Antenna Specifications

- **Bandwidth:** 480 MHz to 1000 MHz
- **Gain:** 4-6 dBi
- **Amplifier Gain:** 12±1 dB (RX connector), 0 dB (RX/TX connector)
- **VSWR (Voltage Standing Wave Ratio):** ≦2：1 (RX connector), ≦2：1 (RX/TX connector)
- **3 dB Beam-width:** 75° vertical and 130° horizontal
- **Power Consumption:** 1120 mW (RX connector), 0 mW (RX/TX connector)
- **Connector:** TNC female
- **Dimensions:** 319×270×25(mm)
- **Weights:** 430g

FC & IC - ID

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES AND RSS-123 ISSUE2 OF CANADA. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

Disposal

Dispose of any unusable devices or batteries responsibly and in accordance with any applicable regulations.

Disposing of used batteries with domestic waste is to be avoided!

Batteries / NiCad cells often contain heavy metals such as cadmium(Cd), mercury(Hg) and lead(Pb) that makes them unsuitable for disposal with domestic waste. You may return spent batteries/ accumulators free of charge to recycling centres or anywhere else batteries/accumulators are sold.

By doing so, you contribute to the conservation of our environment!

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MIPRO®

User Guide

AT-90W

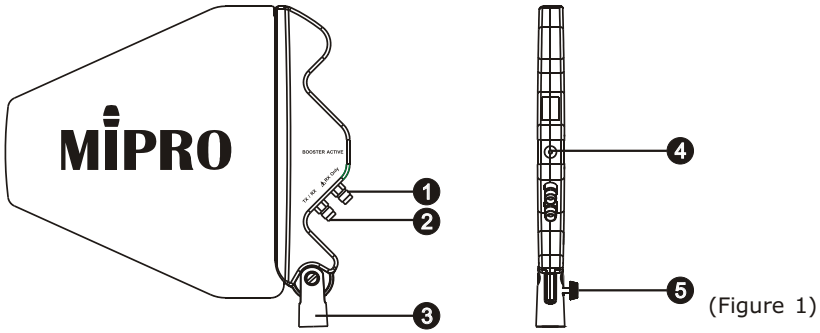
UHF Wideband Dual Directional Antenna

The product is a 2-way directional antenna for professional receiving and transmission within UHF range. Optimized for 480MHz～1000MHz, it has a 4～6dBi high directional effect which is ideal for the environment that needs specific direction usage. The most unique feature of AT-90W is it can be connected to transmitters and receivers directly. Besides, it is built with a 12dB high gain booster specifically for long distance receiving. The power of the amplifier is derived from the coaxial cable connected to MIPRO AD-707/AD-707a antenna divider or ACT-Series receivers. The two ways offer users an option to reach a maximum effect according to actual system requirement. AT-90W is ideal for both indoor and outdoor usage.

This product has following accessories:

1. Screw for assembly x 1  (For MS-90 Wall-mounting Rack)
2. Screw for assembly x 1  (For All MIPRO Tripods)
3. User Guide x 1

Part Names and Functions



(Figure 1)

❶ **RX Antenna Cable Connector:** The connector is installed with a 12 dB-booster. It is needed to have at least 20m antenna cable and connected to the receivers or antenna dividers which offer 8V DC output power.

❷ **TX/RX Antenna Cable Connector:** Transmission output or antenna input connector, 0dB gain, can be connected with maximum 20m cable or antenna to transmitters or receivers.

❸ **Swivel Adapter Bracket:** Can be setup on any 35 mm tripod or mounted on to MIPRO's MS-90 wall-mounting kit.

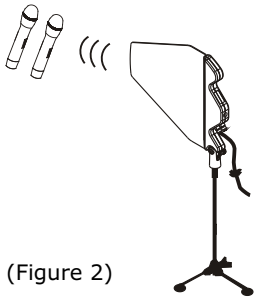
❹ **Power LED Indicator:** The LED light with the 8V DC power input from receivers and the booster will be started at the same time.

❺ **Holding Knob:** To hold antenna's direction. Generally, loose the screw to adjust antenna direction and tighten the button to hold the direction when fixed.

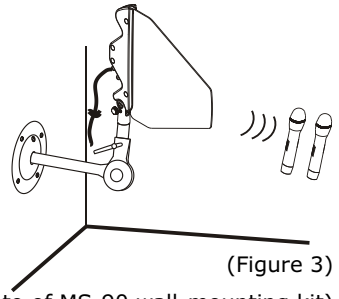
UHF Wideband Dual Directional Antenna

Setup Instruction

- Set the base on any 35 mm tripod or on top of MIPRO's MS-90 wall-mounting kit. When done, tighten the knob (see illustrations below)

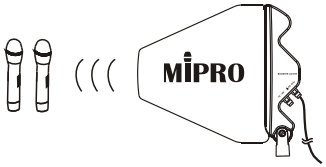


(Figure 2)
(Setup on a 35mm microphone tripod)

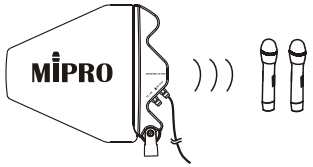


(Figure 3)
(Setup on to of MS-90 wall-mounting kit)

- TX/RX antenna cable connector ❷ can be connected with 20m antenna cable to MI-808T transmitters, AD-808 antenna combiner. This connector can also be connected to ACT-Series receivers or AD-707/AD-707a antenna dividers.
- RX connector ❶ has to adopt the antenna cable which the length is over 20m to connect to the ACT receiver and AD-707/AD-707a. While switching on the receiver or antenna divider AD-707/AD-707a, it is required to check the power indicator of AT-90W. If the indicator does not light up, it means the built-in booster is failed.
- Adjust antenna's directional angel to proper position (see illustrations below) for best performance result.



(Figure 4: ○ Correct setup)



(Figure 5: × Wrong setup)

Notes

- When using the RX connector ❶, please be aware that the inside wire of antenna cable can not touch the case itself to avoid the short circuit. This is due to the connection socket equipping with the 8VDC power.
- RX connector socket is only for the receiver and hence it can not apply to the transmitter. If doing so, it may cause the damage to the transmitter.
- The shorter length of coaxial cable is the better when it comes to connect the TX/RX socket ❷ to the receiver. It is recommended to remain the cable length within 20m to avoid the reception signal decrease too much. However the coaxial cable length has to keep over 20m when using the RX connector ❶, or the signal saturation would occur due to the over-gain from booster then lead to the anti-interference deterioration. Hence it will improve the sensitivity by using RX connector ❶, but meanwhile it requires being aware the anti-interference feature may deteriorate.