# Hytera

*DIGITAL PORTABLE RADIO*
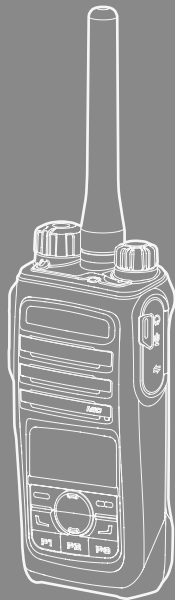
数字手持终端

**OWNER'S MANUAL**

**使用说明书**

## Preface

Thanks for your favor in our product. This manual is helpful for you to quickly know how to use the product. Please refer to the corresponding Feature Book for detailed features and operations.

This manual is applicable to the following product:
PD56X Digital Portable Radio (X may represent 2, 5, 6 or 8)

## Instructional Icons

⊓⊓ Indicates functions that are available on digital channel only.

∿ Indicates functions that are available on analog channel only.

Functions marked with neither the above icons are available on both analog and digital channels.

## Disclaimer

Hytera Communications Corporation Limited (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.

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

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

## RF Radiation Information

This product must be restricted to operations in an occupational/controlled RF exposure environment. Users must be fully aware of the hazards of the exposure and 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 not more than 50% of the time and always adhere to the following procedures:

- RF energy will be generated only when the radio is transmitting.
- The radio must be 2.5 centimeters away from human body when transmitting.

## 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.
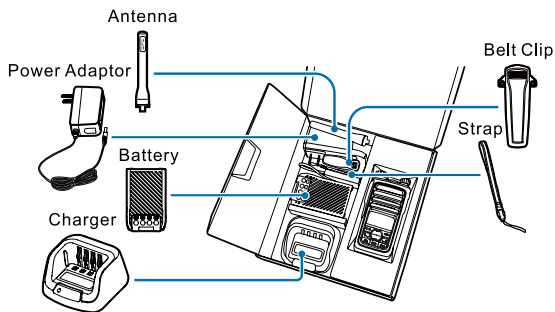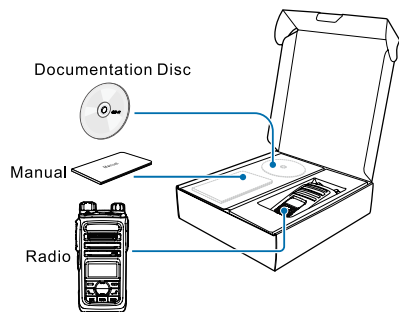
# Contents

## 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.
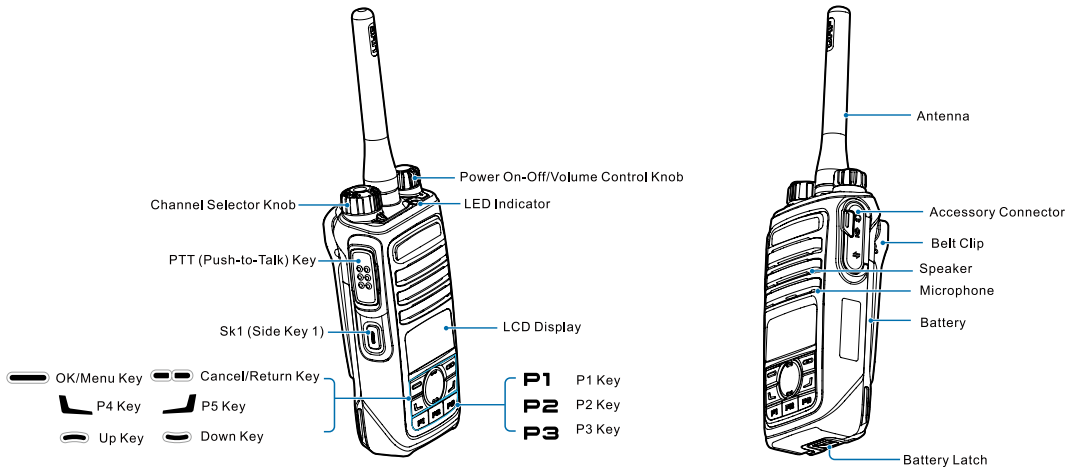
**Note**

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



Documentation Disc

Manual

Radio

Antenna

Power Adaptor

Battery

Charger

Belt Clip

Strap

**Note**

All pictures in this manual are for reference only.

## Product Controls



Power On-Off/Volume Control Knob

Channel Selector Knob

LED Indicator

PTT (Push-to-Talk) Key

Sk1 (Side Key 1)

LCD Display

OK/Menu Key

Cancel/Return Key

P4 Key

P5 Key

Up Key

Down Key

**P1** P1 Key

**P2** P2 Key

**P3** P3 Key

Antenna

Accessory Connector

Belt Clip

Speaker

Microphone

Battery

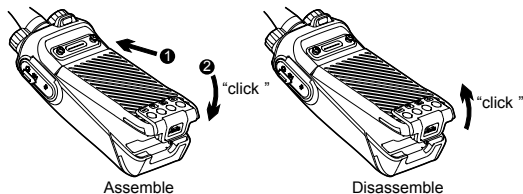Battery Latch

## Product Overview

### Programmable Keys

For enhanced convenience, you may request your dealer to program the **SK1**, **P1**, **P2**, **P3**, **P4** and **P5** as shortcuts to certain functions. Please refer to the corresponding Feature Book for more details.



## Before Use
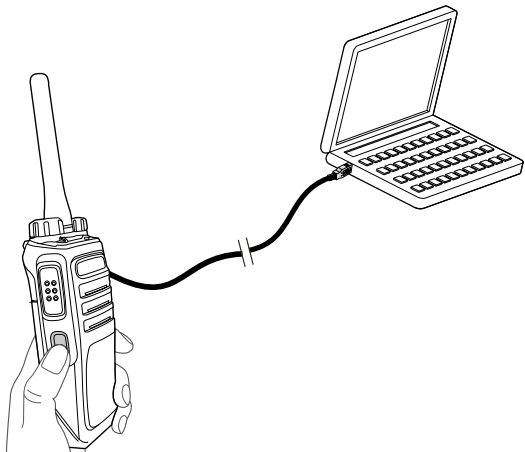
### Attaching the Battery



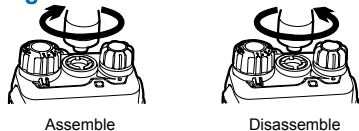Assemble                    Disassemble

> **Note**
> - To remove the battery, turn off the radio first.
> - If not attached with battery specified by Hytera, the radio will give an alarm tone to remind you when powering on. Afterwards, the radio will operate properly but the icons of battery power and RSSI will remain unchanged during operation.
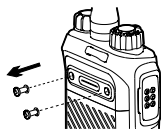
### Attaching the Antenna



Assemble                    Disassemble

## Before Use

⚠️ **Caution** Do not hold the radio by its antenna, otherwise the performance and lifespan of the antenna will be reduced.

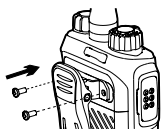### Attaching the Belt Clip
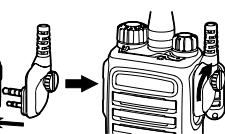


❶ Remove the screws    ❷ Assemble the Belt Clip
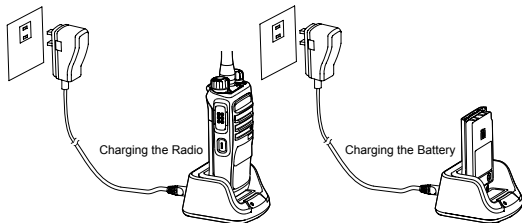
### Attaching the Accessories



❶    ❷    ❸

## Charging the Battery



Charging the Radio    Charging the Battery

Charging Status Indication (on charger):

| LED Indication | Current Status |
|---|---|
| 🔆 The LED Indicator flashes orange slowly | ▢ Low current charging |
| 🔴 The LED Indicator flashes red slowly | ▣ Standby (no load) |
| 🔴 The LED Indicator glows red | ⚡ Charging |
| 🟠 The LED Indicator glows orange | 90% 90% charged |
| 🟢 The LED Indicator glows green | 100% Fully charged |
| ✴️ The LED Indicator flashes red rapidly | ⚠ Charging error |

⚠️ **Caution**
● Make sure the radio is powered off before charging. Read the Safety Information Booklet in advance to get necessary safety information.
● To achieve optimal battery performance, please charge the battery for at least 5 hours before initial use.

# Status Indication

## LCD Icon

| Icon Name | Icon | Radio Status |
|---|---|---|
| Battery Power Icon | | More bars indicate more battery power. |
| TX Power Icon | L | Low power for the current channel. |
| | H | High power for the current channel. |
| Accessory Icon | | An accessory is connected. |
| Operation Mode Icon | DM | Direct Mode Operation: Under this mode, radios can communicate with each other directly. |
| | RM | Repeater Mode Operation: Under this mode, radios communicate with each other via a repeater. |
| Monitor Icon | | The Monitor feature is enabled. |
| Roam Icon | | The radio is roaming. |
| Scrambler/ Encrypt | | The Scrambler/Encrypt feature is enabled. |
| Scan Icon | | The radio is scanning. |
| | | The radio stays on a non-priority channel. |
| | | The radio stays on Priority Channel 1. |
| | | The radio stays on Priority Channel 2. |

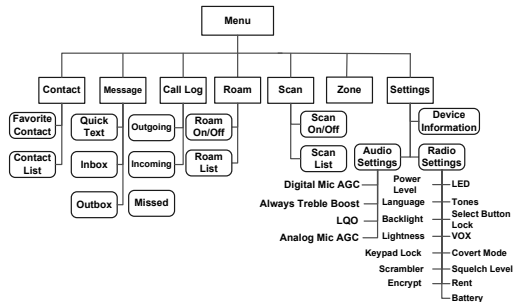| Icon Name | Icon | Radio Status |
|---|---|---|
| VOX Icon | | The VOX feature is enabled. |
| Missed Call Icon | | Missed call(s). |
| Message Icon | | Unread message(s). |
| | | Inbox is full. |
| RSSI Icon | | No signal. |
| | | More bars indicate better signal strength. |
| Speaker Icon | | The speaker is unmuted. |
| LQO Icon | Q | The LQO feature is enabled. |
| Call/Contact Icon | | ● Indicates Private Call during a call.<br>● Indicates Private Contact in the contact list. |
| | | ● Indicates Group Call during a call.<br>● Indicates Group Contact in the contact list. |
| | | ● Indicates All Call during a call.<br>● Indicates All Call Contact in the contact list. |

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## Status Indication

### LED Indicator



LED

| LED Indication | Product Status |
|---|---|
| ☀ The LED indicator flashes green | Powering on |
| ● The LED indicator glows green | Receiving |
| ● The LED indicator glows red | Transmitting |
| ➖ The LED indicator flashes orange slowly | Scanning or roaming |
| ☀ The LED indicator flashes orange rapidly | Emergency |
| ● The LED indicator glows orange | Call hung. During a call, you can hold down the **PTT** key to talk to the other party before the call hang time expires. |

## Menu Navigation

The following menu structure shows all the customizable menu items, which can be programmed by your dealer as per your actual requirements.

To select and confirm the options shown in the menu, press the **OK/ Menu** key and then press the **Up** or **Down** key to select your needed option, finally press the **OK/Menu** key. This manual only provides a menu path when instructing menu operations, for example, to access the contact list, go to "Contact -> Contact List".

The radio supports menu reset function. When you do not operate the menu for a preset time period configured by the dealer, the radio will automatically return to the home screen. You may request the dealer to change the auto reset time or disable the feature.



Menu

- **Contact**
  - Favorite Contact
  - Contact List
- **Message**
  - Quick Text
  - Inbox
  - Outbox
- **Call Log**
  - Outgoing
  - Incoming
  - Missed
- **Roam**
  - Roam On/Off
  - Roam List
- **Scan**
  - Scan On/Off
  - Scan List
- **Zone**
- **Settings**
  - Device Information
  - Audio Settings
    - Digital Mic AGC
    - Always Treble Boost
    - LQO
    - Analog Mic AGC
    - Scrambler
    - Encrypt
  - Radio Settings
    - Power Level
    - Language
    - Backlight
    - Lightness
    - Keypad Lock
    - LED
    - Tones
    - Select Button Lock
    - VOX
    - Covert Mode
    - Squelch Level
    - Rent
    - Battery

## Basic Operations

### Powering On/Off

ON         OFF

"click "      "click "



### Adjusting the Volume



### Selecting a Zone

A zone is a group of channels exhibiting the same property, which is programmed by your dealer and can facilitate convenient management over the channel. The radio support 32 zones, and each zone consists of up to 16 channels.

- Via the menu: Go to "Menu -> Zone", press the **Up** or **Down** key to select an appropriate zone, and then press the OK/Menu key to confirm it.
- Via Programmable Keys: You can toggle to the appropriate zone by pressing the programmed **Zone Up** or **Zone Down** key preset by your dealer.



Selecting a Zone      Selecting a Channel

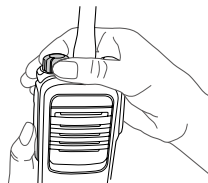### Selecting a Channel

After the radio is powered on, you can rotate the **Channel Selector Knob** to select an appropriate channel. You can also switch to the designated channel directly by pressing the programmed **Preset Channel** key preset by your dealer.

If the Channel Notify feature is enabled by your dealer or by you via the menu "Settings -> Radio Settings -> Tones", the radio will announce the channel number upon channel switching.

### Locking and Unlocking the Keypad

When the keypad is not in use, you can lock the keypad to avoid mishandling. You can lock or unlock the keypad through any of the following methods:

● Default: Long press **P3** key to lock/unlock the keypad.

● Programmable Key: Press the programmed **Keypad Lock** key preset by your dealer.

● Menu Navigation: Go to "Settings -> Radio Settings -> Keypad Lock" to enable or disable the feature.

　　» Enable: The keypad will be locked automatically if there is no radio operation within the preset time.

　　» Disable: The keypad will not be locked automatically. However, you can lock or unlock the keypad via the default way or **Keypad Lock** key mentioned above.

> **Note** You can go to "Settings -> Radio Settings -> Select Button Lock" to configure the lockable keys or knobs.

### Managing the Contacts 🎵

You can manage the contacts via the "Contact" menu.

### Contact List 🎵

The Contact List is used to save Private Call/Group Call/All Call contacts information which is preset by the dealer. You can access the "Contact List" menu by going to "Contact -> Contact List" or by pressing the programmed **Contact List** key.

In the "Contact List" menu, you can check the detailed contact information (such as Call ID). You can send to a private call contact the following commands: Alert Call, Radio Check, Remote Monitor (Optional), Radio Enable (Optional) or Radio Disable (Optional). Please refer to Feature Book for details.

### Favorite Contact 🎵

The Favorite Contact is used to save regular Private Call/Group Call/All Call contacts information which is configured by you. You can access the "Favorite Contact" menu by going to "Contact -> Favorite Contact" or by pressing the programmed **Favorite Contact** key.

You can add, view or delete the Favorite Contact information in the "Favorite Contact" menu. You can send to a private call contact the following commands: Alert Call, Radio Check, Remote Monitor (Optional), Radio Enable (Optional) or Radio Disable (Optional). Please refer to Feature Book for details.

# Call Services

After the radio is powered on, you can make and receive calls. To ensure optimal volume of the receiving radio, keep the microphone about 2.5 to 5 centimeters away from your mouth when transmitting.
The types of calls you may initiate are listed below:

● Private call: A call made to a private contact.

● Group call: A call made to the group contacts.

● All call: A call made to all the contacts on the current channel.
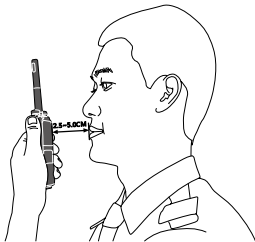


## Call on Digital Channel

You can initiate a private call, group call or all call (programmed by your dealer) through the same operations on digital channel. When calling back, the radio will make a call to the calling party in private call and all call (your radio must be programmed to allow you to call back in an all call); but in group call, the radio will make a call to all parties involved when calling back.

Here takes the private call between Radio A and Radio B as example:

● Preset contact

1.  Radio A and Radio B select the same digital channel.
    You may ask your dealer to preset a regular private call/group call/all call contact for each digital channel.

2.  Radio A holds down the **PTT** key to initiate a call.
    By holding down the **PTT** key, Radio A can talk to the microphone when the LED indicator glows red and the radio displays the icon .

3.  Radio B can receive the call without any operation. When receiving, the LED indicator glows green and the radio displays the icon .Radio B can hold down the **PTT** key to talk when the LED indicator glows orange and the radio displays the icon .
    If Radio B does not respond it, the radio will display appropriate indications.

4.  Radio A can receive the call without any operation. When receiving, the LED indicator glows green and the radio displays the icon .
    Radio A can hold down the **PTT** key to talk when the LED indicator glows orange and the radio displays the icon .
    If Radio A does not respond it, the call will end.

- Contact List or Call Log
1. Radio A and Radio B select the same digital channel.
2. Radio A accesses the contact list via menu "Contact -> Contact List", "Contact -> Favorite Contact" or "Call Log -> Outgoing/Incoming/ Missed".
3. Radio A presses the **Up** or **Down** key to select Radio B.
4. Radio A holds down the **PTT** key to initiate a call.

   By holding down the **PTT** key, Radio A can talk to the microphone when the LED indicator glows red and the radio displays the icon 👤➜.
5. Radio B can receive the call without any operation. When receiving, the LED indicator glows green and the radio displays the icon 👤◄ Radio B can hold down the **PTT** key to talk when the LED indicator glows orange and the radio displays the icon 👤.

   If Radio B does not respond it, the radio will display appropriate indications.
6. Radio A can receive the call without any operation. When receiving, the LED indicator glows green and the radio displays the icon 👤◄ Radio A can hold down the **PTT** key to talk when the LED indicator glows orange and the radio displays the icon 👤.

   If Radio A does not respond it, the call will end.

> 📝
> **Note** The Call Hang Time (the duration of LED indicator glowing orange) is preset by your dealer.

## Call on Analog Channel 〰️

- On the analog channel without signaling, the calling operations are the same as that on the digital channel. The difference is that the called parties are all the users on the channel, rather than the preset contact for the channel.
- Please refer to the corresponding Feature Book for operation description on how to make and receive calls on the analog channel with signaling.

## Message Service 🔵

You can send the Quick Text message directly. In the inbox, you can reply, forward or delete the text message, and in the outbox you can also resend, forward or delete the message.

**Operation:** Press the **OK/Menu** key and select the "Message" menu.

### Quick Text 🔵

Quick Text are frequently used messages preset by your dealer. You can select a Quick Text message and send it directly.

### Inbox 🔵

The radio saves the received messages into the Inbox and gives every message a corresponding icon to indicate its status.

- 📩: Read message

- 📨: Unread message

The inbox can save up to 20 received messages. When the Inbox is full, the radio will display the icon 📵, and the earliest message will be overwritten by the latest one automatically.

### Outbox 🔵

The radio saves the sent messages into the Outbox and gives every message a corresponding icon to indicate its status.

- ☑: The message is sent successfully.

- ☒: The message is not sent successfully. In this case, you can resend it.

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

## Feature Description

Available features of this radio are listed below. Please refer to the corresponding Feature Book for details.

| Feature Type | Detailed Feature |
| --- | --- |
| Radio Features | ● Checking the Device Information |
| | ● Radio settings: Power Level, Language, Backlight, Lightness, LED Indicator, Alert Tone and Covert Mode |
| | ● Audio setting: Mic AGC, Always Treble Boost, LQO, Audio Feedback Suppression |
| | ● Convenient functionality: Shortcuts, Call Log, One Touch Call and VOX |
| | ● Rent |
| Conventional Features | ● Scan |
| | ● Talk Around |
| Digital Features | ● Access management: Time-out-Timer (TOT) and Transmission Management |
| | ● Basic voice services: Private Call and Group Call |
| | ● Auxiliary voice service: All Call |
| | ● Message |
| | ● Security: Encryption |
| | ● Supplementary Services: Alert Call, Radio Check, Remote Monitor (Optional), Radio Enable (Optional) or Radio Disable (Optional) |
| | ● Patented features: Pseudo Trunking and Priority Interrupt (Optional) |
| | ● Mobility management: Roam (Optional) |

| Feature Type | Detailed Feature |
|---|---|
| Analog Features | ● Access management: Time-out-Timer (TOT), Transmission Management, Monitor, Squelch Off and Adjust Squelch Level |
| | ● Call on Analog Channel (No Signaling) |
| | ● Security: Scrambler |
| | ● Signaling: HDC1200, 5-Tone and 2-Tone |

⚠ **Caution**

Follow the instructions below when using the VOX feature:

● You can only enable or disable the VOX feature for one channel instead of all of the channels at a time.

● When using the VOX feature, holding down the internal or external **PTT** key will disable the VOX feature for the current channel. In such case, you can enable the VOX feature by switching the channel, pressing the programmed **VOX** key or restarting the radio.

● The VOX feature settings will remain the unchanged when the radio is powering on and off.

● The VOX Gain Level includes Internal MIC VOX Gain Level and External MIC VOX Gain Level, which can be configured by your dealer or via the menu.

● The VOX MIC Selection can be set to Only External and External First, which is set to Only External by default and can be configured by your dealer.

● To use the VOX feature with an external microphone, make sure the PTT/VOX switch is switched to "VOX" before the radio is powered on and the VOX feature is enabled.

● No matter the VOX feature is enabled or disabled after the radio is powered on, if the PTT/VOX switch is switched to "PTT", you can talk by holding down the internal or external **PTT** key. In such case, switching the PTT/VOX switch to "VOX" will keep the radio transmitting. To make the radio function properly, switch the PTT/VOX switch to "PTT" or restart the radio.

## Troubleshooting

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

| Phenomena | Analysis | Solution |
|---|---|---|
| The radio fails to power on. | The battery may be improperly installed. | Remove the battery and then reattach it. |
| | The battery power may be used up. | Recharge or replace the battery. |
| | The battery may be poorly connected due to dirtied or damaged battery contacts. | Clean the battery contacts. If the problem cannot 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 voltage may be low. | Recharge or replace the battery. |
| | The volume level may be low. | Increase the volume by rotating the **Volume Control Knob**. |
| | The antenna may be loosened or improperly installed. | Reattach the antenna after turning off the radio. |
| | The speaker may be blocked or damaged. | Clean the surface of the speaker. If the problem cannot be solved, contact your dealer or authorized service center for inspection and repair. |
| You cannot communicate with other members. | The frequency or signaling may not match 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 radios using the same frequency. | Change the frequency, or adjust the squelch level. |
| | The radio may be set with no signaling. | Set signaling for all member radios 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 locate in 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 to try again. |
| | You may suffer from external disturbance (such as electromagnetic interference). | Stay away from equipment that may cause interference. |
| You cannot use the keys. | The keypad may fail to function temporarily. | Restart the radio. |
| The LCD does not display any information. | The LCD may fail to function temporarily. | Restart the radio. |

## 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 directly.

Do not hold the product by its earpiece cable directly.

Attach the accessory connector cover when the accessory is not in use.

### Product Cleaning

⚠️ **Caution** Turn off the product 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.

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## Optional Accessories

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

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

Power Supply: MCA08 MCU Multi-unit Rapid-rate Charger (for Li-Ion/Ni-MH batteries),
CH10A06 Dual-Pocket MCU Charger Kit(for Li-Ion/Ni-MH battery, including Dual-Pocket Charger and Switching Power),
PS7501 AC/DC Adaptor,
MCA05 Battery Optimizing System
BL2010 2000mAh Li-Ion battery

Audio: EAM15 3-Wire Earpiece with Transparent Acoustic Tube (Beige),
ESM14 Remote Earbud,
EAM17 Remote Earpiece with Transparent Acoustic Tube,
EHM20 Remote Swivel Earset,
EHM19 Remote C-Earset,
SM26M1 Remote Speaker Microphone,
SM13M1 Remote Speaker Microphone (IP55)

Cable: PC63 Data Cable(USB Port)

Carry Accessories: NCN01 Nylon Carrying Case (Half-folded) (Non-swivel)(Black),
LCBN13 Universal Chest Pack (Nylon) (Black)

**Hytera**

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