

# MIPRO<sup>®</sup>

AT-100

Wideband Circularly Polarized Antenna  
User Guide



I. Part Names. Fig. 1

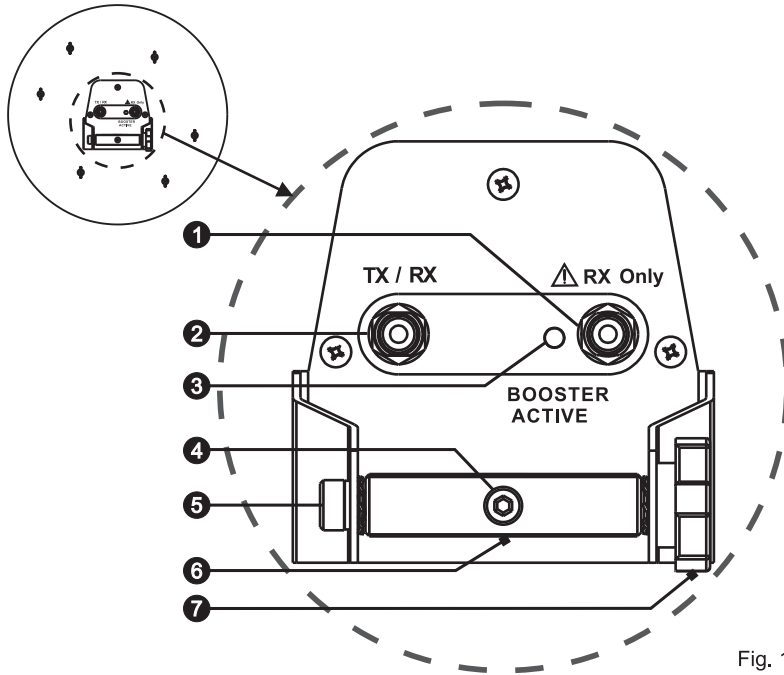


Fig. 1

- ❶ RX (receiver) Antenna Cable Connector: The connector has a built-in 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 (transmitter/receiver) Antenna Cable Connector: Transmission output or antenna output connector, 0 dB gain, can be connected with maximum 10m antenna cable or antenna to transmitters or receivers.
- ❸ Power LED Indicator: LED indicator lights when 8V DC power input from receiver is interfaced to “RX only” connector and indicates booster is active.
- ❹ Hexagonal Screw Nut: To stabilize and prevents Swivel Adapter Bracket from shaking right and left.
- ❺ Fixed Screw Nut: To stabilize Swivel Adapter Bracket and the antenna.
- ❻ Swivel Adapter Bracket: Setup on any 35 Ø tripod or mounted on to MIPRO's MS-90 wall-mounting kit.
- ❼ Fixed Knob: To stabilize antenna's position vertically.

## II. Installation Instructions

1. Mount the Swivel Adapter Bracket on to a 35 Ø tripod or MIPRO's MS-90 wall-mounting kit. Screw on the Hexagonal Screw Nut tightly to fix the Swivel Adapter Bracket firmly. Fig. 2, 3

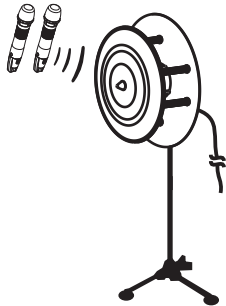
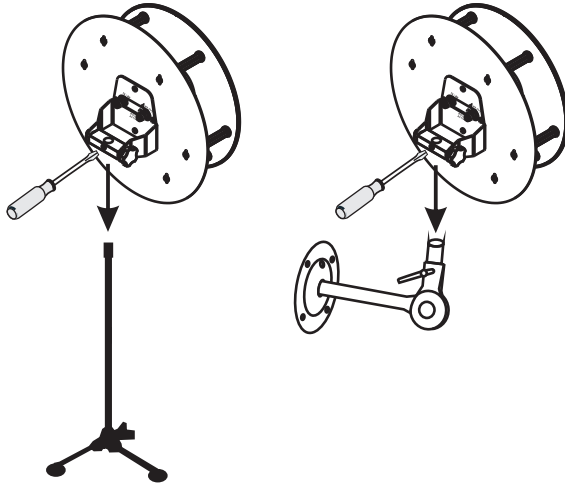


Fig. 2:  
Mounted on an optional  
microphone stand

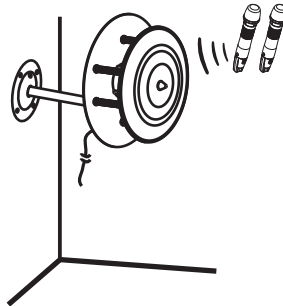


Fig. 3:  
Wall-mounted to an optional  
MS-90 wall bracket

2. Screw on the Fixed Screw Nut tightly and loosen the Fixed Knob, adjust antenna's directional angles for proper positions and then revolve the Fixed Knob tightly for best performance result. Fig. 4, 5

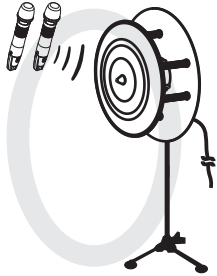


Fig. 4: Correct.  
Transmitter Microphones  
are facing the AT-100.

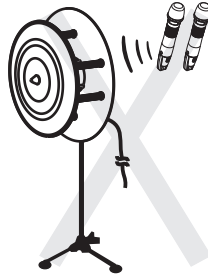


Fig. 5: Incorrect.  
Transmitter Microphones  
are behind the AT-100.

3. Indoor Installation:

- (A) Stage Performance: MS-30 mic stand is recommended.
- (B) Ceiling Mounting-vertical Position: MS-90 ceiling rack-mount is recommended.
- (C) Wall Mounting-horizontal Position: MS-90 wall rack-mount is recommended.

4. Outdoor Installation:

MS-90 rack-mounted to walls, pillars or proper stands is recommended.

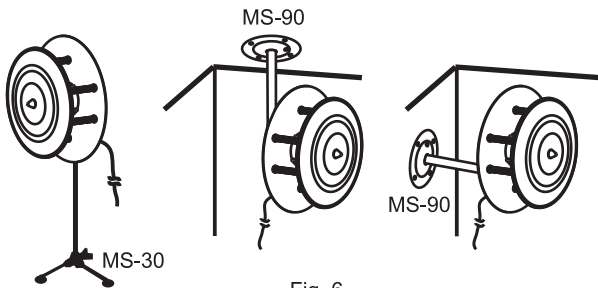


Fig. 6

5. TX/RX Antenna Cable Connector ② can be connected with a 10m antenna cable to MI-909T transmitter, AD-90A power amplifier, any ACT-Series receiver or AD-708 antenna divider.

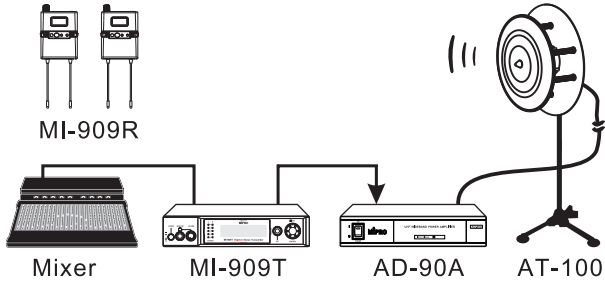


Fig. 7

6. RX Only Connector ① has to connect to an ACT receiver or AD-708 antenna divider. When the receiver or AD-708 is powered on, the Power LED Indicator of AT-100 glows to indicate booster is active. Booster is inactive when Power LED Indicator does not glow when powered on.

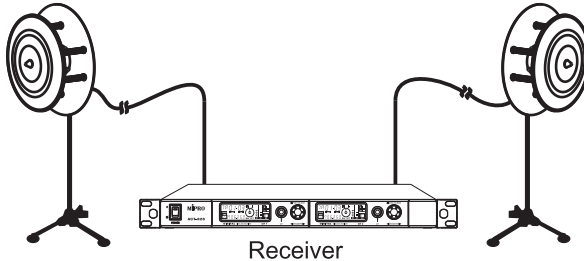


Fig. 8

7. 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.

### 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.

2005-08-13

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

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

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