

Billie / Ladyday 300B Ultrapath and MU Mods

The Ultrapath Mod

It is possible to tweak the basic design the Billie (M500) and Ladyday amplifier beyond tube rolling to bring in a number of improvements. One such modification is the Ultrapath connection. Technically this is not quite a 100% true ultrapath modification because a cathode capacitor remains in place, all be it a smaller value film type to replace the original electrolytic.

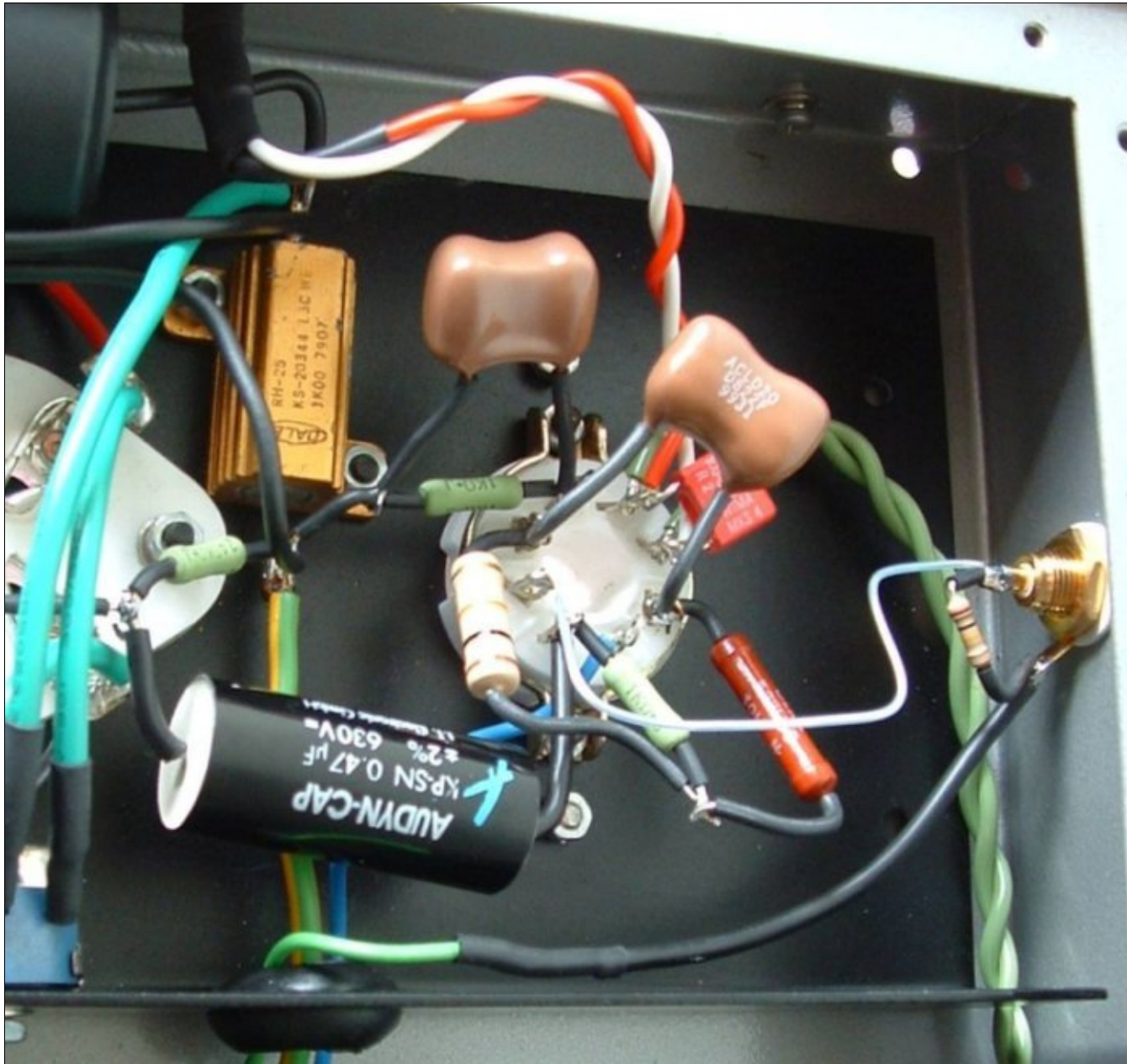
The standard 300B cathode capacitor is replaced with a film-foil type, in my case an Ansar 70uF 200V. A 22uF 600V Ultra path capacitor is also connected between B+1 and the cathode. Both of these components make the unit even quieter. Hard to believe as the standard Billie and Ladyday SET build is already very quiet at under 0.3mV measured noise output. With both large film capacitors fitted and the hum pot adjusted the noise dropped to 0mV. My DVM could no longer measure anything. On my main listening speakers (89db) with just the Billie switched on and no pre-amp you cannot hear any noise at all, total silence. This is impressive for any valve amplifier. With the Basie pre-amp on you can just hear a faint hiss in the tweeter if you put your hear right up against it and turn the volume up high. Again, very impressive noise floor from these pair.



This is one of the Ansar Film capacitors. These replaced the electrolytic on the 300B cathode. The kit comes with a 220uf Rubycon as standard. I later tried an Elna 220uf, a 100uf Blackgate FK and finally the Ansar capacitor here which proved to be the best but rather on the large size. These were custom made by Ansar in the UK.

The MU Mod

Removing the small 100uF capacitor from the Billie's SRPP driver stage loses a little gain but it is not really noticeable. The sound is cleaner as a result. Very similar result to removing the capacitor off the driver SRPP stage in the Basie pre-amp. Lose a little gain but benefit from improved sound quality. However, I later changed the SRPP driver stage to a MU based driver which is more musical and not as analytical as the SRPP stage could be at times.



The capacitors used are silvered-mica. I managed to source the parts locally from RS but they are also available as an upgrade option from Brian at diyhifisupply if you cannot buy them local.