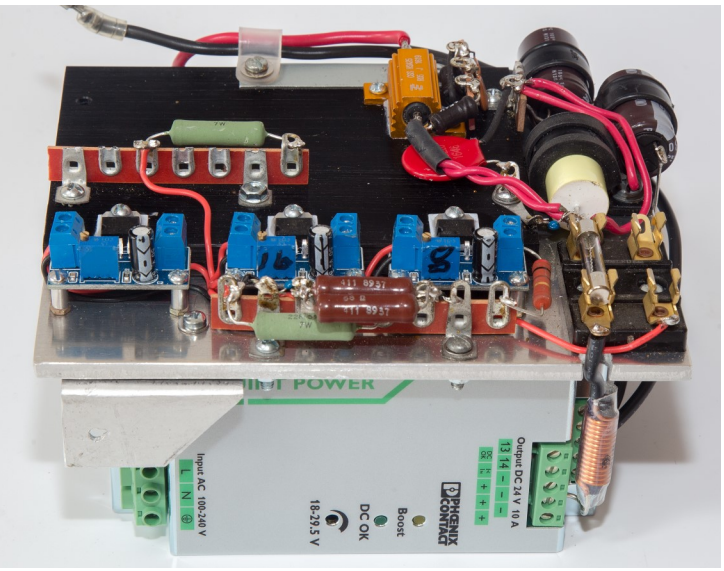
Replacing the TS 930 power supply, a *slightly* different approach.

My 1985 930 has been working fine so why bother? Having read all the info I decided to take the plunge. The hard work has been done by others so what you see here is a variation on a theme. The features here are: using the Quint 2866763 which is shorter allowing for an all vertical design. At 100w RF out, a total of about 12 amps is drawn so the Quint is happy in boost mode. Removing the Zener supplies in the fan housing and replacing them with LM317 based boards available from China on Ebay. (I experimented with the little switching buck regulators and found them to be too noisy, requiring lots of filtering and shielding.) I put a filter on the Quint to get rid of hash. The black heatsink was found on Ebay. It barely gets warm to the touch with the fan on. The fins are 3/8".



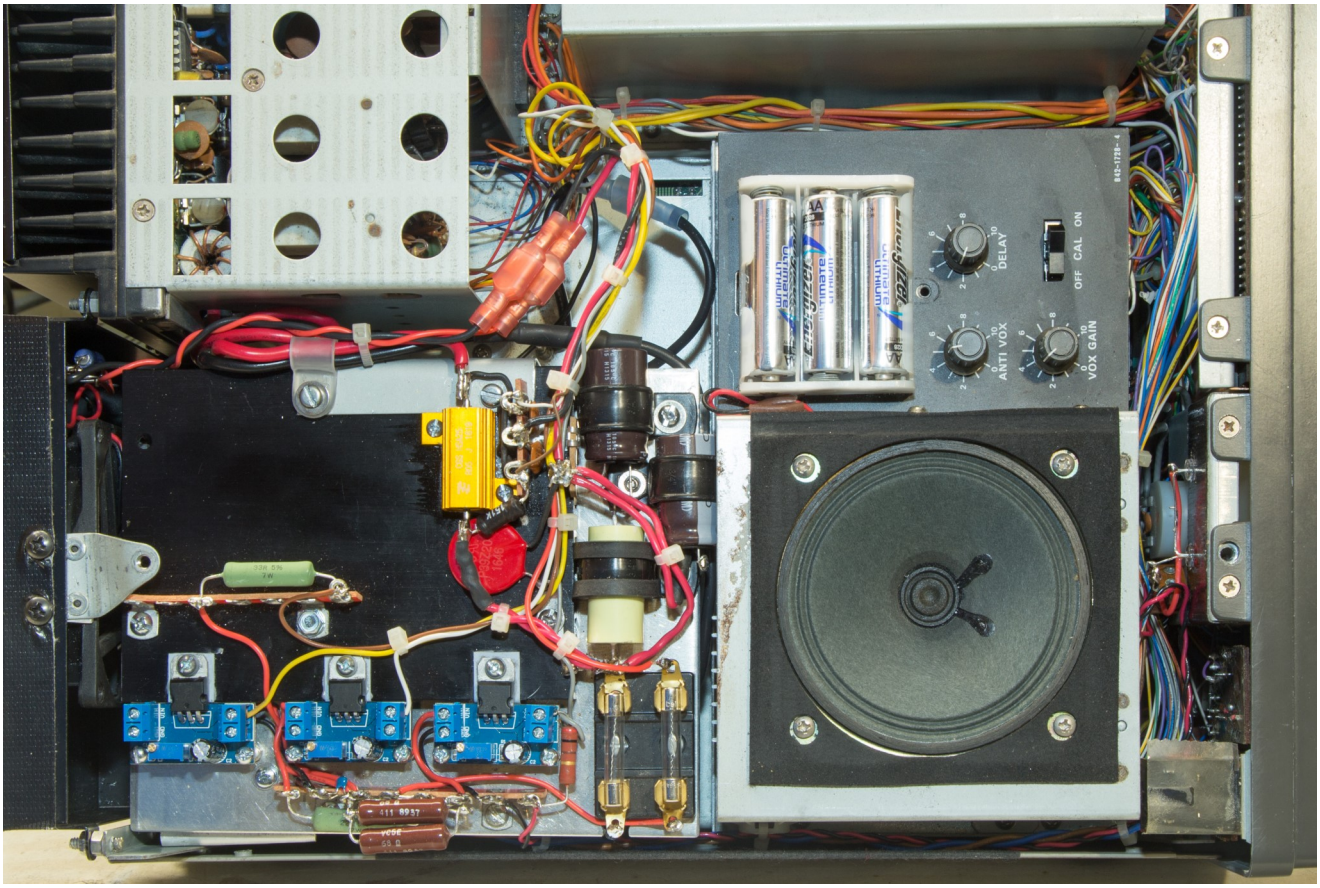
The electrolytics greatly improve transient response of the PS

In the pix you can see the heatsink mounted on an Alum. plate. The original VR mounting plate was re-purposed to be a mounting bracket using the Quint's DIN bracket mounting holes and folded over to hold the heatsink. The small bracket in the foreground mounts to the corner brace on the chassis. Three identical VR boards adjusted to 21.7V, 16V, and 8V are fed from 28V. Two of these are fed with dropping resistors to reduce their heat load. The filter consists of an inductor, 5uH, 10A, and the caps on the right side: a 5uF film, 1uF ceramic and two 3300uF low ESR electrolytics. The PA current sense resistor and chokes are at the top. I have included two fuses, one for the main supply the other for the regulators.

I have also included a MOV, large red disc, for any over voltage anomalies which the Quint is supposed to have built in but it's a $buck, so.

The final product: The cover clears with no problems. The PS fan runs continuously at low speed from the 28V supply. Almost silent. The cabinet is cool to the touch even in transmit. There is no PS noise on any freq.

This view shows that the vertical building method makes for a very serviceable system.



The green resistor near the top cover mounting hole is the 33 ohm feed resistor to the digital board.

I have also changed the meter lighting to bright white, wide angle LEDs, Ebay of course, powered from the 8V reg. through a 200 ohm resistor. Results below.

I hope this has been helpful to anyone who wants to keep the old rig going. If you have any questions, I am happy to help. 73 Ed K3UXN eddiecor@gmail.com