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.

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

This manual is applicable to the following product:

BD61X 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 res

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 cause 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 and 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

- 2012/19/EU

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

1. Items in the Package

Please unpack carefully and check if all items listed below are received. If any item is missing or damaged, please contact your dealer.
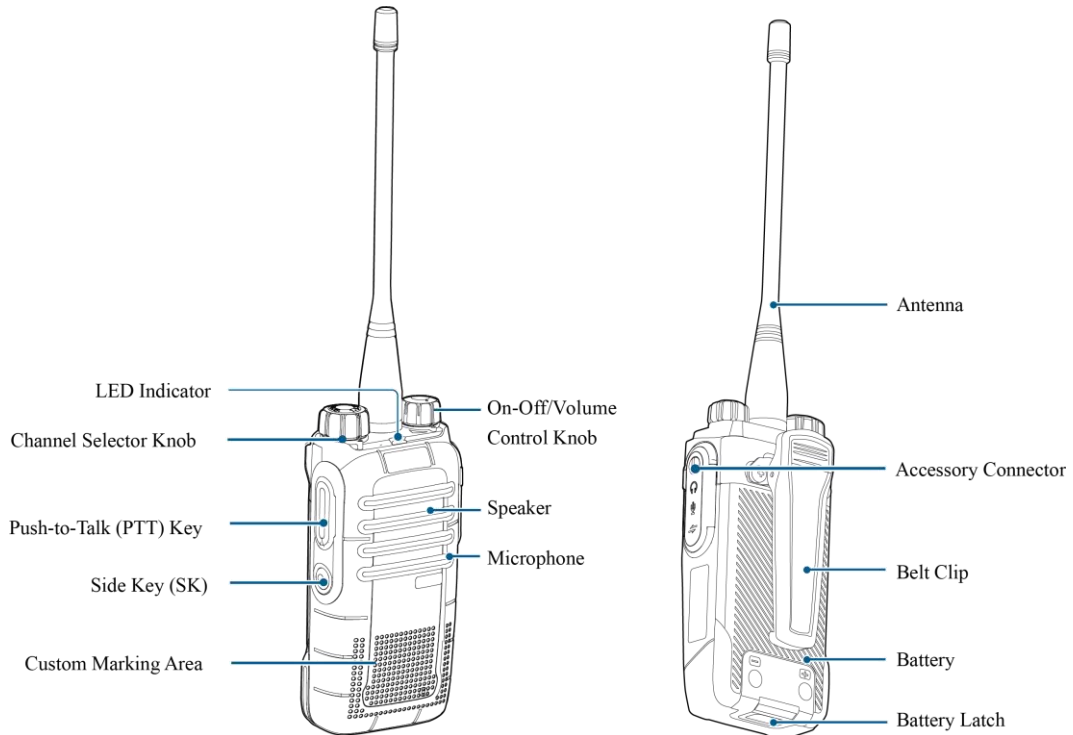
Item	Quantity (PCS)	Item	Quantity (PCS)
Radio	1	Antenna	1
Battery	1	Belt Clip	1
Charger	1	Strap	1
Power Adapter	1	Documentation Kit	1

Note

The frequency band is marked on the label of antenna; if it is unavailable, see the label on the radio.

2. Product Overview

2.1 Product Controls

Labels (left unit): LED Indicator, Channel Selector Knob, Push-to-Talk (PTT) Key, Side Key (SK), Custom Marking Area, On-Off/Volume Control Knob, Speaker, Microphone

Labels (right unit): Antenna, Accessory Connector, Belt Clip, Battery, Battery Latch

📝**Note**

You can adapt your radio to use the **SK** as the shortcut to a radio feature.

2.2 LED Indication

LED Indicator	Radio Status
Flashes green	Being turned on.
Glows green	Receiving.
Glows red	Transmitting.
Flashes orange slowly	Scanning.
Glows orange	Call hang time: No voice is being transmitted or received on the channel during a call. Within such a period, you can hold down the **PTT** key to speak.

3. Before Use

3.1 Attaching the Antenna

⚠️**Caution**

Do not hold the radio by its antenna, as it may reduce the radio performance and life span of the antenna.

Step 1 Place the antenna in its receptacle.

Step 2 Rotate the antenna clockwise.

3.2 Attaching the Battery

Step 1 Insert the top end of the battery into the top of the battery slot.

Step 2 Press the bottom end of the battery until the latch snaps into place.

✏️**Note**

To remove the battery, make sure that the radio is turned off, and then slide the battery latch upwards to unlock the battery.

3.3 Attaching the Belt Clip

Step 1   Unfasten the two screws on the back of the radio.

Step 2   Align the screw holes on the belt clip with those on the back of the radio.

Step 3   Tighten the screws.

3.4 Attaching the Accessories

Step 1 Loosen the screw on the accessory connector cover, and then open the cover.

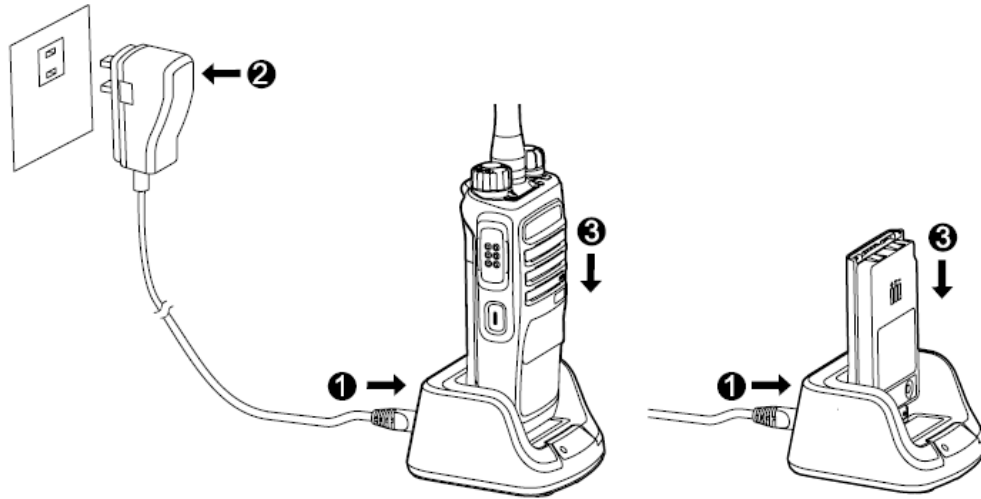**Step 2** Plug the accessory into the accessory connector.

Step 3 Tighten the screw on the accessory plug.

3.5 Charging the Battery

⚠️**Caution**

Use the charger specified by the Company 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 the 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 Indicator	Charging Status
Glows green	The battery is inserted incorrectly or fully charged.
Glows red	The battery is charging.
Glows orange	The battery is charged to 85% or above.

3.6 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. The following table lists battery power indications:

LED Indicator	Alert Tone	Battery Power
Glows green	Three beeps	High
Glows orange	Two beeps	Medium
Glows red	One beep	Low
Flashes red	Low battery tone	Under the low battery threshold. Please recharge or replace the battery.

4. Basic Operations

If you want to…	Do this…
Turn on the radio	Rotate the **On-Off/Volume Control** knob clockwise.
Turn off the radio	Rotate the **On-Off/Volume Control** knob counterclockwise.
Increase/Decrease the volume	Rotate the **On-Off/Volume Control** knob clockwise/counterclockwise after turning on the radio.
Select a channel	Rotate the **Channel Selector** knob.

5. Call Services

5.1 Call on Digital Channel

On the digital channel, you can initiate or respond to a group call or private call. A group call is a call from an individual user to a group of users. A private call is a call from an individual user to another individual user.

5.1.1 Initiating a Call

Step 1 Select the required channel.

Step 2 Hold the radio vertically 2.5 to 5 cm from your mouth.

Step 3 Press and hold the **PTT** key and speak when the radio is in standby mode.

5.1.2 Receiving and Responding to a Call

When receiving a call, you can listen to it without any operation. You can hold down the **PTT** key to respond within the preset time period.

5.2 Call on Analog Channel (Without Signaling)

A call on analog channel is from an individual user to all users on the channel. The operations are the same as the call on digital channel.

6. Optional Features

The following features need to be programmed by your dealer. Please contact your dealer for detailed operations.

Type	Feature	Description
Radio Feature	Zone	Allows you to select a zone. The radio supports up to 3 zones, with a maximum of 16 channels per zone.
	Power Level	Allows you to switch the transmit power level between high and low.
	Scan	Allows the radio to scan all channels in the scan list programmed for the current channel.
	Emergency Alarm	Allows you to initiate an emergency alarm or call at any time to ask for help in case of emergencies.
	Voice Operated Transmit (VOX)	Allows you to enjoy hands-free communication with the dedicated VOX earpiece.
	Busy Channel Lockout	Prevents the radio from transmitting on a busy channel.
	Time-out Timer (TOT)	Terminates transmission when the preset time period expires.
	Battery Save	Allows the radio to automatically enter the battery save mode when detecting no activity or operation within a certain time period.
Digital Feature	One Touch Call	Allows you to press one key to call the predefined private or group contact.
	All Call	Allows you to initiate a call to all users on the channel.
	TDMA Direct Mode	Allows the radio to operate on a channel with two time slots.
Analog Feature	Squelch Off	Allows the radio's speaker to always keep unmuted.
	Squelch Level	Allows you to adjust the squelch threshold required for the radio to unmute.
	Monitor	Allows the radio to monitor activities on the channel.
	CTCSS/CDCSS	Allows you to prevent unwanted calls on the same frequency.

7. 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.
	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.
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	Move to an open and flat area, and restart the radio and try contacting again.

Phenomena	Analysis	Solution
	example, your communication may be blocked by high buildings or blocked in an underground area.	
	It could be the result of external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.

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.

8. 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 product's 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.

9. Optional Accessories

⚠️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.

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