

Hytera

OWNER'S MANUAL

使用说明书

DIGITAL PORTABLE RADIO

数字手持终端



The Hytera logo is displayed in a light gray font on a dark gray rectangular background. The word "Hytera" is written in a clean, sans-serif typeface.

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 Digital Portable Radio

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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.

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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 Environments. The product 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.







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Documentation Conventions

For your better understanding of this manual, please read the following conventions 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

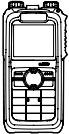






| Convention | Description |
|-------------|--|
| " " | The quotation marks enclose the name of a software interface element. For example, click "OK". |
| Bold | The text in boldface denotes the name of a hardware button. For example, press the PTT key. |
| -> | The symbol directs you to access a multi-level 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.

| Radio Unit | Battery | Antenna | Strap |
|---|---|--|--|
|  |  |  |  |
| Charger | Power Adapter | Documentation | |
|  |  |  | |

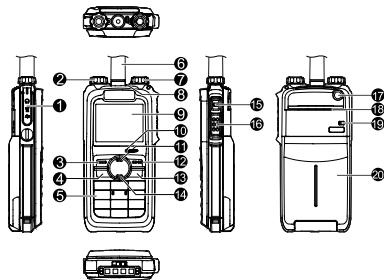


Note: The frequency band is marked on the label of antenna; if not, please refer to the label on the terminal for frequency band information.

Product Introduction

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






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) |
| 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 | To select a desired zone quickly. |
| 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  | To enable or disable the Monitor feature quickly. |
| 11 | Squelch Off  | To enable or disable the Squelch feature quickly. |
| 12 | Squelch Off Momentary  | To enable or disable the Squelch feature quickly. |
| 13 | Home Screen | To quickly return to the previous menu or home screen. |
| 14 | Scan | To enable or disable the Scan feature quickly. |

| No. | Shortcut Key | Function |
|-----|---|---|
| 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. |

| No. | Shortcut Key | Function |
|-----|----------------------|--|
| 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:

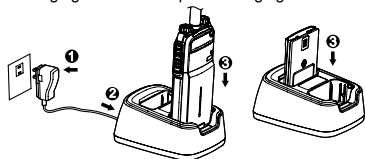
- Long and short press of a key can be assigned with different functions by your dealer.
- Short press of the **TK** key is assigned with the Emergency On feature, long press assigned with the Emergency Off feature. You can also assign it with other features via your dealer.

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:

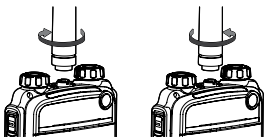
- To achieve optimal battery performance, please charge the battery for 3 hours before initial use.
- Be sure to read the Safety Information Booklet, to get necessary battery safety information.

| 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

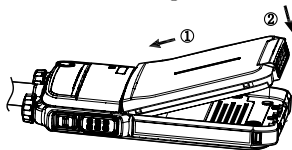
Turn the antenna clockwise to fasten it.



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.



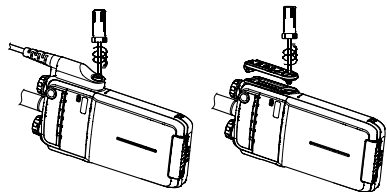
To remove the battery, turn off the radio first. Slide the lock in the direction (see arrow ①) to loosen the

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 |

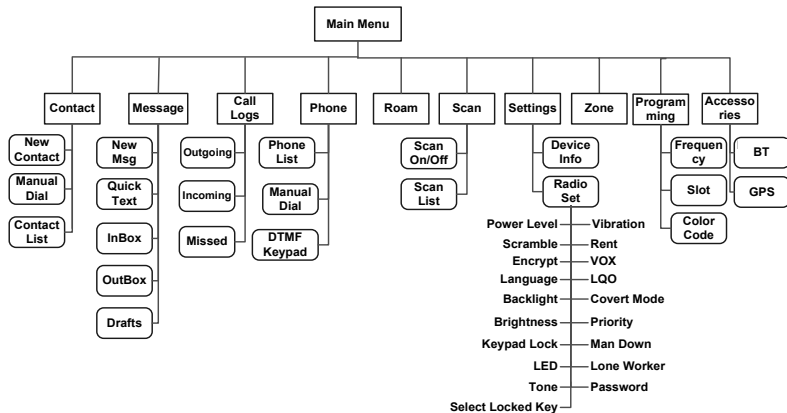
| | |
|---|--|
| The LED glows green | Receiving |
| The LED flashes orange slowly | Scanning |
| The LED flashes orange rapidly | Emergency |
| The LED glows orange | No voice is being transmitted or received on the channel after a call is established. Within such period, you can hold the PTT key to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

BT is a kind of wireless technology that supports short-distance (generally within 10m) communications and information exchange between devices such as mobile phones, PDAs, wireless earpieces, laptops, etc.



Caution:

- For optimal communication quality, it is recommended to use our specified BT devices: the wireless earpiece and wireless finger PTT (find the device model number in "Optional Accessories" chapter). To learn the detailed functions and operations of the devices, refer to the corresponding manual.
- If you use other company's BT earpiece, you will need to use it with our specified wireless finger PTT, otherwise, you will not be able to transmit via this earpiece.

For clear voice communications, when using the devices, please place the radio as required below.

- When the radio is worn, put it and the devices on the same side with the radio's front case (the case with the LCD) outwards.
- When the radio is not worn, keep it within 2m

away from the devices with its front case towards the devices.

Connect the BT devices to the radio in the following steps:

1. Turn on the radio.
2. Activate the BT feature by pressing the programmed **BT** key or via the menu "Accessories -> BT -> On/Off".

When the LED glows blue and then flashes blue once every 3s, it indicates the BT feature of the radio is enabled.



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

3. Turn on the BT device and enter the pairing. Refer to the corresponding accessory manual for the operations.
4. Go to menu "Accessories -> BT -> Paired Devices" and select "Search PTT" to start searching.
5. When the wireless PTT is found, enter "Devices List" to find the alias of the PTT, and select "Connect".


When the connection is done, the prompt "Connect Success!" will be displayed on the LCD, and the LED will flash blue once every 2s.

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 radio. 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 | <p>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.</p> <p> 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.</p> |




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.

- 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.
- 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.
- 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  and Low power is indicated by .

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. |

| Tone | Description |
|---------------------|--|
| 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 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 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 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 radio. |
| 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 | Li-Ion Battery Adapter POA53 | Belt Clip Charger CH04L01 |
|  |  |  |  |  |  |
| Covert Vest NCN009 | Plastic Carrying Case with Clip PCN005 | 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 and Remote Controller EWN07 | Digital Covert Wireless Earpiece with Inductive Neckloop EWN08 | 3-wire Surveillance Earpiece with Transparent Acoustic Tube, Remote Controller and Double PTT (Beige) EAN19 | 3-Wire Surveillance Earpiece with Transparent Acoustic Tube (beige) EAN21 | Wireless Earpiece EHW02 | Wireless Finger PTT POA47 |
|  |  |  |  |  |  |




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  to .

Special Character

To enter common punctuations and special characters, press .

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 to 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.

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