

## **To Costumers**



Thank you very much for your favor of our products! This manual aims to enable you quickly grasp the use of the product.

This manual applies to the following model:

E-pack100 Digital WANET Repeater

## Icon Conventions

The following icons are used in this manual. The explanation of icons are as follows:

Icon	Description
 Caution	Indicates situations that could cause data loss or equipment damage.
 Comment	Indicates notes that serves as supplement, illustration or emphasis to the main content.

## Copyright Information

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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>, or call our service hotline 400-830-7020.

### **Federal Communications Commission (FCC) Regulatory Requirements**

According to the Federal Communications Commission regulatory requirements, the terminals must comply with the FCC's rules on radiofrequency radiation, otherwise the products shall not be sold in the

U.S market. Besides, the manufacture shall be asked to post a label on products informing costumers of considerations and improving the costumers' awareness of radiation protection.

### **Radiofrequency Radiation Control and Operation Instructions**

In order to ensure the best performance of products and ensure that the radiation restrictions related to occupations or environments are met, the delivery time shall not exceed 50% of the rated factor.

### **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.

### **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 responsible for compliance could void the user's authority to operate the equipment.

### **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:

- DMR Antenna gain must not exceed 3.5dBi.

- The antenna must be installed complying with the requirements of manufacturer or supplier, and it must be at least 42 cm away from human body.

### **Compliance with RF Exposure Standards**

Hytera's 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 2.1091
  - 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

### **ISED Statement**

This device complies with Innovation, Science and Economic Development Canada Compliance 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

**ISED Radiation Exposure Statement:**

This device must be restricted to work related operations in an Occupational/Controlled RF exposure Environment.

This equipment should be installed and operated with minimum distance 42cm between the radiator & your body.

ISED exposition aux radiations:

Ce dispositif doit être limité aux opérations liées au travail dans un environnement d'exposition RF professionnel/contrôlé.

Cet équipement doit être installé et utilisé avec un minimum de 42cm de distance entre le radiateur et votre corps.

## **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:

2014/53/EU

2006/66/EC

2011/65/EU

2012/19/EU

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

The maximum antenna gain is 3.5dBi, which is calculated in the EIRP. The distance from observation point to the antenna is 120cm.



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## 1. Packing List

The packing case contains the following items. If there is any loss or damage, please contact the dealer or our company.

Items	Number	Items	Number
Host 1		Palm Mircophone	1
Antenna 1		Mannual	1
Battery 1			

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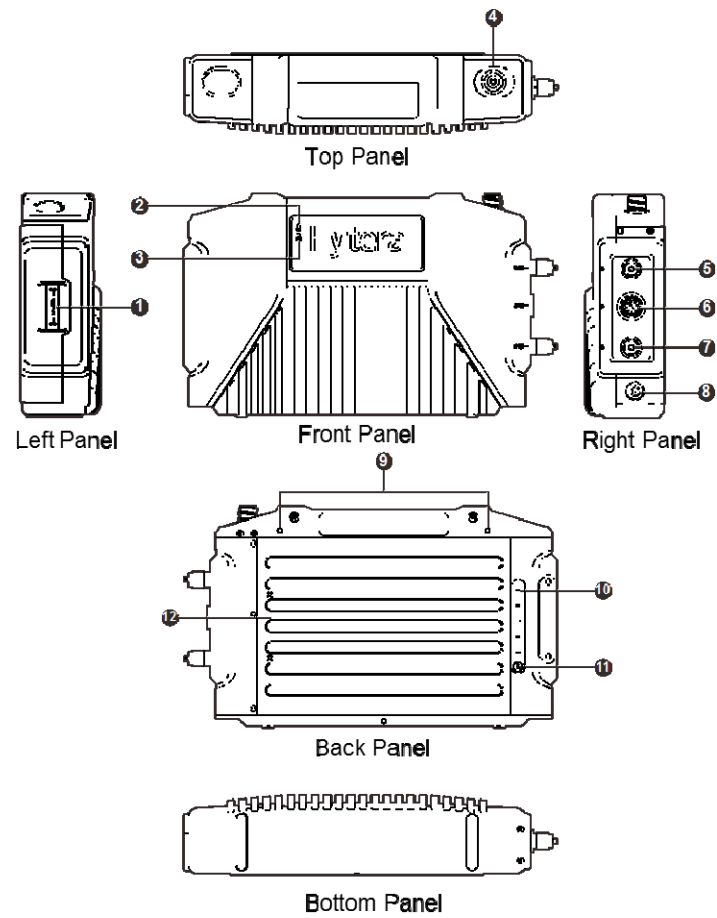
### Comment

The pictures in this manual are for reference only. Please refer to the actual products.

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## 2. Product Component

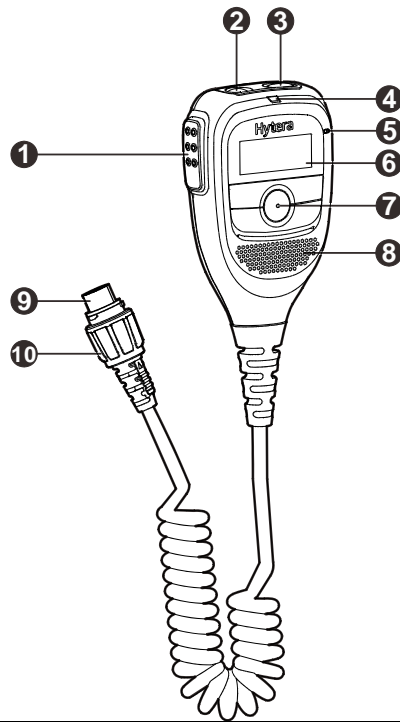
### 2.1 Host



Num.	Item	Description
1	Battery Buckle	Toggle buckle in the direction of the arrow of battery buckle and pull out or insert the battery.
2	Operation Indicator	Operation status indication and the operation indicator turns to flickering (the frequency is 1s) and green if the host is operating properly.

Num.	Item	Description
3	RF Antenna Interface	Used to connect RF antenna for signal transmission and reception. The interface type is the UHF interface.
4	Data Interface	Used for the host debugging and interconnection with center through IP network.
5	Palm Microphone Interface	Connect palm microphone.
6	Power Button	Used to control power on and off. Long press the button for 1s to power on, and long press the button for 3s to power off.
7	Backpack Hole	Used for device installation in the backpack.
8	Electric Quantity Button	Touch the battery level button, and the present power level can be checked through power indicator.
9	Indicator	
10	Battery	Supply power for the host.

## 2.2 Palm Microphone



Num.	Item	Description
1	PTT Button	Press the button to send a voice message.
2	Alarm Button	Press the button to initiate an emergency alarm.
3	Power Button	Press the button to power on and off.
4	Indicator	Operation status indication of palm microphone.
5	MIC	Voice can be transmitted through MIC.
6	Display Area	Display status icons, calling information, etc.

<b>Num.</b>	<b>Item</b>	<b>Description</b>
7	Keyboard	Function keys.
8	Speaker	The sound can be played through the speaker.
9	Aviation Plug	Connect with the host.
10	Aviation Knob	Fix the aviation.

### 3. Installation

#### 3.1 Installation Requirements

##### Installation Position

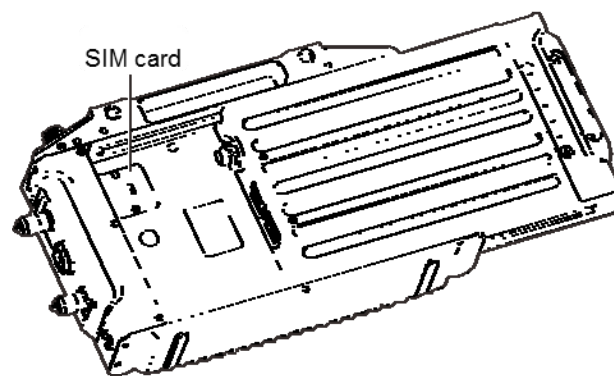
The host can be installed inside the backpack, and on the operation platform as well.

#### 3.2 Host Installation

The installation steps are as follows:

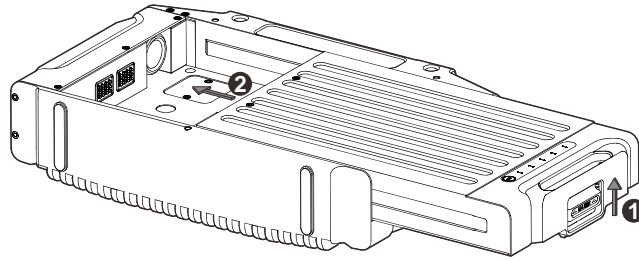
##### 1. ( Optional ) SIM card Installation

If voice business through GSM link is in need, a SIM card can be installed in the position as the figure below.



##### 2. Battery installation in the back of the host

Aim the charging port to the main body, and then toggle the buckle in the direction of battery buckle arrow. Next, don't stop pushing the battery until it can't be pushed any further, and then loosen the battery buckle, as shown in the figure below.



3. Install the host as needed, such in a backpack or on a platform.

When the host is installed in a backpack, the backpack hole should be fixed with the backpack using a screw.



4. The threaded end of sucker antenna should be inserted in the RF interface at the top of the host, and then screw it in clockwise direction.

 Note:

Please don't power up the device when one carries it. When the device is operating, the distance between a man and the antenna should be at least 2 meters. Our company



shall not take any responsibility if there were any consequence caused by operations now following the above rules.

### **3.3 Check after Installation**

After the whole installation process, the host can be powered on. The proper functioning of the host can be checked by watching the status of the LED light on the front panel. The power indicator will be constantly red, and the operation indicator will be green and flickering if the host functions properly. Besides, the operation status of the host can be checked through palm microphone.

## 4. Basic Operation

### 4.1 Power on

Long press *Power Button* for 1s, and then the power indicator will be constantly green.

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#### Comment

The palm microphone can power on the host if the two are connected.

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### 4.2 Power off

Long press *Power Button* for 3s, and then the power indicator will extinguish.

### 4.3 GSM Link Building

Voice business through GSM link can be realized by using an external palm microphone connecting with the host.


1. Connect the external palm microphone to the host.
2. Enter the GSM contact list, and then select the default GSM contact.
3. Press and hold *PTT* button, and then the GSM link can be built.

### 4.4 Switch Channel

When the external palm microphone is connected to the host, the 10 default alternative channels can be switched to be the present channel through menu in the palm microphone.

### 4.5 Host Information Query

When the external palm microphone connects to the host, the frequency, signal strength, battery level and other information of the host can be checked through the display screen of the palm microphone, as shown in the table below.

Operation	Operation Method
Wireless Link Signal Strength Check	Enter the main interface of palm microp hone, as shown in the figure below.
GSM Signal Strength Check	<p>Signal Strength    GSM Status    Battery Level</p> <p>GSM Signal Strength    Output Power Level</p> 
GSM Link Status Check	
Power Level Check	
Battery Level Check	<p><b>Tx</b> No Signal of Wireless Link    <b>C</b> GSM Dropped</p> <p><b>▬</b> The more stripes, the stronger signal level.    <b>Cx</b> GSM Put Through</p> <p><b>Gx</b> No signal of GSM    <b>H</b> High Power</p> <p><b>▬</b> The more stripes, the stronger signal level.    <b>L</b> Low Power</p> <p><b>▬</b> The more stripes, the higher battery level.    <b>M</b> Medium Power</p>

## 5. Fault Handling

Description	Cause Analysis	Solution
Power-On Failure	The battery is not properly installed or in bad contact.	Check whether the battery is correctly and firmly installed is correct and firm
	Low battery.	Touch the battery display button to check the current battery level. In case the battery runs out of power, please charge the battery first or connect the external power for power supply, then try to power on.
Communication failure between E-pack100	The sending and receiving frequency are not consistent between E-pack100.	Check whether the frequency is consistent, and please contact dealer to reset the device if necessary.
	The work frequency point is disturbed by strong signal and unable to transmit useful signal.	Find the interference source, and if unable to shut down or stay away from it, please apply for

Description	Cause Analysis	Solution
		another channel frequency.
	Other E-pack100 have left the communication coverage of this E-pack100.	Confirm and return to the communication coverage.
	E-pack100 antenna is in abnormal connection	Check whether the antenna is normally connected.
Short communication distance, and unclear voice	The connection cable is damaged and the signal energy leaks.	Check the damage and replace with new cable if necessary.
	Cable joint connected to the antenna port is loose or detached cable.	Check and tighten the joint. Replace it with new joint if necessary.
	Transmit power is too low	Adjust the transmit power to high power.
	Cable is internal damaged.	Please replace it with a new cable
	Find the interference source, and if unable to shut down or stay away from it, please apply for another channel frequency.	Find the interference source, and if unable to shut down or stay away from it, please apply for another channel frequency.

If the above method doesn't solve your problem, or there are any other problems, please contact the local dealer or our company for more technical support.

## 6. Maintenance and Cleaning

In order to ensure the good performance of the product and prolong its service life, please familiarize with the following contents for better daily maintenance and cleaning of this product.

### Maintenance

- Please do not use hard object puncture or scraping the product
- Please do not store the product in an environment containing corrosive electronic circuitry

### Cleaning

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#### **Caution**

Please power off the product and disconnect the power connection before cleaning.

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- Please Use clean dry lint free or brush regularly to wipe the dust on the surface of this product and the dust attached to the charging pole.
- The buttons and case of this product are easily to become dirty. Clean with neutral detergent and non-woven fabric. Please do not use detergents, alcohol, sprays or petroleum preparations to clean the products so as to avoid damage to the surface and case.
- After cleaning, make sure that the product is completely dry, otherwise don't use it.

## 7. Accessories Purchase

If you want to purchase the main accessories of the product, please contact the dealer or call our service hotline at 400-830-7020.

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### **Caution**

Please use the accessories specified by our company. The consequences due to any use of unauthorized accessories shall be the responsibility of the user himself.

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## **8. Scope and Duration of Warranty**

We promise that the product produced by our company can enjoy the warranty service under the contract from the date of purchase if there is any occurrence of the defects in material or manufacturing process under the condition of normal use, operation and maintenance.