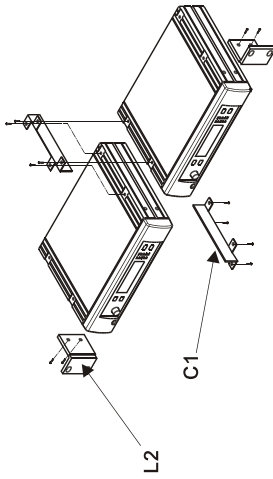
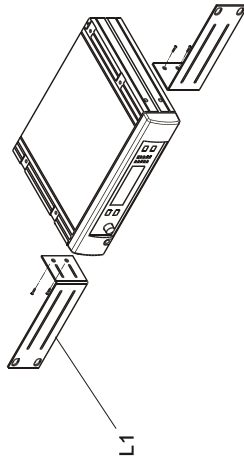


PRODUCT DESCRIPTION

To combine two receivers in a 19" standard rack by using 2 short L type plastic racks (L2) and 2 metal connecting plates (C1). (Each system includes a L2 and a C1.)

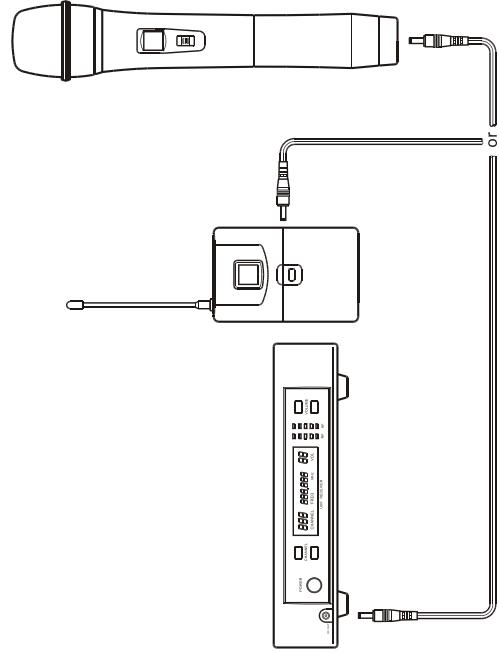


To mount a receiver in a 19" standard rack by using 2 long L type metal racks (L1). (L1 is an optional product, so please purchase extra in local shops.)



Charging Connecting Diagram

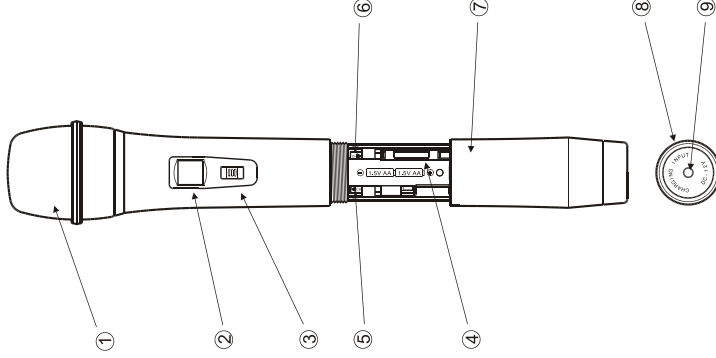
Connect the supplied DC cable to the receiver and the microphone, and it takes around 10 hours to charge and the LED of transmitter is flashing all the time.



PRODUCT DESCRIPTION

5.2 Handheld Microphone

The handheld microphone operates in UHF band frequency with PLL synthesized control. UHF 700 preprogrammed selectable frequencies to avoid interference. Uni-directional dynamic or uni-directional electret condenser cartridges feature different characters for various choices. Use DC1.5V x 2AA size dry or rechargeable batteries for cost-saving and environmental protection.

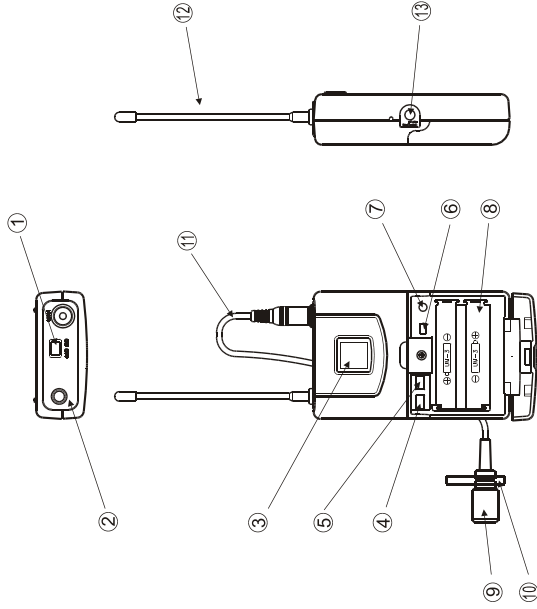


1. **Grille:** Protects the microphone capsule and helps reduce breath sounds and wind noise.
2. **Programmable Display:** Displays channel number and battery power level
3. **On/off Switch:** Turns transmitter power on and off.
4. **Battery Compartment:** Insert DC1.5V x 2 AA dry or rechargeable batteries into the compartment and make sure that the polarity of batteries is correct.
5. **Channel + Button:** Press this button to change channel forward.
6. **Channel - Button:** Press this button to change channel backward.
7. **Battery Cover:** Unscrew to expose battery compartment and channel buttons.
8. **Color Clip:** This color clip helps to identify the frequency for multi-channel operation.
9. **Charging Input:** The inserted rechargeable batteries are charged by using the supplied DC-plug cable connection to DC Out on the receiver. It takes up to 10 hours for charging.

PRODUCT DESCRIPTION

5.3 Backpack Transmitter

The backpack transmitter operates in UHF band frequency with PLL synthesized control. UHF 700 preprogrammed selectable frequencies to avoid interference. Various uni-directional electret condenser cartridge options. Use DC1.5V x 2 AA size dry or rechargeable batteries for low operating cost.

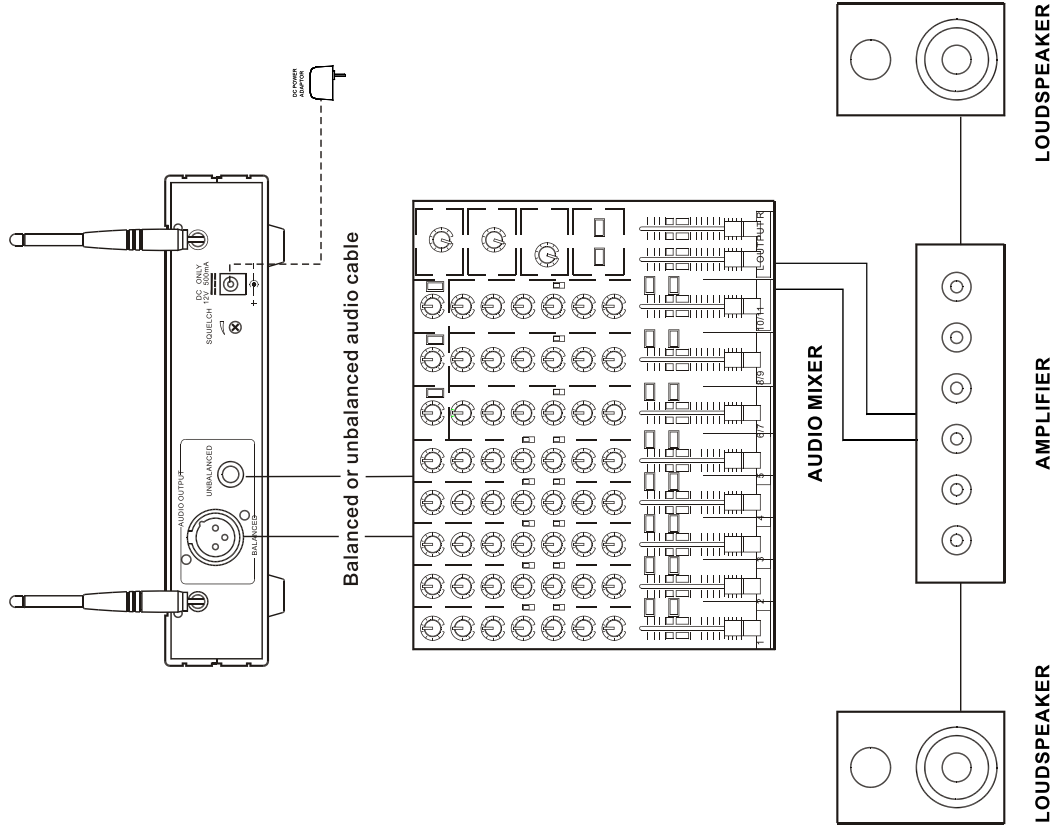


1. **On/Off Switch:** Turns transmitter power on and off.
2. **3-pin Mini XLR Connector:** The included electret lapel microphone is inserted into the connector on transmitter.
3. **Programmable Display:** Displays channel number and battery power level
4. **Channel + Button:** Press this button to change channel forward.
5. **Channel - Button:** Press this button to change channel backward.
6. **Mic/Line Selector :** The switch sets the audio input either to microphone level or line level.
7. **Gain.:** The rotary control adjusts the sensitivity of the transmitter's audio to the level of the connected lapel microphone or instrument.
8. **Battery Compartment:** Insert DC1.5V x 2 AA dry or rechargeable batteries into the compartment and make sure that the polarity of batteries is correct.
9. **Mic Unit:** The uni-directional electret condenser unit features the wide frequency response for warm, rich bass and clear sound.
10. **Tie Clip:** To clip on the tie or lapel for free-movement.
11. **Cable:** With 3-pin mini XLR connector cable to connect the transmitter.
12. **Antenna:** Permanently connected, helical antenna.
13. **Charging Input:** The inserted rechargeable batteries are charged by using the supplied DC-plug cable connection to DC Out on the receiver. It takes up to 10 hours for charging.

BASIC CONNECTIONS

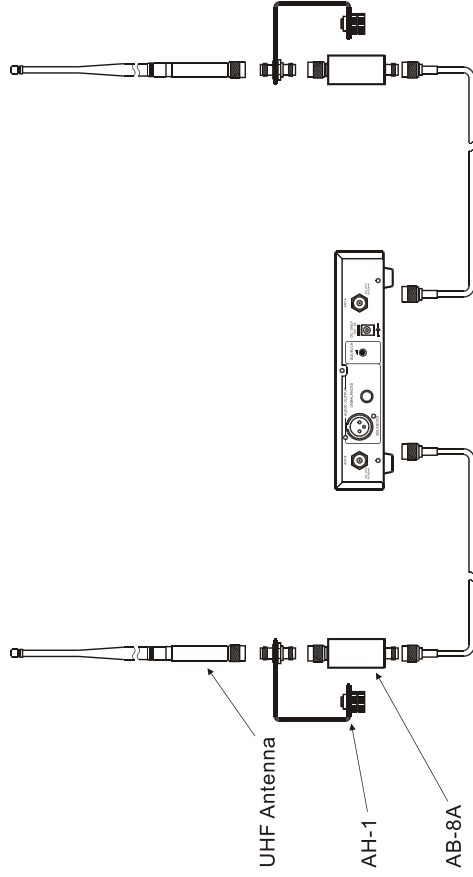
6. Basic Connections

Connect the receiver output to the audio mixer or amplifier input, using a standard audio cable with 3-pin XLR connectors or 6.3 phone plugs. Never use the balanced and unbalanced audio outputs at the same time! This may cause signal loss or increased noise.

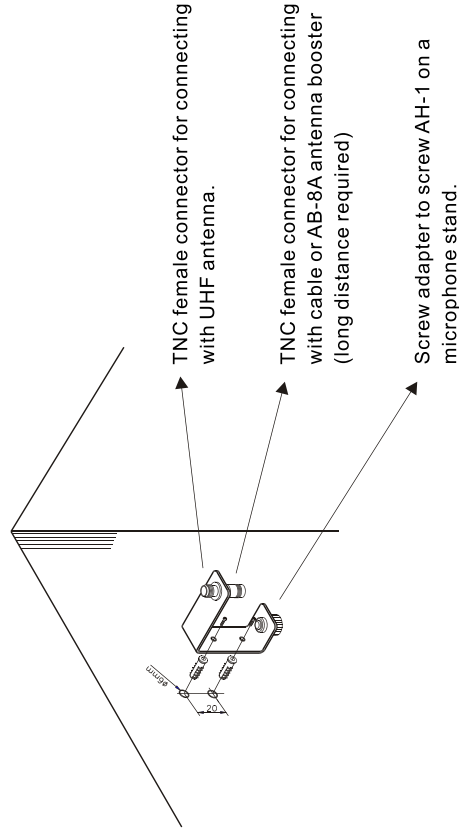


BASIC CONNECTIONS

AB-8A, the antenna booster is highly recommended for long-distance purpose, such as in stadium or in auditorium. By means of antenna holder, the antenna and booster can put wherever you want. It is ideal design for multi-channel application. Antenna boosters are applied to the receivers, which have detachable antennas.



Antenna holder makes it easy to fix wherever for connection antenna and booster. AH-1 can be assembled on the mic stand or on the wall.



SETTING UP

7. Setting Up

NOTICE: Prior to setting up, check that the transmitter and receiver are tuned to the same frequency. Two or above transmitters operating in the same frequency can not be used at the same time and area, so please arrange at least with 10-channel spaces between each channels.

7.1 Connecting the receiver to power

- Plug the antennas into the TNC socket on the receiver, if the antennas are detachable. Point the antennas upward.
- Check that the voltage of the supplied AC adapter conforms to the voltage available (AC110 or AC220) in local area. Using the wrong AC adapter may cause irreparable damage to the unit.
- Plug the feeder cable of the supplied AC adapter into DC IN socket on the receiver. Then plug the AC adapter into a power outlet.

7.2 Connecting the receiver to an audio mixer or an amplifier

In order to make sure the sound quality and avoid distortion, please adjust the volume level according to following instructions.

- When using a standard audio cable with 3-pin XLR connectors or 6.3 ϕ phone plugs to plug into the **MIC IN** on the audio mixer or on the amplifier, please push the Volume Button on the receiver to **20** (approx.), the output level for balanced and unbalanced output is around at **77mV**.
- When using a standard audio cable with 3-pin XLR connectors or 6.3 ϕ phone plugs to plug into the **LINE IN** on the audio mixer or on the amplifier, please push the Volume Button on the receiver to **32**, the output level for unbalanced and balanced output is about at **770mV**.

Never use the balanced and unbalanced audio outputs at the same time! This may cause signal loss or increased noise.

7.3 Inserting batteries into the handheld / bodypack transmitter

- Open the battery cover and insert batteries into the battery compartment conforming to the polarity (+)(-) marks. The transmitter can not work with incorrectly inserted batteries.
 - When push the ON/OFF switch to "ON" to switch the power on, LCD shows battery power level. If it displays insufficient power, the inserted rechargeable batteries can be charged by using the supplied DC 1.5 ϕ plug cable directly connection to DC Out on the receiver and charging input on the transmitter. It should take up to 10 hours for charging.
 - Close the battery cover.
- 7.4 Setting up the handheld microphone transmitter**
- Switch the receiver power on and check the frequency and volume level.
 - Switch the transmitter and hi-fi appliance (amplifier, tape deck etc.) power on.
 - Test the microphone and adjust the levels on your audio mixer or amplifier.

TROUBLE SHOOTING

7.5 Setting up the bodypack transmitter

- A. Connecting a microphone**
- Open the battery cover. Push the MIC/LINE switch to "MIC" and use the supplied screwdriver to adjust the GAIN at appropriate position.
 - Plug the 3-pin mini XLR connector end of the microphone cable into the audio input connector on the bodypack transmitter.
 - Switch the transmitter and hi-fi appliance (amplifier, tape deck etc.) power on.
 - Test the microphone and adjust the levels on your audio mixer or amplifier.
- B. Connecting an Instrument**
- Open the battery cover. Push the MIC/LINE switch to "LINE" and use the supplied screwdriver to adjust the GAIN at appropriate position.
 - Plug the 6.3 ϕ phone plug of the optional guitar cable to the output jack on the instrument and the 3-pin mini XLR into audio input connector on the bodypack transmitter.
 - Switch the transmitter and hi-fi appliance (amplifier, tape deck etc.) power on.
 - Play the instrument for testing and adjust the levels on your audio mixer or amplifier.

8. Trouble-shooting**Problem****No sound****Solution**

- Check the power supply of the microphone and receiver.
- Check that the transmitter and receiver are tuned to the same frequency.
- Check whether the hi-fi appliance is switched on and the receiver output is connected to audio mixer or amplifier input.
- Check whether transmitter is too far away from receiver or SQUELCH control set too high.
- Check whether receiver is located too near metal object or there are obstructions between transmitter and receiver.

Sound interference

- Check the antenna location.
- When using 2 or above microphone sets simultaneously, make sure that the chosen frequencies are not interfered.
- Check whether the interference comes from other wireless microphones, TV, radio and etc.
- Check the receiver volume level is set too high or too low.
- Check whether the interference comes from other wireless microphones, TV, radio and etc.

Distortion

- Check whether the interference comes from other wireless microphones, TV, radio and etc.

FEATURES & SPECIFICATIONS

9. System Feature

- Operating in UHF band frequency with synthesizer controlled.
- The wireless microphone system with 700 selectable frequencies via Phase Locked Loop (PLL) circuitry makes it easy to choose non-interfered channels.
- Super high sensitivity, extremely low noise transmission and reception.
- Diversity technology ensures the reception quality.

10. System Specification**Receiver**

- Carrier Frequency Range : UHF band 630-770MHz
- Oscillator : PLL synthesized
- Modulation : FM
- Frequency Stability : $\pm 0.005\%$
- S/N ratio : $> 94\text{dB}$, at 48KHz deviation and 60dB μ V antenna input
- Image and Spurious Rejection : 80 dB minimum
- Receiving Sensitivity : 6 dB μ V.
- Selectivity : $> 50\text{dB}$
- AF Response : 50Hz to 15KHz ($\pm 3\text{dB}$)
- T.H.D. : $< 1\%$ (at 1KHz)
- IF Frequency : 1st: 56MHz ; 2nd: 10.7MHz
- Dynamic Range : $> 96\text{dB}$
- Tone Signal : 32.768KHz
- Audio Output : Balanced and unbalanced audio outputs
- Power Supply : 12V DC
- Current Consumption : Single Channel: about 500mA
Dual Channel: about 1000mA

Handheld/Bodypack Transmitter

- Carrier Frequency Range : UHF band 630-770MHz
- RF Power Output : 10mW (max.)
- Oscillator : PLL synthesized
- Frequency Stability : $\pm 0.005\%$
- Maximum Deviation : $\pm 48\text{KHz}$
- Spurious Emission : $> 60\text{dB}$ below carrier frequency
- T.H.D. : $< 1\%$ (at 1KHz)
- Tone Signal : 32.768KHz
- Microphone Cartridge : Handheld: uni-directional dynamic or uni-directional electret condenser unit
Lavalier: uni-directional electret condenser unit
- Operating Voltage : DC1.5V x 2 AA size dry or rechargeable batteries
- Current Consumption : 70mA \pm 5mA
- Dimension (mm) : Handheld: 266mm x 55 ϕ
Bodypack: 100(L) x 65(W) x 27(D)