



DIGITAL PORTABLE RADIO

数字手持终端

OWNER'S MANUAL

使用说明书



Hytera 海能达

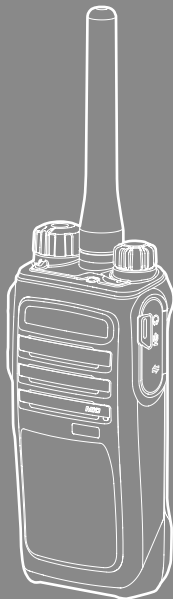
Preface

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

This manual is applicable to the following product:

PD50X Digital Portable Radio (X may represent 2, 5, 6 or 8)

DIGITAL PORTABLE RADIO



Instructional Icons



Indicates functions that are available on digital channel only.



Indicates functions that are available on analog channel only.

Functions marked with no function icons are available on both analog and digital channels.

Disclaimer

Hytera Communications Corporation Limited (the Company) endeavors to achieve the accuracy and completeness of this manual, but no warranty of accuracy or reliability is given. All the specifications and designs are subject to change without notice due to continuous technology development. No part of this manual may be copied, modified, translated, or distributed in any manner without the express written permission of us.

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

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

RF Radiation Information

This product must be restricted to operations in an Occupational/Controlled RF exposure Environments. Users must be fully aware of the hazards of the exposure and able to exercise control over their RF exposure to qualify for the higher exposure limits.

RF Radiation Profile

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

RF Radiation Safety

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

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

FCC Regulations

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

Operational Instructions and Training Guidelines

To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standards and guidelines, users should transmit not more than 50% of the time and always adhere to the following procedures:

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

EU Regulatory Conformance

As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC.

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

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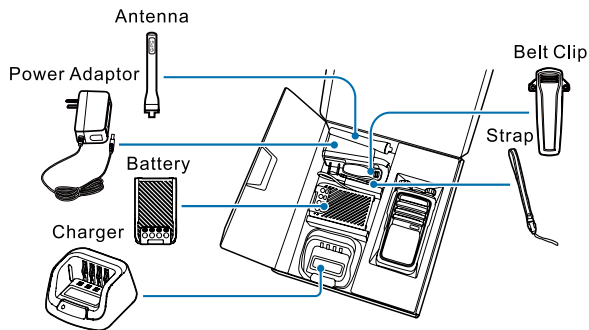
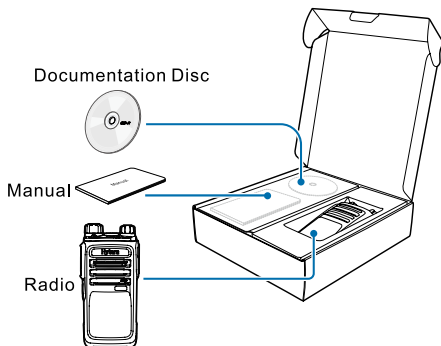
Items in the Package

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



Note

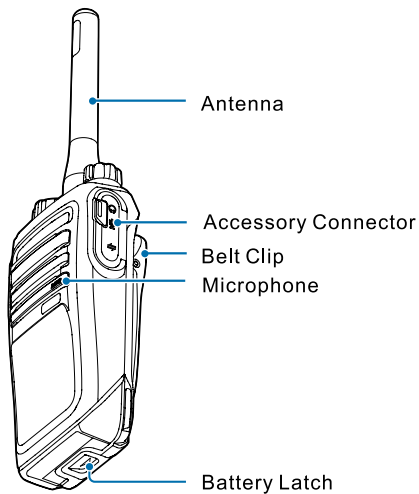
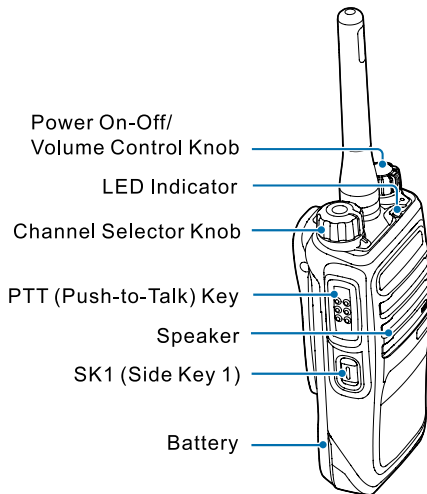
The frequency band is marked on the label of antenna; if not, please refer to the label on the radio for frequency band information.



Note

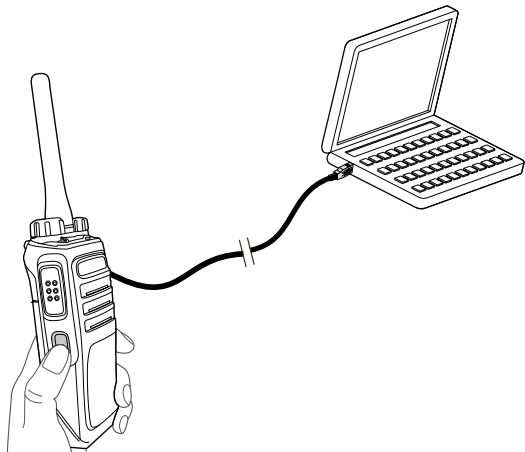
All pictures in this manual are for reference only.

Product Controls

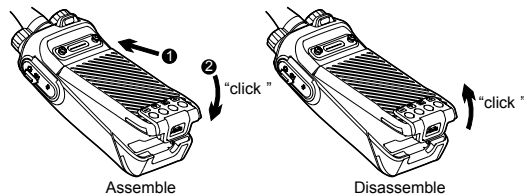


Programmable Keys

For enhanced convenience, you may request your dealer to program the **SK1** key as shortcut to certain feature. Please refer to the corresponding Feature Book for feature details.



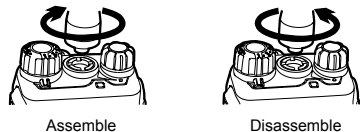
Attaching the Battery




Note

- To remove the battery, please turn off the radio first.
- If not attached with battery specified by the Company, the radio will give an alarm tone to remind you when powering on. Afterwards, it will operate normally.

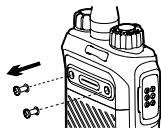
Attaching the Antenna



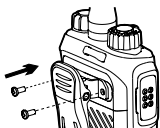
Before Use

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

Attaching the Belt Clip

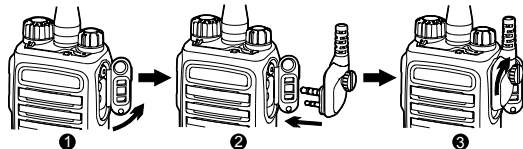


① Remove the screws



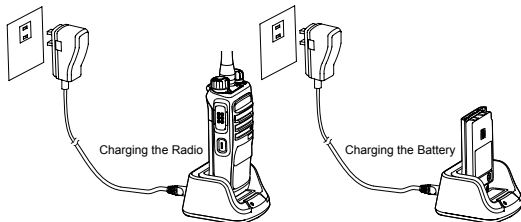
② Assemble the Belt Clip

Attaching the Accessories
















Charging the Battery

Please use the charger specified by the Company to charge the battery. Charging Diagram is listed below.



Charging Status Indication (on charger):

LED Indication	Current Status
 The LED Indicator flashes orange slowly	 Low current charging
 The LED Indicator flashes red slowly	 Standby (no load)
 The LED Indicator glows red	 Charging
 The LED Indicator glows orange	 90% charged
 The LED Indicator glows green	 Fully charged
 The LED Indicator flashes red rapidly	 Charging error

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

Checking the Battery Power

You may check the current battery power by holding down the programmed Battery Power Indicator key preset by your dealer. And release the key to exit. **Battery power indications** are listed below.

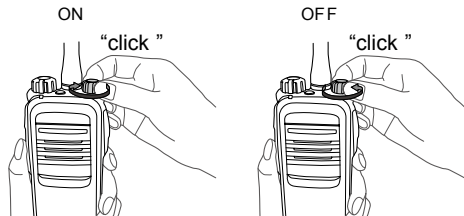


LED Indication	Battery Power
● The LED indicator glows green	■ High
● The LED indicator glows orange	■ Medium
● The LED indicator glows red	■ Low
● The LED indicator glows red and low battery alert sounds	□ Under the low battery threshold. Charge or replace the battery for proper radio operation

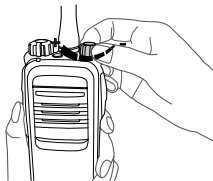


LED Indication	Product Status
☀ The LED indicator flashes green	Powering on
● The LED indicator glows green	Receiving
● The LED indicator glows red	Transmitting
☀ The LED indicator flashes orange slowly	Scanning or roaming
☀ The LED indicator flashes orange rapidly	Emergency
● The LED indicator glows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

Powering On/Off



Adjusting the Volume

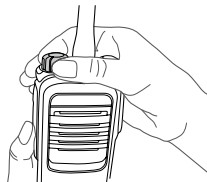


Selecting a Zone

You can include a group of channels with the same property in to a zone for convenient management. The radio supports three zones, each of which consists of up to 16 channels. You can switch to the appropriate zone by pressing the programmed **Zone Up** or **Zone Down** key preset by your dealer.



Selecting a Zone



Selecting a Channel

Selecting a Channel

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

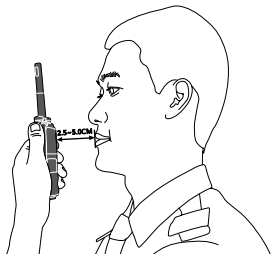
If the Channel Notify feature is enabled by your dealer, the radio will play the channel number upon channel switching.

Call Services

After the radio is powered on, you can make different kinds of calls. To ensure optimal volume of the receiving radio, keep the microphone about 2.5 to 5 centimeters away from your mouth when transmitting.

The types of calls you may initiate are listed below:

- Private call: A call made to a private contact.
- Group call: A call made to the group contacts.
- All call: A call made to all the contacts on the current channel.



Calling on Digital Channel

You can initiate a private call, group call or all call (your radio must be programmed to allow you to use the all call service) through the same operations on digital channel. When calling back, the radio will make a call to the calling party in private call and all call (your radio must be

programmed to allow you to call back in an all call); but in group call, the radio will make a call to all parties involved when calling back.

Here we take the private call as example to illustrate the call process:

1. User A and B select the same digital channel for radios.
Users may request the dealer to preset a regular private call/group call/all call contact for each digital channel.
2. User A holds down the PTT key to initiate a call.
User A can talk to the microphone when the LED indicator on the radio glows red and release the PTT key to finish talking.
3. User B can receive the call without any operation. When receiving, the LED indicator glows green.
User B can hold down the PTT key to talk when the LED indicator on the radio glows orange.
4. User A can receive the call without any operation. When receiving, the LED indicator glows green.
User A can hold down the PTT key to talk when the LED indicator on the radio glows orange.
If User A does not respond it, the call will end.



Note The duration of LED indicator glowing orange (Call Hold Time) is preset by your dealer.

Calling on Analog Channel (No Signaling)

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

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

Feature Type	Detailed Feature
Radio Features	<ul style="list-style-type: none"> ● Radio setting: Power Level, Covert Mode ● Audio setting: Mic AGC, Always Treble Boost, LQO, Audio Feedback Suppression ● Convenient functionality: Shortcuts, One Touch Call and VOX ● Rent
Conventional Features	<ul style="list-style-type: none"> ● Scan ● Talk Around
Digital Features	<ul style="list-style-type: none"> ● Access management: Time-out-Timer (TOT), Transmission Management ● Basic voice services: Private Call, Group Call ● Auxiliary voice service: All Call ● Message ● Security: Encrypt ● Supplementary services ● Patented features: Pseudo Trunking, Priority Interrupt ● Mobility management: Roam
Analog Feature	<ul style="list-style-type: none"> ● Access management: Time-out-Timer (TOT), Transmission Management, Monitor, Squelch Off and Adjust Squelch Level ● Call on Analog Channel (No Signaling) ● Security: Scrambler ● Signaling: HDC1200, 5-Tone and 2-Tone

Follow the instructions below when using the VOX feature:

- You can only enable or disable the VOX feature for one channel instead of all of the channels at a time.
- When using the VOX feature, holding down the internal or external PTT key will disable the VOX feature for the current channel. In such case, you can enable the VOX feature by switching the channel, pressing the programmed VOX key or restarting the radio.
- The VOX feature settings will remain the unchanged when the radio is powering on and off.
- The VOX Gain Level includes Internal MIC VOX Gain Level and External MIC VOX Gain Level, which can be configured by your dealer or via the menu.
- The VOX MIC Selection can be set to Only External and External First, which is set to Only External by default and can be configured by your dealer.
- To use the VOX feature with an external microphone, make sure the PTT/VOX switch is switched to "VOX" before the radio is powered on and the VOX feature is enabled.
- No matter the VOX feature is enabled or disabled after the radio is powered on, if the PTT/VOX switch is switched to "PTT" , you can talk by holding down



Caution

the internal or external PTT key. In such case, switching the PTT/VOX switch to "VOX" will keep the radio transmitting. To make the radio function properly, switch the PTT/VOX switch to "PTT" or restart the radio.

Troubleshooting

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

Phenomena	Analysis	Solution
Power-on Failure.	The battery may be improperly installed.	Remove the battery and reassemble it.
	The battery power may be used up.	Recharge or replace the battery.
	The battery is poorly connected due to dirtied or damaged battery contacts.	Clean the battery contacts. If the problem cannot be solved, contact your dealer or authorized service center for inspection and repair.
During receiving, the voice is weak, discontinuous or totally inactive.	Low battery voltage.	Recharge or replace the battery
	Low volume level.	Increase the volume by rotating the Volume Control knob.
	The antenna may be loosened or improperly installed.	Reassemble the antenna after turning off the radio.
	The speaker may be blocked or damaged.	Clean the surface of the speaker. If the problem cannot be solved, contact your dealer or authorized service center for inspection and repair
Unable to 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. And change the signaling settings for all portable radios at the same time.
The noise is too loud.	You may be too far away from other members.	Move towards other members.
	You may locate in an unfavorable position. For example, your communication may be blocked by high buildings or frustrated in the underground areas.	Move to an open and flat area, and restart the radio to try again.
	You may suffer from external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.

Care and Cleaning

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

Product Care



Do not pierce or scrape the product.



Keep the product far away from substances that can corrode the circuit.



Do not hold the product by its antenna directly.



Do not hold the product by its earpiece cable directly.



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

Product Cleaning





Caution Turn off the product and remove the battery before cleaning.


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

Optional Accessories

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

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

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

 **Audio:** Tube,
EAM15 3-Wire Earpiece with Transparent Acoustic Tube (Beige),
ESM14 Remote Earbud,
EAM17 Remote Earpiece with Transparent Acoustic Tube,
EHM20 Remote Swivel Earset,
EHM19 Remote C-Earset,
SM08M3 Remote Speaker Microphone,
SM13M1 Remote Speaker Microphone (IP55)



Cable: PC63 Data Cable(USB Port)



Carry Accessories:
NCN011 Nylon Carrying Case (half-folded) (non-swivel)(black),
LCBN13 Universal Chest Pack (Nylon) (Black)



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