



# **PLL TRUE DIVERSITY WIRELESS SYSTEM**

**WIRELESS MICROPHONE**

Instruction For use

Thank you for purchasing this SPIRIT Series UHF Multi-Channel Professional Wireless Microphone. Please read through this manual before operate this product. This manual should be retained for future reference.

## **SUPERIORITY**

- ▶ Adopting PLL and MCU technology to provide thirty-two channels for two sets of MIC.
- ▶ Adopting PLL technology to provide high transmission efficiency and S/N, wide dynamic range and frequency response.
- ▶ Adopting advance circuit with professional wireless system IC chip that can enhance the system's stabilization and anti-interference.
- ▶ Special audible signal panel with humanization.
- ▶ Special silent function with noise test technology.
- ▶ Adopting IC chip with low current consumption and long-lasting battery function.

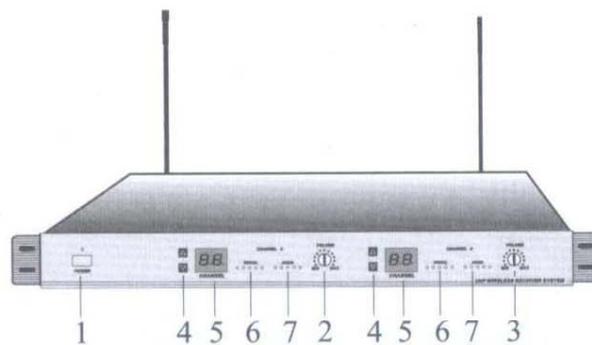
## **FUNCTION**

1. Operating on UHF high band frequency within 700MHz to 900MHz.
2. Advance PLL technology.
3. MCU intelligent control.
4. Audible signal panel.
5. Multi-processing system can be used in different channels simultaneously.

6. MCU noise tester with signal analysis and noise squelch.
7. Double audio compression and extent with high S/N and wide dynamic range.
8. Multi-channel synchro-output.
9. Intelligent IC voltage stabilization.
10. Low current consumption and long-lasting battery function.
11. Low battery LED indicator.

## **PARTS OF RECEIVER IDENTIFICATION (FROM PANNEL)**

**Figure 1**

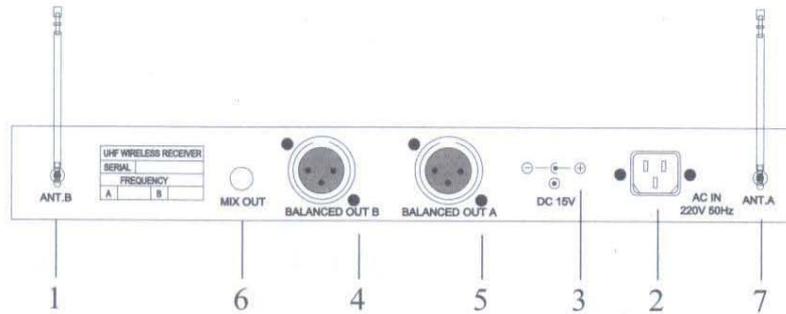


- (1). POWER SWITCH. The audible signal panel will appear the frequency digit when the power switch is in the "ON" position.
- (2).(3). VOLUME CONTROL. Revolving knob clockwise to increase volume anticlockwise to reduce the volume.
- (4).A.B Channel switch. Press the button; the channel digit will increase by degrees circularly.
- (5).A.B Channel display panel: Indicate the channel which is used.

- (6).A.B RF indicator. Indicate the receiving signal.
- (7).A.B AF indictor. Indicate the audio signal from the MIC.

## BACK PRNEL

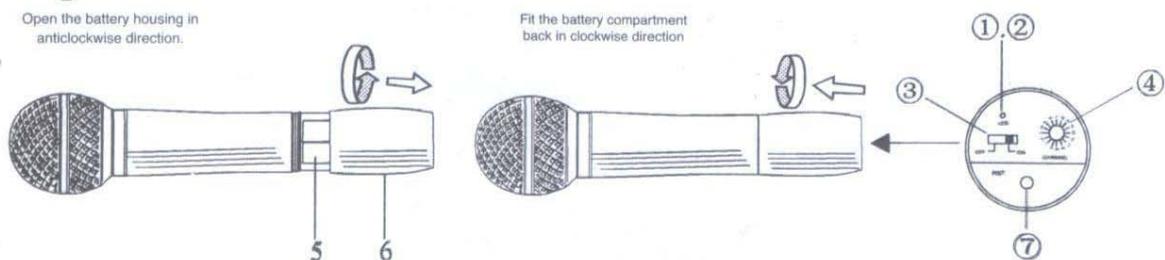
Figure 2



- (1).(7).CH-A,CH-B ANTENNA INPUT THRMINAL.
- (2).AC220V/110V POWER INPUT JACK.
- (3).DC 1.5V POWER INPUT JACK.
- (4).(5).BALANCE XLR OUTPUT JACK.
- (6).NON-BANCE MIXED AUDIO OUTPUT JACK.

## PARTS OF HAND-HELD MIC IDENTIFICATION

Figure 3

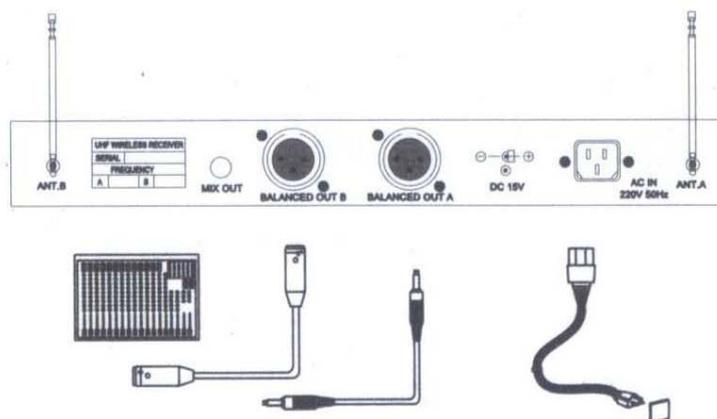


- 1. POWER LED INDICATOR. The green LED is light up when the POWER switch to “ON” position.
- 2. LOW BATTERY LED INDICATOR. The red LED is light up it means the battery is in need of replacement.

3. **POWER SWITCH.** Switch on or off the hand held emission.  
When the POWER switch is in the to middle position the hand-held MIC is in the MUTE state.
4. **CHANNEL SWITCH.** Turn the knob clockwise to change the channel from “01” channel to “16” channel.
5. **BATTERY HOUSING.** Insert three pieces of 1.5VAA batteries or 1.2V rechargeable batteries.
6. **BATTERY COVER**(remove it to insert the battery.)
7. **EMISSION ANTENNA.** Screw on the antenna clockwise.  
Screw off the antenna anticlockwise. Make sure the ANT-A and ANT-B are in the right port.

## THE WIRELESS RECEIVER INSTALLATION INSTRUCTION

**Figure 4**



1. Fixing the antenna and pull them vertically.
2. Plug the power cord into the receiver AC power jack, then plug the other end of the power cord into the power output socket on the wall. (Make sure the power cord type that

required in your area.)

### 3. Audio output connection.

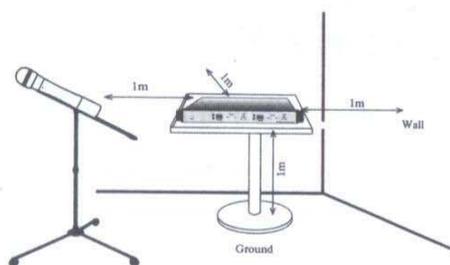
(1) Balance output: Plug the “XLR” cord or “CANNON” cord into the “MIKEIN” port of amplifier. (See the figure 4)

(2) Non-balance output: Plug the cord one end to the Non-balance output port of the receiver the other end to the amplifier input port. (See the figure 4)

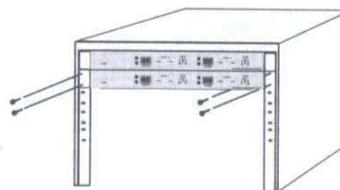
4. To get the better receiving please place the receiver 1m high from the ground and away noise. (See the figure 5)

5. Use the frame to fix the receiver on the ELA standard frame. (See the figure 6)

**Figure 5**



**Figure 6**



## OPERATION INSTRUCTION

1. Connect the audio cable from the receiver to the external equipment.

2. Push the battery cover according to the arrow marks.

Insert three pieces of 5#1.5V batteries or 1.2V rechargeable batteries according to the positive pole and negative pole then close the cover.

3. Connect the antennas of the receiver and the hand-held

- MIC.(Hand-held MIC: red-A, blue-B).
4. Switch off the power of the hand-held MIC then adjust the channel knob to the channel you want.
  5. Turn down the volume of the receiver and external equipment to the minimum.
  6. Switch off the hand-held MIC then switch on the power of the receiver. Press the channel selector to choose the channel you want.

Make sure the last two digits display on the channel panel and hand held MIC channel digits are the same.

7. Push the power switch to the middle position, the green LED of the MIC and the LED indicator of the receiver are light up at the same time, then switch on the power, the system is in the normal function.
8. Volume adjustment:
  - (1) Non-balance Mix output: Revolve the volume knob of the receiver to the middle position, and then adjust the volume of the external equipment to make the MIC get the proper volume.
  - (2) In the case of more than two sets of MIC are in use, please adjust the wireless MIC and wire MIC to the same volume to get the same sound sensitivity.
  - (3) Adjust the volume of the receiver to the proper position. The minimum or maximum volume will make the amplifier and MIC in abnormal position.

9. To get the perfect effect:

(1) Pull out the antenna and adjust in a proper position.

(2) Adjust the distance between the emission and receiver as possible as short.

(3) The ANT-A and ANT-B should be separated at angle  $45^\circ$  from the vertical line.

(4) Do not approach the receiver near the metallic surface or veil.

(5) Replace the battery when the battery indicator is red.

(6) Don't make the antennae touched or cross.

10. Mark the dead point to avoid it in the live show.

## **NOTE**

- Two sets of MIC that were set in the same channel can be used in one unit.
- The LED of the Hand-held MIC is red that means the normal function.
- If the LED is green that means the battery is in the need of replacement.
- Hand-held MIC should be connected the antenna to get the better effect.
- The receiver and wireless MIC should be set in the same channel.
- Do not change the channel when the receiver is used.
- Do not use AC and DC power at the same time.

- When several units were used, please set them in different channels.
- Cut off the power source and take out the battery of the hand held MIC when they will be used for long periods of time.
- Distinguish the ANT-A and ANT-B when you connect the antennae.

## TECHNICAL SUPPORT

### Problem & Question

Problem	Indicator State	Possible Solution
No sound	The receiver indicator LED is off.	The emitter's power switch should be in the ON position. Check the battery installation.
No sound	The receiver indicator LED is off.	The ANT-A and ANT-B should be separated at angle 45° from the vertical line. Remove the block between the emitter and the receiver.
No sound	The audible signal panel is off.	Check the power output socket on the wall. The power cord should be connected.
No sound	The receiver indicator LED is on and the AUDIO LED is flashing.	Check whether the emission frequency and the receiver frequency are compatible. Check the external equipment connection.
Can't adapt to the musical instrument.	The receiver signal LED and the AUDIO LED is on.	Adjust the emitter's and the receiver's volume.
One set of MIC is in normal the other is mute.	One set of MIC LED is on the other MIC LED is off.	Check whether the channel of the abnormal MIC is the same as the other one.
The sound is distorted.	The receiver signal LED and the emitter Low battery LED is on.	Replace the battery.
Noise and voice interruption occur.	The receiver signal LED is on.	Remove the block or change the frequency.
The audio signal sometimes lost during the moving.	The receiver signal LED is off when the audio signal is lost.	Mark the dead point and avoid it.

## **SPECIFICATION**

Channel:  $16 \times 2 = 32$

Frequency range: 176MHz~212MHz

Bandwidth: <200KHz

Frequency respond: 60~13,000Hz

Dynamic range: >110dB

T.H.D: <0.1%

Effective distance: >80M

## **Emitter**

Emission power: 10mW

Oscillator: PLL

Modulation mode: FM

Image disturbing ratio: >50dB

Frequency excursion:  $\leq 75$ KHz

Channel switch mode: Coding Switch

Power voltage: DC3.6V-6.0V(4xDC1.2V or 4xDC1.5V).7#battery

## **RECEIVER**

Sensitivity: 2.0uV

Oscillator: PLL

S/N: >90dB

Distortion: <0.1%

Channel switch mode: MCU

Output: 2-balance output

Output Voltage: Balance output: 500mV; Mix-output: 350mV

Mix-output:350mV (Modulate with 30KHz)

Power:AC220V-230V; DC16-18V

Dimension:482 x 220 x 45 (Equipped with the standard 19 inches  
frame)

**Packing list:**

The product package should include the following items:

1. Audio signal cord.(1piece)
2. Receiving Antenna (2 pieces)
3. Emission Antenna (2 pieces)
4. Power cord (1 piece)
5. Sponge cap (2 pieces)
6. Instruction Manual (1 pieces)
7. 1.5VAA Battery (8 pices) 7# battery

*We reserve the right of changing technology and specification  
of our products without notice in advance.*



**SOUND REGION HONG KONG EXPAND CO.,LTD.**