



*Remote Video Microphone*  
**USER'S MANUAL**

# Preface

Welcome to the world of Hytera and thank you for purchasing this product. To derive optimum performance from the product, please carefully read this manual before use.

This manual is applicable to the following products:

VM68X Remote Video Microphone

# Icon Conventions

The following icons are available through this manual:

 **Caution** :indicates situations that could cause damage to your product or bodily injury.

 **Note** :indicates tips that can help you make better use of your product.

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# 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:

- 2014/53/EU
- 2006/66/EC
- 2011/65/EU
- 2012/19/EU

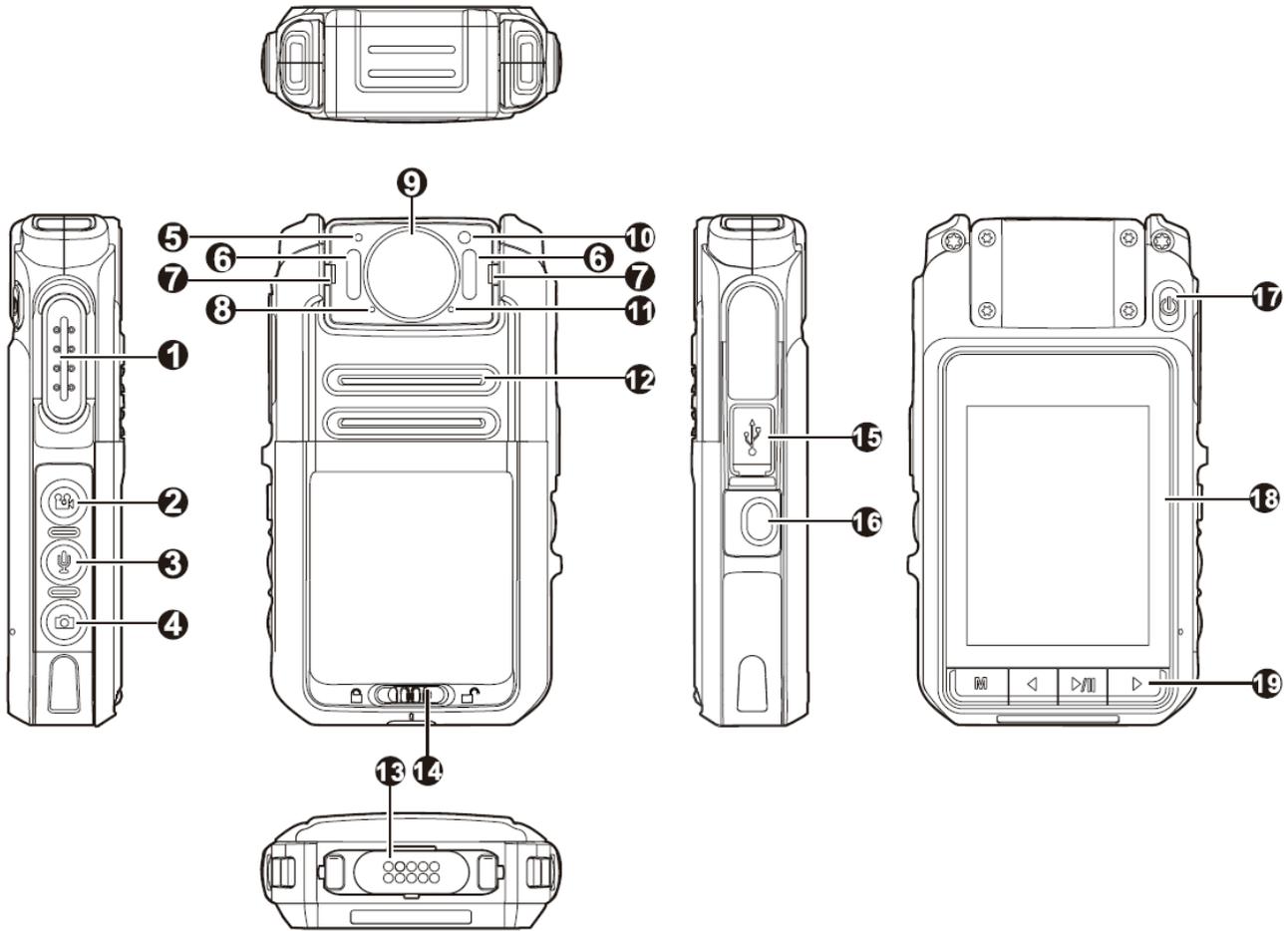
Please note that the above information is applicable to EU countries only.

# 1. Packing List

No.	Item	Qty.
1	Remote Video Microphone (RVM)	1
2	Battery	1
3	Belt Clip	1
4	USB Cable	1
5	Power Adapter	1
6	Documentation Kit	1

## 2. Product Introduction

### 2.1 Product Layout



No.	Part Name	No.	Part Name
1	PTT (Push-to-Talk) Key	11	Microphone 1
2	Video Recording Key	12	Speaker
3	Audio Recording Key	13	Accessory Interface (10-pin)
4	Photo Taking Key	14	Battery Latch
5	Light Sensor	15	USB Connector
6	Infrared (IR) LED	16	Emergency Key
7	LED Indicator	17	On/Off Key
8	Microphone 2	18	LCD Display
9	Lens	19	Keys (Menu/Back Key, Left Key, Play/Pause/Confirm Key, Right Key)
10	Light Compensator	/	/

## 2.2 LCD Icons

LCD Icon	Description
	WLAN is enabled.
	WLAN hotspot is enabled.
	BT Feature is enabled.
	The wireless connection is established.
	The remaining capacity of the TF card is less than 2 GB.
	The TF card is full.
	Earpiece is connected.
	 : The product is being charged when the battery is low.  : The product is fully charged
	 : Low battery.  : Full battery.

## 2.3 LED Indicators

LED Indication	Description
Glows red	<ul style="list-style-type: none"> <li>● The product is transmitting.</li> <li>● The product is being charged.</li> <li>● The TF card is full.</li> <li>● The product is being turned off.</li> </ul>
Glows green	<ul style="list-style-type: none"> <li>● The product is receiving.</li> <li>● The product is fully charged.</li> <li>● The product is being turned on.</li> </ul>
Glows orange	Call idle. You can press and hold the <b>PTT</b> key to speak.
Flashes orange rapidly	Idle status in Emergency Alarm mode.
Flashes red once every five seconds	The battery runs low. Please recharge or replace the battery in time.
Flashes red slowly	Video recording.

Flashes orange slowly	<ul style="list-style-type: none"> <li>● Audio recording.</li> <li>● The remaining card is less than 2 GB.</li> </ul>
The LED indicator flashes red and blue in turn.	BT pairing.

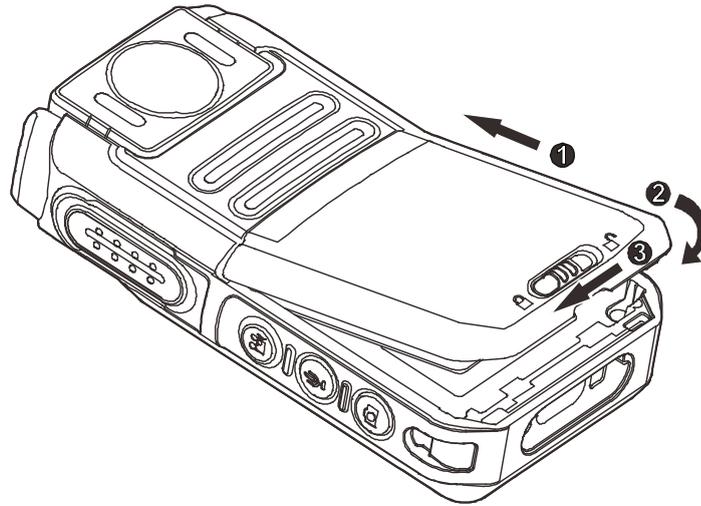
## 2.4 Specifications

RVM	
Dimensions (H x W x D)	24 mm x 60 mm x 106.5 mm
Weight (with standard battery)	< 170 g
Image Sensor	16-megapixel
Camera	Fixed angle, glass, 180° rotatable, diagonal 140°, horizontal 106°, vertical 78°
Focus Range	0.1 m to infinity
Battery Life (continuous video shooting)	≥ 8 hours
Battery Capacity	2,500 mAh
Display Size	2.4-inch
Display Resolution	240 (RGB) x 320
Screen Type	TFT-LCD 262K color display
Internal Memory	<ul style="list-style-type: none"> <li>● Standard: 16 GB</li> <li>● Optional: 32 GB/64 GB/128 GB</li> </ul>
Video Format	MP4
Video Encoding Format	H.264
Video Resolution	480P (30FPS), 720P (30FPS/60FPS), 1080P (30FPS/60FPS)
Audio Encoding Format	AAC (Advanced Audio Coding)
Photo Format	JPG

Photo Resolution	4608 x 3456 (16-megapixel), 3072 x 1728 (5-megapixel), 2304 x 1296 (3-megapixel)
Pre-recording Time	10s/20s
Post-recording Time	10s/20s/30s
Speaker Power	2 W
Microphone	<ul style="list-style-type: none"> <li>● Silicon microphone x 1, -38 dB</li> <li>● Electret microphone x 1, -42 dB</li> </ul>
Wi-Fi	802.11b/g/n (AP mode and STA mode supported)
BT	BT4.0
Connector	Micro USB, 10-pin contact port
Infrared (IR) LED	OSRAM RED x 6
Night Vision Range (without lighting)	≥ 3 m
Light Compensator	1 W
Ruggedness	MIL-STD-810G, IP67
Drop Resistance	1.5 m
ESD	<ul style="list-style-type: none"> <li>● ±6 kV (contact discharge)</li> <li>● ±12 kV (air discharge)</li> </ul>
Operating Temperature	-20°C to +60°C
Storage Temperature	-40°C to +85°C
System Compatibility	Windows XP/Window 7/Windows 8/Windows 10
<b>Power Adapter</b>	
Input	110 V – 240 V AC, 50 Hz – 60 Hz
Output	5 V DC, 1 A

## 3. Before Use

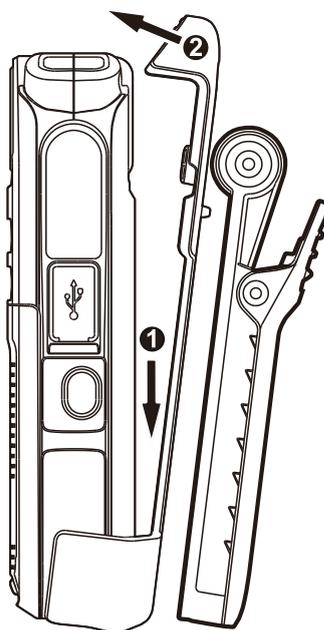
### 3.1 Attaching the Battery



#### Note

Use only the Hytera standard or optional battery. Polarity reverse and use of other batteries may result in explosion and fire hazards.

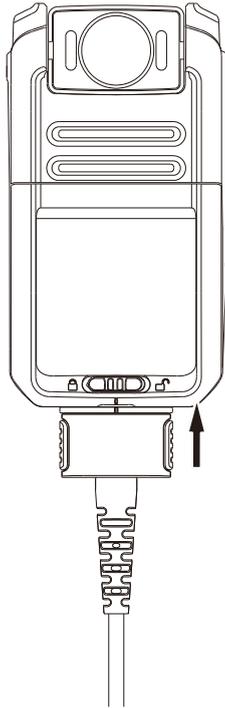
### 3.2 Attaching the Belt Clip



#### Note

To remove the belt clip, go through the above steps reversely.

### 3.3 (Optional) Connecting the Accessory Cable

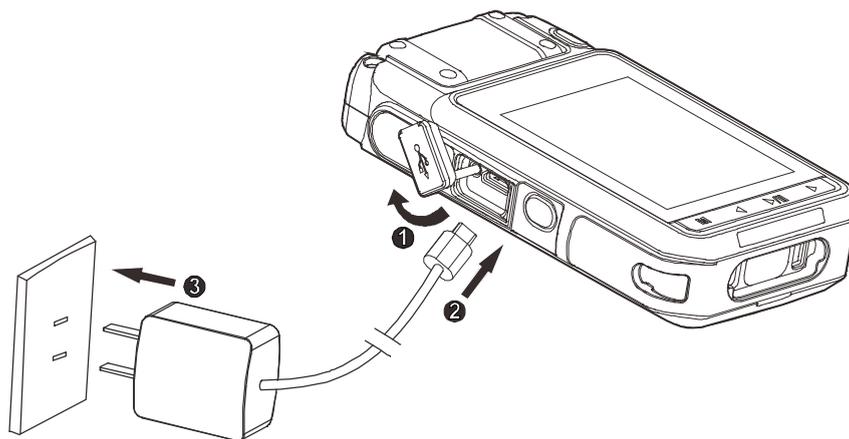


#### Note

- Skip this section if you do not purchase the accessory cable.
- To disconnect the cable, press both sides of the cable connector and remove the connector with proper force.

### 3.4 Charging the Product

To charge the product, do as follows:



#### Note

The LED indicator tells you the charging status of the product. See 2.3 LED Indicator for details.

## 4. Basic Operations

### 4.1 Turning on the Product

To turn on the product, press and hold the **On/Off** key for 3s to enter the Live View mode.

### 4.2 Turning off the Product

To turn off the product, press and hold the **On/Off** key again for 3s.

### 4.3 Setting the Product

You can set the BT, WLAN, WLAN hotspot, language, screen, volume, silent mode, night vision and other features.

To enter the basic settings screen, press and hold the **Menu/Back** key in the Live View mode.

#### 4.3.1 BT

You can enable or disable BT and Device Match features, or view the Device Name and MAC Address.

1. Press the **Left** key or the **Right** key to select **BT**, and then press the **Play/Pause/Confirm** key.
2. To enable or disable the BT feature, do as follows:
  - a. Press the **Play/Pause/Confirm** key to enter BT On/Off screen.
  - b. Press the **Left** key or the **Right** key to select **ON** or **OFF**, and then press the **Play/Pause/Confirm** key.
3. To enable or disable the Device Match, do as follows:
  - a. Press the **Left** key or the **Right** key to select **Device Match**, and then press the **Play/Pause/Confirm** key.
  - b. Press the **Left** key or the **Right** key to select **ON** or **OFF**, and then press the **Play/Pause/Confirm** key.
4. To view the Device Name, press the **Left** key or the **Right** key to select **Device Name**, and then press the **Play/Pause/Confirm** key.
5. To view the MAC address, press the **Left** key or the **Right** key to select **MAC address**, and then press the **Play/Pause/Confirm** key.

#### 4.3.2 WLAN

You can enable or disable WLAN, view the network list, select the device to be connected, and view the IP address.

1. Press the **Left** key or the **Right** key to select **WLAN**, and then press the **Play/Pause/Confirm** key.

2. Press the **Play/Pause/Confirm** key to enter the **WLAN** screen.
3. Press the **Left** key or the **Right** key to select **ON** or **OFF**, and then press the **Play/Pause/Confirm** key.
4. To view the network list, press the **Left** key or the **Right** key to select **Network List**, and then press the **Play/Pause/Confirm** key.
5. (Optional) Press the **Left** key or the **Right** key to select the device to be connected, and then press the **Play/Pause/Confirm** key.
6. (Optional) To view the IP address, press the **Left** key or the **Right** key to select **IP address**, and then press the **Play/Pause/Confirm** key.

### 4.3.3 WLAN Hotspot

You can enable or disable hotspot, view hotspot name, hotspot password, MAC address, and IP address.

1. Press the **Left** key or the **Right** key to select **WLAN Hotspot**, and then press the **Play/Pause/Confirm** key.
2. Press the **Play/Pause/Confirm** key to enter the **Hotspot On/Off** screen.
3. Press the **Left** key or the **Right** key to select **ON** or **OFF**, and then press the **Play/Pause/Confirm** key.
4. To view the Hotspot name, press the **Left** key or the **Right** key to select **Name**, and then press the **Play/Pause/Confirm** key.
5. (Optional) To view the Hotspot password, press the **Left** key or the **Right** key to select **Password**, and then press the **Play/Pause/Confirm** key.
6. (Optional) To view the MAC address, press the **Left** key or the **Right** key to select **MAC Address**, and then press the **Play/Pause/Confirm** key.
7. (Optional) To view the IP address, press the **Left** key or the **Right** key to select **IP Address**, and then press the **Play/Pause/Confirm** key.

### 4.3.4 Language

You can set the language displayed on the interface.

1. Press the **Left** key or the **Right** key to select **Language**, and then press the **Play/Pause/Confirm** key.
2. Press the **Left** key or the **Right** key to select the desired language, and then press the **Play/Pause/Confirm** key.

### 4.3.5 Screen

#### 1. Brightness

To adjust the brightness, do as follows:

1. Press the **Left** key or the **Right** key to select **Screen**, and then press the **Play/Pause/Confirm** key.
2. Press the **Left** key or the **Right** key to select **Brightness**, and then press the **Play/Pause/Confirm** key.
3. Press the **Left** key or the **Right** key to select the brightness value, and then press **Play/Pause/Confirm** key.

## **2. Screen Off**

To set the time for the screen saver, do as follows:

1. Press the **Left** key or the **Right** key to select **Screen**, and then press the **Play/Pause/Confirm** key.
2. Press the **Left** key or the **Right** key to select **Screen Off**, and then press the **Play/Pause/Confirm** key.
3. Press the **Left** key or the **Right** key to select **10s, 20s, 30s** or **OFF**, and then press the **Play/Pause/Confirm** key.

## **3. Auto-Brightness**

This feature allows the product to adjust the brightness automatically to fit lightning situation for better image and video view. To enable or disable the feature, do as follows:

1. Press the **Left** key or the **Right** key to select **Screen**, and then press the **Play/Pause/Confirm** key.
2. Press the **Left** key or the **Right** key to select **Auto-Brightness**, and then press the **Play/Pause/Confirm** key.
3. Press the **Left** key or the **Right** key to select **ON** or **OFF**, and then press the **Play/Pause/Confirm** key.

## **4. Sleep Mode**

This feature allows the product to enter sleep mode for saving battery power, if no operation is made within predefined time. To set the sleep mode, do as follows:

1. Press the **Left** key or the **Right** key to select **Screen**, and then press the **Play/Pause/Confirm** key.
2. Press the **Left** key or the **Right** key to select **Sleep Mode**, and then press the **Play/Pause/Confirm** key.
3. Press the **Left** key or the **Right** key to select **5 min, 10 min, 20 min** or **OFF**, and then press the **Play/Pause/Confirm** key.

### **4.3.6 Volume**

You can adjust the volume for the key tone, alert tone, video playback and audio playback.

To adjust the volume, do as follows:

1. Press the **Left** key or the **Right** key to select **Volume**, and then press the **Play/Pause/Confirm** key.
2. Press the **Left** key or the **Right** key to select **High, Medium, Low** or **Silent**, and then press the **Play/Pause/Confirm** key.

### 4.3.7 Silent Mode

With this feature enabled, the product gives no alert tones, the indicator will not light up, and the display brightness is at the lowest level.

To enable or disable the Silent Mode, do one of the following:

- Press the **Left** key or the **Right** key to select **Silent Mode**, and then press the **Play/Pause/Confirm** key. Press the **Left** key or the **Right** key to select **ON** or **OFF**, and then press the **Play/Pause/Confirm** key.
- Press and hold both the **On/Off** key and the **Menu/Back** key simultaneously.

### 4.3.8 Night Vision

With this feature enabled, the IR LED will light up when the product is recording video in the dark.

To enable or disable this feature, do as follows:

1. Press the **Left** key or the **Right** key to select **Night Vision**, and then press the **Play/Pause/Confirm** Key.
2. Press the **Left** key or the **Right** key to select **ON** or **OFF**, and then press the **Play/Pause/Confirm** key.

### 4.3.9 About

You can view the Model Name, Device ID, SN, Processor, and other information.

To view related information, do as follows:

1. Press the **Left** key or the **Right** key to select **About**, and then press the **Play/Pause/Confirm** key.
2. Press the **Left** key or the **Right** key to view the details.

## 4.4 Waking Up the Product from the Sleep Mode

To wake up the product from the sleep mode, press the **On/Off** key.

## 4.5 Turning the Screen On or Off

To turn the screen on, press any key except **PTT**. To turn the screen off, press the **On/Off** key.

# 5. Advanced Features

## 5.1 Recording Videos or Audios and Taking Photos by One Key

To record videos or audios or take photos, do as follows:

- In power-off mode: press and hold the **Video Recording key/Audio Recording key/Photo Taking key**.
- In sleep mode: press the **Video Recording key/Audio Recording key/Photo Taking key**.

To stop recording video or audio, press the **Video Recording key/Audio Recording key** again.

## 5.2 Recording Videos

To record videos in the Live View mode, press the **Video Recording key**. To stop recording, press the **Video Recording key** again.

## 5.3 Pre-recording or Post-recording Videos

### 1. Pre-recording

This feature allows you to record the video for a predefined time period before pressing the **Video Recording key** to start recording.

To enter pre-recording mode, press and hold the **Video Recording key** in the Live View mode. Press it again to exit.

### 2. Post-recording

This feature allows you to record the video for a predefined time period after pressing the **Video Recording key** to finish recording.

To enter post-recording mode, do as follows:

1. Press the **Video Recording key** to start recording normal video, or press the **Emergency key** or **Menu/Back key** to start recording important videos.
2. Press the **Video Recording key** again to stop recording. The product will enter post-recording mode automatically.

To exit post-recording mode, do one of the followings:

- For normal video recording: press the **Video Recording key**.

The product starts normal video recording again. To stop recording, press the **Video Recording key**.

- For important video recording: press the **Emergency** key.

The product starts important video recording again. To stop recording, press the **Video Recording** key.

#### Note

The pre-recording and post-recording features can be programmed by your dealer.

## 5.4 Recording Audios

To record audios in the Live View mode, press the **Audio Recording** key. To stop recording, press the **Audio Recording** key again.

## 5.5 Taking Photos

To take photos in the Live View mode, press the **Photo Taking** key.

## 5.6 Marking Videos or Audios

- In Video or Audio mode, press the **Menu/Back** key to mark the recording as important. After the operation, the red icon ★ appears on the top left corner of the screen.
- To directly mark the video recordings after power-on, press the **Emergency** key to start important recording. To stop recording, press and hold the **Emergency** key or press the **Video Recording** key.

## 5.7 Taking Photos in Video Mode

To take photos during video recording, press the **Photo Taking** key.

## 5.8 Playing Back Audio or Video Recordings

The video playback is similar to the audio playback. The following example shows how to play back the video. .

To play back videos, do as follows:

1. In the Live View mode, press the **Menu/Back** key.
2. Press the **Left** key or the **Right** key to select **Video**.
3. Press the **Play/Pause/Confirm** key.
4. Press the **Left** key or the **Right** key to select the video.
5. Press the **Play/Pause/Confirm** key to play back the video.

You can do the following during playing:

- Pause: Press the **Play/Pause/Confirm** key.
- Fast-forward: Press the **Right** key to select a speed.
- Fast-backward: Press the **Left** key to select a speed.
- Play the previous video: Press the **Left** key when the video is paused.
- Play the next video: Press the **Right** key when the video is paused.

## 5.9 Viewing Photos

To view photos, do as follows:

1. In the Live View mode, press the **Menu/Back** key.
2. Press the **Left** key or the **Right** key to select **Photo**.
3. Press the **Play/Pause/Confirm** key.
4. Press the **Left** key or the **Right** key to select the photo.
5. Press the **Play/Pause/Confirm** key to view the photo.

## 5.10 Turning the Flashlight On or Off

To turn the flashlight on, press and hold the **Audio Recording** key when the product is powered on. To turn the flashlight off, press and hold **Audio Recording** key again.

## 5.11 IR Controlling by Light Sensor

With the Night Vision feature enabled, when the light sensor detects that the environment light dims in video recording, the IR LED will be turned on. When the environment light brightens, the IR LED will be turned off.

## 5.12 Adjusting the Volume

### Note

This feature is available only when the product is wirelessly connected to the multi-mode advanced radio.

- To adjust the volume during a call, press the **Left** key to decrease the volume, and press the **Right** key to increase it.
- To adjust the volume of alert tone in standby mode, press the **Left** key to decrease the volume, press the **Right** key to increase it.
- To adjust the volume during video or audio playback, press the **Left** key to decrease the volume, press the **Right** key to increase it.

## 5.13 Selecting the Channel/Contact

### Note

This feature is available only when the product is wirelessly connected to the multi-mode advanced radio.

1. Press the **Play/Pause/Confirm** key in the Live View mode.
2. Press the **Left** key or the **Right** key to select the channel/contact.

## 5.14 Selecting the Zone/Group (folder)

### Note

This feature is available only when the product is wirelessly connected to the multi-mode advanced radio.

1. Press the **Play/Pause/Confirm** key in the Live View mode.
2. Press the **Left** key or the **Right** key to select the zone/group (folder).

## 5.15 Transmitting the Voice

When the product is connected to the portable radio by cable or BT, it works as the remote speaker microphone. You can press and hold the **PTT** key to speak into the microphone, or release the key after finishing talking.

### Note

If the product is connected to the portable radio by cable and BT simultaneously, the voice will be transmitted by cable.

## 5.16 Making an Emergency Alarm

When the product is wirelessly connected to the multi-mode advanced radio, you can press the **Emergency Alarm** key to make an emergency alarm in case of emergencies. At this time, the product starts recording the video simultaneously. To end the emergency alarm, press the **Emergency Alarm** key again.

### Note

The emergency alarm has the highest priority. You can make an emergency alarm no matter whether the multi-mode advanced radio is transmitting or receiving. The duration of the **Emergency Alarm** key press can be set by your dealer.

## 6. Troubleshooting

Phenomena	Analysis	Solution
The product cannot be turned on.	The battery may be improperly installed.	Remove the battery and attach it again.
	The battery may run out.	Recharge or replace the battery.
	The radio battery and the charging probes are in poor contact due to dirtied or damaged battery contacts.	Clean the battery contacts.
Wireless connection cannot be established.	The product is out of the communication coverage of the wirelessly connected radio.	Make sure that the product and the radio are within the communication coverage of each other.
You hear noise during calls.		
The LED indicator does not glow red when you press and hold the PTT key.		
The volume is low when the product is used with portable radio.	The microphone 2 and speaker are blocked or damaged.	Clean the microphone 2 and speaker.
The volume during video or audio playback is low.	The microphone 1 is blocked or damaged.	Clean the microphone 1.
The product cannot record video or audio.	The TF card is full.	Delete all data from the TF card after exporting the data.
The product cannot take photos.	The TF card is full.	Delete all data from the TF card after exporting the data.
	The total number of photos reaches the maximum (300).	Delete all the photos after exporting them.
The product cannot pre-record or post-record the video.	The pre-recording or post-recording feature is not enabled.	Enable the features via CPS.
The IR LED has not been turned on automatically when the product is recording videos in the dark.	The Night Vision feature is not enabled.	Enable the Night Vision feature.
The product gives no alert; the indicator does not light up; the display lightness is at the lowest value.	The Silent Mode is enabled.	Disable the Silent Mode.
The product gives no response to operations.	The system has crashed.	Press the <b>Audio Recording</b> key, the <b>Left</b> key and the <b>Right Key</b> simultaneously to power off the product, and then power on it again.

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

# 7. Care and Cleaning

To guarantee optimum 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 away from substances that can corrode the circuitry.
- Do not hold the product by connection cable.
- Attach the USB port cover when the USB port is not in use.

## Product Cleaning

### Caution

- Turn off the product before cleaning.
- Make sure the product is completely dry before use.
- Clean up the dust and fine particles on the product's surface with a clean and dry lint-free cloth or a brush regularly.
- Use a non-woven cloth with neutral cleanser to clean the device after long-time use. Do not use chemical preparations such as stain removers, alcohol, sprays or oil preparations, so as to avoid potential damage on the surface.
- Make sure the product is completely dry before use.

## 8. Optional Accessories

### Caution

Use the accessories specified by the Company only; otherwise, we shall not be liable for any losses or damages arising out of the use of any unauthorized accessories.

Contact your local dealer for the optional accessories of the product.



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