

The “pure tone” modified Jolida J302B power amplifier

In the Carton



Chassis

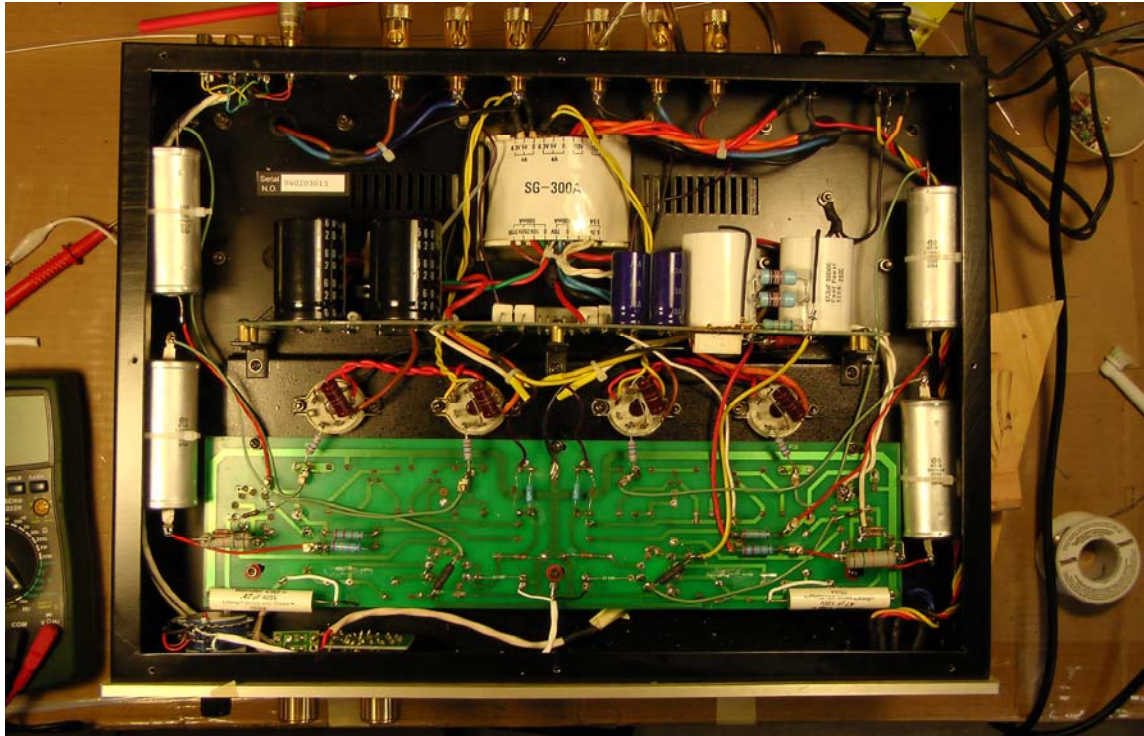


Tubes



Original User Manual
Original Parts (replaced by premium parts)
Additional knob for volume control
Power cord

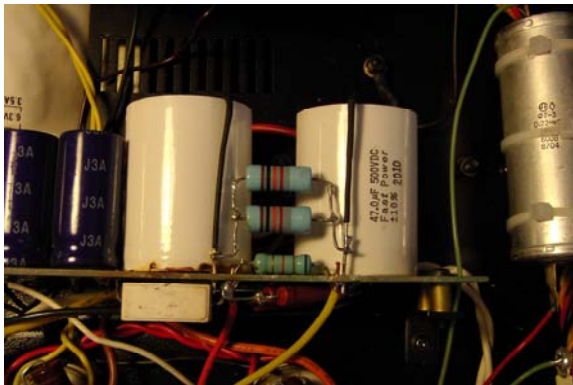
Modifications



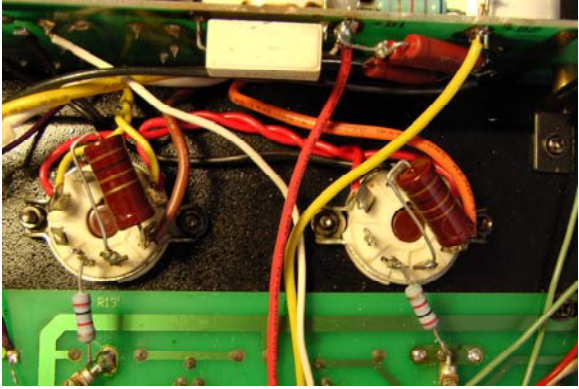
Under the Hood



Upgraded power supply (B+) filter capacitors to Nichicon 520uf. The result is deeper, more articulated bass.



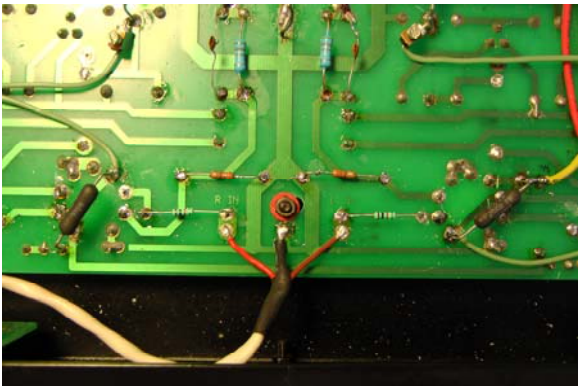
Upgraded filter capacitors for gain and driver stage to 47uf film capacitors. The result is cleaner, faster sound that is detailed.



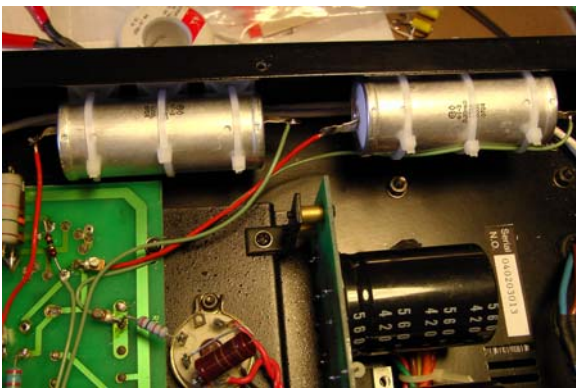
Upgraded output from pentode to triode operation. The result is smooth, warm, detailed sound that is often associated with tubes.

The cost is some what lowered power level at the same distortion, however, since it is primary second order, is not unpleasant.

The operating point of the drivers are tuned to match triode mode output tubes.



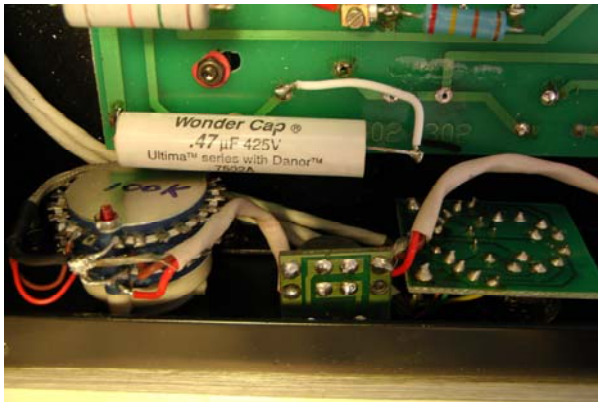
Upgraded input gain stage from SRRP to triode mode operation. SRRP is known for higher distortion. Triode mode input stage offers similar advantage as triode mode output stage: warm, clean that makes the tube sound attractive.



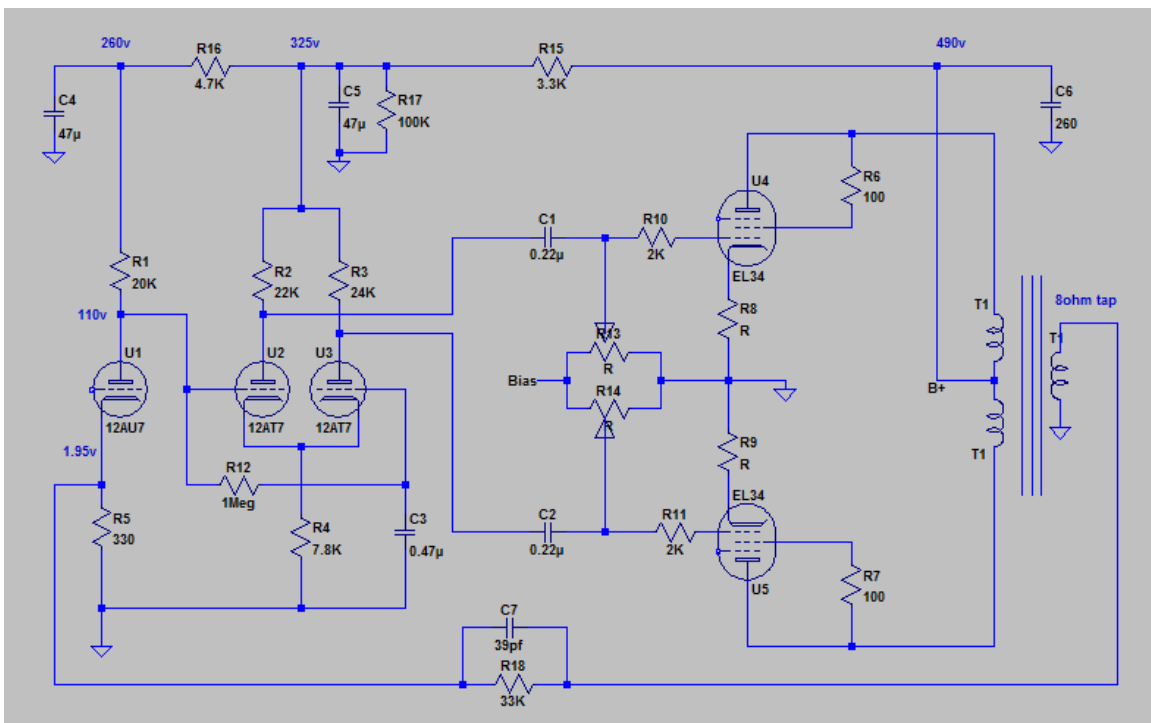
Upgraded coupling capacitors to teflon. The result is very refined, detailed, grainless sound. Very polite, non aggressive.



Upgraded bypass capacitor on the drive stage to wondercap. The result is quieter, faster sound.



Upgraded input volume control to 23 step attenuator. The result is much better definition and quieter signal.



Modified schematics

Installation

Once the chassis is unpacked, examine for damage. If there is no damage, proceed to insert the tubes.

The destination of the 9pin tubes are marked on the container of each tube. Make sure to align the pins during insertion, pins are easy to bend. Straighten pins with a pair of pliers if necessary.

The destination of the output tubes are labelled on the tubes themselves. Align the key to the socket.

Turn the volume control all the way counterclockwise to minimum.

Connect input signal, turn the selector to the source.

Connect speakers between the correct tap (8 or 4 ohm) and common.

Connect power.

Always turn on source first, wait a few seconds for the source to stabilize before turning on the power amplifier. This is to avoid turn on transient to go through the power amplifier to the speakers. Transients are known to damage speakers.

Run music, increase volume, enjoy.

Always turn off power amplifier before source, again to avoid transients in the source.

Important notes

1, Input tubes V1 and V5 have been changed to 12AU7. *Do not use 12AX7* because the operating point is not set for it.

2, Output tubes are stock EL34, biased at 40ma. Follow the instructions in the original user manual for bias adjustments.

Increasing bias makes the sound warmer, "heavier", with apparent increase in bass response. *Do Not Increase bias beyond 45ma*, it will reduce tube life and puts stress on B+ supply.

Decreasing bias makes the sound faster, more detailed, more airy. EL34 can operate at bias below 30ma, but most listeners will detect apparent decreased bass response at such low bias.

3, The modified J302B is compatible with 6550, KT88, KT99. Each tube type offers different sound.

4, Coupling capacitors can easily be changed since they are mounted with straps and connected by screw terminals.

Popular choices are paper oil capacitors made by Jensen or Mundorf. They each have their own characteristic sound, and are very different from the installed teflon capacitors. Be careful, grab the terminal block with a pair of pliers to provide mechanical support when loosening or tightening the screws

5, The stock volume control comes with a longer shaft and works well with the stock gold knob. The 23 step volume control has a shorter shaft, as a result, the stock gold knob feels wobbly. If desired, replace the gold knob with the supply knob. Once it is secured by the set screw, it is very stable.

