



**Andros 1.2  
Vacuum Tube Phonostage Preamplifier  
Owner's Manual**

Please read carefully before  
installing and operating this equipment

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**Made in the USA  
Using US and Imported Parts**

Dear Music Lover,

I wanted to personally thank you for your purchase of my Andros 1.2 Phonostage.

I have loved music all my life – as a musician, record producer and audio engineer. That makes me fussy about sound. That's a good thing.

Each unit is built by hand with precision and pride to produce the most enjoyable listening experience for you.

I am proud to put my name on it and honored to share this with you.

Wishing you many happy years of listening!

Sincerely,

-- George Counnas, President of Zesto Audio

**FYI:**

**Zesto** is Greek for hot

**Andros** is a Greek island and the home of my grandmother's family.

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**What's in the box?**

- Andros 1.2 Phonostage
- 4 Vacuum Tubes
- White glove for handling tubes
- IEC power cable 6'
- Optional ground wire for turntable
- Not Included: Interconnect cables

## Warning and Caution

**WARNING:** The triangle with the lightning flash symbol displayed on the unit advises the user of dangerous uninsulated voltage inside the product's enclosure.

**CAUTION:** To reduce the risk of electric shock, do not remove the cover. There are no user-serviceable parts inside; it is recommended that only qualified personnel service this component.

1. **OWNER'S MANUAL:** Before powering up the equipment, read all safety and operating instructions and follow them as instructed. Retain the safety and operating instructions for future reference.
2. **ATTACHMENTS:** Use only those attachments recommended by the unit manufacturer, as others may cause hazards.
3. **ACCESSORIES:** Do not place the unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing injury to a person or damage to the unit. Mount the unit according to the manufacturer's instructions with the suggested mounting accessory.
4. **WALL OR CEILING MOUNTING:** Do not mount the unit on a wall or ceiling.
5. **WATER AND MOISTURE:** Do not use the unit near water (for example, near a swimming pool, bath tub, wash bowl, kitchen sink, or laundry tub) or in a damp environment (like a basement or outside in the rain).
6. **OBJECT AND LIQUID ENTRY:** Do not push objects of any kind into the unit through openings as they could touch dangerous voltage points and short-out parts, possibly resulting in a fire or electric shock. Do not spill liquid of any kind on the unit. If water or any metal object (such as a paper clip, coin, or staple) accidentally falls inside the unit, disconnect it from the AC power source immediately and contact Zesto Audio for further instructions.
7. **HEAT:** Position the unit away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.
8. **VENTILATION:** Slots and openings in the enclosure create ventilation to protect the component from overheating. All of these openings must remain unobstructed. Allow at least six inches of clearance above the unit, 0.5 inch below and an opening behind the unit for airflow. Do not place the unit on a bed, sofa, rug, built-in bookcase, or rack without adequate ventilation.
9. **GROUNDING OR POLARIZATION:** As a safety feature, the unit may be equipped with a polarized alternating current line plug in which one blade is wider than the other and has an additional grounding blade. This plug will fit into the power outlet only one way. If you cannot insert the plug fully into the outlet, try reversing the plug. If the plug still will not fit, contact a licensed electrician to update your outlet. Do not defeat the safety purpose of the polarized plug.
10. **POWER SOURCES:** Operate the unit only from the power source indicated on the marking label on the back of the unit. If you are unsure of the type of power supplied to your home, consult your unit dealer or local power company.
11. **POWER CORD PROTECTION:** Arrange power supply cords so that they do not suffer from foot traffic or pinching by items placed on or against them. Pay close attention to cords where plugs enter the AC outlet and where they exit from the unit.
12. **LIGHTNING:** For added protection during a lightning storm or when the component is idle for long periods of time, unplug the unit from the wall outlet. This will help protect the unit from lightning and power line surge damage.

13. **POWER LINES:** Do not locate an outside antenna system in the vicinity of overhead power lines or other electric light or power circuits. When installing an outside antenna system, take extreme care to avoid touching the power lines or circuits; contact with them could be fatal.
14. **OVERLOADING:** Do not overload wall outlets, extension cords, or integral convenience receptacles as this increases the risk of fire or electric shock.
15. **REPLACEMENT PARTS:** When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or those having the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock or other hazards.
16. **SAFETY CHECK:** Upon completion of any service or repairs to the unit, ask the service technician to perform safety checks to ensure the unit is in proper operating condition.
17. **IMPORTANT SAFETY NOTE:**
- Before connecting a new product such as the Andros 1.2 Phonostage to your audio or home theater system, turn off all other equipment (preferably unplugging them from the AC power source). Many audio components feature automatic turn-on circuits that may activate during an installation, potentially causing damage to electronic components or speakers. This type of damage is not covered by product warranties, and Zesto Audio specifically disclaims responsibility for any such damage.
  - **Power Cord:** The removable IEC power cord provided with your unit was specifically designed for use with this product, but other AC cords may be used. Consult your dealer for advice on AC power cords and high quality wire in your system.
  - **AC Fuse:** The fuse is located inside the IEC power entry connector. If the unit does not power up, contact an authorized service representative.
  - **Wiring:** Cables running inside walls should have the appropriate markings to indicate compliance and listing by the UL, CSA or other standards required by the UL, CSA, NEC, or your local building code. Questions about cables inside of walls should be directed to a qualified custom installer, licensed electrician, or low-voltage contractor.
18. **RECORDING COPYRIGHT:** Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.
19. **FCC INFORMATION FOR USER:**
- **CAUTION:** Any changes or modifications not expressly approved by Zesto Audio could void the user's authority to operate the equipment.
  - These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy, and if not installed and used in accordance with the instructions it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
    - Reorient or relocate the equipment.
    - Increase the separation between the equipment and receiver.
    - Connect the equipment into an outlet on a circuit different from where the receiver is connected.

## Rear Panel Inputs and Controls



- Power ON/OFF switch ..... Turns the unit ON/OFF (located on side panel).
- IEC Power entry connector ..... 110/120V or 220/230/240V AC power input.
- Ground binding post/banana socket ..... The main ground point for turntable.
- RCA Output (Left and Right) ..... The main output going to your system.
- RCA Moving Magnet (MM) Input (Left and Right) ..... A possible turntable input.
- RCA Moving Coil (MC) Input (Left and Right) ..... A possible turntable input.
- XLR3 Balanced MC Input (Left and Right) ..... A possible turntable input.
- MM/MC selection switch (Left and Right) ..... Selects between the MM/MC inputs.
- MC High/Low Output switch (Left and Right) ..... Selects the gain for MC cartridges.
- Ground ON/OFF switch (Left and Right) ..... Connects or disconnects the ground to the MC input.
- MC Load rotary switch (Left and Right) ..... Correctly tunes your MC cartridge.
- MM Load switch (Left and Right) ..... Correctly tunes your MM cartridge.

## Specifications

### Inputs per channel

- Separate MM and MC inputs
- MM/MC switch
- MM impedance switch 47K or 15K Ohms
- MM capacitance 200pf
- MC Single Ended RCA with isolated ground or transformer Balanced XLR3F
- MC ground on/off switch
- MC load impedance adjustable 1000, 800, 600, 500, 400, 300, 200, 100, 50, 20 Ohms
- MC Internal step up transformers
- MC High/Low switch with ~ – 3dB gain for high output MC cartridges

### Outputs per channel

- Impedance 10K ohms
- +6V max output level

### Power

- Ground binding post
- Power consumption 27W , 0 drain when off
- Voltage 110/120V AC 60Hz  
(optional factory installed 220V or 230/240V AC 50/60Hz)
- Standard 3 pin IEC power connector
- ON/OFF power switch conveniently located on the front side
- Two internal high quality linear regulated power supplies  
250V and 12V

### Active Components

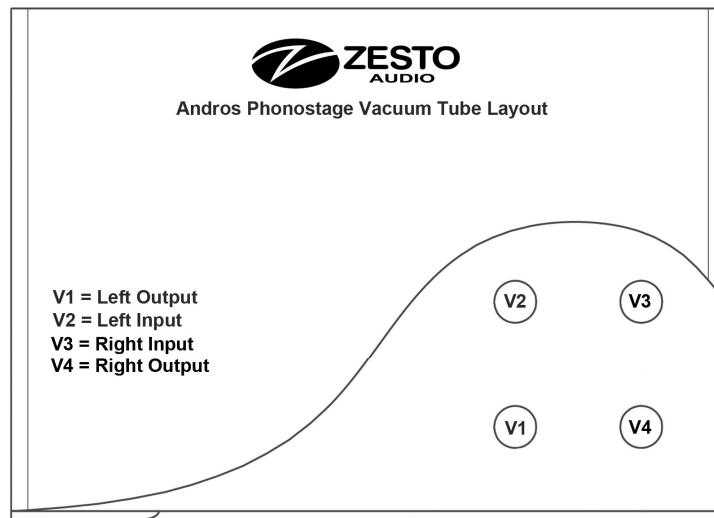
- Four (4) Gold pin ECC83S vacuum tubes
- High quality Gold pin ceramic sockets

### Detailed Specifications

- Gain MM input 47dB
- Gain MC input 67dB
- Noise -75dBu below max output
- Frequency response complies to RIAA curve within +or- 0.5 dB
- RIAA curve is achieved using a passive filter
- 1% metal film resistors throughout
- Polypropylene capacitors throughout the audio path

### Other Features

- Each unit is made by hand
- 50 hour factory burn in on all circuits and vacuum tubes
- Dimensions 17" W X 12" D X 5" H
- Weight 20 lbs.



### Hookup, Settings and Adjustments

#### Before you start you will need:

1. RCA Interconnect cables to your system
2. Turntable cables, RCA or XLR
3. Manufacturer specs on your Phono cartridge
  - Is your cartridge MM or MC?
  - Is your MC cartridge high or low output?
  - What is the recommended Ohms load for MC cartridge?

### Proper Care of your Vacuum Tube Phonostage

#### Very Important Read First

**The simple rule to remember is “Turn on first, Turn off last”.**

It is customary for vacuum tube equipment, as it is first turned on, while the unit is powering up, to have a brief initial “hum” coming from the unit, not from the speakers.

It is very important that all of your audio equipment is **turned off** or unplugged from the main power before attempting to install this unit.

It is recommended that during normal operation this unit is **turned on first** for at least 5 minutes before turning on the rest of your system to prevent damage to your equipment and to get the best performance from the phonostage.

You should also **turn off** your power amplifiers before making any adjustments to the phonostage.

In addition it is also strongly recommended that this unit is **turned off last** after the rest of your system has been turned off to prevent damage to your equipment. **Remember “Turn on first, Turn off last”.**

Not doing so may create a very loud noise that could damage your speakers or other equipment.

## Hookup, Settings and Adjustments

### Burn-in

Like all high end audio equipment, this Vacuum Tube Phonostage can take 100 hours to **break in**. For circuit testing and quality assurance, Zesto Audio ships all their Phonostage units with at least 50 hours of burn-in.

### Vacuum Tubes

Using the glove provided, unpack and carefully plug in the four vacuum tubes making sure they are firmly pushed in all the way in their sockets. They can only go in one way.

### Output

Using interconnect cables connect both the left and right color coded RCA outputs to an auxiliary or equivalent input on your system.

### Ground Wire

Attach the Spade Lug to both the Turntable and Phonostage binding post ground. This wire is included.

### Input

Before connecting your turntable to the phonostage please determine if your cartridge is MM or MC high output or an MC Low output. Also what is the recommended loading for your cartridge? This information is usually in the cartridge documentation or can be found on the manufacturer's web site.

The left and right signal paths (inputs, switches and outputs) are completely independent of each other. So any adjustments or connections must be applied to both left and right.

The turn table signal cables attach to the left and right inputs of the phonostage. Either MM-RCA, MC-RCA or MC-XLR.

### Cartridge Set up

Select MM or MC on the switch.

If using an MC cartridge select the ground ON position to start with.

If using an MC cartridge select Low output on the phonostage to start with.

If using an MM cartridge select either 47K or 15K.

### Feet

Your unit is installed with four feet using #8-32 screws.

### Power

Carefully plug in the AC power cable to the phonostage first then to your main power.

### Turn it on

**Caution:** Tube electronics should not be turned ON, then OFF, then ON again quickly. This could blow a fuse or create a hum. Once the unit is ON, it is safe to wait a minute before switching OFF. If you do get a hum, leave the unit off for 15 minutes.

Turn on the phonostage using the ON/OFF switch located on the front left side. After a short time (about two minutes) the four tubes should start glowing. The amber glow will be the only visible indication that the unit is turned on.

If the tubes do not light up, turn off the unit at the power switch and unplug the power cord. After waiting a few minutes unplug each vacuum tube in turn (using the glove provided) and make sure that none of the pins are bent. If they are please contact Zesto Audio for instructions.

*Enjoy the music!*



## Tips and Tricks

### Grounding

- **Important!** It is necessary to have your Phonostage plugged into a proper three pin electrical grounded outlet. Grounding is a safety issue as well as a potential source of noise problems.
- Although all the other switches on the back panel should be in the same position for the left and right channels, the ground switches work independently. You can adjust them for the least amount of noise.
- Start with both ground switches up. Then try any combination that sounds good.
- The ground switches are designed to isolate the grounds between the turntable and the phonostage.
- They affect only the input and not the output of the phonostage.
- Ground switches work independently and are designed to break ground loops.
- **Example:** Some tone arms have all their grounds wired together.
- Start with both ground switches up. Then try any combination that sounds good.
- Throw switches independently until you get the lowest noise.

### MC Load Adjustments

- The range is 1000 to 20 Ohms in ten steps. Find the setting that sounds best in your system. Don't go below the cartridge manufacturer's recommended settings, but experiment with any setting above. Load settings can be done while the unit is **Turned On** so you can hear the difference. Keep the volume low, while carefully making these adjustments.
- Unlike most Phonostages, the loading on the Andros is different because it loads on the secondary of the step-up transformer. This method transfers the entire signal from the cartridge to the primary side of the transformer without any interference from other components like resistors.
- It is recommended that you adjust the MC loading for the highest amount of dynamic range. **Tip:** You can adjust on the "Fly" while the unit is on without clicks or pops, so you can hear what sounds best.
- **Loading Example:** For the Dynavector XXII MK2, they recommend a 30 Ohm load and I set mine at 300 Ohms. You can hear when you've gone too far, usually in the mid-range.
- You may find a need to adjust the loading as your Cartridge breaks in.
- You may also want to revisit the load settings after any adjustments to your turntable/tone arm.

### MM Load Adjustments

- Start with 47K Ohms on the switch then try the 15K Ohms.

### High/Low MC Setting

- The labeling of the High/Low MC switch was intended to match the specifications of the cartridge.
- **Example:** For Low MC output cartridges, set the switch to Low MC, High MC cartridges set to high MC.
- Technically this is a high/low gain switch; however it's labeled to match a High/Low MC cartridge.
- The Low MC switch setting means the unit is set to high gain of 67dB.
- The High MC setting means the unit is set to low gain of 61dB.
- The unit is designed to work best in the Low MC setting and the majority of the time this setting will sound better. Even if the cartridge is on the higher output side, I would recommend trying it on the Low MC setting first and if you hear distortion then switch to the High MC setting.

## Volume

- If the volume is louder on one channel than the other, you may want to try switching the back tubes around with the unit **Turned Off**. Use the white glove provided and switch the back tubes only left to right, not the front tubes.

## Tube Rolling (The Sport of Audiophile Kings)

- The 12AX7 input tubes closest to the back/curve are the most sensitive and effective to tube roll.
- Only a 12AX7/ECC83s type will work and we recommend that it is high gain/ low noise tube.
- The unit is designed around the JJ ECC83s because they are neutral, consistent and are high gain/low noise.
- If your tastes are warmer, you may want to try Mullard's and if you like it brighter try GE.
- We cannot recommend any specific NOS tubes, as no 2 are the same. We prefer to encourage personal taste, trusting your ears and enjoying the sport.
- Any damage caused by tube rolling will not be covered under the warranty.

## Tube Rush Noise

- If you are hearing this noise it is most likely a gain setting is too high on the input of the Line Amp.

## Power cord

- The Andros is not particularly sensitive to power cords.

## No Balanced outputs

- The decision was based purely on cost not to include balanced outputs, as there is not enough sonic difference between single ended and balanced in this application to warrant the increased cost. As a manufacturer, balanced outputs would require 2 more transformers, 2 more tubes, all the associated circuitry and a change to the design and size of the case, which would increase the cost of this phonostage significantly.

## Balanced-in verses single ended inputs

- The Andros has a built in step up transformer, so it's a very nice option to provide both balanced and single ended inputs. In this particular application there is no sonic difference, but a high convenience factor.

## Leaving the equipment on

- The filament on the tube will burn out quicker if switched on and off more often.
- The tube will wear out quicker if it's left on all the time. There is no clear choice which is preferred.

## Warranty

All Zesto Audio equipment is covered by a 2 year limited warranty for parts and labor to cover defects in materials and workmanship and 6 month warranty on the original vacuum tubes from date of purchase.

To obtain this original owner warranty the completed warranty registration must be received by email at the factory within 15 days from date of purchase. The warranty is not transferable.

This warranty is void if the product has not been used in accordance with the instructions found in this owner's manual, or if it has been misused, abused, damaged by accident or neglect, or in transport once in possession of purchaser. The warranty is also void if the product has been tampered with or has been repaired or modified by anyone other than Zesto Audio or its specifically authorized representatives. This limited warranty only applies to Zesto Audio equipment and carries no responsibility for any other equipment attached to this unit.

To return the product it must be packed in its original packaging and returned to Zesto Audio or its authorized representative via insured freight at the owner's expense. Returned products must be accompanied by written description of the defect and a return authorization number that is available from Zesto Audio or the authorized representative. Upon receipt of the defective product Zesto Audio or the authorized representative agrees to repair the product without charge for parts and or labor if within the 2 year warranty period, except for vacuum tubes if the unit is more than 6 months old. The product will then be returned via prepaid insured freight with a carrier at the sole determination of Zesto Audio or the authorized representative.

Zesto Audio and its partners reserve the right to modify their products or change specifications at any time without obligation or liability to previous purchasers.

Warranty will cover ownership outside the USA, but shipping is the sole responsibility of the owner. See your local dealer for factory approved service in your area.

Factory service on non-warranty items will be billed at an hourly rate to be quoted before work is done.