┌──────┬──────┬──────┼──────┬──────┬──────┐
  ┌──────┐┌──────┐┌──────┐┌──────┐┌──────┐┌──────┐
  │ 联  ││ 短  ││ 呼  ││ 扫  ││ 区  ││ 设  │
  │ 系  ││ 消  ││ 叫  ││ 描  ││ 域  ││ 置  │
  │ 人  ││ 息  ││ 记  ││    ││    ││    │
  │     ││     ││ 录  ││    ││    ││    │
  └──────┘└──────┘└──────┘└──────┘└──────┘└──────┘
```

联系人

要进入此菜单，按【菜单】键进入主菜单后选择"联系人"。

```
┌─────────────────────┐
│       联系人         │
├─────────────────────┤
│ 1 联系人列表         │
│ 2 新建联系人         │
│ 3 手动拨号           │
│                     │
│                     │
├─────────────────────┤
│ 选择          返回   │
└─────────────────────┘
```

● 联系人列表

联系人列表最多可储存200条记录。您可从"联系人"菜单进入"联系人列表"，或按编程的【联系人列表】快捷键即可快速进入"联系人列表"。

编辑联系人

您可对联系人列表中的某个联系人（仅个呼联系人）的号码、别名进行编辑。

查看联系人

您可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，且您无法删除数字信道上预设的个呼联系人。

● 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。新建的联系人别名/号码不能与联系人列表中的任一别名/号码相同，输入联系人号码的范围为1～16776415。

● 手动拨号

此菜单可使您直接通过输入所需的个呼号码进行呼叫。

短消息

要进入此菜单，按【菜单】键进入主菜单后选择"短消息"，或按【短消息】快捷键即可快速进入"短消息"菜单。

```
短消息.选项
1 新建短消息
2 快捷文本
3 收件箱
4 发件箱
选择          返回
```

● **新建短消息**

您可进入此菜单，编辑新的短消息（最多256个字符）进行发送，可选择发送给个人或群组。

● **快捷文本**

此菜单中存有经销商为您设置的快捷文本（最多10条），您可选择任一文本直接发送，或对文本进行适当编辑后再发送。

● **收件箱**

本机可存储最多20条已接收的短消息。若收件箱已满，则显示 ✉ 图标，如有新的已收短消息，则最旧的短消息将自动被覆盖。

您可对任一短消息进行如下操作：回复、转发、详情、删除。

要删除收件箱中的所有短消息，选择"短消息->收件箱->删除全部"。

● **发件箱**

本机可存储最多20条已发送的短消息。当发件箱已满时，如有新的已发短消息，则最旧的短消息将自动被覆盖。

您可对任一短消息进行如下操作：回复、转发、详情、删除。

要删除发件箱中的所有短消息，选择"短消息->发件箱->删除全部"。

呼叫记录 ⌐

要进入此菜单，按【菜单】键进入主菜单后选择"呼叫记录"，或按【呼叫记录】快捷键即可快速进入"呼叫记录"菜单。

```
呼叫记录
1 已拨呼叫
2 已接呼叫
3 未接呼叫
选择          返回
```

本机可分别存储最多10条已拨/已接/未接呼叫记录（仅个呼记录）。当呼叫记录已满时，若有新的呼叫记录，则最旧的记录将自动被替换掉。

进入呼叫记录列表，选择一条记录后，可进行如下操作：按【PTT】进行呼叫、添加至联系人列表、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->删除所有"。

扫描

要进入此菜单，按【菜单】键进入主菜单后选择"扫描"。

```
        扫描
  1 扫描开关
  2 扫描列表


 选择         返回
```

- **扫描开关**

扫描功能可助您收听其它信道上的通信活动，从而了解相关组员当前的活动状况。您可通过此选项来开启或关闭扫描。

- **扫描列表**

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。选择进入某个扫描列表后，您可以进行以下操作：

添加信道

在当前扫描列表中增加一个新的信道。

编辑优先信道

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。

区域

要进入此菜单，按【菜单】键进入主菜单后选择"区域"。

```
       区域 1/3
  ◉ 消防三大队
  ○ 巡警一队
  ○ 第二支队

 选择         返回
```

本机支持32个区域，您可通过此菜单选择您所需的区域。

设置

要进入此菜单，按【菜单】键进入主菜单后选择"设置"。

```
        设置
  1 对讲机设置
  2 本机信息


 选择         返回
```

您可根据自己的喜好和实际需求，来设置对讲机的有关参数，使其发挥最大效能。

● **对讲机设置**

功率级别

您可在此菜单选择对讲机的发射功率级别为高或低。或在待机界面下，按【调整功率级别】快捷键可快速在高/低功率之间切换。

LCD显示 $\boxed{H}$ 图标表示高功率； $\boxed{L}$ 图标表示低功率。高功率可以使您与距离较远的用户通信。

> 备注：每个信道的功率级别需单独设置。

静噪级别

您可在此菜单选择对讲机的静噪级别为加强、正常、或常开。或在待机界面下，按【调整静噪级别】快捷键可快速在各级别之间切换。默认静噪级别为"正常"。

一般情况下，"加强"要求接收到的信号强度较高。若设置为"常开"（即静噪级别为0），无论解码条件是否满足，直接打开喇叭放出背景音。

语言设置

选择菜单显示的语言。目前仅支持中文和英文。

背光灯

设置对讲机的背光灯。有三个选项可供选择：开启、关闭、定时。定时关闭时间可由经销商设置，有效范围为5-60秒。

亮度设置

调整屏幕显示亮度。您可以通过【上移】/【下移】键来增加和减少亮度。

键盘锁

选择是否启用键盘锁。如选中"允许"，可通过【上移】/【下移】键对键盘锁进行定时设置，定时范围为5-60秒。

LED显示

选择是否启用LED显示。

提示音

设置对讲机的提示音。您可对以下提示音进行设置：

对讲机静音：设置对讲机是否响提示音。如选择"开启静音"，则所有提示音都关闭。

呼出提示音：设置对讲机在发射时是否响提示音。

有如下选项可供选择：

　　无提示音（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）、

开启提示音（在数字信道和模拟信道上发射时都响提示音）。

个呼提示音: 设置对讲机接收到个呼时是否响提示音。

消息提示音: 设置对讲机接收到短消息时是否响提示音。

按键提示音: 设置在进行操作按键时是否响提示音。

● **本机信息**

您可通过此选项来查看本机的相关信息，包括序列号、对讲机型号、频率范围、主机版本等信息。

功能与操作

待机界面

此功能可使您快速返回至上一级菜单或待机界面。

操作方法：

在编辑界面下，按【待机界面】快捷键，对讲机立即退出编辑界面，返回至上一级菜单；在其它界面下按此键，对讲机立即返回至待机界面。

扫描

扫描功能可助您收听其它信道上的通信活动，从而了解相关组员当前的活动状况。

操作方法：

1. 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。
2. 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 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 P₁ 或 P₂。

- 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。

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，用户可按【脱网】快捷键转换至直通模式，实现两部终端直接通话。

操作方法：

按【脱网】快捷键在直通模式与中转模式之间切换。

监听 〜

开启"监听"功能可调整信号接收匹配条件。

操作方法：

- 按【监听】快捷键开启此功能，此时对讲机显示 🔊 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，此时对讲机显示 🔊 图标；松开该键即可退出。

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静噪打开

开启"静噪打开"功能时，无论是否有载波，对讲机始终打开喇叭。

操作方法：

- 按【静噪打开】快捷键即可开启此功能，此时对讲机显示 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】快捷键即可开启此功能，此时对讲机显示 图标，并响"沙沙"的背景噪音；松开该键即可退出。

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。

如需在某个信道上启用报警功能，您必须通过写频软件为此信道关联一个报警系统。报警类型和报警模式也可通过写频软件设置。

紧急报警类型

在每个报警模式下，有以下四个报警类型，您可通过经销商任选其一：

报警类型	说明
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。
常规	报警时，对讲机会给出可听和可视提示。
静音	报警时，对讲机不会给出任何可听提示或可视提示。
带话音的静音	报警时，对讲机会自动接收来自同伴或控制中心的语音回复，但不会给出任何可听提示或可视提示。

紧急报警模式

本对讲机支持以下3种紧急报警模式，您可通过经销商任选其一（备注：以下操作方法以"常规"报警类型为例）。

报警模式	说明
普通紧急报警	在此模式下，您只能通过按下【紧急报警】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。
带呼叫的紧急报警	在此模式下，按下【紧急报警】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，只需对着麦克风讲话而无需按【PTT】键，您的话音和周围的背景音将被发送至接收方。
带语音跟随的紧急报警	在此模式下，按下【紧急报警】快捷键进入报警发射信道。当屏幕上显示 图标时，只需对着麦克风讲话而无需按【PTT】键，您的话音和周围的背景音将被发送至接收方。

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模拟模式下的报警操作方法

● 普通紧急报警

操作方法：按【紧急报警】快捷键发送报警信息。此时LED红灯常亮，屏幕上显示 📞 图标及"发报警码"字样；若通过写频启用"本地报警"，本机将会响报警音。

退出报警有以下两种方式：

1. 报警循环次数用完后，对讲机将自动退出紧急报警模式。
2. 长按【紧急报警】快捷键立即退出报警。

● 带呼叫的紧急报警

操作方法：

1. 按【紧急报警】快捷键发送报警信息。此时LED红灯常亮，屏幕上显示 📞 图标及"发报警码"字样；若通过写频启用"本地报警"，本机将会响报警音。
2. 当屏幕上显示 📞 图标时，可对着麦克风讲话，发送紧急呼叫。
3. 当屏幕上显示 📞 图标时，进行接收；接收到呼叫后，屏幕上显示 📞 图标。

退出报警有以下两种方式：

1. 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。
2. 长按【紧急报警】快捷键立即退出报警。

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备注：可通过编程设定报警音的次数和持续时间、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

● 带语音跟随的紧急报警

操作方法：

1. 按【紧急报警】快捷键进入报警信道，屏幕上显示 📞 图标；
2. 当屏幕上显示 📞 图标时，可对着麦克风讲话，发送紧急呼叫。
3. 当屏幕上显示 📞 图标时，进行接收；接收到呼叫后，屏幕上显示 📞 图标。

   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【PTT】键（红色LED红灯常亮，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）；接收到呼叫后，屏幕上显示 📞 图标。

若要退出报警模式，长按【紧急报警】快捷键即可。

备注：可通过编程设定紧急呼叫次数、每次发送时间和发送间隔。

功能与操作

繁忙信道锁定

此功能可通过写频软件开启。当您在其他用户占用该信道时按下【PTT】键，对讲机将发出"嘟"音并显示"信道繁忙"，提示您此时无法发射。若要停止"嘟"音，请松开【PTT】键。当该信道空闲时，按下【PTT】才能进行发射。

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编程设定的时间，对讲机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）再次按下【PTT】键。

若经销商编程设定预警告功能，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。

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故障处理指南

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 Hytera 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 Hytera 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。

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

保养与清洁

为了保证本对讲机发挥其良好性能，以及延长其使用寿命，请熟悉以下内容，更好地对机器进行日常保养与清洁。

保养

- 请勿用硬物穿刺或刮花对讲机；
- 请勿将对讲机存放于含有腐蚀电子电路物质的环境；
- 携带或使用对讲机过程中，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

- 请定期使用洁净干燥的无绒布或毛刷拭去对讲机表面及充电极片附着的粉尘。
- 对讲机的按键、控制旋钮和机壳如果变脏。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以避免其表面和外壳受损。清洁之后，务必保证对讲机彻底干燥，否则请勿使用。

⚠ 注意：在您进行清洁之前，请关闭对讲机并取出电池。

质量保证与维修条款

海能达通信股份有限公司（以下简称 Hytera）承诺，凡 Hytera 生产的对讲机产品，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。

1. 保修的范围与期限

主机   24个月

标配附件（包括天线、电池、充电座及皮带夹等） 6个月

2. 保修的申请

如申请 Hytera 产品保修服务，必须提供有效的 Hytera 产品保修卡或有效购机发票原件作为凭证；保修期内，Hytera 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。

1) 产品保修卡是指由Hytera或Hytera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；

2) 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。

质量保证与维修条款

> 备注：
> 1) 防爆对讲机必须寄回 Hytera 客服总部进行维修；
> 2) 防水对讲机（防水级别达 6 级及以上）必须寄回 Hytera 客服总部、Hytera 驻外维修站或经 Hytera 授权的经销商维修站进行维修；
> 3) 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 Hytera 指定的售后服务点。您也可以通过拨打 Hytera 的免费服务热线 400-830-7020 获得帮助。

3. 本服务保证条款不包括以下内容：

1) 超出保修有效期限；

2) 未按说明书要求使用、维护及保养所造成的故障或损坏；

3) 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；

4) 未经 Hytera 授权的改造、改动、拆卸、使用非原装的附件或电池，或未经 Hytera 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；

5) 非材料或加工问题所造成的天线故障或损坏；

6) 主机上的 Hytera 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的产品；

7) 购买日期无法鉴定的产品；

8) 不可抗力所造成的故障或损坏；

9) 正常及常规磨损；

10) 如下情况的电池：

    a. 电池外壳密封有任何人为破损或启封现象；

    b. 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：

1. 在法律允许的限度内，Hytera 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。

2. 由于采用本产品所使用的环境、系统等各不相同，Hytera 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。

3. 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 Hytera 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

本机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Hytera免费服务热线

防水扬声器话筒(IP57)
SM18N2

PTT-ON-MIC透明管耳机
EAN16

"D"型耳挂无咪管耳机
EHN12

三线透明管监控耳机(米
色）EAN17

PTT-ON-MIC耳塞式耳机
ESN10

六端输出开关电源
PS7002

真皮携带外套(可旋转)
LCY002

编程连接线(USB口)
PC38

备注：请使用 Hytear 指定的配件。若用户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

您可通过对讲机的键盘输入用户别名、号码和短信。本对讲机支持英文输入法、中文简体拼音输入法、数字输入法。

● 中文简体拼音输入法

操作方法：

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

操作方法：

1. 按 ⌗⇧ 键切换至大写或小写英文输入法；
2. 按数字键输入所需英文字母，LCD显示备选字母；
3. 按【上移】/【下移】键选择所需字母；
4. 按【确认】键输入所选字母。

重复以上步骤完成输入。

● 数字输入法

操作方法：

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。

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