



**Kydera<sup>®</sup>**  
PROFESSIONAL DIGITAL TWO-WAY RADIO

# ***DM-607*** User Manual

## TO USER

Thank you for purchasing the digital / analog two way radios designed and produced by Quanzhou City New Century Communication Electronic Co., Ltd. This product is developed elaborately as a regular digital handheld radio according to EU standard and advanced international technology. The radio is endowed with ergonomic design and comprehensive function to deliver an advanced communication solution, which can definitively bring you a whole new operation and digital communication experience, improve your work efficiency and convenience, and provide a reliable safeguard for emergent communication.

Our serial products are tested strictly by rigorous testing procedures with advance international instruments and equipments.

Warm warning: To derive optimum performance from your radio, please read this manual and the supplied Safety Information Booklet carefully before use.

## FCC Statement

This equipment has been tested and found to comply with part 90 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."

### Attention:

This radio complies with IEEE and ICNIRP exposure limits for occupational/controlled RF exposure environment at operating duty factors of up to 50% and is authorized by the FCC for occupational use only.

## Compliance with RF Exposure Standards

The 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 this radio generates

measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance).

- Hold the radio in a vertical position in front of face with the microphone (and the other parts of the radio, including the antenna) at least one inch (2.5 cm) away from the nose. Keeping the radio at the proper distance is important because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes.
- When worn on the body, always place the radio in a approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of our's or other manufacturer's non-approved accessories may result in exposure levels, which exceed the FCC's occupational/controlled environment RF exposure limits.
- If you are not using a body-worn accessory and are not using the radio in the intended use position in front of the face, then ensure the antenna and the radio are kept at least 2.5 cm (one inch) from the body when transmitting. Keeping the radio at the proper distance is important because RF exposures decrease with increasing distance from the antenna.
- Use only manufacturer's name approved supplied or replacement antennas, batteries, and accessories. Use of non-manufacturer-name approved antennas, batteries, and accessories may exceed the FCC RF exposure guidelines.

**Safety:**

- It's important that the operation is aware of and understand the general hazards to the operation of any transceiver.
  - We can't guarantee the safety and operability of transceiver that using other accessories not sold by us.
- ▲ Disassembled and maintained by qualified technicians only.

**Warning:**

Turn off the transceiver in the following locations:

- In explosive atmospheres. (Inflammable gas, dust particles, metallic powders, grain powers, etc.).
- While taking on fuel or parking at gasoline service stations.

**Precautions**

- ▲ Observe the following precautions to prevent fire, personal injury and transceiver damage.
- Do not modify or attempt to adjust this transceiver for any reason by non-technicians.
  - Do not expose the transceiver of direct sunlight for long time, nor place it close to heating appliances.
  - Do not place the transceiver in a dusty, humid or wet area, nor place on unstable surface.
  - If an abnormal odor or smoke is detected coming from the transceiver, switch OFF the transceiver immediately and remove the battery pack from the transceiver. And contact your dealer in time.

**Getting Started :**

Before you use this user manual, please review the following information carefully.

- ◆ How to use this user manual.
- ◆ What information that your dealer / System Administrator can inform you.

**How to use this user manual**

This manual introduces the basic operation of RADIOBOSS compatible DMR/Analog handheld transceiver. However, your dealer or system administrator may already preset features of this radio based on your working type and requirement. Please consult with your dealer or system administrator about the details.

For your convenience and easy familiar with this radio, the icons below are used for distinguishing operable and available features for analog mode and digital mode.

 This icon indicates the function is only available in Analog mode

 This icon indicates the function is only available in Digital mode

**You can check with your dealer or system administrator for the following:**

- ◆ Is your radio with default settings or any preset channels that the distributor usually set?
- ◆ Which buttons are have been designed to operate other features?
- ◆ What optional accessories can be used with your radio?

## CONTENT ( I )

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### PREPARATION FOR OPERATING THE RADIO

**Please assemble your radio by following steps**

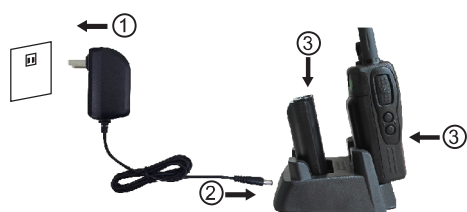
|                                                                                   |   |
|-----------------------------------------------------------------------------------|---|
| The battery pack is not charged at the factory, charge it firstly before use..... | 3 |
| Installing the battery to the radio.....                                          | 3 |
| Installing the antenna.....                                                       | 4 |
| Installing the belt clip.....                                                     | 4 |
| Installing the common interface fender (Dust cover).....                          | 4 |
| Switch the radio power ON.....                                                    | 5 |
| Adjust the volume.....                                                            | 5 |

## PREPARATION FOR OPERATING THE RADIO

### CHARGING THE BATTERY PACK

Please use charger, adaptor and battery pack supplied only by us. The charger can indicate the charging status.

Charging diagram:



#### Charging steps:

1. Plug the AC adaptor into an AC outlet, like arrow ①
2. Plug the AC adapter cable into the adapter jack located on the back of the charger, like arrow ②
3. Place the battery pack or the radio with a battery pack into the charger, like arrow ③
4. The indicator lights red and charging starts.
5. When charging is completed, the indicator lights green. Then remove the battery pack or the radio from the charger.
6. For optimum battery life and performance, charge the battery pack or the radio (with a battery pack) at least 12 hours before initial use.

#### Charging indicators

| LED indicator                | Charger state                 | Description                 |
|------------------------------|-------------------------------|-----------------------------|
| LED Flashes red and then OFF | Electrify but on standby mode | No-load                     |
| LED Lights Red               | Charging                      | Insert battery successfully |
| LED Lights Green             | Fully charged                 | Charging completed          |
| LED Flashes Red              | Failure                       | For maintenances            |

#### Note:

1. It is normal if the charger LED flashes red for a short time when the charger is just connected.
2. If a second battery is replaced to charge, please wait until the current battery is fully charged (lights green). If the charger indicator flashes red during charging:
  - (1) Please check if the battery pack is well connected with the charger.
  - (2) The battery pack is damaged or failed
  - (3) The surrounding temperature is too high or too low.

**Note:** Please read the "Battery Safety Information" before use the charger.

### INSTALLING THE BATTERY PACK

1. Align the battery pack to the battery slot like diagram ①
2. Sliding the battery pack to the battery slot till the battery lock to the right place like diagram ②.

## PREPARATION FOR OPERATING THE RADIO

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To remove the battery, turn off the radio firstly. Then slide the battery latch upwards to unlock the battery, like diagram ③.

### INSTALLING THE ANTENNA

Turn off the radio, holding the base of antenna, and then screw it into the connector on the top of transceiver and turn clockwise until secure.

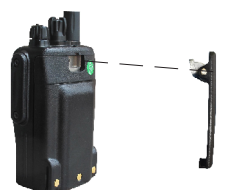


To remove the antenna, turn off the radio firstly, and rotate it anticlockwise.

### INSTALLING THE BELT CLIP

Align the belt clip to the two screw holes on the back of the radio, and then tighten the screws by using special screw

driver.



To remove the belt clip, unscrew the screws.

### INSTALLING THE COMMON INTERFACE FENDER (DUST COVER)

**Insert / pull out the audio accessories / programming cable**

1. Please open the cover of connector in diagram ①;
2. According to the direction of the arrow ② to connect to the connector of radio, then press insert slightly.
3. According to the direction of the arrow ③ to pull it out.
4. Then cover the fender.



**Note:**

After install, if the accessories can't use, please check this accessories is match or not or install is improper.

## PREPARATION FOR OPERATING THE RADIO

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### TURNING THE RADIO ON

Short press the power switch for 3 seconds, you will hear the open tone or voice prompt. Then release the button, the radio has turned on.



#### Note:

1. If the alert or voice prompt function is disabled, the radio will not have open tone. If your radio can't turn on, kindly check the battery. Make sure the battery is charged and install properly. If your radio still can't open up, please contact your local dealer.
2. If you want to turn off the radio, short press the power for 3 seconds, you will hear the close tone. Then release the button, the radio has turned off.

### ADJUSTING THE VOLUME

Rotate clockwise the volume control to increase the volume after power on.



Rotate anticlockwise the volume control to decrease the volume.



## CONTENT ( II )

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### KNOWING MORE ABOUT THE RADIO CONTROLS SETTING

Please review the following sub-directory firstly:

|                                                                               |    |
|-------------------------------------------------------------------------------|----|
| Radio controls.....                                                           | 7  |
| Programmable keys.....                                                        | 8  |
| Radios functions can be preset by programmable keys.....                      | 8  |
| Other settings and utility functions can be pre-set by programmable keys..... | 9  |
| PTT Button.....                                                               | 9  |
| Switching between Analog and digital mode.....                                | 10 |
| LED indicator.....                                                            | 10 |

# RADIO CONTROLS INTRODUCTION

## RADIO CONTROLS



Parts description:

| NO | PART NAME                     | NO | PART NAME          | NO | Part Name           |
|----|-------------------------------|----|--------------------|----|---------------------|
| 1  | Channel selector              | 6  | Side key 2(*)      | 11 | Li-pol Battery pack |
| 2  | Power switch / volume control | 7  | LED indicator      | 12 | Battery latch       |
| 3  | Antenna                       | 8  | MIC / SP connector |    |                     |
| 4  | PTT button                    | 9  | Speaker            |    |                     |
| 5  | Side key 1(*)                 | 10 | MIC                |    |                     |

**Note:** Buttons like [\*] are programmable key.

## RADIO CONTROLS INTRODUCTION

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### PROGRAMMABLE KEYS

You dealers can pre-set the programmable keys based on the length of a button press.

Pre-setting can be shortcuts of radio functions.

- ◆ Short press — Pressing and Releasing quickly (programmable range is from 50ms-750ms)
- ◆ Long press — Pressing and holding for programmed length (programmable range is from 500ms-5000ms)

**Note:** The programmable duration for a key press can be used for all radio functions / utility functions or setting, except Emergency Call feature. For detailed function operation, please refer to page 25.

### Radios functions can be preset by programmable keys

- ▲ High/Low Power Selection — Switch power level between High and Low power.
- ▲ Voice Operating Transmission (VOX) ON / OFF — Switch between VOX feature ON and OFF
- ▲ Zone selection — Change the current working zone (allowed to select from a zone list)
- ▲ Scan on/off — Turn ON / OFF scanning feature
- ▲ Scanning Mode — Switch scanning mode in TO, CO, SE.
- ▲ Repeater / Talk around  — Switch between Repeater mode and Talk Around.
- ▲ Emergency mode ON / OFF  — Start or stop an emergency

alarm or call

- ▲ Encryption ON / OFF  — Turn ON / OFF encryption feature (Available only in Digital Working Mode)
- ▲ Radio activation  — It is allowed to enabled a target radio remotely. (Available only in Digital Working Mode)
- ▲ Radio Detection  — Detect and confirm if the radio is within the scope of the system activity without sending any indication or making visual inspection. (Available only in Digital Working Mode)
- ▲ Radio kill  — Disable a target radio remotely, which can protect stolen or missed radios being used by others. (Available only in Digital Working Mode)
- ▲ Remote monitor  — Remotely activate Mic and Transmitter of a target radio, and create a call silently without sending any indication or visual inspection message to target radio, etc. (Available only in Digital Working Mode)
- ▲ Analog Monitor  — Turn ON or OFF radio squelch to receive weak analog signal. (Available only in Analogue Working Mode)
- ▲ Permanent Monitor  — Same as Analog Monitor feature, monitoring the channel to make sure it is not occupied before transmitting. The only difference is once Permanent Monitor is on, the radio will always be in this Monitor mode, till you exit it.

## RADIO CONTROLS INTRODUCTION

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▲ **Information Check** — Switch to check current channel and battery strength status information

▲ **Digital / Analog Mode** — Switch between Digital Mode and Analog Mode.

▲ **SQ Level** — Select the proper SQ level to get the best signal in different environments.

▲ **P1** — Call Shortcut, press it to send corresponding call function. ( Available only in radios without LCD display )

▲ **P2** — Call Shortcut, press it to send corresponding call function. ( Available only in radios without LCD display )

▲ **P3** — Call Shortcut, press it to send corresponding call function. ( Available only in radios without LCD display )

▲ **Flashlight** — Turn ON / OFF flashlight.

**Other settings and utility functions can be pre-set by programmable keys**

1. Flashlight ON / OFF — turn flashlight ON or OFF

2. Preset keys P1, P2 & P3 — Press call shortcuts to send corresponding calls

3. **Information Check** — Switch to check current channel and battery strength status information

4. **SQ Level** — Select the proper SQ level to get the best signal in different environments.

5. High / Low power selection — Switch transmit power level between high and low.

### PTT BUTTON

There are two basic functions of PTT button: Transmitting and Receiving.



- ◆ Press PTT button to transmit the signals to other radios
- ◆ Release PTT button to receive signals from other radios
- ◆ If the Individual / Group Call or Prompt Tones is activated, the PTT Sidetone will be heard when you press or release PTT button.

◆ If the Individual / Group Call or Prompt Tone is activated, you will hear the PTT Sidetone when your radio is receiving or communication is finished.

**Note:** You can use programming software to turn off all radio alert tones and prompt tones or just disabled partial radio alert tones and prompt tone.

## RADIO CONTROLS INTRODUCTION

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### SWITCHING BETWEEN DIGITAL AND ANALOG MODE

For your convenience, each channel can be programmed as either analog channel or digital channel.



◆ In standby mode, press [ Digital / Analog ] button for at least 3 seconds, the current channel will be switched between Analog and Digital mode.

**Note:** During scanning, the radio also can switch between Analog and Digital mode, but scanning mode will be disabled.

### LED INDICATORS

LED indicators display the working status and modes of radios.



- ◆ When LED indicator lights up solid green, the radio is transmitting in analog mode.
- ◆ When green LED indicator flashes, the radio is receiving in analog mode.
- ◆ When LED indicator lights up solid blue, the radio is transmitting in digital mode.
- ◆ When blue LED indicator flashes, the radio is receiving in digital mode.

**Note:**

- ◆ In analog mode, if LED lights up or flashes green, it indicates there is active signal detected over the air;
- ◆ And then if Busy Channel Lock (BCL) function is turned on, the radio will refuse to transmit signal when you press the PTT key.

## CONTENT ( III )

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### INITIATING AND RECEIVING CALLS

After you understand how your radio is configured, you are able to use it more deftly.

Use this directory to familiar with the basic call feature:

|                                                |    |
|------------------------------------------------|----|
| Choose a Zone.....                             | 12 |
| Choose a Channel, User ID, Group ID.....       | 12 |
| Receive and Answer a Call.....                 | 12 |
| Receive and Answer a Group Call.....           | 13 |
| Receive and answer a Private Call.....         | 13 |
| Receive a General Call.....                    | 13 |
| Initiate a Radio Call.....                     | 14 |
| Use the Encoder Switch to Initiate a Call..... | 14 |
| Initiate a Group Call.....                     | 14 |
| Initiate a Private Call.....                   | 15 |
| Initiate a General Call.....                   | 15 |
| Making a Group or Private Call.....            | 16 |
| Talk Around.....                               | 16 |
| Monitor.....                                   | 17 |
| Monitor Channel.....                           | 17 |
| Permanent monitor .....                        | 17 |