
WOO AUDIO WA6 2ND GEN

Single-Ended Class-A Stereo Headphone Amplifier



OWNER'S MANUAL

Please review this manual before operating your WOO AUDIO™ product.

CHANGE LOG: March 29, 2017. Changed tubes from 6DE7 to 13DE7. All remain the same. Note that 6DE7 and 13DE7 are NOT interchangeable.

Important Safety Information



CAUTION: These amplifiers are shipped without the vacuum tubes installed. It is necessary to install the tubes first. The tubes must be installed correctly or *serious damage that is not covered by the warranty will result.*



Turn off immediately in the event of malfunction
Should you notice smoke or an unusual smell coming from the equipments, turn it off immediately. Continued operation could result in injury.



Do not disassemble
High voltage circuit. Touching the product's internal parts could result in injury. In the event of malfunction, the product should be repaired only by a qualified technician.



Keep out of children
Failure to observe this precaution could result in injury



WARNING: Failure to follow these instructions could result in fire, electric shock, or other injury or damage.

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Overview

Thank you for choosing a Woo Audio product. The WA6 is finely hand-crafted amplifier that delivers uncompromised performance and superior listening experience.

- ❖ Point-to-Point wiring
- ❖ One 5AR4 rectifier tube. Direct substitute: 5U4G
- ❖ Two 13DE7 drive/power tubes
- ❖ Pseudo-dual power supply
- ❖ All tubes. No semi-conductors in the entire circuitry
- ❖ High or low headphone impedance switch
- ❖ One TRS (1/4") headphone jack
- ❖ 80 watts specially made toroidal power transformer.
- ❖ Full aluminum die-cast chassis, anodized finish
- ❖ Whole aluminum volume knob and power switch button
- ❖ Custom gold-plate RCA
- ❖ Alps potentiometer and power switch
- ❖ Dale and Vishay high precision resistors
- ❖ Silver plated Teflon hook-up wires

Quick Installation

What's in the box?



- ① WA6 amplifier
- ② One 5AR4 rectifier tube
- ③ One matched pair of 13DE7 power tubes

- ❖ The actual tubes may look different.
- ❖ Compatible tubes may be included instead of the ones illustrated above.
- ❖ Power cord and interconnection cable are not included.

Installing the rectifier tube:

Note: avoid oil or smudge on the tube glass; clean hands before installation.

1. Find the correct tube for the socket. There is a label below each tube socket that indicates a standard tube for the amplifier. For example, a 5AR4 tube should install on the socket labeled "5AR4". You MUST use the compatible tube or serious damage may occur to the amplifier. See Compatible Tube section for all the approved direct substitute tubes.
2. Align the tube guide pin to the socket as below.



Tube socket guide pin indicator



Guide pin shows on the bottom of a tube.

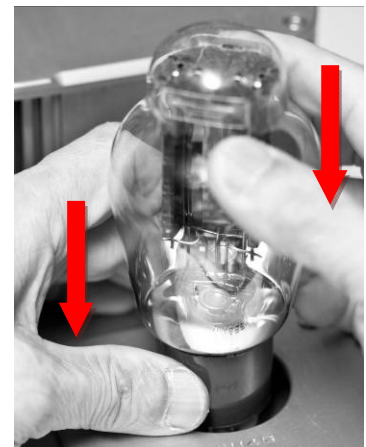
3. Hold the tube base firmly then squeeze it into the socket slowly. Be sure to apply force perpendicular to the tube socket; never insert the tube at an angle. Apply slight rocking motion for the tube, which is harder to insert; never apply circular motion. Apply pressure from top of the tube if needed.



Do no insert a tube at an angle

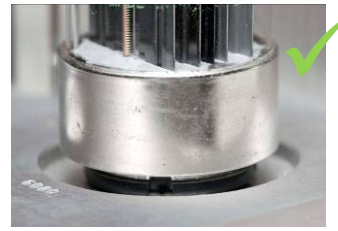
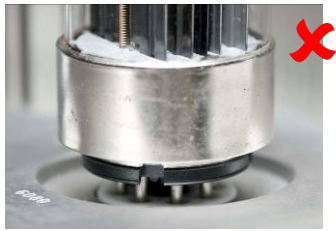


Insert a tube perpendicular to the socket.

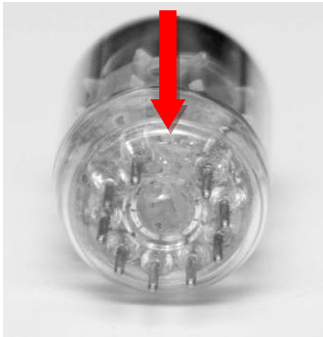


Hold base firmly.

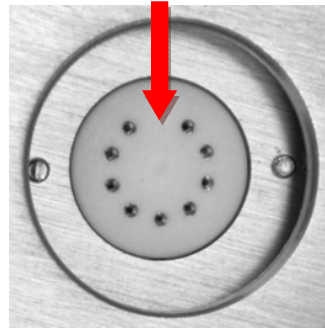
4. Check installation. The tube pins should be inserted fully into the tube socket receptacles.



Installing the driver/power tubes:



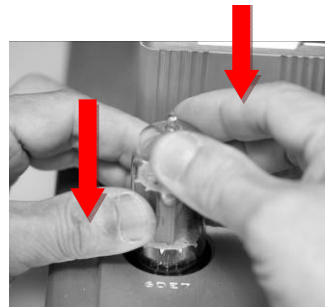
Bottom of the tube



Align the 6DE7 to the socket



Insert the tube perpendicular to the socket



Use both hands if needed

Selecting AC voltage:

WARNING: failure to select the correct voltage will result in damage of the amp.



Switch to label "115" for AC100 to 125V voltage.



Switch to label "230" for AC210 to 240V voltage.

Installing the power cord:

Plug the power cord into the AC inlet. See ② in the below diagram. The AC inlet socket is a standard IEC type. You will need to obtain the correct type for your region.



Installing the source input:

Plug the RCA interconnection cable into the RCA connectors ③.

Back panel diagram:



- ① Voltage selection switch
- ② AC inlet
- ③ Impedance selector
- ④ RCA input

Operation

DO NOT

- Turn on the amp before properly installing **ALL** tubes.
- Use tubes that are not approved by Woo Audio.
- Turn on the equipment without checking the correct AC voltage setting.
- Remove any tubes or the DC cord while the amp is operating
- Touch tubes (**extremely hot**) after warm-up.
- Leave the amps running unattended. To use the amps safely, please allow it to cool down for every 8 hours of continuous play time.
- Place amplifier in direct sunlight. Extended exposure may cause discoloration to the anodize aluminum.

DO

- Place the amp away from any wireless or frequency-emitting devices such as mobile phones, PDAs and radios, to avoid noise interference.
- Keep away from water or excessive moisture.
- Turn off the amp if its sound is abnormal.
- Allow a minimum of 2 inches of air clearance for heat dissipation.
- Allow approximately 5 minutes of warm-up.
- Allow the tubes to cool down before replacing them.

Turning the amplifier on:

1. Turn the volume knob to the lowest position.
2. Insert a headphone into headphone output ①.
3. Press the power switch ③ to a locking position. The power LED will light.
4. Observe that all tubes light gradually.
5. Let the tubes warm up for at least 1 minute before turning up the volume.

Front panel diagram:



- ① Headphone output
- ② Volume control
- ③ Power switch
- ④ Power LED indicator

Break-in period:

It is recommended to allow the amplifier to operate 150+ hours so that peak performance can be realized. An effective way to break-in the amp is to run the amp normally with music playing. Please do not leave the amp running continuously.

Compatible Tubes

	Model#	Adapter	Comment
Driver/Power	13DE7 *	No	
	13EM7	Yes	A 8-pin to 9-pin adapter is needed.
	13DR7	No	WA6-SE shipped prior April 17, 2010 is not compatible.
	13DN7	Yes	A 8-pin to 9-pin adapter is needed.
	13FD7	No	WA6-SE shipped prior April 17, 2010 is not compatible.
	12SN7	Yes	A 12SN7 to 13DE7 adapter is needed.
Rectifier	5U4G * /B	No	Directly Heated
	274A	Yes	Directly Heated, a 4-pin to 8-pin adapter is needed.
	274B	No	Directly Heated
	53KU	No	Directly Heated
	5AR4	No	Indirectly Heated
	5AS4	No	Directly Heated
	5Z4	No	Indirectly Heated
	5R4	No	Directly Heated
	5U3C	No	Directly Heated
	5V4 /G /GA	No	Directly Heated
	5Y3	No	Directly Heated
	5Z3	Yes	Directly Heated, a 8-pin to 8-pin adapter is needed.
	GZ30	No	Indirectly Heated
	GZ32	No	Indirectly Heated
	GZ33	No	Indirectly Heated
	GZ34	No	Indirectly Heated
	GZ37	No	Indirectly Heated
	CV378	No	Indirectly Heated
	U52	No	Indirectly Heated
	U54	No	Directly Heated

* The most current chart can be found in this document:

<http://tinyurl.com/4wbv5qn>

FAQ - Frequently Asked Questions

Can I change headphone while the amp is on?

Yes, but you must first to turn the volume to the lowest position.

Can I flip the impedance switch while the amp is on?

Yes, it will not have any negative effect to the amp.

No sound is coming out of the headphone.

- Check that all tubes are properly installed.
- Check that the source is properly installed and is working fine.
- Check that the source switch is on the correct position.
- Check headphone connection.

There is noticeable noise coming from the headphone.

- Remove all sources from the amp to check if the noise disappears. If it does, the noise is coming from the source.
- Place the amp away from other electronic devices to check whether those were causing the noise.
- Place the amp in a different location to check if the noise is coming from the AC line.
- Remove all tubes, clean tube pins, and then reinstall them again.
- Replace some or all tubes.

The sound is abnormal or distorted.

Replace tubes to see if they have deteriorated.

The LED and the tubes do not light.

Check if the fuse is burnt. See the following on how to replace a fuse. You will need a 2 or 3A, slo-blo type.



Insert a small flat screwdriver into the fuse door which located on the AC inlet.



Release the fuse door by pulling it out.



The fuse holder is released from the AC inlet.



The fuse is held by a clip.

Warranty and Service

Woo Audio warrants this product free from defects in materials and workmanship for 1 year from the original date of purchase. The tubes are warranted for 30 days unless otherwise stated. In the event that your Woo Audio product requires servicing, please contact us directly to get a return instruction. If the equipment needs to be shipped back, please use the original packaging and include a copy of the sales purchase along with a detailed explanation of the problem(s).

Send service inquiry to info@woaudio.com

Any modification not authorized by WOO AUDIO will void this warranty.

Reviews

*"With a creamy, natural sound and tight bass response, along with pro-grade build quality to match, we're sure any serious music lover would enjoy this fabulous piece of audio bliss." - **Unplggd Test Lab***

*"WooAudio has one of the prettiest and slickest build quality that you can find in the industry. Everything from the hairline finishing, the lines, the knobs, the transformer housing, all the way to the back panel, you find nothing but top quality workmanship." - **Headfonia***

*"It was almost magical the way the Woo WA6 made every recording sound better than I thought it was. – **The AudioPhiliac CNET***

The WA6 offer great sound and great value!" - Tone Audio, issue 8

*"Awesome! Amazing sound! I know I use these heavy words now and I promised myself I wouldn't as I do not get excited very easily and I did not want to cause a stir with this review and then make people have high expectations. But I do think the sound is indeed awesome." - **George Chronis@Head-fi***

*"I never really knew how good the HD-600's could sound until hearing them through the WA6. Anyone that says the HD-600's are dark or veiled hasn't tried the correct headphone." - **Rad212@Head-Fi***

*"The soundstage or spatial placement of sound is excellent, but in my opinion this is also dependant on the music, recording quality and headphones used. Overall clarity is excellent, it sounds natural and the sound is clean/undistorted without a morsel of off sound or graininess." - **WalkGood@Head-Fi***

Product Specification

Model:	WA6
Headphones Impedance:	8-600 Ohms
Input Impedance:	100 Kilo-Ohms
Frequency Response:	20 Hz - 30 KHz, -3dB
Power Output:	580mW @32Ω 550mW @60Ω 590mW @120Ω 460mW @300Ω 400mW @600Ω (with 6DR7 tube)
Signal/Noise:	93 dB
THD:	<= 0.3%
Voltage:	AC 110/220 - 240V, 50/60 Hz, selectable
External Dimension, end to end measurement, same for both units:	6" (H) x 5.5 (W) x 13" (D)
Weight:	13.5 pounds

Woo Audio is committed to continuously improve its products. We reserve the right to improve the design without notice.