



# Hytera PD502i DMR Two Way Radio Owner's Manual

[Home](#) » [Hytera](#) » Hytera PD502i DMR Two Way Radio Owner's Manual





**DIGITAL PORTABLE RADIO**

## Contents [ [hide](#) ]

- [1 PD502i DMR Two Way Radio](#)
- [2 Items in the Package](#)
- [3 Product Overview](#)
- [4 Before Use](#)
- [5 Status Indication](#)
- [6 Basic Operations](#)
- [7 Call Services](#)
- [8 Feature Description](#)
- [9 Troubleshooting](#)
- [10 Care and Cleaning](#)
- [11 Optional Accessories](#)
- [12 Documents / Resources](#)
  - [12.1 References](#)
- [13 Related Posts](#)

## PD502i DMR Two Way Radio

### 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: PD502i 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

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.

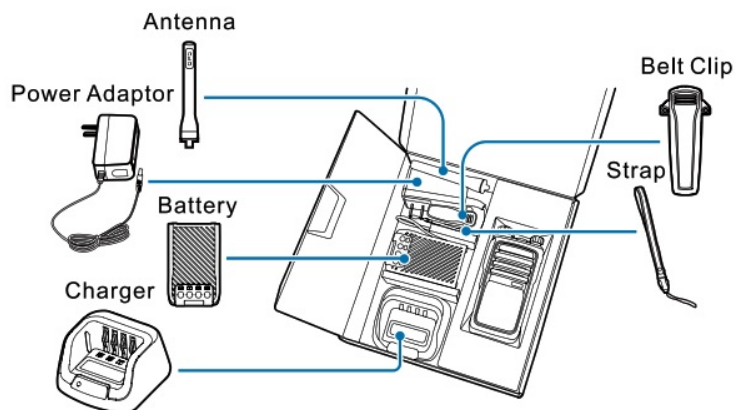
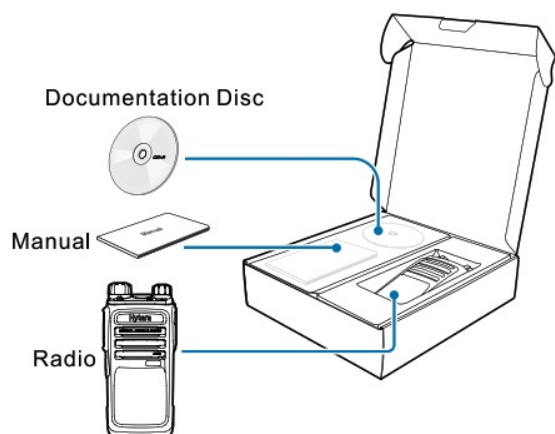
#### **Items in the Package**

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.

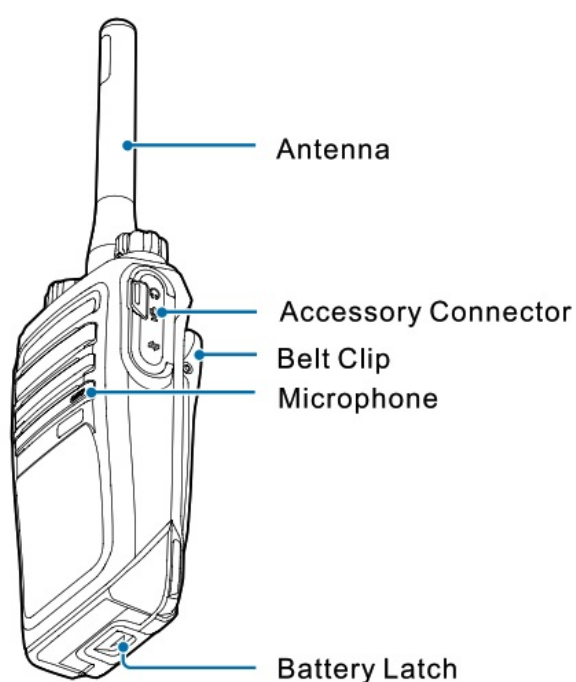
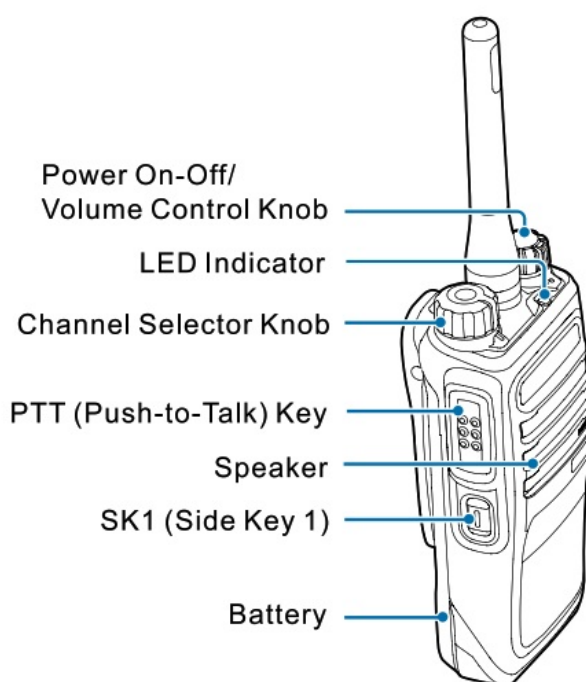


## NOTE

All pictures in this manual are for reference only.

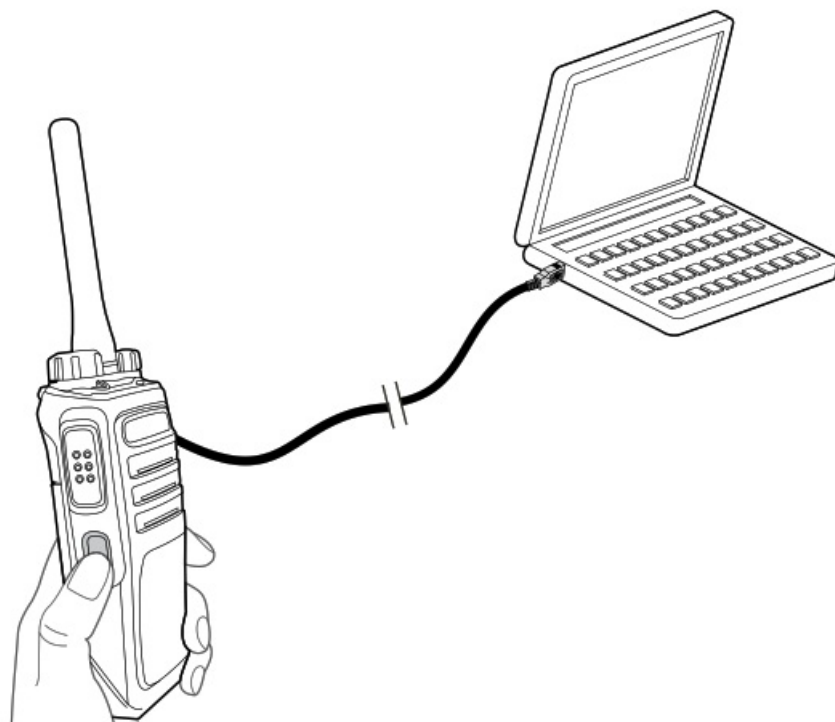
## Product Overview

### Product Controls



### Programmable Keys

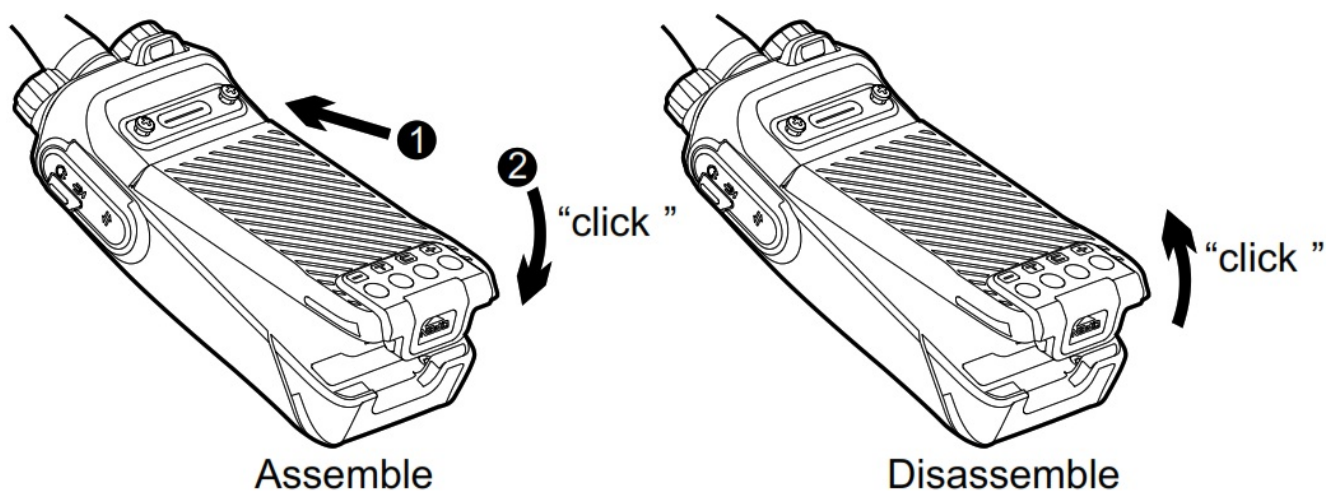
For enhanced convenience, you may request your dealer to program the SK1 key as shortcut to certain feature. Please refer to the corresponding Feature Book for feature details.



## Before Use

### Assembling the Radio

#### 1. Assembling the Battery



#### NOTE

- To remove the battery, please turn off the radio first. Then slide the battery latch upwards to unlock the battery.
- If not assembled with battery specified by Hytera, the radio will give an alarm tone to remind you when powering on. Afterwards, it will operate normally.

#### 2. Assembling the Antenna





Assemble



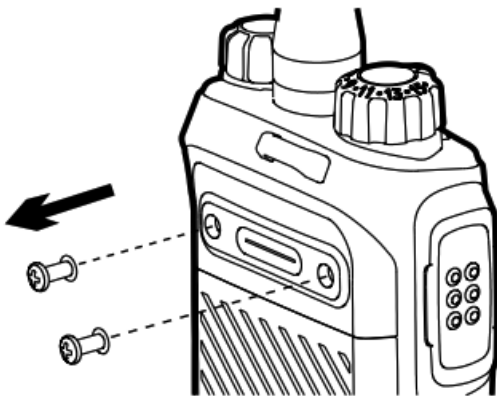
Disassemble



**CAUTION**

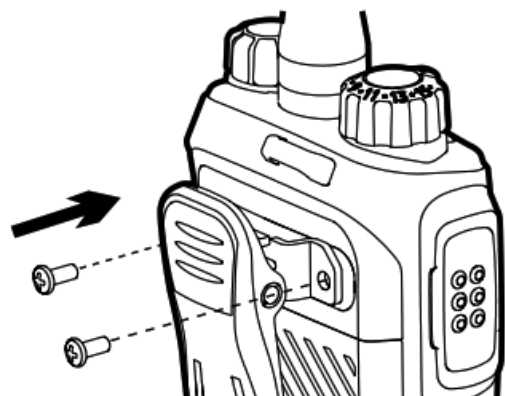
Do not swing the radio when holding it by the antenna, so as to avoid lowering the performance and shortening the life span of the antenna.

**3. Assembling the Belt Clip**



①

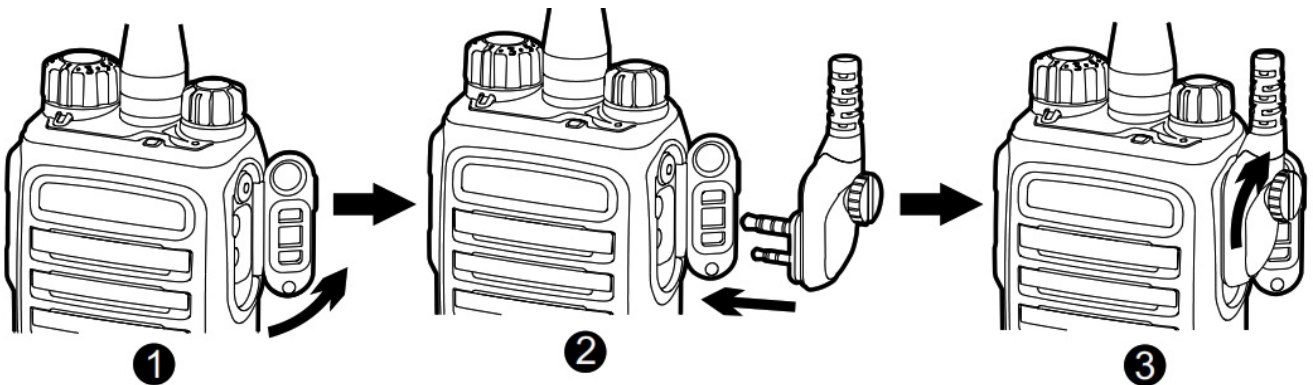
Remove the screws



②

Assemble the Belt Clip

**4. Assembling the Accessories**



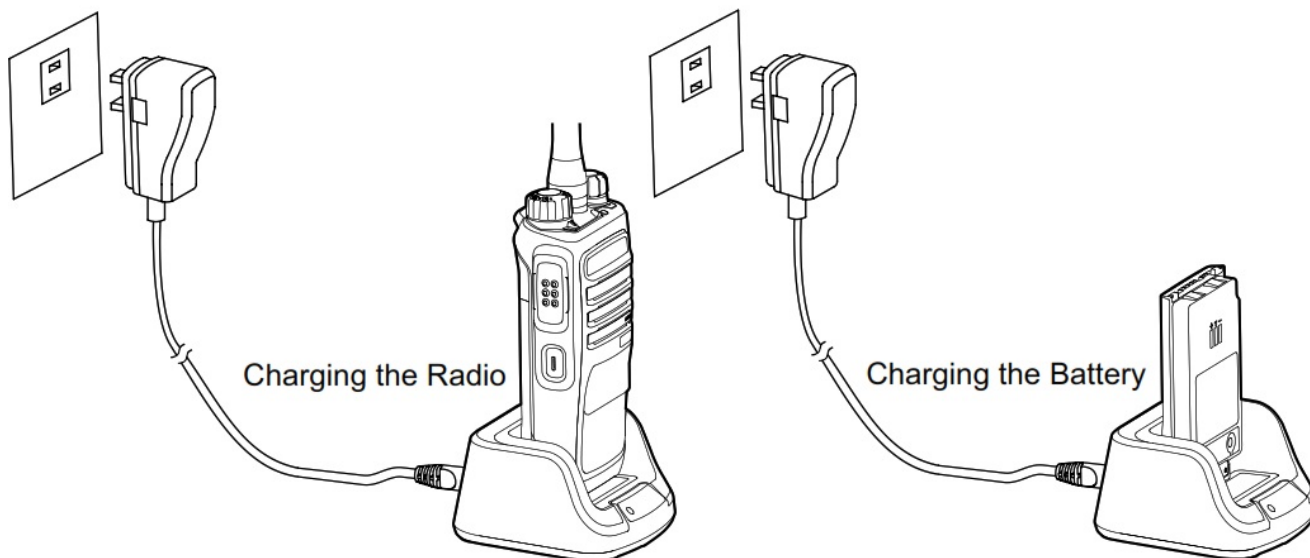
①

②

③

**Charging the Battery**

Please use the charger specified by the Company, and follows the charging steps as shown below.



LED Indication		Current Status	
	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 flashes orange slowly		Low current charging
	The LED Indicator glows green		Fully charged
	The LED Indicator flashes red rapidly		Charging error

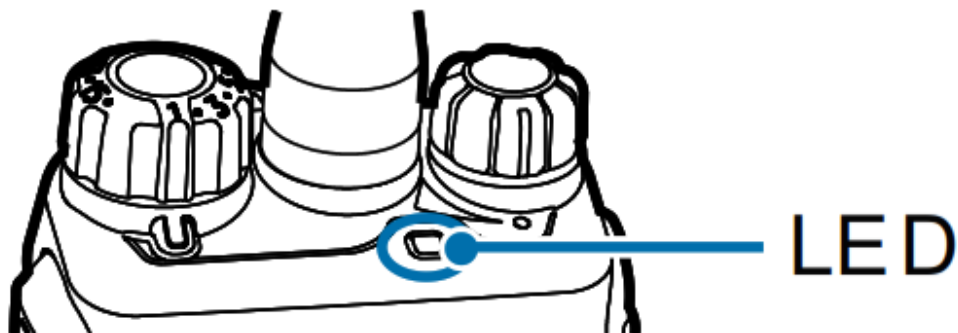






#### CAUTION

- 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

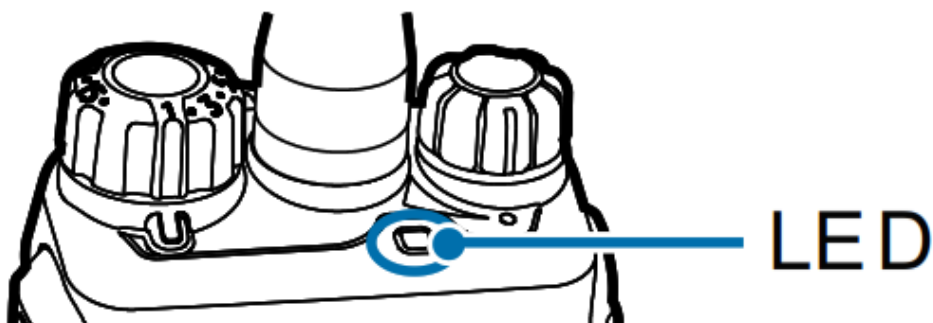
You may check the current battery power by holding the programmed Battery Power Indicator key preset by your dealer. Release the key to exit.









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

## Status Indication

### LED Indicator

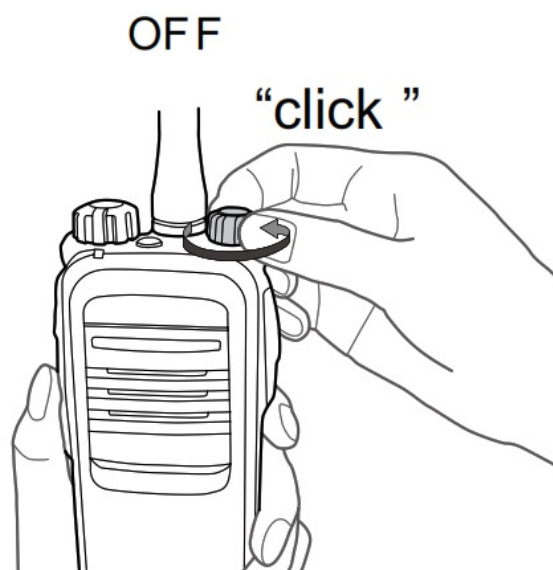
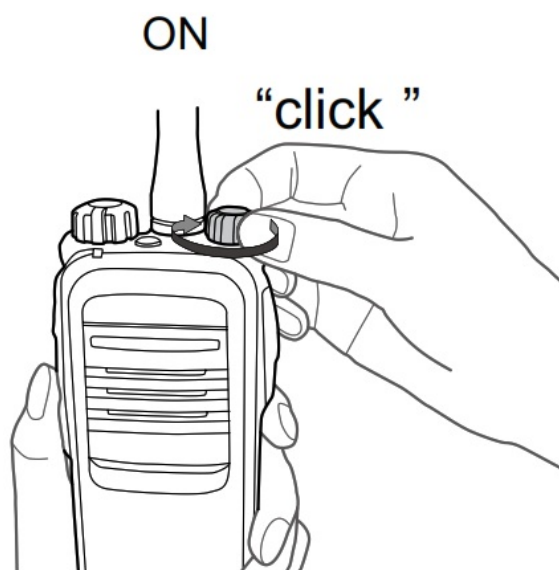




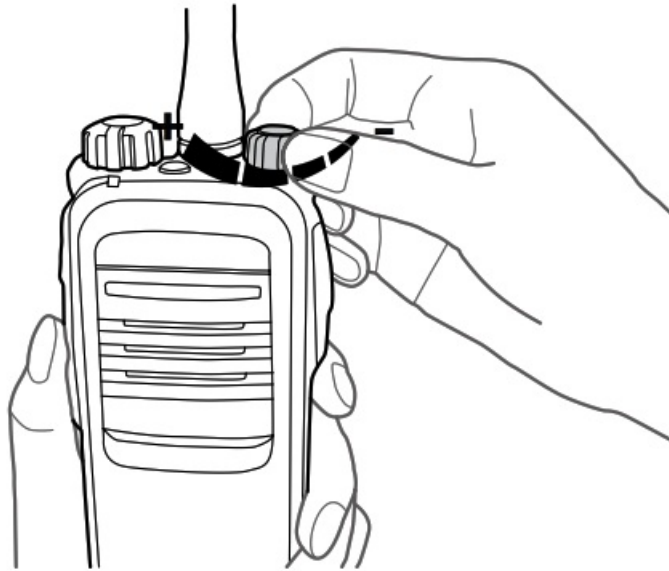
LED Indication		Product Status
	The LED indicator flashes green	Powering on
	The LED indicator glows green	Receiving
	The LED indicator glows red	Transmitting
	The LED indicator flashes orange slowly	Scanning or roaming
	The LED indicator flashes orange rapidly	Emergency
	The LED indicator glows orange	The call is established

## Basic Operations

### Powering On/Off

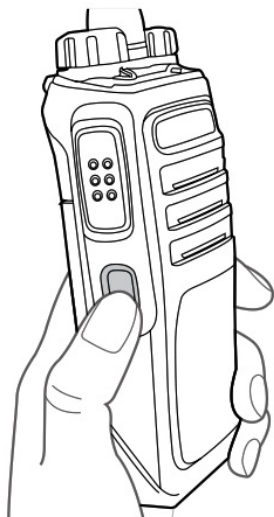


### Adjusting the Volume

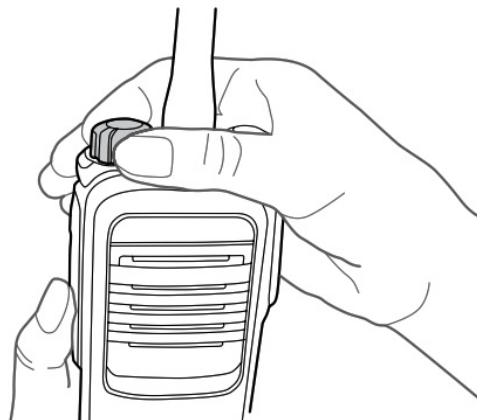


### Selecting a Zone

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.
2. User A holds down the PTT key to initiate a call.  
You may preset a regular private call/group call/all call contact for each digital channel via your dealer.
3. By holding down the PTT key, user A can talk to the microphone when the LED indicator on the radio glows red.
4. User A releases the PTT key to finish talking.  
User A can hold down the PTT key to talk when the LED indicator on the radio is glowing orange.  
When receiving, the LED indicator on the radio glows green.
5. User B can receive the call without any operation. When receiving, the LED indicator glows green.
6. User B can hold down the PTT key to talk when the LED indicator on the radio is glowing orange.



### Note

The duration of LED indicator glowing orange (Call Hold Time) is preset by your dealer. The call will end if neither one talks before this duration expires.

### 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.

## Feature Description

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

Feature Type	Detailed Feature
Radio Features	<ul style="list-style-type: none"><li>● Radio setting: Power Level, Covert Mode</li><li>● Convenient functionality: Shortcuts, One Touch Call and VOX</li><li>● Rent</li><li>● Audio Optimization</li></ul>
Conventional Common Features	<ul style="list-style-type: none"><li>● Scan</li><li>● Talk Around</li></ul>
Digital Features	<ul style="list-style-type: none"><li>● Access management: Time-out-Timer (TOT), Transmission Management</li><li>● Basic voice services: Private Call, Group Call</li><li>● Auxiliary voice service: All Call</li><li>● Data service: Message</li><li>● Security: Encrypt</li><li>● Supplementary services</li><li>● Patented features: Pseudo Trunking, Priority Interrupt</li><li>● Mobility management: Roam</li></ul>
Analog Feature	<ul style="list-style-type: none"><li>● Access management: Time-out-Timer (TOT), Transmission Management, Monitor, Squelch Off and Adjust Squelch Level</li><li>● Voice services</li><li>● Security: Scrambler</li><li>● Signaling: HDC1200, 5-Tone and 2-Tone</li></ul>

## 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
	Audio:	EAM15 3-Wire Earpiece with Transparent Acoustic Tube (Beige), ESM14 Remote Earbud, EAM17 Remote Earpiece with Transparent Acoustic Tube, EHM20 Remote Swivel Earset, EHM19 Remote C-Earset, SM08M3 Remote Speaker Microphone, SM13M1 Remote Speaker Microphone (IP55)
	Cable:	PD50X Programming & Downloading Functional Cable
	Carry Accessories:	Carry Accessories: NCN011 Nylon Carrying Case



**Hytera** is the trademark or registered trademark of Hytera Communications Corp., Ltd.

© 2018 Hytera Corp., Ltd. All Rights Reserved.

Address: HYT Tower, Hi-Tech Industrial Park North, Beihuan RD., Nanshan District, Shenzhen, China


Postcode:518057

<http://www.hytera.com>



811PD50000000

## Documents / Resources

	<p><a href="#">Hytera PD502i DMR Two Way Radio</a> [pdf] Owner's Manual PD502i DMR Two Way Radio, PD502i, DMR Two Way Radio, Way Radio</p>
---	--

## References

- 
[Hytera | Official Site - Trusted Two Way Radio and Critical Communications Solution](#)

