Quick and Dirty Class "AB" mod for KL300p

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02-22-2011, 03:41 PM

eagle1911
Junior Member
iTrader: (0)

Quick and Dirty Class "AB" mod for KL300p

This is a "quick and dirty" class AB mod for the KL300p that I ran across some time ago. While this providing a small bias source can be applied to just about any class C amp. Basically any amp that g is class C. In this case, the inductor is part of the input transformer.

Procedure: First I used a dremel tool to carve a notch all the way around the outside end (closest si transformer, which is the smaller of the two transformers on the amp PCB. This disconnects the trai completely through the ground trace all the way around that end of the transformer. If you check fo ohms. If you get a reading of 0 ohms, recheck to make sure that you've cut completely through the transformer.

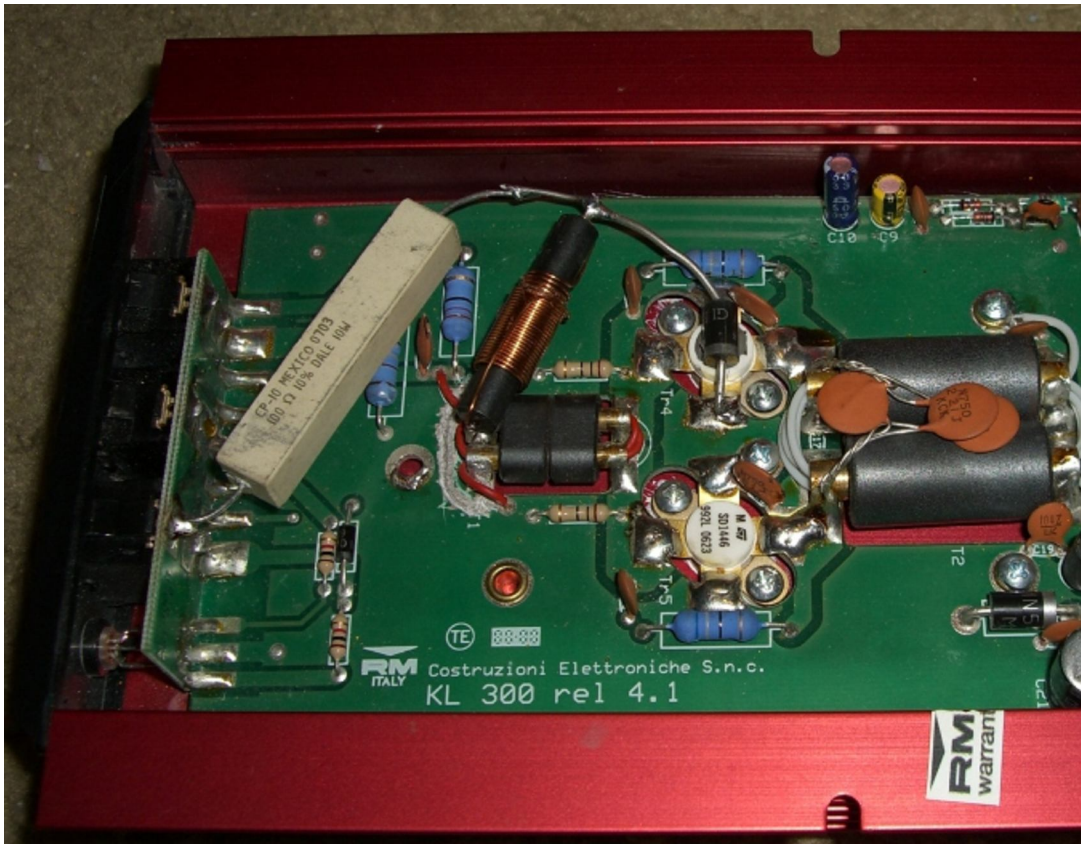
I used a large 10W 100ohm resistor in line as well, one end of which I connected to the "Pre + Lin" pin. When the switch is on, this pin is a source of 13.8V. This way, the bias is only supplied if the ar supplied to the transistors, and it is connected in series with a large 3A silicon diode (1N5402), the of the SD1446s (there is thermal paste between the two) and the cathode end (stripe) is connected emitter tabs. As you may already know a diode is simply a PN junction, and so this diode limits the PN junction, generally .6-.7V depending on the junction temperature. At the connection point betwe end of an RF choke (available from Radio Shack) which ensures RF cannot pass as we only want DC the input transformer, on the same side as the cut that was made with the dremel. This replaces th voltage. This completes the rudimentary bias supply. This small voltage applied to the bases (.6-.7V all times, which means your amp is now class AB. Since the components used are fairly heavy-duty you don't have to worry about things moving around much.

This is a quick and dirty mod, partly due to limited room, and partly due to my feelings that simplici see this same basic supply frequently in many 10-11m amps and even some Mirage VHF amps that very similar results to many major name manufacturer's amps and most other simple class AB amps to the physical arrangement of the diode and transistor you're actually a step ahead of many manuf

There are much more complex bias designs out there that are meant to make sure the transistors a

of condition .. so if you really wanted to you could go much further with it and get even better resul avoid overdriving the amp can help ensure that there is a reduction in the amount of distortion pro or fuzzy output then this mod might be just the thing you need.

Here's a pic of the end result:



Anyway, I just thought folks here might like to have a good description and pic of this mod, since I amp classes in general and how they are applied in real-world hardware.. this might help remove so there with KL300p's that want cleaner SSB output and less distortion this will likely help them out t

Last edited by eagle1911; 02-22-2011 at 04:50 PM.

02-22-2011, 04:38 PM

bob85
Senior Member
iTrader: (0)

whenever i use a diode to track temp i like to sand a flat on the diode to improve thermal contact, its good to see somebody out here doing some biasing

_____

tom bearden taught me that quantum entanglement allows thought to travell faster than the speed of light, this expla wait a while you will see they are not very bright at all.

02-22-2011, 04:47 PM

eagle1911
Junior Member
iTrader: (0)

That's actually a great idea, thanks! Never occurred to me to do that..

02-22-2011, 05:24 PM

Shockwave
Senior Member
iTrader: (0)

I do see one problem with this basic mod that is easy to correct. The center tap on the input transfo
That's not right. It should only be isolated from DC ground and returned to RF ground trough an ap
ceramic cap between the two points cut with the Dremel. Keep the wires on the cap short to reduce

02-22-2011, 05:35 PM

eagle1911
Junior Member
iTrader: (0)

Wow.. you guys are good! I'll add that to mine in the next few days and update the OP here with a

02-22-2011, 07:11 PM

mackmobile43
33 more than 43
iTrader: (7)

Nice job there Eagle.

_____
Ain't no feelin like mackmobeeelin

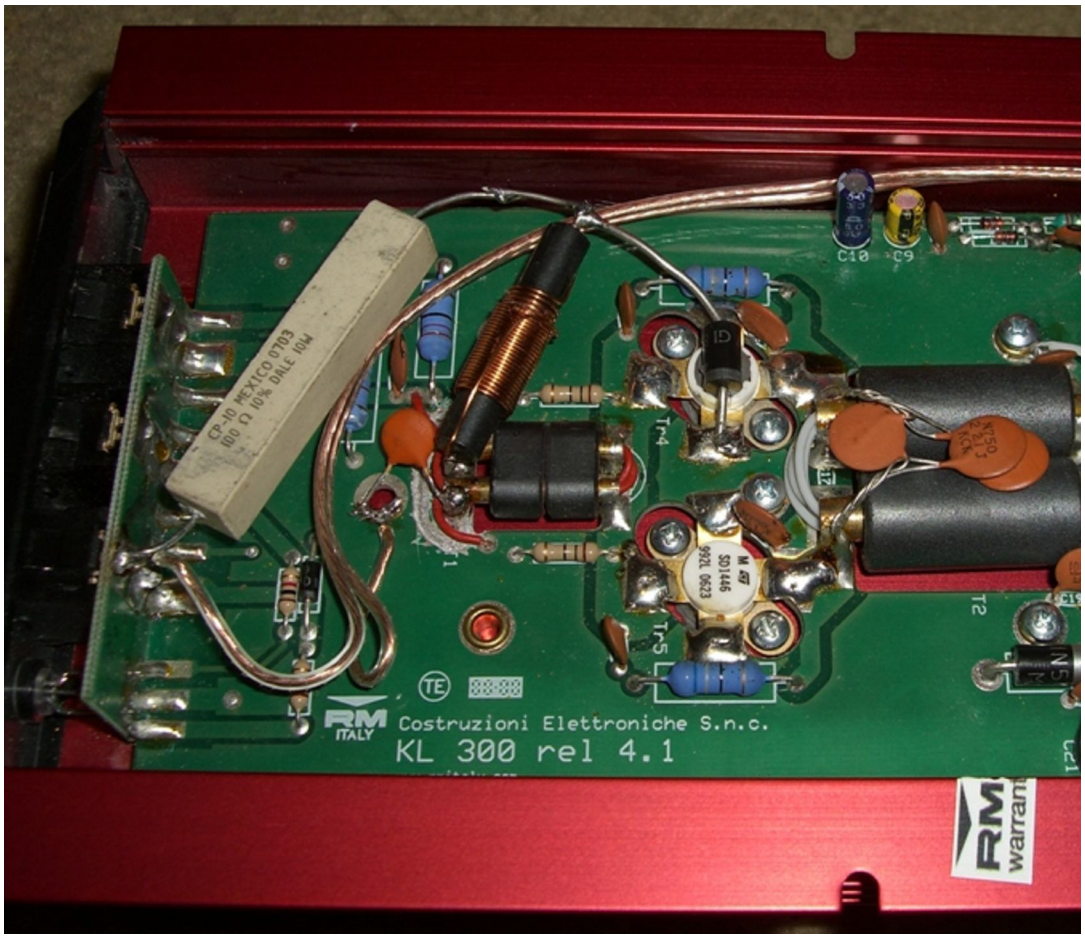
02-22-2011, 08:27 PM

eagle1911
Junior Member
iTrader: (0)

Tnx!

Well, it looks like I can't edit the OP anymore, so here's a new pic. Per Shockwave's observation (m
the input transformer and the circular ground pad around the hole just next to it. As Shockwave sa
ground as far as the DC bias voltage is concerned, while still providing a path to ground for the inco

The wire with clear insulation powers a fan I've mounted on the heatsink. The fan's positive wire is
and the negative wire is connected to the same ground as the capacitor described above.



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Klondike Mike, **eagle1911**

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