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Notice

Power supply unit should be plugged into the amplifier unit with the tubes in the correct sockets BEFORE POWERING UP. 6SL7/5691 goes in front socket and the 6AS7G/6080 goes in back socket of the headphone amplifier unit.

Please allow at least 12 hours for the tubes to burn in since they are new. It is not uncommon to hear crackling and metal expanding for new tubes. They require settling in, especially the 6AS7G/6080 which can be particularly noisy in the beginning since it is trying to remove impurities due to the manufacturing process from the plate and cathode. It is recommended not to have the headphones plugged in for about 3 hours when installing a new 6AS7G/6080.

Do Not plug in headphones immediately after the high voltage LED, second LED, goes ON. One has to allow the output capacitors to be charged up first. It is OK if the headphones are constantly plugged in to the headphone amplifier since the high voltage power supply ramps up slowly.

Stacking amplifier as shown on manual cover will increased hum. The 6AS7G/6080 are more microphonic than usual. With some headphones this may not be an issue. Low sensitivity headphones will produce less audible hum. A magnetic shielding plate, 1/8" - 1/4 " steel plate, with acoustic dampening, felt/rubber, can be used between the amplifier and power supply to reduce the hum. If this is still an issue separate the power supply unit from the amplifier unit.

For super sensitive headphones the 6SL7/5691 might require shielding. Just place a metallic cylinder/ shield over the tube and allow the cylinder to touch the mounting screws of the socket for the 6SL7/5691.

Do not clean with alcohol or paint thinner. Water damp cloth is sufficient or dust off.

Read Manual before operation.

SUGARMAPLE

MAPLETREE AUDIO DESIGN

Octal Duo Stereo Headphone Amplifier

Users' Manual

Rev Aug. 30/16

Mapletree Audio Design
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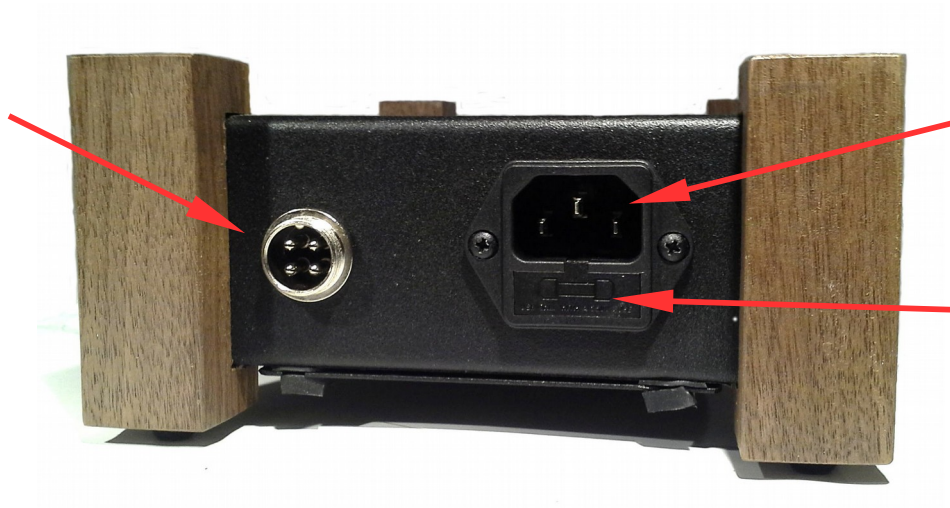
Introduction

The Mapletree Audio Design Octal Duo (OD) 300 Stereo Headphone Amplifier represents a high performance development of an octal-based headphone amplifier. The use of a high capacity power supply provides increased power output and a lower driving impedance employing a widely available 6AS7G/6080 output tube and 6SL7/5691 driver. The separate power supply chassis allows flexibility in positioning each unit and reduces the heat seen by components in the main amplifier chassis. Premium components include Tantalum film resistors in the driver stage.

Input/Output Connections

The standard IEC line cord is attached to the receptacle on the rear panel of the OD300 power supply. It is compatible with a 120 VAC line with a frequency of 50–60 Hz. A 1A/250 V fuse provides primary protection for the power supply. It is located under the chassis and can be accessed by removing the bottom cover of the power supply with the unit unplugged and waiting 3 minutes after powering off. Under normal conditions, it should not be necessary to replace the fuse. If power fails to come on, you can check the fuse and replace with a spare if necessary. If the fuse blows a second time, you should not try to operate the unit. Contact Mapletree Audio Design for information regarding service.

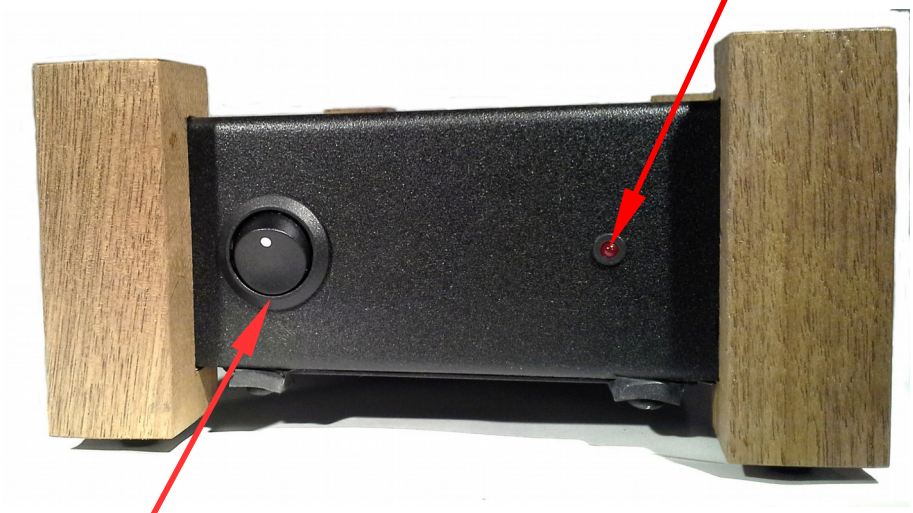


The power supply is connected to the amplifier chassis with the supplied power interconnect cord. Never power on the power supply without making this connection. The two chassis may be stacked or separated as permitted by the power interconnect cord.

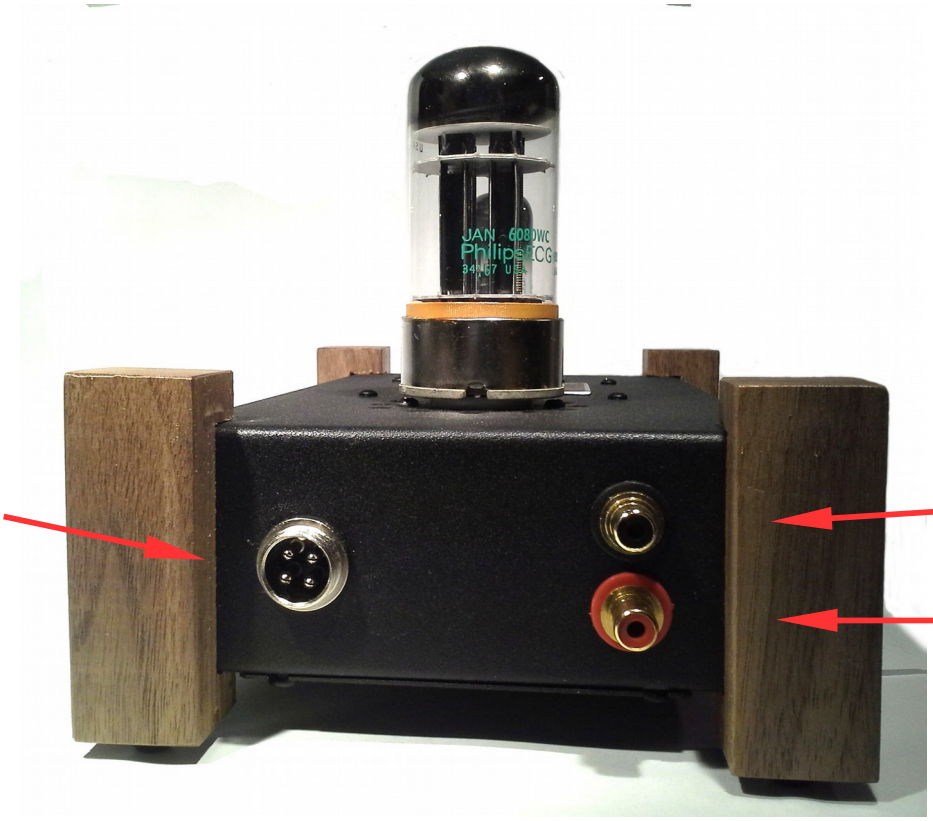
The power switch is located on the front panel of the power supply. High Voltage will automatically switch on after 30 seconds. The LED pilot light indicates the power on condition.

The RCA jacks allow connection to a line-level stereo source (e.g. CD player) while maintaining the connection to the regular amplification system. The input impedance is 50 kΩ which is compatible with all source output circuits.

LED Heater
Power Indicator



On Switch
(High Voltage will automatically switch on
after 20 seconds)



DC Power
Input

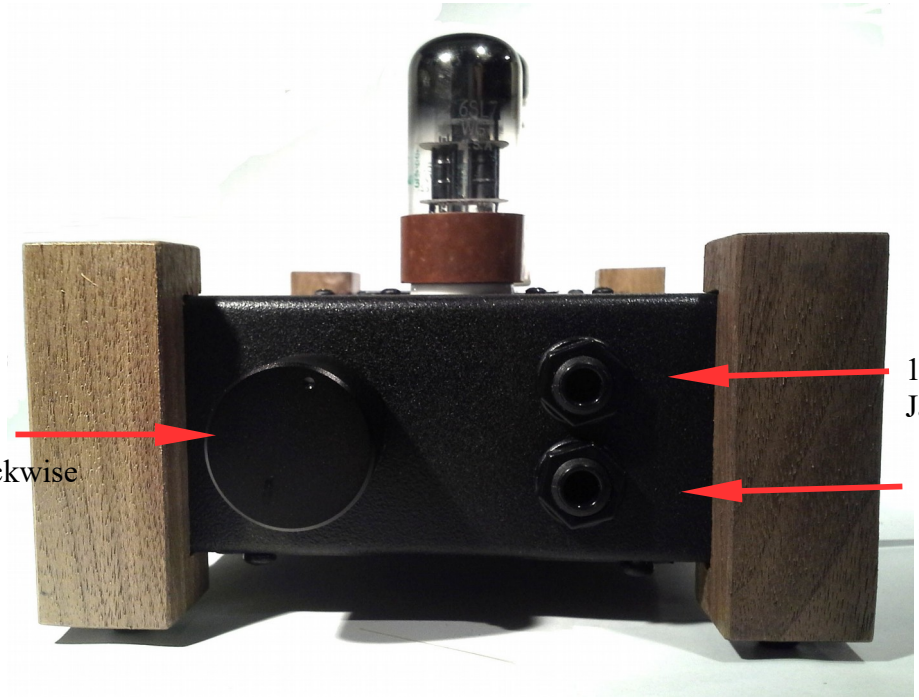
Left Channel
Input

Right Channel
Input

The headphone output jacks are two standard ¼" stereo phone jacks. The high impedance output (HiZ)

gives the most power output before clipping occurs but has a higher output impedance. The low impedance output (LoZ) gives less power output before clipping occurs but has a lower output impedance. If your headphones are terminated in a 1/8" plug, an adapter is required (usually supplied with your headphones). Headphone impedance from 16 to 300 Ω are suitable for use in both the HiZ and LoZ outputs.

Volume Control
Min. Volume:
Full Counter-Clockwise
Max. Volume:
Full Clockwise



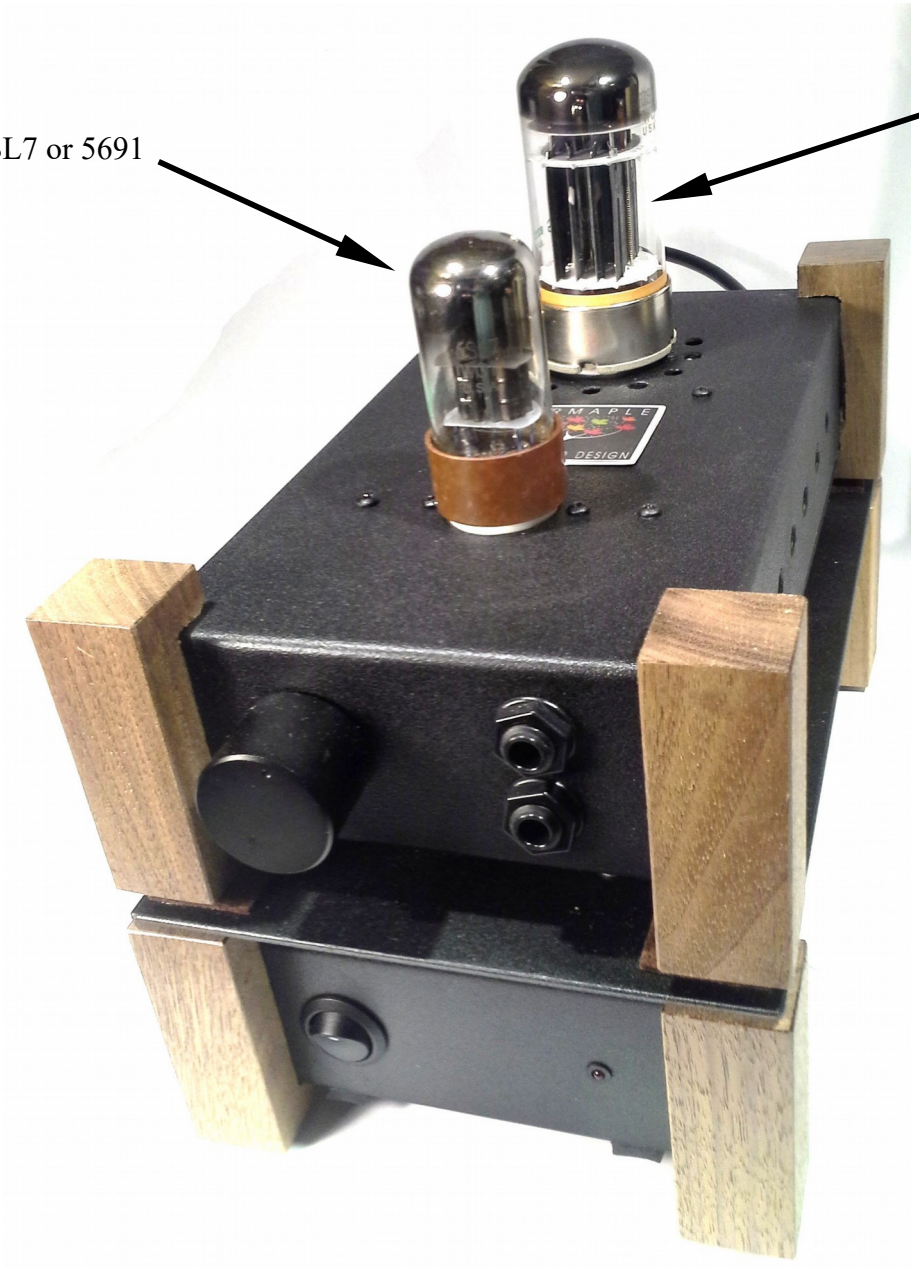
Controls

The signal level in both channels is controlled simultaneously by the volume control on the front panel of the OD300 amplifier.

Tubes

A tube burn-in period of several hours may be needed to achieve the best sonic performance. Tube life should be thousands of hours. Aging tubes may result in a reduced gain in one or both channels or an increase in noise levels. Infrequently, a heater may burn out which is indicated by total loss of sound. The OD300 is supplied with 1 – 6SL7 (driver) and 1 – 6080 (output) tube. Replacement tubes can be obtained from several suppliers in the U. S. and Canada. Both types are currently manufactured and are also available as new old stock (NOS). Some listeners enjoy trying different brands and variants of tubes. The greatest sonic variation will occur with different driver tubes. The 6SL7 should have matched sections so as to have a balanced right and left channels.

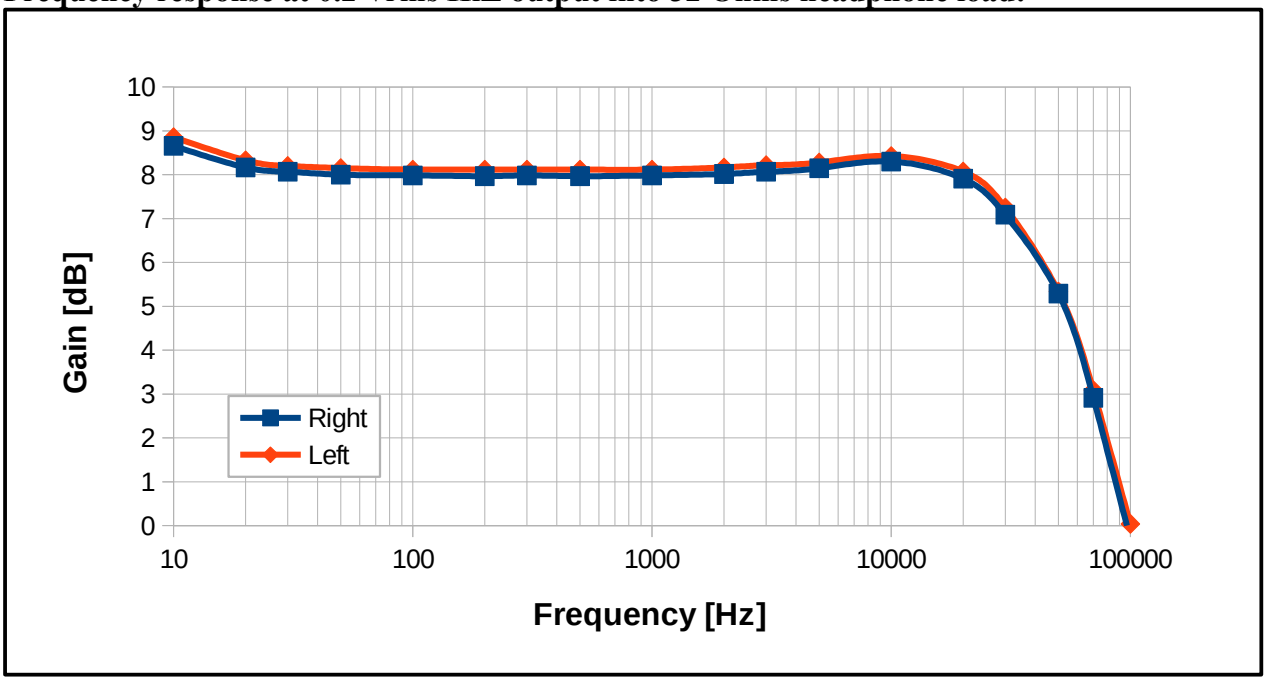
Warranty
Factory assembled MAD components are warranted for 2 years to the original purchaser for failure of all parts (excluding tubes). Tubes are warranted for 90 days exclusive of shipping cost. Service, including parts and labor (but excluding shipping), is free within
the warranty period.



Additional Notes
This manual is an aid to the user for the operation of the OD300. Details of the amplifier and power supply circuits are subject to change without notice so as to achieve the best possible performance. The schematic is only representative of the actual amplifier and component manufactures, model and values may vary.

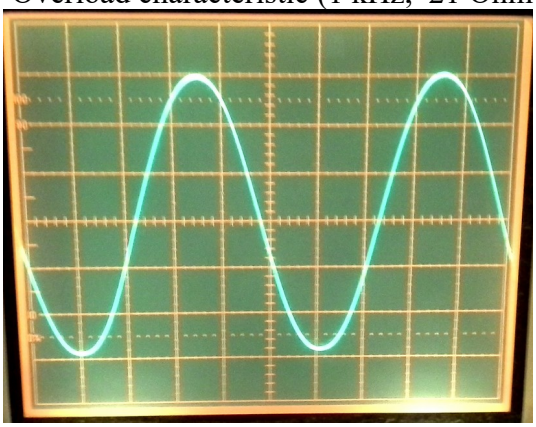
MAD OD300 Custom Measured

Frequency response at 0.2 Vrms HiZ output into 32 Ohms headphone load:

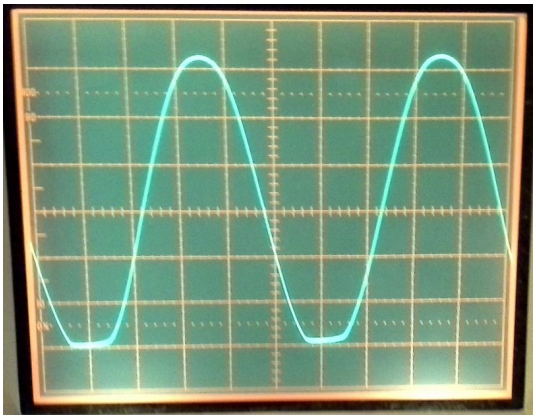


Maximum undistorted HiZ output at 1 kHz:
Po(max) Rload
1.4 W 16 Ω
1.0 W 21 Ω
0.7 W 32 Ω
0.1 W 300 Ω

Overload characteristic (1 kHz, 21 Ohm load HiZ)



V_{out}=4.5 Vrms



V_{out}=5.0 Vrms

Measured output impedance at 1 kHz: LoZ 1.1 Ω and HiZ 2.1 Ω
Input impedance: 50 kΩ
Hum and noise at output: less than 3 μV rms (120 dB below max. output)
Recommended load impedance: 16–600 Ω
Phase: non-inverting
Power consumption: 90 W, 120 VAC (240 VAC Europe) 50-60 Hz

MAD OD300 Headphone Amplifier

Version:7a

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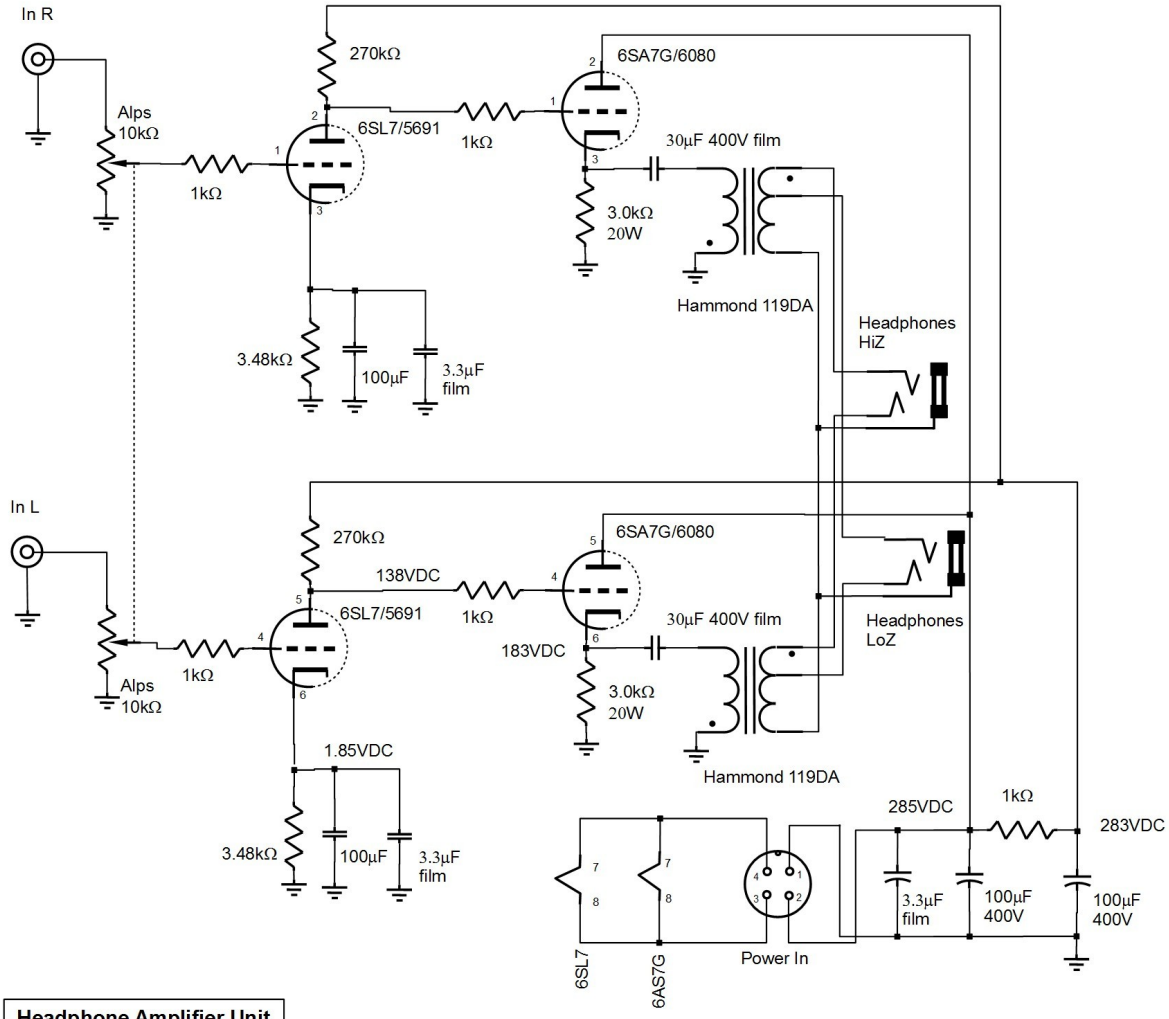
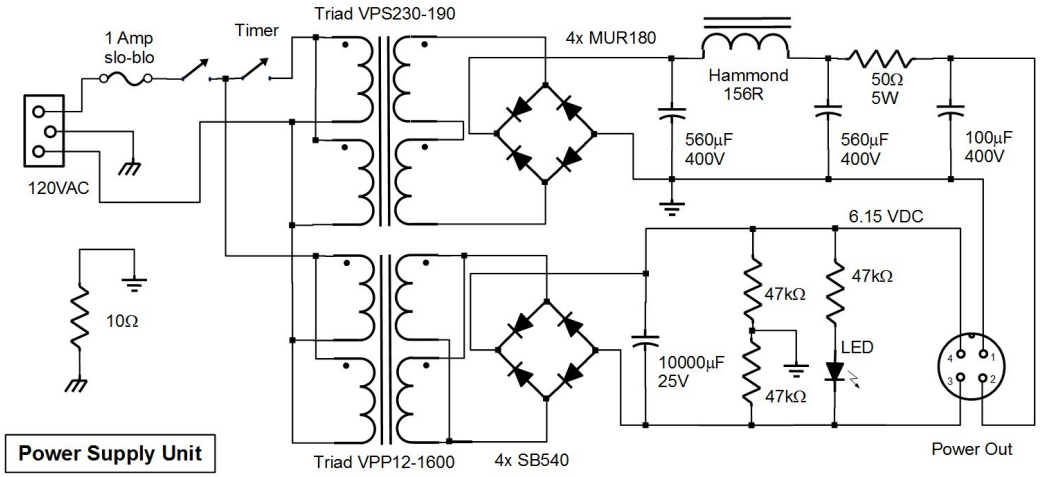
Rev. May 27, 2016



Headphone Amplifier Unit



Power Supply Unit