

Trafomatic Audio

Experience Head One

Tube Headphone Amplifier

User's Manual



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SAFETY PRECAUTIONS

IMPORTANT SAFEGUARDS

PLEASE READ CAREFULLY ALL THE FOLLOWING IMPORTANT SAFEGUARDS THAT ARE APPLICABLE TO YOUR EQUIPMENT

CAUTION!

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

SAFETY

1) Read the User's Manual and refer to it frequently during use of this product

All the safety and operating instructions should be read before the product is operated.

2) Retain the User's Manual

The safety and operating instructions should be retained for future reference.

3) Follow Instructions

All operating and instructions for use should be closely followed.

4) Power Sources

This product should be operated using only the type of power source indicated on the marking label. If you are not sure of the type of power supply in your home, consult your product dealer or local power company.

5) Grounding

This product is equipped with a three prong IEC connector. Always use power cord with adequate wire cross section and an electrical outlet that is grounded. If you do not know whether the outlet is grounded, consult your electrician or local power company.

6) Power Cord Protection

Power supply cords should be routed so that they are not likely to be walked on or pinched. Pay particular attention to cords at plugs, convenience receptacles and where they exit from the product. Always use power cords with adequate current ratings and safety certifications (UL, CE, TÜV, CSA, etc.)

7) Fuses

For continued protection against fire hazard, replace fuses with the same type and rating of the fuses specified. When changing fuses, completely unplug the AC cord from the wall outlet.

8) Tubes

During operation the tubes get very hot. Do not touch the tubes since this may result in a severe burn. Allow at least 10 minutes after removing power for tubes to cool down before touching them.

9) Turn-off when not using

Turn off the unit as soon as you stop actively using it. Unplug the power supply from the wall during a lightning storm or when the product is to be left unattended and unused for longer periods of time.

ENVIRONMENT

1) Water and Moisture

Do not use this product near water - i.e. near a bathtub, ash bowl, kitchen sink or laundry tub; in a wet basement; or near a swimming pool or the like. Damp basements should be avoided.

2) Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves or other appliances that produce heat. Also avoid putting the unit in the direct rays of the sun.

3) For indoor use only.

PLACEMENT

1) Accessibility

It is normal for a vacuum tube power amplifier to run warm if used for prolonged periods. Tubes are very hot when operating and should not be touched for at least ten minutes after the unit is turned off to prevent burns. Always place your amplifier away from children and pets to prevent burns.

2) Ventilation

This product should not be placed in a built-in installation or rack unless proper ventilation is provided or the manufacturer's instructions have been followed. Never place anything on top your amplifier that could obstruct the airflow and cause the electron tubes to overheat and damage the amplifier. Do not place your amplifier in a closed bookcase; overheating could occur. Ensure that there is at least 8" (200mm) of open space above the amplifier.

3) Surface

Place the unit on a flat level surface. Care should be taken to prevent objects from falling and liquids from spilling into the unit. Do not subject the unit to excessive smoke, dust, vibration or shock.

MAINTENANCE

1) Cleaning

Unplug this product from the wall outlet before clean-

ing. Do not use liquid cleaners or aerosol cleaners. Use a dry cloth for cleaning. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene.

2) Tube replacement

Electron tubes have their life in the 2000-3000 hrs range. We strongly recommend replacing the output tubes at 20-30 months interval (depending on your listening habits) and signal tubes at every other power tube replacement (after 24-36 months). This will ensure that the amplifier always performs at its best and tube failure will not overstress other parts.

3) Biasing the amplifier

The Experience Head One amplifier uses tubes in self-biasing configuration and does not require any adjustments. The only requirement is to ensure that matched tubes are used in both channels. Matched tubes are available from multiple vendors as well as directly from Trafomatic Audio.

SERVICE

1) Replacement Parts

When replacement parts are required, be sure that the service technician uses replacement parts specified by the manufacturer or parts with the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

2) Tube Replacement

Should it become necessary to replace your tubes, remove the AC power plug from the wall and allow thirty minutes for the high voltage capacitors to discharge. Follow instructions outlined in this manual.

3) Modifications

Modifications to the amplifier are strongly discouraged. The unit was designed by experienced engineers and tested for safe and reliable operation. Any modification may pose a safety problem and result in reduced lifetime of the product. Any removal of the cover will void warranty.

Getting Started - About Your Headphone Amplifier

Your Experience Head One headphone amplifier was designed to provide a significant value based on a high performance to price ratio that will exceed the sonic quality of good solid state amplifiers with its musical accuracy.

The Experience Head One uses two 6S45P power output tubes and one EZ80(81) rectifier tube. The Experience Head One is designed to work in a Single-Ended class A. Parts are carefully chosen for the optimum sound quality and the overall circuit layout is maximized for sonic purity.

Handling Vacuum Tubes

Many people have never had experience handling vacuum tubes. Process is very similar to handling incandescent light bulbs. As with light bulbs, you should not touch a vacuum tube when it is operating since you can burn yourself. Similarly, if a tube is dropped on a hard surface it will break. When replacing the tubes allow sufficient time, minimum 30 minutes, for tubes to cool down and internal capacitors to discharge. Before you insert a tube you should make certain the unit is disconnected from the AC outlet and that the tube has cooled down. Inspect the tube for cracks and physical damage. Make sure that the pins are straight. If you need to straighten the pins, be very careful as it may cause the glass envelope

to break, causing the tube to lose the vacuum and fail as soon as the amplifier is powered on. Carefully align the pins with the socket and gently insert the tube. **Never force a tube into a socket.** Should you decide to buy replacement tubes from Trafomatic Audio, rest assured that they were fully tested before the shipment.

Packaging

Save all the packaging in a dry place. Your amplifier is a precision electronic instrument and should be properly packaged any time shipment is made. Because of its weight it is highly probable that the unit will be damaged during shipment if repackaged in a box and packing other than that designed for the unit.

Preparation for Use

Place your amplifier on a flat surface. Before inserting the tubes, inspect them for cracks and physical damage. Make sure that the pins are straight. If you need to straighten the pins, be very careful as that may cause the glass envelope to break, causing the tube to lose the vacuum and fail as soon as the amplifier is powered on. Refer to the drawing below to locate correct location for each tube. Carefully align the pins with the socket and gently insert the tube according to the drawing below. Never force a tube into a socket.

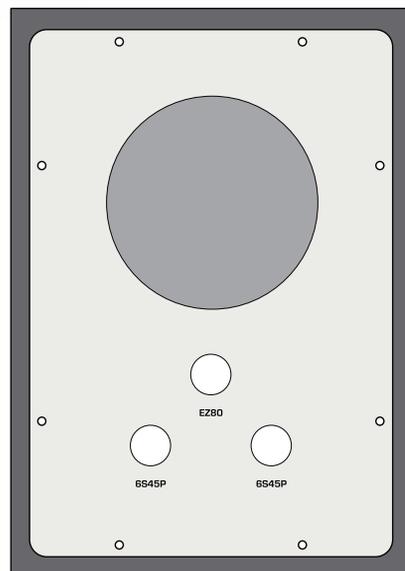


Figure 1: Experience Head One tube layout

Never use excessive force when inserting the tubes into their socket.

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Experience Head One

Operating Procedure

1. Make sure that you read instructions before attempting to operate your unit.



Figure 2: Experience Head One Front panel



Figure 3: Experience Head One back panel

Make sure your amplifier is properly connected to a high-current power receptacle.

2. When turning the unit on, make sure the volume control is at its lowest point (the volume control is at minimum when turned counterclockwise to the mechanical limit).
3. The headphone amplifier will be fully functional after only a couple of minutes. However, as it warms up over the first 30 minutes of operation you may notice slight improvement in the sound quality.
4. At the end of your listening session make sure to turn the amplifier off. Leaving it on does nothing for sound quality and it reduces life of the vacuum tubes.

The amplifier should always be turned on and off via its own power on-off switch.

Controls and Their Functions

Front Panel

Selector Switch

The three position selector switch can be used to select impedance of headphone (30, 100 and 300 ohms) as well as function of the line preamplifier (line out).

Volume control

This control is used to adjust the output volume level. Turning the control knob clockwise increases the sound level and turning it counterclockwise decreases the sound level.

Headphone terminals

Your amplifier has normal stereo unbalanced 6,3mm jack for headphone

Audio signal connection jacks - Use these jacks to connect the audio interconnects from your components to the amplifier. Amplifier has two pairs of RCA connectors for two stereo inputs which can be select with toggle switch.

Back Panel

Power Switch: Press the power switch to (I) turn the power on. Within 10-20 seconds, as the heaters reach operating temperature the tubes will begin to glow a soft orange light. Press the power switch to (0) to turn the unit off. As the heaters cool off, the orange glow will slowly disappear.

It is normal for a vacuum tube equipment to run warm if used for prolonged periods. Tubes are operating at much higher temperature and should not be touched for at least ten minutes after the unit is turned off to prevent burns.

Always place your amplifier away from children and pets to prevent burns.



TUBE REPLACEMENT

Your **Experience Head One** amplifier's conservative design maximizes life of the tubes. You can expect that your 6S45P tubes will last in excess of 5000, while the EZ80(81) rectifier tube should last approximately 2500 hrs.

Lacking the accurate time measurement, we strongly recommend replacing the output tubes at 20-30 months interval (depending on your listening habits). This will ensure that the amplifier always performs at its best and tube failure will not overstress other parts.

Before you start replacement you should make certain that the unit is turned off and disconnected from the AC outlet and that the tubes have cooled down. Allow sufficient time, minimum 30 minutes, for tubes to cool down and internal capacitors to discharge. Before inserting a new tube, inspect the tube for cracks and physical damage. Make sure that the pins are straight. If you need to straighten the pins, be very careful as it may cause the glass envelope to break, causing the tube to lose the vacuum and fail as soon as the amplifier is powered on, possibly damaging the amplifier as well. Also, make sure to inspect the tube sockets for cracks and pin inserts. Carefully align the pins with the socket and gently insert the new tube. **Never force a tube into a socket.** Should you decide to buy replacement tubes from Trafomatic Audio, rest assured that they were fully tested before the shipment.

Only 6S45P power tubes can be used. Regarding rectifier tube, the EZ80 tube can be replaced with EZ81 or 6V4 .

No other types of tubes can be used as they may cause damage to the amplifier, which is not covered by the warranty.

We do not recommend frequent changes of the tubes, as the sockets are sensitive mechanical parts and are rated for relatively small number of insertions.

Servicing

Because of its careful design and high manufacturing standards, your amplifier should normally require only minimal service to maintain its high level of performance.

CAUTION

Lethal voltages are present inside the amplifier. Do not remove the amplifier's bottom cover and do not tamper with components inside the unit even with the power turned off. Servicing should be left only to authorized and trained personnel.

Technical Specifications:

Tube Headphone Amplifier

Tubes: 2x 6S45P , 1x EZ80(81)

Power supply: 230VAC (option 115VAC) , 50/60Hz - 50VA

Consumption: 30VA

Output impedance: 30 -100 – 300ohms

Maximum output power: 300mW

THD at 100mW/1kHz: 3 %

Additional outputs: line out i sub out

Inputs: CD , AUX

Input sensitivity: 1Veff

Input resistance: 47Kohm

Output line voltage:

THD 1% - 3.2V

THD 2% - 6.4V

THD 2.8% - 9V

Frequency bandwidth:

- headphone and line out 20Hz(-3dB) – 80KHz(-3dB)
- Subwoofer out 20Hz(-3db) – 18KHz(-3dB)

S/N: 85dB

Minimum load resistance on “LINE and “SUB”:

- 2k ohm both outputs simultaneously;
- 1k ohm single output.

Gain on “LINE” output: 18dB

Dimension: 200x280x150mm



Trafomatic Audio

Trafomatic Ltd.

Andije Habusa 15
11400 Mladenovac, Serbia
www.trafomatic.com

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