Hytera

PD985/G
Digital Portable Radio
OWNERS MANUAL

Preface

Welcome to the world of Hytera and thank you for purchasing this product. This manual includes a description of the functions and step-by-step procedures for use. It also includes a troubleshooting guide. Please refer to the corresponding Feature Book for detailed features and operations.

To avoid bodily injury or property loss caused by incorrect operation, please read carefully the *Safety Information Booklet* before use.

This manual is applicable to the following product:

PD98X/PD98XG Digital Portable Radio (X may represent 2, 5, 6 or 8)

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

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. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Verification of harmful interference by this equipment to radio or television reception can be determined by turning it off and then 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 different circuit to that of the receiver's outlet.
- Consult the dealer or an experienced radio/TV technician for help.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- 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.

Compliance with RF Exposure Standards

Hytera's portable radio complies with the following RF energy exposure standards and guidelines:

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR § 1.1307, 1.1310 and 2.1093.
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1:2005; Canada RSS102 Issue 5 March 2015.
- Institute of Electrical and Electronic Engineers (IEEE) C95.1:2005 Edition

RF Exposure Compliance and Control Guidelines and Operating Instructions

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits always adhere to the following procedures.

Guidelines:

- Do not remove the RF Exposure Label from the device.
- User awareness instructions should accompany device when transferred to other users.
- Do not use this device if the operational requirements described herein are not met.

Operating Instructions:

- Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the **Push-To-Talk** (**PTT**) button. To receive calls, release the **PTT** button. Transmitting 50% of the time, or less, is important because the radio generates measurable RF energy only when transmitting (in terms of measuring for standards compliance).
- Keep the radio unit at least 2.5 cm away from the face. Keeping the radio at the proper distance is important as RF exposure decreases with distance from the antenna. The antenna should be kept away from the face and eyes.
- When worn on the body, always place the radio in a Hytera-approved holder, holster, case, or body harness or by use of the correct clip for this product. Use of non-approved accessories may result in exposure levels which exceed the FCC's

occupational/controlled environmental RF exposure limits.

- Use of non-approved antennas, batteries, and accessories causes the radio to exceed the FCC RF exposure guidelines.
- Contact your local dealer for the product's optional accessories.

IC Statement

The device has been tested and complies with SAR limits, users can obtain Canadian information on RF exposure and compliance

Après examen de ce matériel aux conformité aux limites DAS et/ou aux limites d'intensité de champ RF, les utilisateurs peuvent sur l'exposition aux radiofréquences et la conformité et compliance d'acquérir les informations correspondantes

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause harmful interference.

- This device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

EU Regulatory Conformance

As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the following directives: 1999/5/EC or 2014/53/EU, 2006/66/EC, 2011/65/EU, and 2012/19/EU.

Please note that the above information is applicable to EU countries only.

Contents

Conventional

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.

Radio	Battery	Charger
Power Adapter	Antenna	Belt Clip
Strap	Documentation Kit	

📖 Note

- The pictures in this manual are for reference only.
- The frequency band is marked on the antenna label; if unavailable, see the label on the radio.

Product Overview

Product Controls
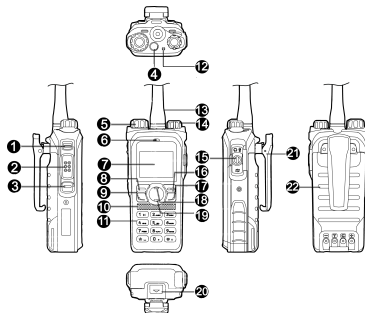
No.	Part Name	No.	Part Name
1	Side Key 1 (**SK1**)	12	LED Indicator
2	Push-to-Talk (**PTT**) Key	13	Antenna
3	Side Key 2 (**SK2**)	14	On-Off/Volume Control Knob
4	Top Key (**TK**)	15	Accessory Connector
5	Channel Selector Knob	16	Back Key
6	Microphone	17	**P2** Key
7	LCD Display	18	Up Key
8	OK/Menu Key	19	Down Key
9	**P1** Key	20	Battery Latch
10	Speaker	21	Belt Clip
11	Numeric Keypad	22	Battery

LCD Icon

Icon	Radio Status
🎹	The dual-tone multi-frequency signaling (DTMF) keypad is enabled.
🛰	The GPS feature is enabled, and the radio receives GPS data.
🛰	The GPS feature is enabled, but the radio receives no GPS data.
🔋	The number of bars (0–3) indicates the charge remaining in the battery.
Ⓛ	The radio is set at Low power.
Ⓗ	The radio is set at High power.

Icon	Radio Status
📲	An accessory is connected.
📋	One or more new work orders are received.
▣	The maximum number of saved work orders is reached.
DM	**D**irect **M**ode: In this mode, radios communicate with each other directly.
RM	**R**epeater **M**ode: In this mode, radios communicate with each other via a repeater.
📢	The Monitor feature is enabled.
⚠	The radio is in emergency mode (excluding silent emergency mode) or an emergency call is received.
🛰	The radio is roaming.
🔐	The Scrambler or Encrypt feature is enabled.
🔄	The radio is scanning.
🔄	The radio stays on a non-priority channel.

Icon	Radio Status
P_1	The radio stays on priority channel 1.
P_2	The radio stays on priority channel 2.
Ⓥ	The Voice Operated Transmit (VOX) feature is enabled.
📞	There is/are missed call(s).
✉	There is/are unread message(s).
✉	The Inbox is full.
🅱	The BT feature is enabled.
🅱	The wireless device is connected.
📶✕	There is no signal.
📶	The number of bars (1–4) indicates the radio signal strength.
🔊	The speaker is unmuted.

Icon	Radio Status
⌀	The radio operates in silent mode.
◉	The Loudness and Quality Optimizer (LQO) feature is enabled.
⌷!	No Micro SD card is detected.
👤	A private call is in progress or a private contact is in the contact list.
👥	A group call is in progress or a group contact is in the contact list.
👥	An all call is in progress or an all call contact is in the contact list.

LED Indicator

LED Indication	Radio Status
Flashes green	Being turned on.
Glows green	Receiving.
Glows red	Transmitting.
Flashes orange slowly	Scanning or roaming.
Flashes orange rapidly	Working in emergency mode.

LED Indication	Radio Status
Glows orange	Call hang time: No voice is being transmitted or received on the channel during a call. Within such a period, you can press and hold the **PTT** key to speak.
Glows blue	The BT feature is being enabled.
Flashes blue every 3s	The BT feature is enabled, but no wireless device is connected.
Flashes blue every 1.5s	The wireless device is connected.
Flashes blue every 0.1s	The BT feature is being disabled.

Before Use

Attaching the Antenna

⚠️ **Caution**

- Rotate the antenna clockwise until hand tight; if over tightened, the antenna or its connector may be damaged.
- Do not hold the radio by its antenna, as it may reduce the radio performance and life span of the antenna.
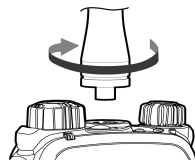
Installing the Micro SD card

Install the Micro SD card as follows (if required):

1. Loosen the screw fixing the Micro SD card cover, remove the cover, and then place the card in the holder correctly as shown below.
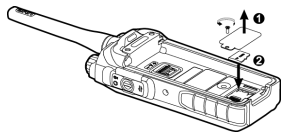
2. Replace the cover and tighten the screw as shown below.
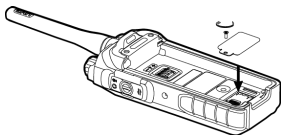
Attaching the Battery

📝 **Note**

- Upon power-on, the radio automatically checks if the battery is approved by Hytera and gives a corresponding indication.
- Using an unapproved battery disables the Battery Save feature, makes the battery power indication inaccurate, and reduces the radio performance.
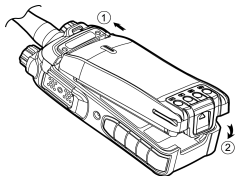
Attaching the Belt Clip

1. Unfasten the two screws on the back of the radio.
2. Align the screw holes on the belt clip with those on the back of the radio, as shown below.
3. Tighten the screws.
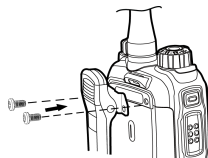
Attaching the Accessories

⚠️ **Caution**

For optimal waterproof and dustproof performance:

- Do not scrape the silicone waterproof pad surrounding the screw hold of the accessory connector.
- Do close the accessory connector cover and fasten the screw after removing the accessory.

1. Loosen the screw fixing the accessory connector cover, and open the cover as shown below.

2. Align the accessory (such as an audio accessory or a programming cable) plug with the accessory connector.
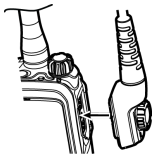
3. Tighten the screw on the accessory plug.
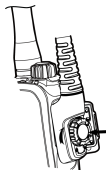
Charging the Battery

⚠ Caution

Use the charger specified by Hytera to charge the battery.

Be sure to charge the battery fully before initial use, since reduction of state of charge (SoC) may lead to low battery alarm. You can charge the standalone battery or the radio with battery attached.

It is recommended that your radio remain powered off during charging.
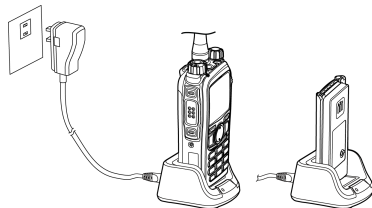
The LED indicator on the charger shows the charging status. For details, see the following table.

LED Indication	Charging Status
Flashes red slowly	The battery is inserted incorrectly.
Glows red	The battery is charging.
Glows orange	The battery is charged to 90% or more.
Glows green	The battery is fully charged.
Flashes red rapidly	The battery fails to be charged.

Checking the Battery Power

You can check the current battery power by holding down the **Battery Power Indicator** key programmed by your dealer, and release the key to exit. Battery power indications and alert tone are listed below:

Icon	LED Indication/Tone
🔋	The LED indicator glows green.
🔋	The LED indicator glows orange.
🔋	The LED indicator glows red.
🔋*	The LED indicator glows red and an alert tone sounds.

* The battery runs low. Please recharge or replace the battery.

Basic Operations

Turning On/Off the Radio

On   Off
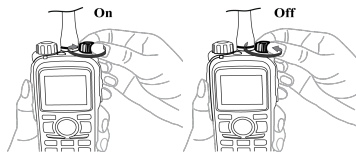
Adjusting the Volume

Selecting a Zone

A zone is a group of channels within the same operational area. The radio supports up to 64 zones, with a maximum of 128 channels per zone.

To select a zone, do one of the following:

- **Menu**: Go to **Menu** > **Zone**, press the **Up** or **Down** key to select an appropriate zone, and then press the **OK/Menu** key to switch to the selected zone.

- **Shortcut key**: Switch to an appropriate zone by pressing the **Zone Up** or **Zone Down** key programmed by your dealer.

Selecting a Channel

Data and voice are transmitted and received on the selected channel. To select a channel, rotate the **Channel Selector** knob to the desired channel.

Inputting via Keypad

You can use the keypad to enter user aliases or IDs and text messages. Here are some useful tips:

- To switch the input method between alphabetic mode and numeric mode, press [⊞↑].
- To enter special characters, press [1◁] in the alphabetic mode or [⊞↑] in the numeric mode.
- To enter a space, press [✱↵] in the alphabetic mode.

Locking or Unlocking Keys and Knobs

When the keypad is not in use, it is recommended that you lock it to avoid accidental key presses. To lock or unlock the keypad, do one of the following:

- **Automatically** lock or unlock the keypad

  The Keypad Lock feature allows the keypad to be locked automatically if no operation is being performed within a preset time period.

  To enable this feature, go to **Menu** > **Settings** > **Radio Set** > **Keypad Lock**, select **Enable**, and

set **Delay Time(s)** by pressing the **Up** or **Down** key.

  To disable this feature, select **Disable** under the **Keypad Lock** menu.

- **Manually** lock or unlock the keypad

  To manually lock or unlock the keypad, do one of the following on the home screen:

  ➤Press the **Keypad Lock** key programmed by your dealer.

  ➤Press the **OK/Menu** key and then press [✱↵].

> 📝 **Note**
>
> You can go to **Menu** > **Settings** > **Radio Set** > **Optional Key**\ to set whether the keys and knobs still function when the keypad is locked .

Creating a Private Contact

To add a new contact to the private contact list, go to **Menu** > **Contact** > **New Contact**, enter the ID and alias of the new contact, and save it.

> 📝 **Note**
>
> The ID and alias of a new contact must be unique.

Call Services

Once you have selected the required channel, you can make or receive calls on that channel. To ensure optimal voice quality on the receiving radio, keep the microphone about 2.5 to 5 centimeters away from your mouth when the radio is transmitting.
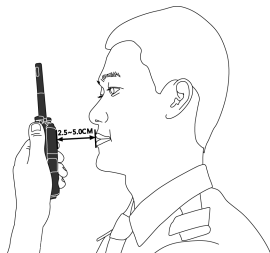
Private Call

A private call is a call from an individual user to another individual user.

Initiating a Private Call

On the home screen, press and hold the **PTT** key to initiate a call to the private contact preset for the current channel. In this case, the radio displays on the screen.

For other ways to initiate a private call, refer to the corresponding Feature Book included with the product.

Receiving and Responding to a Private Call

When you receive a private call, the radio emits a tone and displays on the screen. You then can listen to it without any operation.

You can press and hold the **PTT** key to speak within the preset time period. Otherwise, the call ends and the radio displays missed call indications.

Group Call

A group call is a call from an individual user to a group of users.

Initiating a Group Call

On the home screen, press and hold the **PTT** key to initiate a group call to the group contact preset for the current channel. In this case, the radio displays on the screen.

For other ways to initiate a group call, refer to the corresponding Feature Book included with the product.

Receiving and Responding to a Group Call

When you receive a group call, the radio emits a tone and displays on the screen. You then can listen to it without any operation.

You can press and hold the **PTT** key to speak within the preset time period. If there is no voice activity within the preset time period, the call ends.

Call on Analog Channel without Signaling

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

For descriptions and operations of calls on the analog channel with signaling, refer to the corresponding Feature Book included with the product.

Emergency Call

In case of emergency, you can use the Emergency Call feature to ask for help from other personnel or the control center.

This feature needs to be configured and enabled by your dealer. For details, refer to the corresponding Feature Book included with the product.

Message Services

Message services allow you to send and receive text and quick text messages.

Sending a Text Message

To edit and then send a text message, do as follows:

1. Go to **Menu** > **Message** > **New Msg**, and then edit the text.
2. Press the **OK/Menu** key, and then select **Send**.
3. Select **Contact List** or **Manual Dial**.
4. Select the required contact or enter the contact number.
5. Press the **OK/Menu** key to send the text message.

Sending a Quick Text Message

Quick text messages are preprogrammed by your dealer, and you can edit each message before sending it. To send a quick text message, do as follows:

1. Go to **Menu** > **Message** > **Quick Text**, and then select the required quick text.
2. (Optional) Edit the quick text.
3. Press the **OK/Menu** key, and then select **Send**.
4. Select **Contact List** or **Manual Dial**.
5. Select the required contact or enter the contact number.
6. Press the **OK/Menu** key to send the text message.

Viewing a Received Message

To view a received message, do as follows:

1. Go to **Menu** > **Message** > **Inbox** > **Inbox List**, and then select the message to be viewed.
2. Press the **OK/Menu** key to view the details.

Troubleshooting

Phenomena	Analysis	Solution
The radio cannot be turned on.	The battery may be installed improperly.	Remove and reattach the battery.
	The battery power may run out.	Recharge or replace the battery.
	The battery may suffer from poor contact caused by dirty or damaged battery contacts.	Clean the battery contacts or replace the battery.
During reception, the voice is weak, intermittent 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 loose or may be installed incorrectly.	Turn off the radio, and remove and reattach the antenna.
	The speaker may be blocked.	Clean the surface of the speaker.
You cannot communicate with other group members.	The frequency or signal strength may be low in comparison to other members.	Verify your TX/RX frequency and signal strength are correct.
	The channel type (digital or analog) may be set incorrectly.	Verify you are on the correct digital or analog channel.
	You may be too far away from other members.	Move towards other members.

Phenomena	Analysis	Solution
Unknown voices 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 in analog mode may be set with no signaling.	Set signaling for all radios operating at the same frequency to avoid interference.
You are unable to hear anyone because of too much noise and hiss.	You may be too far away from other members.	Move towards other members.
	You may be located in an unfavorable position. For example, your communication may be blocked by high buildings or blocked in an underground area.	Move to an open and flat area, and restart the radio and try contacting again.
	It could be the result of external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.
The GPS cannot locate your position.	GPS signals may not be received due to unfavorable position.	Move to an open and flat area, and try again.
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.

If the above solutions cannot fix your problems, 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 these tips.

Product Care

- Do not pierce or scrape the product.
- Keep the product far away from substances that can corrode the circuitry.
- Do not hold the product by the antenna or earpiece cable.
- Close the accessory connector cover when no accessory is in use.

Product Cleaning

> ⚠ **Caution**
>
> Turn off the product and remove the battery before cleaning.

- Clean up the dust and fine particles on the products 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, 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

Contact your local dealer for the optional accessories used with the product.

> ⚠ **Caution**
>
> Use the accessories specified by Hytera only; otherwise, the Company will not be liable for any loss or damage arising out of the use of any unauthorised accessories.