

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!

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AS110531

MIPRO AD-90A

UHF Wideband High Power Amplifier

Instruction Manual



UHF Wideband High Power Amplifier

Instruction Manual

Thank you for choosing the MIPRO AD-90A UHF wideband high power amplifier. In order to get the best performance possible, please read this instruction manual thoroughly for a better understanding of how to operate the system properly.

In this system, you will find following accessories:

- (1) RG-58AU Signal Cable 40cm (TNC male) × 1
- (2) 12V / 1A Power Supply × 1
- (3) Instruction Manual × 1

Main Functions of the AD-90A:

MIPRO AD-90A is a professional UHF wideband high power amplifier. Its working frequency is in the range of 470 MHz to 960 MHz and its maximum output power can reach +30dBm (1W). The AD-90A is designed to work with MIPRO's MI-808T Stereo Transmitter and MT-90 Wireless Interlinking Transmitter. Alternatively, it can also work with the MIPRO AD-90S UHF wideband high power splitter for requirement of long-range transmission up to a distance of 2~3 kilometers. Therefore, when cable transmission is not possible due to environmental restrictions, combining the MIPRO MT-90 or MI-808T with the AD-90A for long-distance wireless transmission is an ideal solution. In addition, the AD-90A can be used for connecting to AT-90T UHF Wideband Passive Directional Antenna for outdoor applications such as a transmitting amplifier when remote speakers require wireless transmission at longer distances.

Specification:

- (1) Operating Frequency: 470 MHz ~ 960 Mhz.
- (2) Gain: 8 ± 1 dB.
- (3) Signal Indicator: Equipped with signal indication light. It lights up when input signal indicator is over +6 dBm.
- (4) Maximum Output Power: +30dBm (1W).

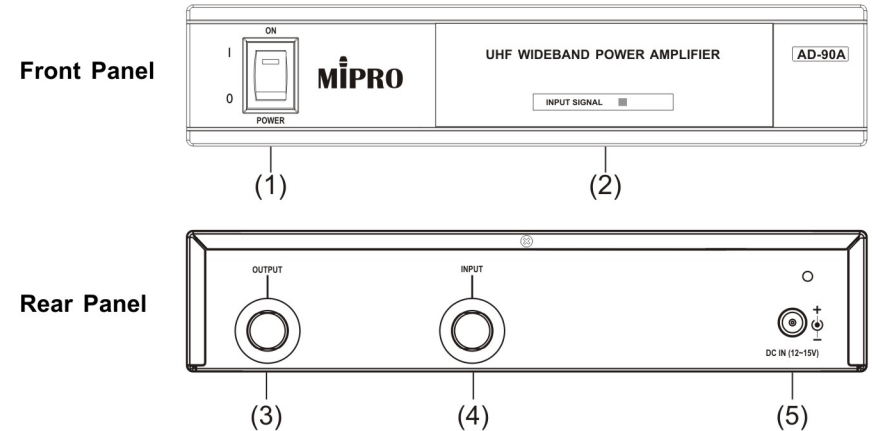
Key Features:

- (1) Wideband Amplification: Utilizes a wideband amplification design for the gain flatness UHF470~960MHz bandwidth.
- (2) Linear Amplification Characteristics: Utilizes a low distortion, high linear amplification technique that allows the enhancement of FM or AM signals.
- (3) High efficiency and High Power Output: Utilizes high power circuitry design with a maximum output power of +30dBm (1W). Since the gain of amplifier is 8dB, it requires only 150mW of input power to achieve 1W of output power.

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1. Glossary:



- (1) Power Switch / Power Indicator: Indicator will turn on after main power is turned on.
- (2) Input Signal Indicator: When input signal of external transmitter is greater than +6 dBm, LED indicator will turn on.
- (3) Input Signal Connector: Connects to the RF output connector of the transmitter (for example: MI-808T).
- (4) Output Signal Connector: Exports signals to the antenna.
- (5) DC Input Socket: Input socket for 12-15 Volt DC power. Please note that the polarity of the central pin in the socket is positive (+).

2. Operations:

1. Installing the Input Signal

Connect the MI-808T's output to the AD-90A's input via a coaxial cable having a TNC connector on both ends. Please note the length of the coaxial cable should be kept to a minimum.



(Illustration 1)

UHF Wideband High Power Amplifier

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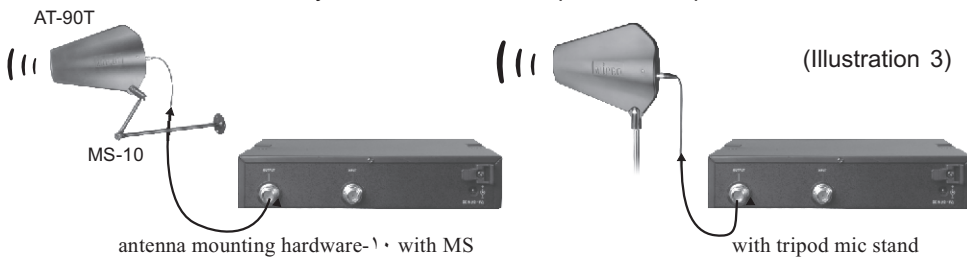
2. Installing an Antenna

Install the original coaxial antenna from the transmitter into the output connector. For best transmitting performance, please make sure the antenna and matching MI-808T transmitter have the same frequency band.



3. Installing an Extension Antenna

Connect a coaxial cable to a MIPRO AT-70 extension antenna or an AT-90T wideband extension antenna. The antenna can be mounted on a MS-10 (wall-mount antenna bracket) or on a standard microphone stand. Please make sure to use above-average quality coaxial cable and keep the cable length to a minimum to minimize line losses. The antenna should be installed in a position that is higher than the audience and away from obstacles for optimum reception.



4. Turning on the System:

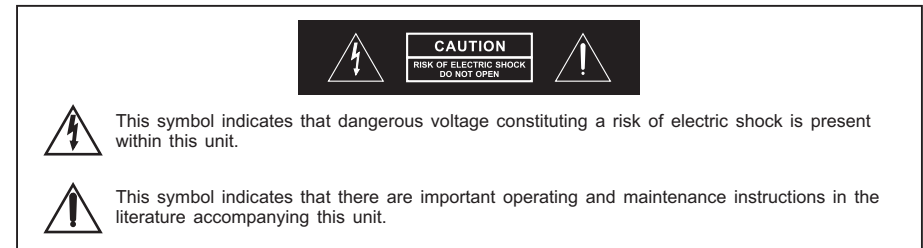
Turn the power to the "ON" position and the power indicator will illuminate. When the input signal strength is greater than +6 dBm, the LED indicator will also illuminate.

NOTE:

- (1) The AD-90A works in the frequency range of 470 MHz ~ 960 MHz. Any MI-808T transmitter that is within this range can work with the AD-90A. However, please make sure the antenna used with the AD-90A is the same bandwidth as the one in the MI-808T to avoid adversely affecting the system's performance. The MIPRO AT-90T wideband transmitting antenna is designed to handle this entire frequency range and is thus the best solution to avoid a possible mistake in matching the frequency bands of the antenna and transmitter above.
- (2) When using coaxial cable, please make sure a premium quality 50Ω coaxial cable is used (e.g.: RG-58 cable or better) and the cable length should be no more than 10

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.



FC & IC - ID

THIS DEVICE COMPLIES WITH PART 74 OF THE FCC RULES AND RSS-123 ISSUE1 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.