

# TUBE MP

PROFESSIONAL TUBE MIC PREAMP



## USER'S MANUAL





## IMPORTANT SAFETY INSTRUCTIONS – READ FIRST



This symbol, wherever it appears, alerts you to the presence of uninsulated Dangerous voltage inside the enclosure. Voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read manual.

### Read instructions:

Retain these safety and operating instructions for future reference. Heed all warnings printed here and on the equipment. Follow the operating instructions printed in this user guide.

### Do not open:

There are no user serviceable parts inside. Refer any service work to qualified technical personnel only.

### Power sources:

Only connect the unit to mains power of the type marked on the rear panel.

### Power cord:

Use the power cord with sealed mains plug appropriate for your local mains supply as provided with the equipment. If the provided plug does not fit into your outlet consult your service agent. Route the power cord so that it is not likely to be walked on, stretched or pinched by items placed upon or against.

### Ventilation:

Do not position the unit where the air required for ventilation is impeded. If the unit is to be wall mounted with a 100mm vesa mounting system, ensure that it is constructed to allow adequate ventilation.

### Moisture:

To reduce the risk of fire or electrical shock do not expose the unit to rain, moisture or use in damp or wet conditions. Do not place a container of liquid on it, which may spill into any openings.

### Heat:

Do not locate the unit in a place close to excessive heat or direct sunlight, as this could be a fire hazard. Locate the unit away from any equipment, which produces heat such as: power supplies, power amplifiers and heaters.

### Environment:

Protect from excessive dirt, dust, heat, and vibration when operating and storing. Avoid tobacco ash, drink spillage and smoke, especially that associated with smoke machines.

### Handling:

*To prevent damage to the cosmetics avoid rough handling or placing the front or rear face on an abrasive surface. Protect the controls from damage during transit. Use adequate padding if you need to ship the unit. To avoid injury to yourself or damage to the equipment take care when lifting, moving or carrying the unit.*

### Servicing:

Switch off the equipment and unplug the power cord immediately if it is exposed to moisture, spilled liquid, or the power cord or plug becomes damaged, during a lightning storm or if smoke odor or noise is noted. Refer servicing to qualified technical personnel only.

### Installation:

Install the unit in accordance with the instructions printed in the user manual.

# TUBEMP

## PROFESSIONAL TUBE MIC PREAMP

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# INTRODUCTION

Thank you for purchasing the TUBE MP and congratulations: You now own one of the most sophisticated pieces of audio signal-processing gear. Offering a superb level of sound quality, the TUBE MP's special tube and integrated circuit design combined with a straightforward user interface quickly and easily gives you access to all of its features.

## Features

- 70dB of Gain
- 12AX7 Tube
- XLR Balanced Input
- ¼-inch TS Instrument Input
- Balanced XLR Output
- ¼-inch TS Output
- Switchable Phantom Power
- Phase Reverse Switch
- 20dB Gain Switch
- Input Gain Control
- Output Level Control
- 10Hz to 20KHz Frequency Response
- >100dB Dynamic Range
- AU Steel Chassis

## Product Description

ART's TUBE MP circuitry is a hybrid design utilizing the latest and best solid state and tube technology. Using a transformerless design throughout the TUBE MP maintains exceptional signal integrity and extremely low noise. The active balanced input utilizes a hybrid multiple paired transistor/opamp design providing extremely low noise and excellent CMRR. The instrument input has a high impedance preventing the loading of any device connected to it. Phantom power is derived from the incoming AC voltage. The XLR output is active balanced and the ¼-inch output is unbalanced with a 300 ohm impedance.

## CONNECTIONS

It's easy to interface the TUBE MP with other equipment. All connections are made at the back of the TUBE MP. Standard XLR and ¼-inch inputs and outputs make patching simple. Note: For best audio quality, always use high-quality cables.

### Inputs

The TUBE MP provides both an XLR and ¼-inch input jack. Use the balanced XLR input for use with a microphone. Audio input as well as phantom power (if needed switchable on and off) is supplied through this jack. Use the unbalanced ¼-inch input jack for instrument applications. XLR pin configuration: pin 1 = gnd pin 2 = Positive (hot), pin 3 = negative.

***DO NOT USE BOTH INPUTS AT THE SAME TIME.***

### Outputs

The XLR output of the TUBE MP is active balanced you may “see it in an unbalanced configuration without harm to the output circuitry. Use the unbalanced ¼-inch jack for sending your signal to amps, processors or other unbalanced configurations. Also, both outputs may be used at the same time.

### Power

Insert the supplied 9 Volt AC adapter's plug into the input labeled Pwr, 9VAC on the TUBE MP's back panel.

An external 9VAC adapter powers the TUBE MP. Always make sure the output plug is securely plugged into the rear of the TUBE MP, and that the adapter is held firmly in an electrical outlet. Never operate the TUBE MP or AC adapter in the rain or in wet locations. If the AC adapter's cord is ever cut, discontinue use and replace the adapter with a new one. Unplug the adapter when the TUBE MP is not in use. Refer to the label on the adapter or the specifications later in this manual for the appropriate operating voltages.

## CONTROLS, SWITCHES and INDICATORS

### Input Control

The input control sets the amount of input Gain of the TUBE MP Turn the control clockwise to increase gain and counterclockwise to decrease gain. You may control two ranges of gain with this control, +26 to +60dB and +6 to +40dB. Selection of the gain range is made with the +20dB Gain Switch.

#### **+20dB Gain/Norm Switch**

Use the +20dB Gain/Norm switch to set the gain range of the Input control. When the switch is out, the TUBE MP operates in Normal mode depressing the switch adds 20dB of gain. This mode is indicated by the labeling in red and corresponds directly to the Input control's red gain range labeling for microphone applications, where more level is needed, push the switch in.

#### **P-Pwr +48V/Out Switch**

Use the TUBE MP's phantom power to supply power to all microphones requiring +48V phantom power. The TUBE MP's Phantom power is engaged and disengaged with this switch Phantom power is applied to pins 2 and 3 of the XLR Input jack when this switch is pushed in. To disengage phantom power, position the switch in the out position. Power Phase Reverse/Norm Switch.

## Phase Reverse/Norm Switch

To set the phase of the TUBE MP's output signal, adjust this switch. When the switch is in the Out position the output signal is normal. Depressing the switch reverses the phase of the output signal. In multi-microphone applications, mic placement can affect the phase of the signals. If your sound is "thin" or "out of position," reverse the phase to correct the problem.

## Output Control

The output control sets the output level of the TUBE MP. When the control is fully counterclockwise the output level of the TUBE MP is zero. Turning the control clockwise increases the level of the output to a maximum of +10dB of gain. This gain is in addition to the existing input gain.

## Power/Peak L.E.D.

When power is applied to the TUBE MP the Power/Peak L.E.D. lights green. This L.E.D. also serves as the signal clip indicator. If too much signal is present this L.E.D. lights red. If the L.E.D. is constantly lit, reduce the signal level with the Input Control. The clip L.E.D. is positioned at the tube's output in the circuitry and lights when a level 6dB below hard clipping dB is reached.

## Applications

The main application of the TUBE MP is a microphone preamplifier. Plug any microphone directly into either input and set the Input and Output controls to provide a healthy level into the next stage of your system. Use the TUBE MP as an acoustic or piezo pickup preamplifier to run directly into a console, amplifier, signal processor or recorder. You may use the TUBE MP to interface any instrument directly to a live or recording console's line input, amplifier, signal processor or recorder.

The TUBE MP may also be used as a direct box.

## Safety Precautions

**Warning:** To avoid the risk of shock or fire, do not expose this unit to moisture. Refer all servicing to qualified personnel. Do not remove the metal cover; there are no user-serviceable parts inside. Only use the power adapter that came with this unit or one obtained from ART's Customer Service Department at E-mail: [support@artproaudio.com](mailto:support@artproaudio.com)

# WARRANTY INFORMATION

## Limited Warranty (USA only)

Applied Research and Technology will provide warranty and service for this unit in accordance with the following warrants:

Applied Research and Technology, (A R T) warrants to the original purchaser that this product and the components thereof will be free from defects in workmanship and materials for a period of **three** years from the date of purchase. Applied Research and Technology will, without charge, repair or replace, at its option, defective product or component parts upon prepaid delivery to the factory service department or authorized service center, accompanied by proof of purchase date in the form of a valid sales receipt.

## Online Registration

Please go to [www.artproaudio.com](http://www.artproaudio.com). Select "*Support*", then "*Product Registration*" input your information here.

## Exclusions

This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. This warranty is void if the serial number is altered, defaced, or removed.

A R T reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install the same on products previously manufactured.

A R T shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights and you may have other rights, which vary from state to state.

For units purchased outside the United States, an authorized distributor of Applied Research and Technology will provide service.



# SERVICE

The following information is provided in the unlikely event that your unit requires service.

1. Be sure that the unit is the cause of the problem. Check to make sure the unit has power, all cables are connected correctly, and the cables themselves are in working condition. You may want to consult with your dealer for assistance in troubleshooting or testing your particular configuration.
2. If you believe that the ART unit is at fault, go to [www.artproaudio.com](http://www.artproaudio.com).
3. Select “*Support*”, then “*Return Authorization Request*” to request a return authorization number.
4. If you are returning the unit for service, pack the unit in its original carton or a reasonable substitute. The original packaging may not be suitable as a shipping carton, so consider putting the packaged unit in another box for shipping. Print the RA number clearly on the outside of the shipping box. Print your return shipping address on the outside of the box.
5. Include, with your unit, a note with the RA number and your contact information, including a return shipping address (we cannot ship to a P.O. box) and a daytime phone number, and a description of the problem, preferably attached to the top of the unit. Also include a copy of your purchase receipt.

## **Please fill in the following information for your reference**

Date of purchase \_\_\_\_\_

Purchased from \_\_\_\_\_

Serial Number \_\_\_\_\_

# SPECIFICATIONS

<b>Input Connections</b>	XLR (balanced), ¼-inchTS
<b>Output Connections</b>	XLR (balanced), ¼-inchTS
<b>Input Impedance XLR, ¼-inch</b>	2K ohms, 840k ohms
<b>Output Impedance XLR, ¼-inch</b>	600 ohms, 300ohms
<b>Maximum Input Level, XLR</b>	+14dBu
<b>Maximum Input Level, ¼-inch</b>	+22dBu
<b>Maximum Output Level, XLR</b>	+28dBu
<b>Maximum Output Level, ¼-inch</b>	+22dBu
<b>CMRR</b>	>75dB (typical @ 1kHz)
<b>Frequency Response</b>	10Hz to 30kHz, +/- .5dB
<b>Dynamic Range</b>	>100dB (20-20kHz) typical
<b>Total Harmonic Distortion (THD)</b>	<0.1% (typical)
<b>Maximum Gain</b>	
<b>XLR to XLR</b>	79dB (typical)
<b>¼-inch to ¼-inch</b>	54dB (typical)
<b>XLR to ¼-inch</b>	64dB (typical)
<b>¼-inch to XLR</b>	60dB (typical)
<b>Equivalent Input Noise (EIN)</b>	
<b>XLR to XLR</b>	-129dBu (A weighted)
<b>¼-inch to ¼-inch</b>	-105dBu (A weighted)
<b>Tube Type</b>	12AX7A, Dual Triode, Hand Selected
<b>Dimensions (HWD)</b>	2.0-inch x 5.5-inch x 5.0-inch 50.8mm x 139.7mm x 127mm
<b>Weight</b>	1.5 lbs (680kg)
<b>Tube Type</b>	12AX7A, Dual Triode, Hand Selected
<b>Power Requirements</b>	USA – 9VAC @ .8A (typ.) Export units configured for country of destination

ART maintains a policy of constant product improvement. ART reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install same on products previously manufactured. Therefore, specifications are subject to change without notice.





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