



**VALVE AMPLIFICATION COMPANY**

**AURICLE MK II STEREOBLOC  
TUBE POWER AMPLIFIER**

**INSTRUCTIONS**

MANUAL ISSUE DATE: 7 FEBRUARY 2004

*Please read carefully before installing*

## **WELCOME**

Congratulations on your purchase of the VAC Auricle Mk II, and welcome to the family of VAC owners!

Your VAC is designed not to the latest fad but to substance, providing the highest quality of sound. Time spent familiarizing yourself with this manual will be well rewarded.

It is our goal to provide instruments of the highest quality, be informative to all of our customers, and to provide responsive, effective customer service.

Please feel free to contact us if we can be of assistance. We can be reached:

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E-mail	<a href="mailto:info@vac-amps.com">info@vac-amps.com</a>
Website	<a href="http://www.vac-amps.com">www.vac-amps.com</a>
Mail	1731 Northgate Boulevard Sarasota, FL 34234

We look forward to being of service, even as you have many years of enjoyment from your Auricle!

Kevin M. Hayes  
President, VAC

## **WARRANTY**

Your equipment is warranted for a period of thirty (30) days from the date of purchase.

In addition, if the registration form is received by VAC along with a copy of your sales receipt from an authorized VAC dealer within this thirty days, a service contract will be extended to cover your equipment for three (3) years (tubes excepted).

This warranty applies only to units sold in the United States of America through authorized VAC dealers. It covers factory service and standard return shipping. For warranty information outside of the U.S. contact the importer of VAC equipment for your country. Units sold outside of the U.S. should still be registered with VAC.

It is the responsibility of the dealer and/or customer to verify the suitability of this unit for any particular purpose.



## **GENERAL PRECAUTIONS & SAFETY NOTES**

1. TUBES BECOME HOT IN USE, AND CAN CAUSE INJURY. DO NOT EXPOSE CHASSIS TO MOISTURE. DO NOT PLUG INTO AN AC SOURCE UNTIL ALL CONNECTIONS ARE COMPLETED.

Note: A tube cage is available as an option. When fitted, DO NOT REMOVE TUBE COVER UNTIL UNIT HAS BEEN SWITCHED OFF FOR 5 MINUTES.

2. Complete all signal (interconnect and speaker cable) connections *before* connecting the AC cord to the wall outlet and turning the unit on. Similarly, always turn the amplifier off and remove the AC power cord before detaching cabling. Failure to observe this sequence can result in damage to the amplifier, speakers or associated components.
3. Allow one (1) minute for warm up before commencing playback.
4. THIS UNIT CONTAINS NO USER SERVICEABLE PARTS. DO NOT REMOVE THE BOTTOM COVER. LETHAL VOLTAGES ARE PRESENT WITHIN THE CHASSIS. DO NOT OPERATE THE UNITS IF THEY ARE WET.
5. VACUUM TUBES BECOME HOT ENOUGH TO CAUSE SERIOUS BURNS. NEVER TOUCH A TUBE WHEN THE UNIT IS ON. IT MAY TAKE SEVERAL MINUTES FOR THE TUBES TO COOL DOWN AFTER THE UNIT IS SWITCHED OFF. FOR THIS REASON THE TOP CAGE SHOULD ALWAYS BE LEFT SECURELY IN PLACE.
6. The Auricle is heavy. Please exercise caution in lifting the unit, and take care to install Auricle securely in a sturdy, well designed stand so that it will not fall or tip over (this could cause serious, possibly fatal injury).

## INSTALLING Auricle

Physical requirements:

- 1) Provide Adequate Ventilation-Allow at least three inches of free air space above and to either side of Auricle.
- 2) Do not place Auricle in a completely enclosed cabinet. If equipment cabinet has a solid front door, a “boxer” fan will be necessary to ensure proper airflow.
- 3) Do not stack other components (or any objects which could impede proper ventilation) on top of Auricle.
- 4) Do not operate Auricle on carpet, or on any other surface that might restrict airflow.
- 5) Auricle’s chassis will become warm during normal use.
- 6) Auricle must be installed in a secure, sturdy, properly built (and ventilated) stand, cabinet or enclosure. Auricle is heavy, and could inflict serious injury or property damage if it falls, or if the stand upon which it is place tips over. This concern is particularly important in households with small children who might try to climb furniture.
- 7) **IMPORTANT: The vacuum tubes become extremely hot in use. Contact can cause severe burns. Take great caution to keep the Auricle out of the reach of children, pets, or anyone not familiar with tube electronics. Keep Auricle away from any flammable material.**

Note: An optional tube cage is available.

## Basic Hookup:

- 1) Connect your line level source (preamplifier, volume controlled CD player, etc.) to the RCA input jacks on Auricle’s rear panel.
- 2a) For stereo operation, set the Stereo/Mono switch to “Stereo”. Connect loudspeaker cables to the five-way binding posts on Auricle’s rear panel. Make sure that all connections are tight (Do NOT over tighten, or damage to amplifier or speaker cable may result), and that heavy or bulky cables are properly strain-relieved. You will notice that Auricle includes four posts for each of the two (i.e., left and right)

amplifier channels. The negative or “common” cable lead is always attached to the “G” or “Com” center posts, while the “hot” or positive lead may be connected to the 4, 8, or 16 ohm posts (see “Matching Auricle To Your Loudspeakers” for more information).

- 2b) For monophonic operation, set the Stereo/Mono switch to “Mono”. Use either input jack, but not both. Use either set of output connectors, but not both.
- 3) Set the “GND” switch to “1” (the upper position). If you experience significant hum, try the other position.
- 4) Set the “Triode/Ultralinear” switch to either position.
- 5) Connect the AC power cord to the IEC connector on Auricle’s rear panel. ALWAYS connect power cord to component before plugging it into an AC outlet, and make sure that unit’s power switch is set to the “off” position before making the final connection. For best performance, try to route the power cord away from signal cables.
- 6) Before turning Auricle’s power switch to the “on” position, your source component should already be warmed up and the volume turned to zero.
- 7) Allow Auricle to warm up for a few minutes, then adjust output tube bias. (See “Output Tube Bias Adjustment”, below)
- 8) Switch the Auricle off before turning off your source components; failure to do this may result in damage to your loudspeakers, as the power amplifier will amplify any ‘turn off thump’ transients from the source components.

As with all high performance audio products, the sonic characteristics of all VAC products will continue to improve during the first several hundred hours of use.

## **OBTAINING THE BEST PERFORMANCE FROM Auricle**

### Output Tube Bias Adjustment:

Your Auricle has been shipped with the output tube bias properly set. Nonetheless, it should be checked when you install your amplifier and approximately once every month thereafter. It must also be adjusted each time a tube is replaced.

The bias adjusters are located near each output tube. Allow the amplifier to reach normal operating temperature (about ten minutes of warmup should be sufficient). Mute the preamplifier. Turn the bias test switch to each tube position in turn and observe the bias meter. Using a long handled screwdriver, rotate the control by the appropriate tube until the needle is centered on the small white dot. Repeat for each of the output tubes and then, because the adjustments can interact slightly, recheck all four tubes, in the same order as before.

**NOTE:     The tubes are very hot (up to 250 degrees centigrade) and can cause severe burns. Be extremely careful not to come into contact with the tubes when making these adjustments.**

### **Matching Auricle To Your Loudspeakers:**

Like many modern tube amplifiers, Auricle includes multiple “transformer taps” for the left- and right-channel outputs. The rear panel includes separate binding posts for each channel’s 4, 8, and 16 ohm taps. Do NOT assume that the tap which corresponds to your speakers’ published impedance specification will yield the best sound. Due to the various standards by which impedance can be measured, not to mention the fact that a speaker’s impedance varies with frequency, it is impossible to assert with certainty which output tap will yield the best sound. For this reason, VAC strongly suggests auditioning your speakers through both taps. In general, we find that a speaker’s minimum impedance is more important than its nominal (average) impedance when determining which tap is correct. A lack of bass response often indicates that a lower impedance tap should be tried.

**Precautions: To avoid risk of injury from hot tubes, allow unit to cool before coming into contact with the tubes.**

### **Triode Mode:**

A small toggle switch provides a choice of partial-Triode (Ultralinear) and full Triode operation. Your unit is shipped in the Ultralinear mode, but can be easily changed to Triode by moving the switch.

Ultralinear and Triode sound different, although the extent of these differences will largely depend upon your choice of speakers and ancillary components. Due to issues of system matching, universal recommendations do not exist, although Ultralinear mode generally provides more extension at the frequency extremes (low bass and upper trebles), while Triode Mode can offer a more natural midrange presentation. As with our discussion of transformer taps, VAC recommends auditioning your Auricle in both modes.

Compared with Triode mode, Auricle produces approximately twice as much power when used in Ultralinear operation. When used as a Triode amplifier, the decrease in power is offset by a 3 dB increase in dynamic headroom.

## MAINTENANCE

### Chassis Care:

Although your VAC Auricle's finish is extremely durable, it can be scratched, chipped or damaged if improperly treated. Cleaning with a soft, damp cloth while the amplifier is switched off and unplugged should restore the finish to its original lustre. Never clean Auricle with harsh or caustic cleansing agents.

When shipping your Auricle, be certain to wrap the amplifier in the cloth, tissue or plastic wrap in which it was originally packaged. Make sure there are no ridges or sharp surfaces in those parts of the cloth which contact the faceplate. Use of a coarser cloth or failure to otherwise protect the unit may result in damage to the finish. VAC is not responsible for cosmetic damage resulting from improper care or packing.

### Installing New Tubes:

Original Equipment Replacement tubes are available from VAC. These tubes ensure your Auricle will meet or exceed all factory performance specifications.

Before replacing tubes, all power must be off. Mute unit, place power switch in the "off" position and unplug power cord. Remove the old tubes ONLY after the unit has cooled down. **[In normal use, tubes become hot enough to cause serious burns. Allow several minutes for tubes to cool before attempting to remove or replace.]** Install the new tubes fully firmly in their sockets, taking care to observe the direction of the locating ridge in the plastic center pin of the EL34 output tubes' plastic base. With the 9-pin miniature tubes (type 12AU7), make sure that pin pattern corresponds to holes in tube socket.

When changing EL34 tubes, turn the bias control corresponding to the new tube fully counterclockwise. After turning the unit on and allowing it to reach normal operating temperature, follow the normal biasing procedure.

In the event that trouble is encountered, switch power to the "off" position, check that all tubes are correctly seated in their sockets and check all signal, speaker and power connections. If possible, try another tube. If the problem persists, please consult your VAC dealer or contact the factory directly.

## **GENERAL INFORMATION ABOUT TUBES**

It is true that each brand of tube sounds different in a particular high resolution circuit. This is because no two manufacturers make a tube type in quite the same way, and the central tendencies of the performance parameters will differ slightly with each maker.

This sonic variability may at first seem a liability, but further thought will reveal that it is an advantage. The owner of a tube amplifier can select those tubes which sound like the real thing in his/her specific system. VAC can recommend the best tubes for your amplifier.

Normally vacuum tubes should last for 4,000 to 12,000 hours of use, or two to ten years for most users. There are always occasional exceptions, long or short. If you have to replace a tube before, say, 3,000 hours, just replace the single tube. If you have to replace a tube at 8,000 hours, replace them all and keep those still functioning well as spares

VAC will be happy to test tubes for concerned customers.

## **VAC Auricle SPECIFICATIONS (typical)**

Type:	Vacuum tube power amplifier.
Options:	Tube cage
Output matching:	4, 8, or 16 ohms nominal
Power output:	Greater than 60 watts/channel ultralinear (stereo) Greater than 120 watts ultralinear (mono) Triode mode reduces power by approximately 50%
Frequency response:	3 Hz - >100 kHz +0 / -3.0 dB
Power bandwidth:	13 Hz - >100 kHz + 0 / -3.0 dB ref. 50 watts
Gain:	27 dB ultra-linear
Residual noise:	0.5 mV at 8 ohm output typical
Channel separation:	-72 dB @ 1 kHz; -60 dB @ 10 kHz typical

**Tube compliment:** 4 x 12AU7  
4 x EL34

**Fuse:** 5 A slow blow at 100 - 120 VAC  
2.5A slow blow at 220-240 VAC

**Warranty:** Up to three years parts and labor, excluding tubes (90 days).

**Options:** Protective tube cage in dark grey.

# **VAC Auricle Mk II Stereobloc REGISTRATION FORM**

*MAIL TO VAC SOON AS POSSIBLE.*

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Telephone \_\_\_\_\_ / \_\_\_\_\_ - \_\_\_\_\_ E-Mail \_\_\_\_\_

Dealer name \_\_\_\_\_

" address \_\_\_\_\_

Purchase date \_\_\_\_\_ Serial Number \_\_\_\_\_

Salesperson \_\_\_\_\_

How did you first learn of VAC products?

\_\_\_\_\_

What other brands and models did you consider?

\_\_\_\_\_

\_\_\_\_\_

What made you decide on the VAC?

\_\_\_\_\_

\_\_\_\_\_

Please provide any comments on VAC products or your dealer

\_\_\_\_\_

\_\_\_\_\_

What magazines do you read regularly?

\_\_\_\_\_

\_\_\_\_\_

What are your hobbies?

\_\_\_\_\_

What are your favorite types of music?

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