

# MARS T1000

User Manual

## DESCRIPTION

Thank you for purchasing Hollyland MARS T1000 full-duplex wireless intercom system. With the DECT protocol technology, MARS T1000 is widely used in the areas of studio, stage events, EFP, webcasting, filmmaking etc. With a clean line of sight (LOS), the transmission range of MARS T1000 reaches up to 300m with full-duplex wireless communication and carrier-grade voice quality.

## KEY FEATURES

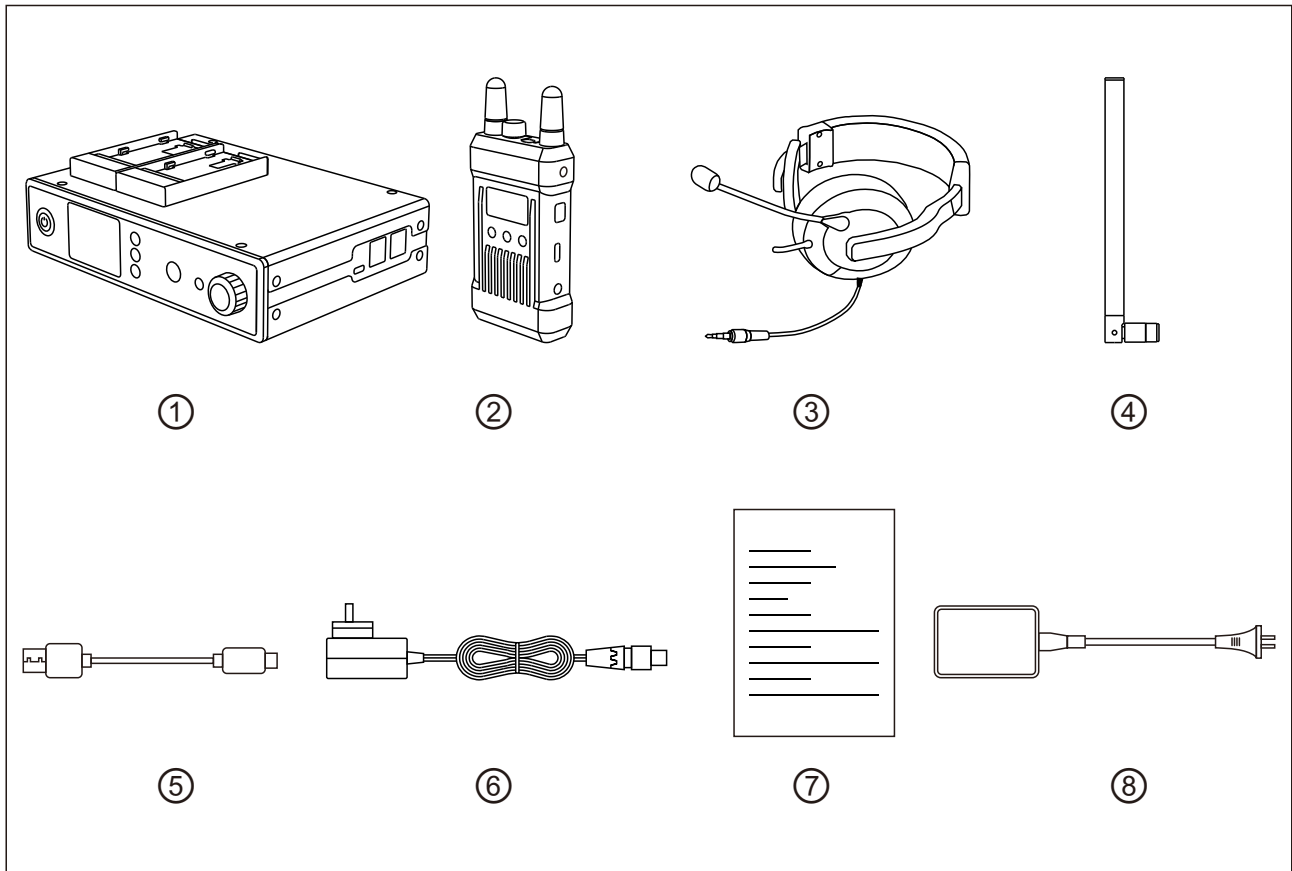
- Carrier-Grade Voice Quality, 300m Transmission Range
- 1.9GHz Frequency Bandwidth, Support Frequency Configuration for Different Territories
- Full-Duplex Wireless Communication
- Base Station Supports Maximum 4 Beltpacks Communication Simultaneously
- Base Station Supports 3.5mm Headset and 4-Pin Analog Audio Connection
- Base Station Equipped with Two External Antennas
- Base Station Support 7-36V DC Wide Voltage Input
- Base Station Supports USB Firmware Upgrade, Beltpacks Support Firmware Upgrade on PC
- Beltpacks Powered by Built-In Lithium Batteries, with Longer than 8 Hours Run Time on a Full Charge
- Industrial Metal Case, Stable and Reliable
- Provide a Rich List of Accessories

## DESCRIPTION

### ■ APPLICATIONS

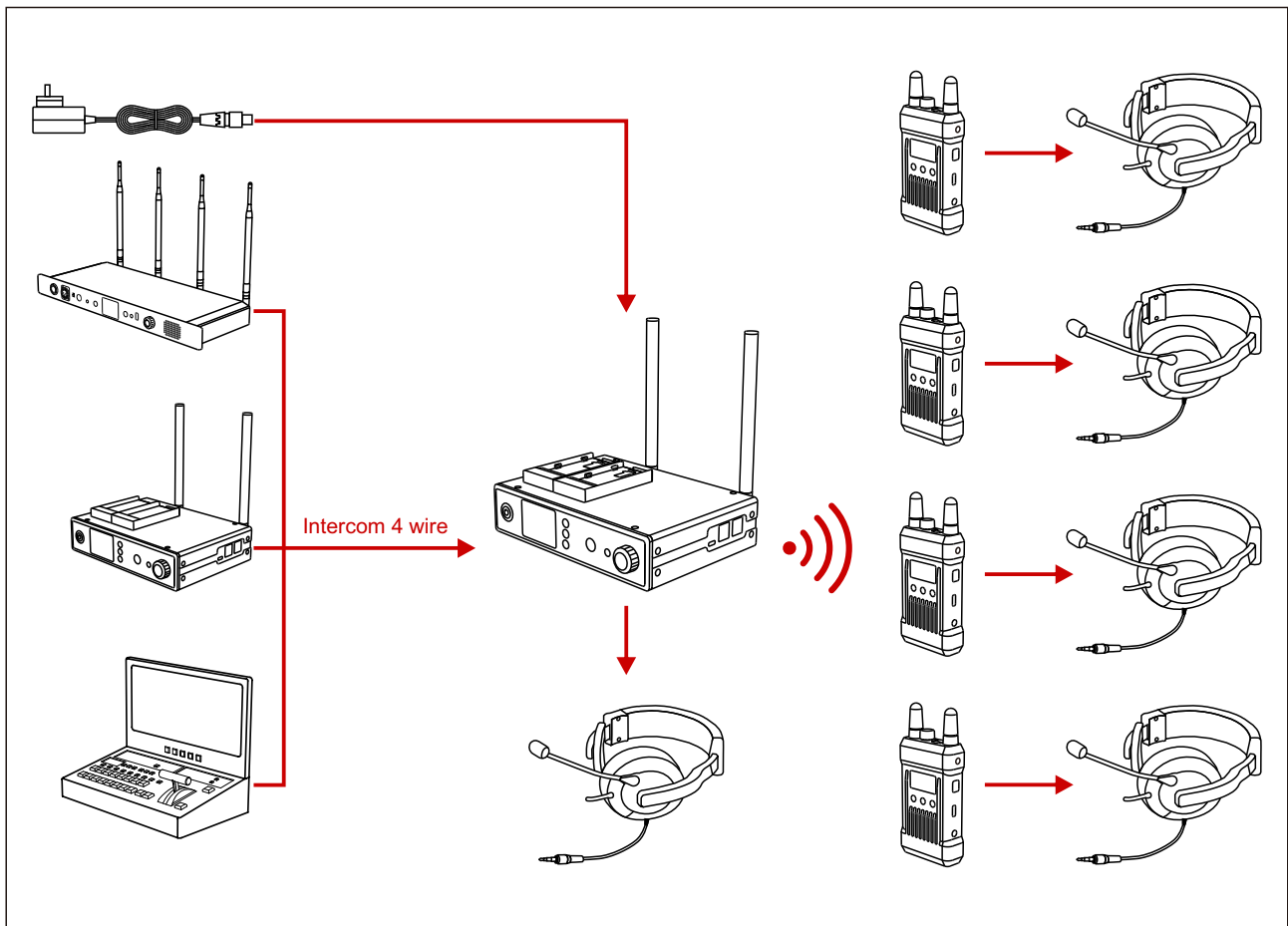
- Filmmaking
- Live Broadcasting
- Corporate Events
- Production Team Communication
- Stage Activities
- Emergency Dispatch
- Webcasting

# PACKING LIST



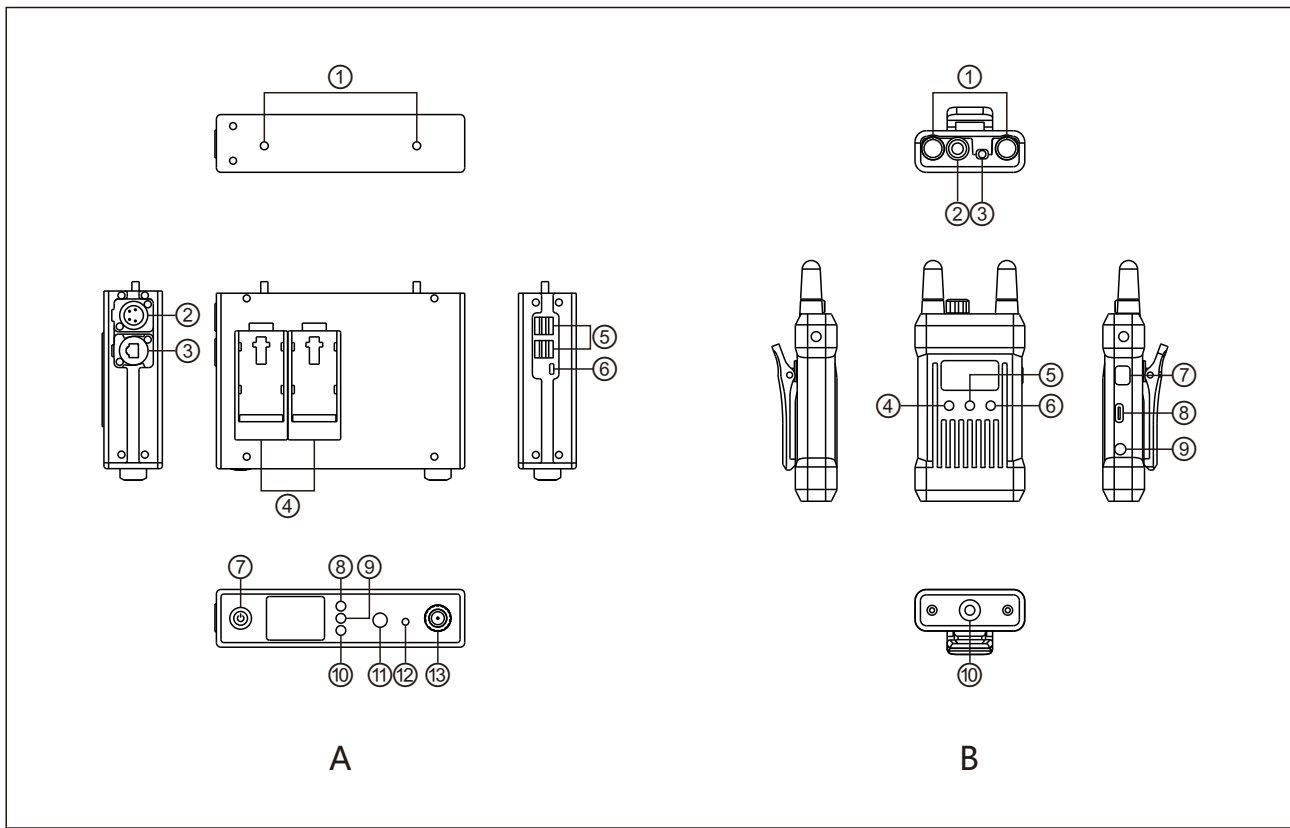
① Base Station	x1
② Beltpack	x4
③ Professional Dynamic Side-Ear Headset	x5
④ 1.9G High-Gain Base Station Antenna	x3
⑤ Type-C Cable	x4
⑥ 4-Pin XLR Adaptor	x1
⑦ Quick Guide	x1
⑧ Multi-Interface USB Charger	x1

## STANDARD SETUP



The base station of this wireless full-duplex intercom system supports 4 belt packs. The base station and the belt packs support dynamic and electret mics. They could be switched by selecting on the menu for different applications. The 4-pin audio interface on the base station enables the device to connect with other audio systems, which can increase the quantity of belt packs and also the wireless communication range.

# PRODUCT INTERFACES



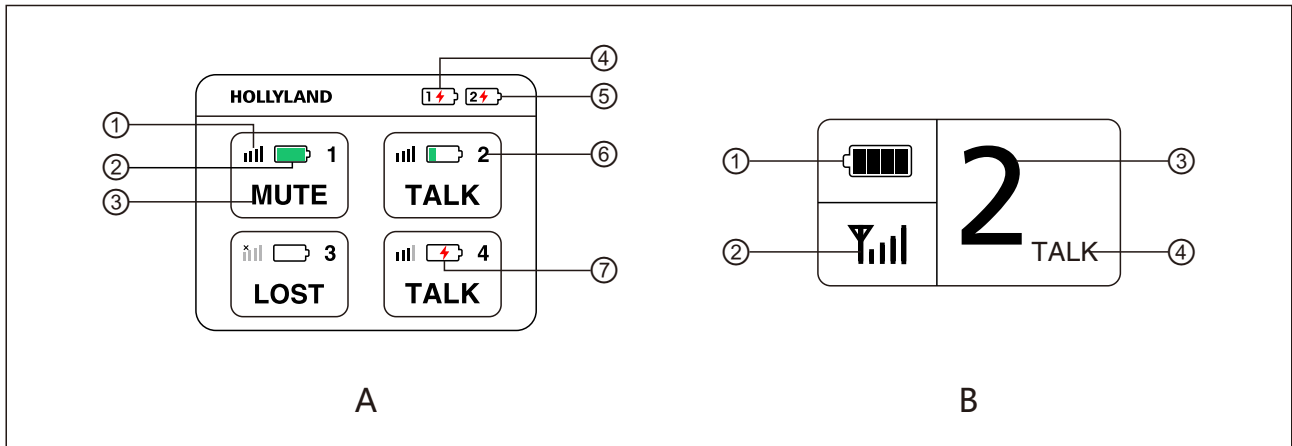
## A BASE STATION

- ① RF Antenna Interfaces (SMA-K)
- ② DC Power Supply (4-Pin XLR Male)
- ③ 4-Pin Audio Input / Output (RJ45)
- ④ F970 Battery Plate
- ⑤ 4 USB Type-A Interfaces (For Beltpacks Charging and Cable Connection)
- ⑥ Type-C USB Debugging Interface
- ⑦ Power Switch
- ⑧ Up/Left Button
- ⑨ Menu/Confirm Button (Long Press to Enter Menu/Click to Confirm)
- ⑩ Down/Right Button
- ⑪ Remote Beltpack Mic Mute Button
- ⑫ 3.5mm Headset Interface
- ⑬ Base Station Volume Control Knob

## B BELTPACK

- ① Antennas Interfaces
- ② Power and Volume Control
- ③ 3.5mm Headset Interface
- ④ Up/Left Button
- ⑤ Menu/Confirm Button (Long Press to Enter Menu /Click to Confirm)
- ⑥ Down/Right Button
- ⑦ Mute/Talk Switch Button (Double Click to Mute/Long Press to Talk)
- ⑧ Type-C USB Interface (For beltpacks Charging and Cable Connection)
- ⑨ 3-Segment 3.5mm TALLY Output Interface
- ⑩ 1/4 Screw Hole

# OLED DISPLAY



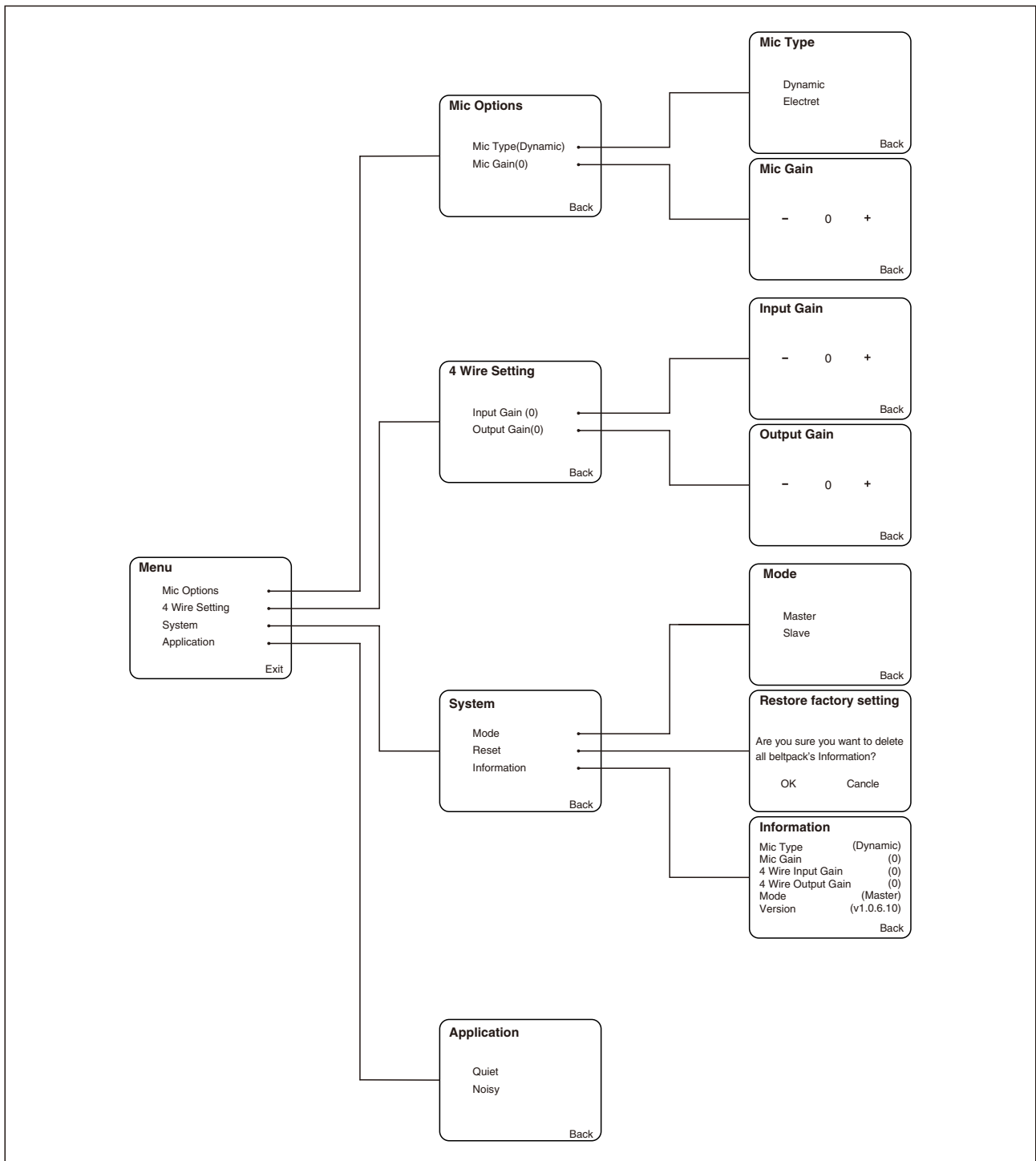
## A BASE STATION

- ① Beltpack Signal Strength
- ② Beltpack Real-Time Battery Status
- ③ Beltpack Current Status
- ④ F970 Battery 1 Low Battery Indicator
- ⑤ F970 Battery 2 Low Battery Indicator
- ⑥ Beltpack Number
- ⑦ Beltpack Low Battery Indicator

## B BELTPACK

- ① Beltpack Real-Time Battery Status
- ② Beltpack Signal Strength
- ③ Beltpack Number
- ④ Beltpack Current Status

# BASE STATION MENU FUNCTION INTRODUCTION



Long press the menu/confirm/OK button for about three seconds to enter the root menu, select the folder and press the “OK” button to enter the next menu. Each menu function is introduced as follows.



# BASE STATION MENU FUNCTION INTRODUCTION

## **1 Select "Mic Options" and press "OK" button to enter the secondary menu of Mic Settings**

1.1. Select "Mic Type" and press "OK" button to enter the third-level menu of Mic selection.

1.1.1. Select "Dynamic" and press "OK" button to switch to dynamic mic mode.

1.1.2. Select "Electret" and press "OK" button to switch to electret mic mode.

1.2. Select "Mic Gain" and press "OK" button to enter the third-level menu of Mic gain control.

1.2.1. Select "+" and press "OK" button, when the gain increases, the beltpack will hear more sound. Select "-" and press "OK" button. When the gain decreases, the beltpack will hear less sound.

## **2 Select "4 Wire Setting" and press "OK" button to enter the secondary menu of 4 wire audio setting**

2.1. Select "Input Gain" and press "OK" button to enter the third-level menu of gain adjustment.

2.1.1. Select "+" and press "OK" button, when the gain increases, the amplitude of sound input on 4 wire input will increase. Select "-" and press "OK" button, when the gain decreases, the amplitude of sound input on 4 wire input will hear less sound.

2.2. Select "Output Gain" and press "OK" button, to enter the third-level menu of gain adjustment.

2.2.1. Select "+" and press "OK" button, when the gain increases, the amplitude of sound input on 4 wire input will increase. Select "-" and press "OK" button, When the gain decreases, the amplitude of sound input on 4 wire input will hear less sound.

# BASE STATION MENU FUNCTION INTRODUCTION

## **3 Select “System” and press "OK" button to enter the secondary menu of system settings**

3.1. “Mode” on the master and slave (still developing) .

3.1.1. Set up as the Master.

3.1.2. Set up as the Slave.

3.2. Select “Reset” and press "OK" button. Reset confirmation alert will pop up on the screen.

3.2.1. Select“OK”and press "OK" button, delete all beltpacks registration information.

3.3. Select “Information” and press "OK" button to enter the third-level menu of system information inquiry.

3.3.1. “Mic Type” displays the mic and press "OK" button type currently set.

3.3.2. “Mic Gain” displays the mic gain currently set.

3.3.3. “4 Wire Input Gain” displays the 4 wire input gain currently set.

3.3.4. “4 Wire Output Gain” displays the 4 wire output gain currently set.

3.3.5. “Mode” displays the base station mode currently set.

3.3.6. “Version” displays the current software version number.

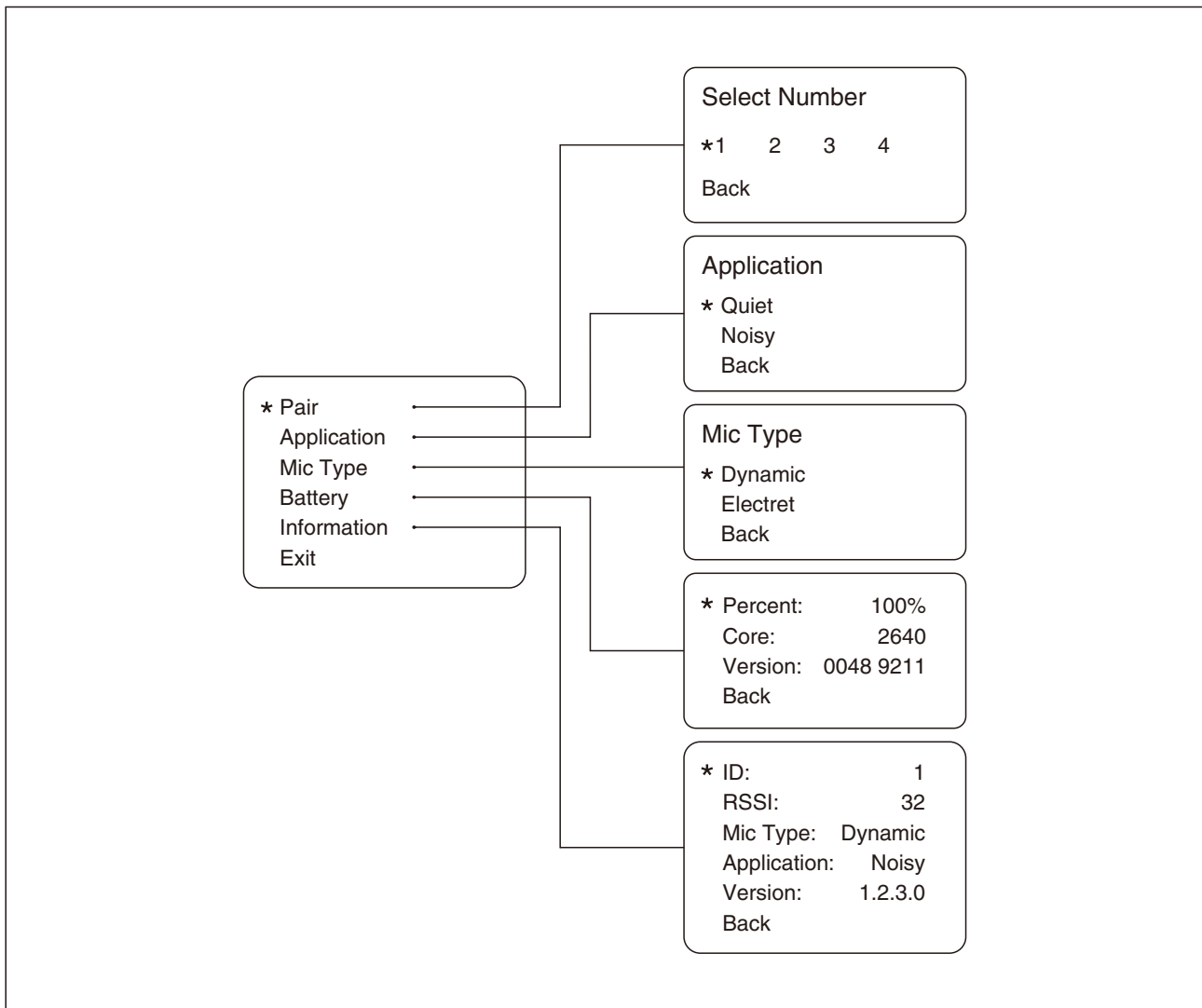
## **4 Select “Application” and press "OK" button to enter the secondary menu of scene mode configuration**

4.1. Select“Quiet”and press "OK" button, suitable for quiet environment.

4.2. Select “Noisy” and press "OK" button, suitable for noisy environment.

Order from top to bottom by menu rank.

# BELTPACK MENU FUNCTION INTRODUCTION



Long press "OK" button for about three seconds to enter the root level menu, select the menu and press "OK" button to enter the next menu, each menu function is described as follows.

# BELTPACK MENU FUNCTION INTRODUCTION

## **1 Select “Pair” and press "OK" button to enter the secondary menu of registration function**

1.1. Select any ID from 1 to 4 and press "OK" to register. "Pairing..." can be seen on the main interface of base station and beltpacks. Unplug the USB cable after "Pair success" is displayed on the interface of base station and beltpacks.

## **2 Select “Application” and press "OK" button to enter the secondary menu of scene mode configuration**

2.1. Select “Quiet” and press "OK" button, suitable for quiet environment.

2.2. Select “Noisy” and press "OK" button, suitable for noisy environment.

## **3 Select “Mic Type” and press the "OK" button to enter the secondary menu of mic type selection**

3.1. Select “Dynamic” and press "OK" button to switch to dynamic mic mode.

3.2. Select “Electret” and press "OK" button to switch to electret mic mode.

## **4 Select “Battery” and press "OK" button to enter the secondary menu of the battery information interface**

4.1. “Percentage” displays current power percentage.

4.2. “Core” displays the current battery cell core version number.

4.3. “Version” displays the current hardware version number.

## BELTPACK MENU FUNCTION INTRODUCTION

### **5 Select “Information” and press "OK" button to enter the secondary menu of system information inquiry**

5.1 “ID” displays current beltpack number .(If it is not registered, “NULL” will be on displayed on the beltpack)

5.2 “RSSI” displays the current wireless signal strength.

5.3 “Mic Type” displays the mic type currently set.

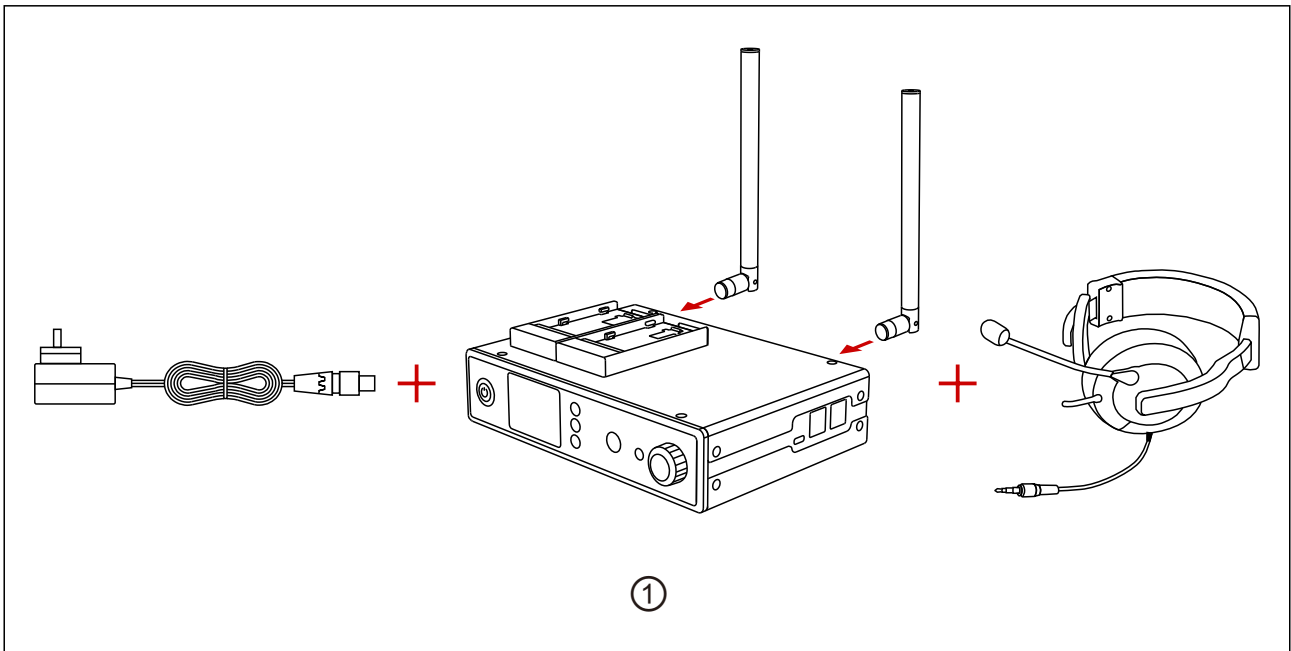
5.4 “Application” displays the context mode currently set.

5.5 “Version” displays the current software version number.

### **6 Select “Back” and press "OK" button to return to the main menu**

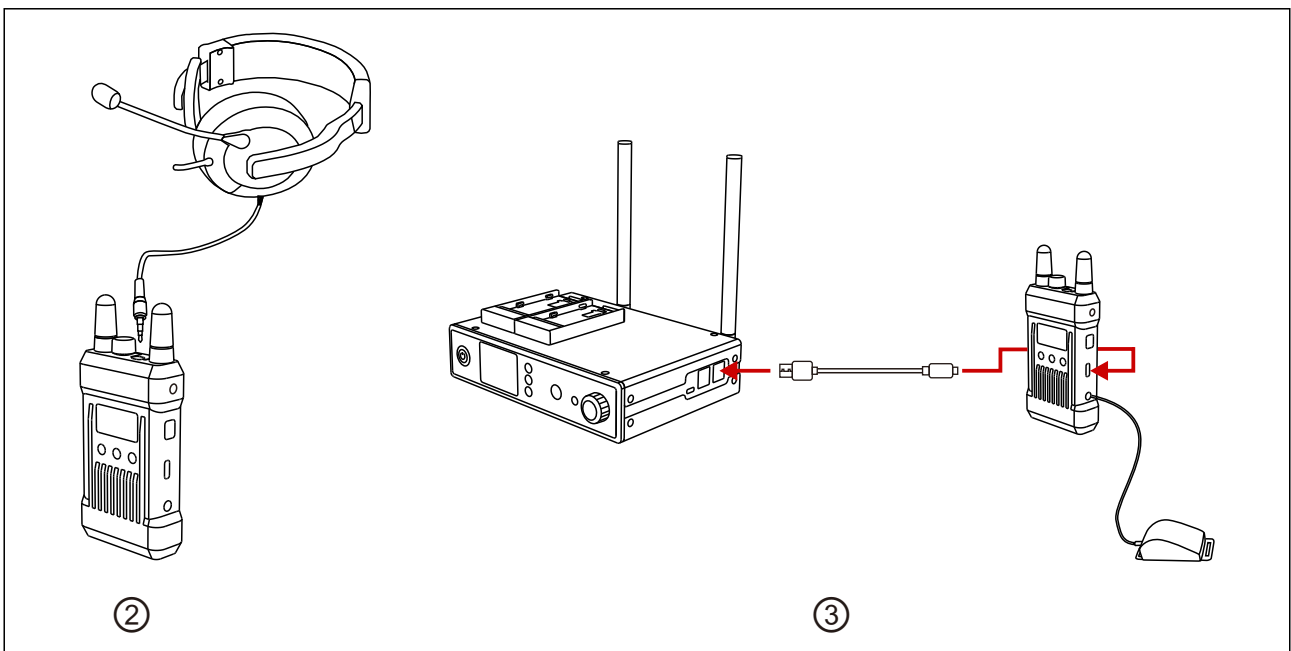
Order from top to bottom by menu rank.

# INSTALLATION



## ① Base Station Installation

1. Install antennas as demonstrated.
2. Connect with the power adapter and headset.
3. Press the power switch to power on.

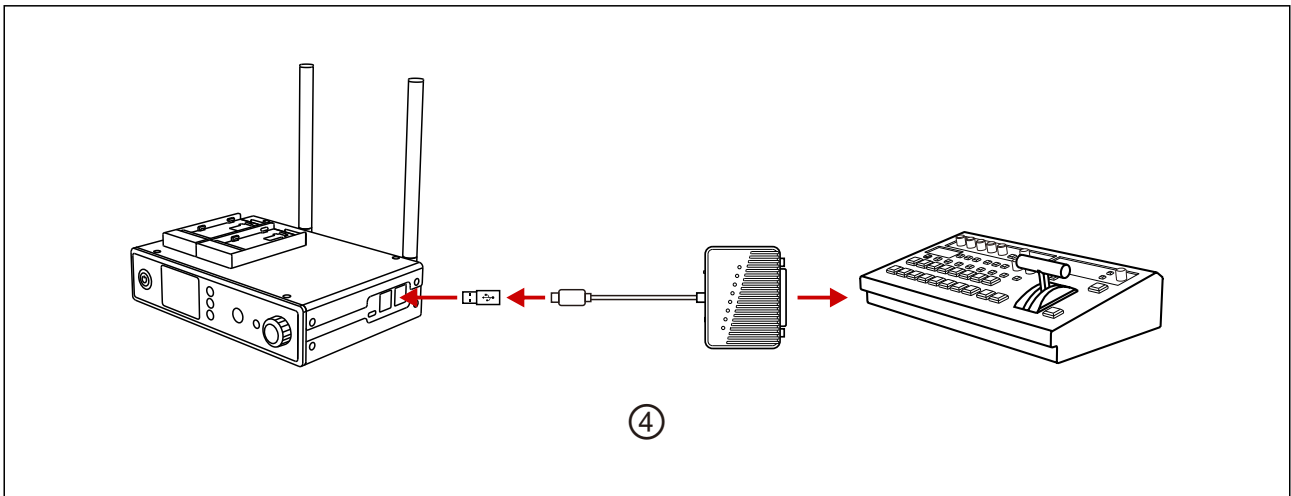


## ② Beltpack Installation

1. Connect headset as instructed in the picture.
2. Turn power and volume control knob to turn on the beltpack.
3. When the status of beltpack turns from “LOST” to “MUTE”, long press the “MUTE/TALK” button on the side of the beltpack to switch to “TALK” mode to communicate. If the beltpack operator doesn’t want to talk with the base station, double click the “MUTE/TALK” button on the side of the beltpack to switch to “MUTE” mode. The beltpack operator can still hear the base station and other connected beltpacks under this mode.
4. Click the “REMOTE MIC KILL” button to mute all beltpacks if the base station operator doesn’t want to hear from all beltpacks. When the indicator light is on, all beltpacks are switched to “MUTE” mode. On which mode, beltpacks’ operators can hear the base station but they cannot talk to each other and to the base station. If a beltpack operator wants to communicate with the base station, long press the “MUTE/TALK” button on the side of the beltpack to call the base station. The “REMOTE MIC KILL” button on base station will flash with a red light. Click the “REMOTE MIC KILL” to enable all beltpacks to switch back to “TALK” mode.
5. The default setting of mic is dynamic mic. Users can choose different types of mics based on different applications. Long press the menu bottom to enter the interface of mic setting and change the mic to electret.
6. When connected with other intercom systems by 4 wire audio interfaces, users can enter main menu and adjust input/output gain to reach gain balance for the whole intercom system.
7. Due to the noise differences in different applications, it may take white noise to have better hearing experience. The background noise level can be adjusted by changing the “Application” in the main menu.

## ③ Repairing

If any beltpack ID is lost while using the system resulted by incorrect operation or other reasons, connect the base station and the beltpack through the standard USB type-C data cable. Beltpack enters the pair menu and selects a master station vacancy ID for registration. "Pairing..." will appear in the main interface of the base station and the beltpack. Wait until "Pair Success" is displayed in the interface of the main station and the beltpack before unplugging the cable. The beltpack will then be ready to use again.



## ④ TALLY Features

TALLY universal signal converter is an optional accessory available on the market. It can achieve TALLY distribution feature. Please find the detailed user guide in the TALLY Universal Signal Converter Quick Guide.



# PARAMETERS

	Base Station	Beltpack
<b>Interface</b>	2Antenna Interfaces (SMA-K) 4-Pin XLR Male DC Input 3.5mm Headset Interface RJ45 Interface 4 wire audio interface USB Type-C Interface Double USB Type-A Interfaces	2Antenna Interfaces (SMA-K) 3.5mm Headset Interface 3.5mm TALLY Output Interface USB Type-C Interface
<b>Power Supply Mode</b>	7~36V DC; F970 Battery (Typical)	1600mAh Polymer Lithium Battery
<b>Frequency Response</b>	300Hz to4KHz	300Hz to4KHz
<b>Signal to Noise</b>	> 50dB	> 50dB
<b>Ratio</b>	/	/
<b>Distortion</b>	< 2%	< 2%
<b>Transmission Range</b>	300m Between Beltpack and Base Station	300m Between Beltpack and Base Station
<b>Frequency Bandwidth</b>	1.9GHz	1.9GHz
<b>Modulation Mode</b>	GFSK	GFSK
<b>Transmission Power</b>	Maximum 24dBm	Maximum 24dBm
<b>Receiver Sensitivity</b>	≤-93dBm	≤-93dBm
<b>Bandwidth</b>	1.728MHz	1.728MHz
<b>Power Consumption</b>	< 4W	< 0.7W
<b>Dimension</b>	(L*W*H): 220*170*50mm	(L*W*H): 100*58*22mm
<b>Net Weight</b>	1400g	180g
<b>Temperature Range</b>	0~+40 (working status) -20~+60 (storage condition)	0~+40 (working status) -20~+60 (storage condition)

### ■ POOR AUDIO QUALITY

1. Please first confirm whether the beltpack antennas are correctly installed and tightened. If there is no improvement, replace the antennas.
2. Please ensure that the beltpack and the base station are in the transmission range, and there is no obstacle between the main station and the beltpack.
3. Please check if the volume of the beltpack is too low and turn it to a comfortable level.
4. Due to the difference in impedance and setting bias, we generally don't recommend customers to use his own 4-stage 3.5mm headset. If the sound quality is poor, please replace the headset.


### ■ BASE STATION CANNOT DISPLAY BELTPACK INFORMATION

1. Please first confirm whether the beltpack antennas are correctly installed and tightened. If there is no improvement, replace the antennas.
2. Check the status of the Beltpack. If "LOST" appears on the beltpack screen, make sure that the beltpack is within the transmission distance from the base Station.
3. Check the status of the beltpack. If it is displayed as "NULL", it means that the beltpack information is lost due to incorrect operation, and it needs to be reregistered.

### ■ NO SOUND BETWEEN THE BASE STATION AND BELTPACK

1. Please confirm if the "REMOTE MIC KILL" button on the base Station is on. If the red light is on, click on it to turn it off.
2. Check the current status on the beltpack screen. If it's on "MUTE", long press the "MUTE/TALK" button on the side to switch it to "TALK".
3. Check if the headset functions well and if you wear the headset and mic properly. (correct way: put the headset on the head with the mic less than 10cm from your mouth).



 HollylandTech

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 HollylandTech

 sales@Hollyland-tech.com

 www.hollyland-tech.com