

**MIPRO**<sup>®</sup>  
MICROPHONE PROFESSIONALS

AT-90W

Wideband Multi-function Directional Antenna  
User Guide



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I. Part Names. Fig. 1

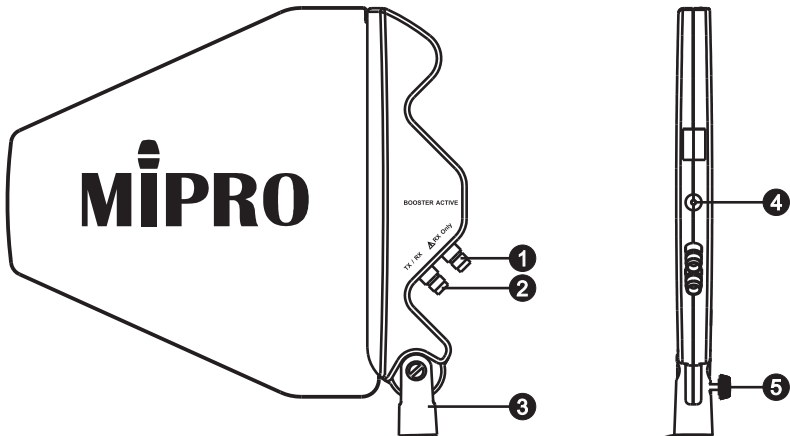


Fig. 1

- ❶ RX Antenna Cable Connector: Built-in 12dB gain controllable booster. It needs to be connected to 8V DC output power or AD-708's antenna input connectors.
- ❷ TX/RX Antenna Cable Connector: Transmission output or antenna input connector, 0dB gain, can be connected with maximum 10m cable or antenna to transmitters or receivers.
- ❸ Swivel Adapter Bracket: Can be setup on the 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.

II. Installation Instructions

1. Set the base on any 35 Ø tripod or on top of MIPRO's MS-90 wall-mounting kit and tighten. Fig. 2, 3

## Wideband Multi-function Directional Antenna

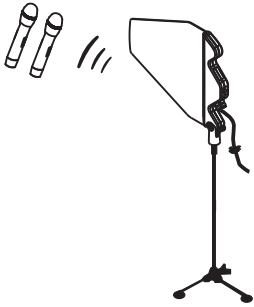


Fig. 2: Mounted on an optional microphone tripod

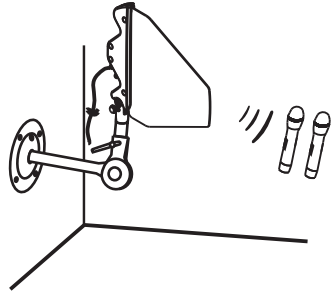


Fig. 3: Wall-mounted to an optional MS-90 wall bracket

2. TX/RX Antenna Cable Connector ② can be connected with 10m antenna cable to MI-909T transmitters, AD-808 antenna combiner, any ACT-Series receiver or AD-708 antenna divider.
3. RX Only Connector ① has to be connected to an ACT receiver or AD-708 antenna divider. When the receiver or AD-708 is powered on, the Power LED Indicator of AT-90W glows to indicate booster is active. Booster is inactive when Power LED Indicator does not glow when powered on.
4. When paired with the auto gain-controllable antennas (like AD-708 antenna divider or AD-702 antenna auto gain controller), please refer to **IV. General Specifications of 50Ω Coaxial Cable** for reference. Select the appropriate cable specifications and length and refer again to instructions on how to adjust for auto gain-controls.
5. Adjust antenna's directional angel to proper position for best performance result. Fig. 4, 5

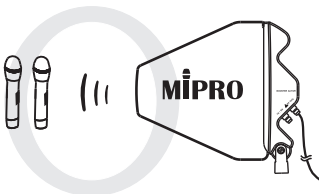


Fig. 4: Correct. Transmitter Microphones are facing the AT-90W.

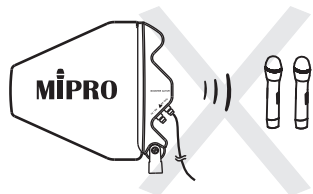


Fig. 5: Incorrect. Transmitter Microphones are behind the AT-90W.

### III. Cautions

1. When using the RX connector ❶, do not allow the internal antenna core cable to be in contact with the casing to prevent short circuit since the connector has 8V DC power supply.
2. RX connector is designed for receiver use only. DO NOT apply to the transmitter, otherwise it may cause the product damage.
3. The shorter length of coaxial cable is better when connected the TX/RX connector ❷ to the receiver. It is recommended to remain the cable length within 10m to avoid deterioration of reception signals.
4. The default gain of the built-in booster is 12dB (maximum value). Once the auto gain adjustment is activated, an adjusted value will be auto-saved. If the cable length or specification changes, activate auto gain adjustment again is needed.
5. Refer to actual product in the event of product discrepancy.

### IV. General Specifications of 50Ω Coaxial Cable

| Cable Type | Signal Loss (dB/10m) |        | Maximum Length (m) |
|------------|----------------------|--------|--------------------|
|            | 200MHz               | 1.0GHz |                    |
| RG-58A/U   | 2.3                  | 5.8    | 30                 |
| 3D-2V      | 2.1                  | 5.2    | 33                 |
| 5D-2V      | 1.5                  | 3.8    | 45                 |
| 8D-2V      | 0.9                  | 2.2    | 80                 |
| 5D-SFA     |                      | 1.8    | 95                 |
| 8D-SFA     |                      | 1.2    | 140                |

Note: Characteristics of above coaxial cables are industry standard. Signal loss might vary depending on each brand's specifications. Hence, for the most accurate calculation, always refer to the specifications provided by the manufacturers.

### 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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