

MIPRO[®]

User Guide

AT-90Wa

**Wideband Transmitting and Receiving
Log Antenna**

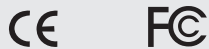
FOR MLK SHOWPRODUCT ONLY



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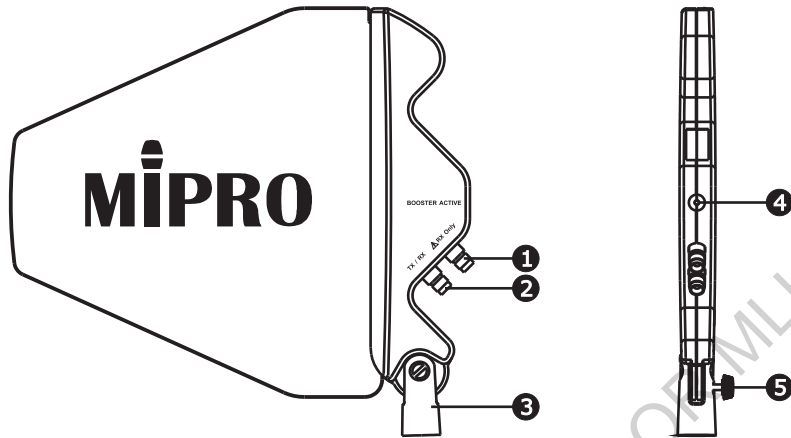
Specifications and design subject to change without notice.

The AT-90Wa is a bi-functional log antenna for professional receiving and transmitting applications for the MIPRO ACT-series receivers & transmitters. Optimized for 470~1GHz, it has a 4~6dBi gain which is ideal for any installation requiring specific directionality. The wideband AT-90Wa can be easily distinguished from its predecessor, the AT-90, by its new "W-Shaped" design.

Built-in 12dB gain controllable booster and thus provides extended reception range and compensates the signal loss of coaxial cable to improve reception range and signal quality.

With the addition of a MIPRO AD-708 wideband 4-channel auto gain-control antenna divider, it adjusts gain control booster automatically, avoid excessive intermodulation distortion signal after amplification, resulting in deterioration of interference characteristics of the receivers. Built-in gain controllable booster's bias power is provided by AD-708 or ACT-series receiver. To be applied when the regulator with the receiver in order to provide gain control functions.

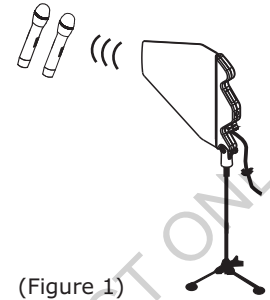
Controls and Indicators



- ❶ **RX Antenna Cable Connector:** Built-in 12dB- gain controllable booster. It needs to be connected to 8V DC output power or ACT-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 any 35mm 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.

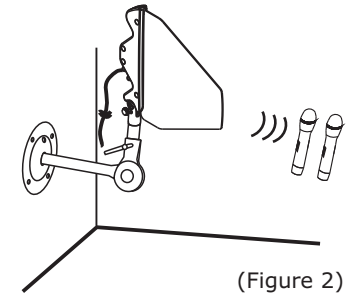
Set-up Instructions

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



(Figure 1)

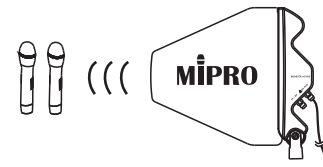
(Setup on a 35mm microphone tripod)



(Figure 2)

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

- TX/RX antenna cable connector can be connected with 10m antenna cable to MI-909T transmitters, AD-808 antenna combiner. This connector can also be connected to ACT-Series receivers or AD-708 wideband 4-channel auto gain-control antenna divider.
- RX connector has to be connected to ACT receiver or AD-708's antenna connectors. While switching on the receiver or AD-708, it is required to check the power indicator of AT-90Wa. If the indicator does not light up, it means the built-in booster is not operational.
- During operation when antenna having auto gain-controllable models (like AD-708), please refer to the chart table below about 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.
- Adjust antenna's directional angel to proper position (see illustrations below) for best performance result.



(Figure 3: ○ Correct setup)



(Figure 4: × Wrong setup)

Notes

When using the RX connector, 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 8V DC 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 better when connected to the TX/RX socket to the receiver. It is recommended to remain the cable length within 10m to avoid deterioration of reception signals.


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.

WARNING

1. **FOR OUTDOOR USE:**
To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
2. **UNDER WET LOCATION:**
Apparatus should not be exposed to dripping or splashing and no objects filled with liquids, such as vases should be placed on the apparatus.
3. **SERVICE INSTRUCTIONS:**
CAUTION - These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.



 This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

 This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

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



2005-08-13

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!

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.