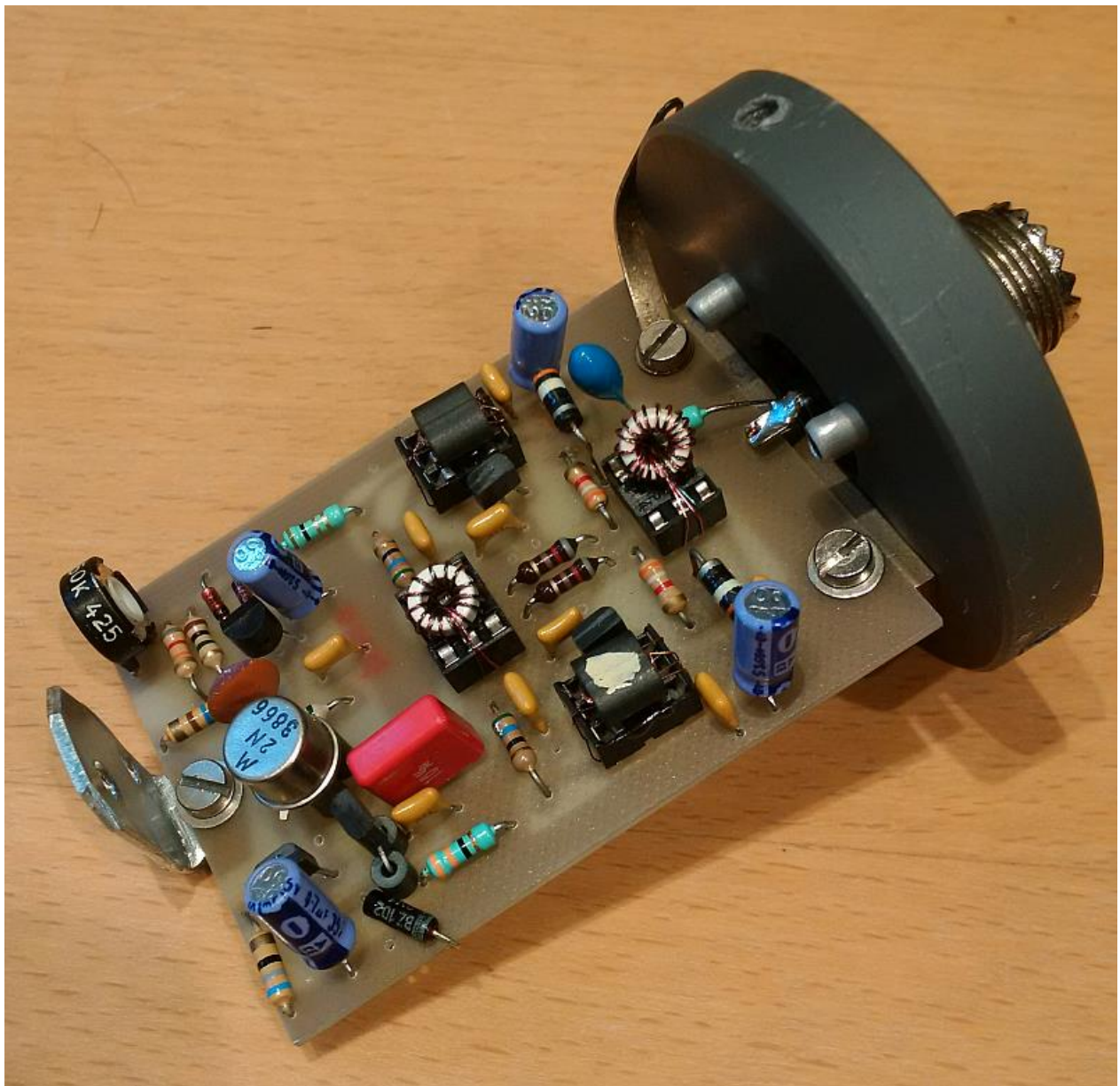


Dressler ARA-30 active antenna - what's inside ?

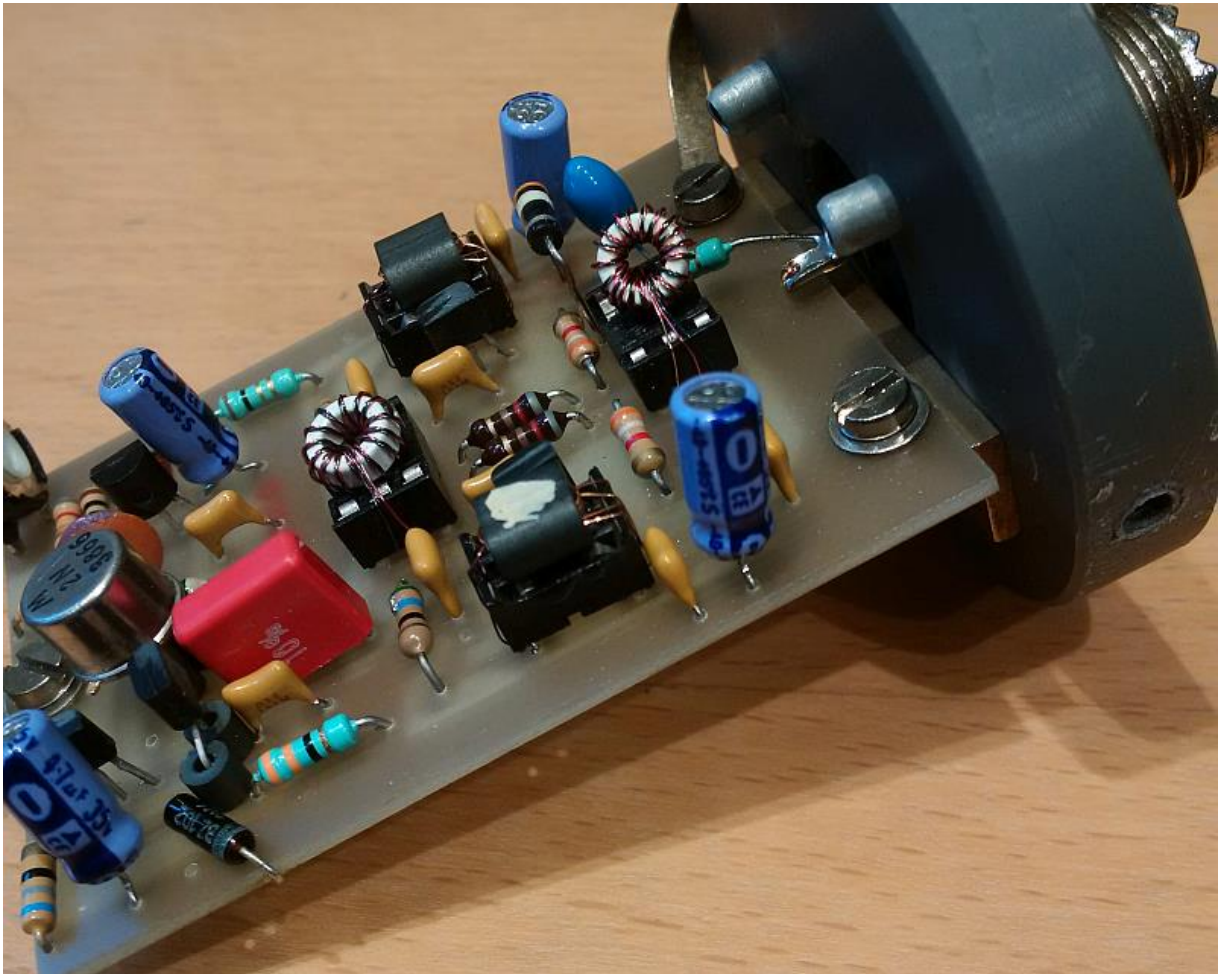
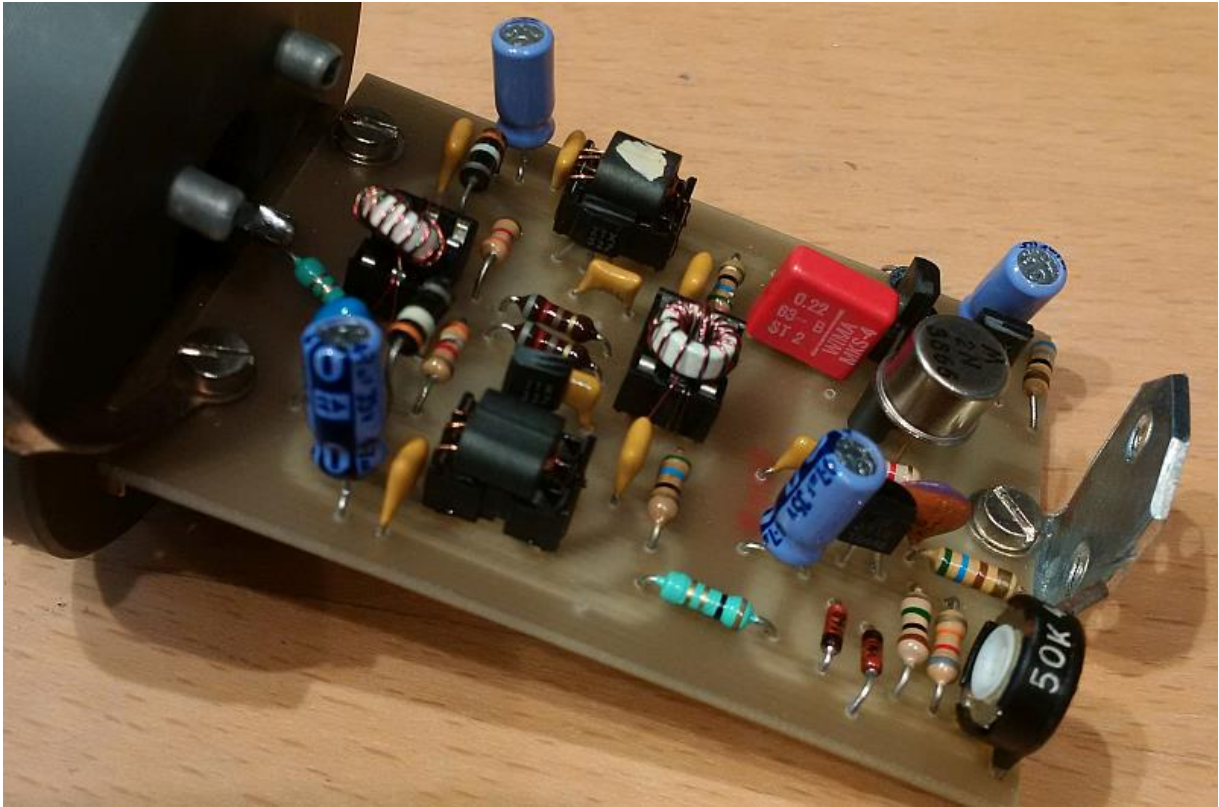
Matthias DD1US
December 2nd 2017

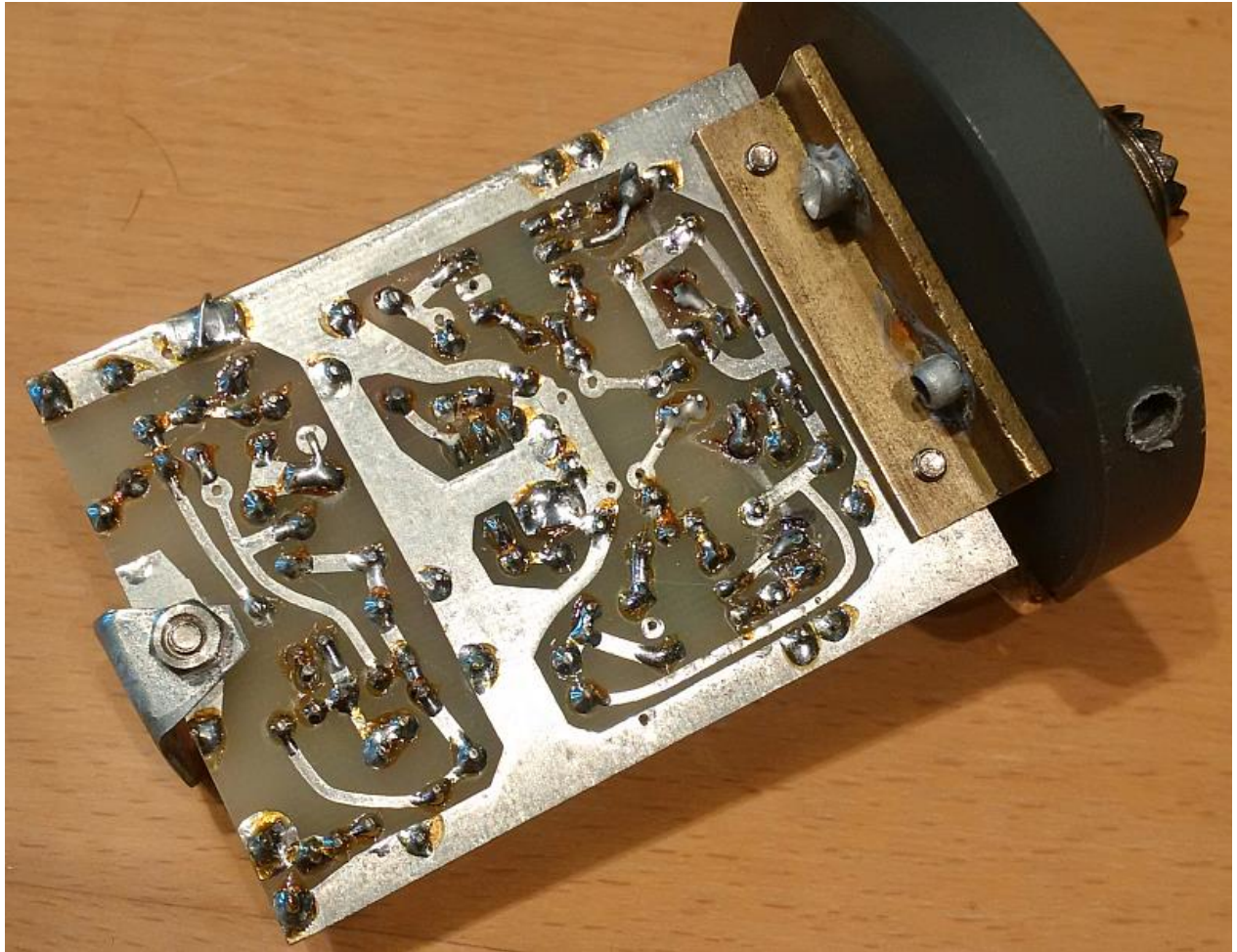
Recently I was able to buy a second hand Dressler ARA-30 active antenna on a fleamarket. I was sold as fully intact. However when I got back home and tried it I recognized that the current consumption was zero. Even the most efficient active antennas do not get close to that value and thus I decided to open the antenna.

Here are pictures of the PCB in the ARA-30 which I think is nice made.









I found out that a tantalum capacitor was damaged and provided a short circuit. I think it is a bad idea to use tantalum capacitors in such a circuit especially the one which was damaged was only rated for 16V (all other electrolyte capacitors on the PCB have at least 25V ratings). In addition a resistor was damaged and had an infinite high resistance. This might have been a consequence of the defective capacitor.



When searching the internet for information on this antenna I found a nice German report from Helmut OE5GPL called "Reparaturbericht ARA 30". It includes a schematic which turns out to be not identical with my ARA-30 device but very similar (the overall circuit is identical but types of some transistors and values of resistors were different). Thank you Helmut for this excellent report.

The production of this antenna has been discontinued and this little description is intended to provide some background information for those who consider buying one second hand, who need to repair their antenna or are interested to build one themselves.

I am always happy to answer questions. Please direct them to my Email address given below.

Best regards

Matthias DD1US

Email: dd1us@amsat.org

Homepage: www.dd1us.de