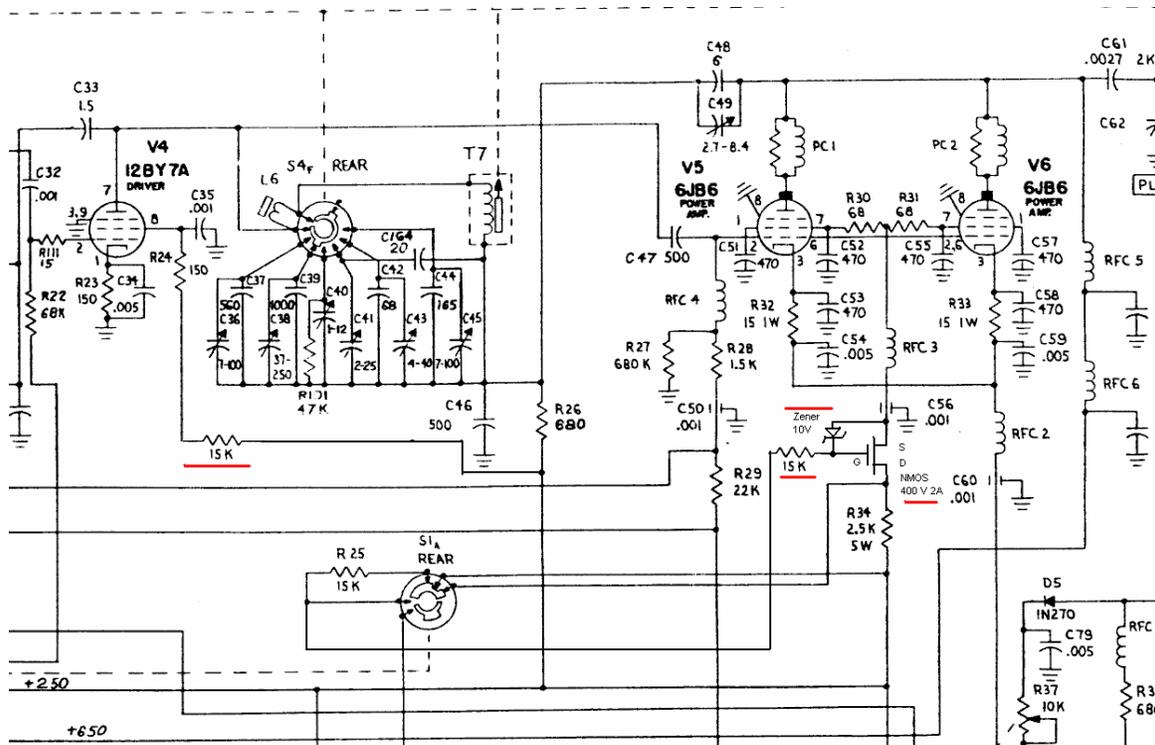


6JB6 AM screen modulator for Your DRAKE T-4XB.

Drake adopted true Am screen modulation only for the TR3 - TR4 series of transceivers. Why the T-4 series of transmitters employs AM modulation of the driver tube is a mystery, maybe for higher power, but there are problems. In fact it is very possible to have a good AM modulated signal at the output of the 12BY7 which may indeed saturate the 2 x 6JB6 linear amplifier. The tuning procedure suggested by Drake on its manuals do indeed avoid any possible saturation, but the factory choice of driver tube modulation may disrupt the functionality of some later user improvements to the AM modulator.

Let's correct this birth defect by moving the AM modulation to the final stage.

It is incredibly simple to implement, but we must use a NMOS to do it in 15 minutes. Any NMOS TO220 with not less than 400 V and 2 A is good. I used a 1000V 3A device. No piece of wire is required....

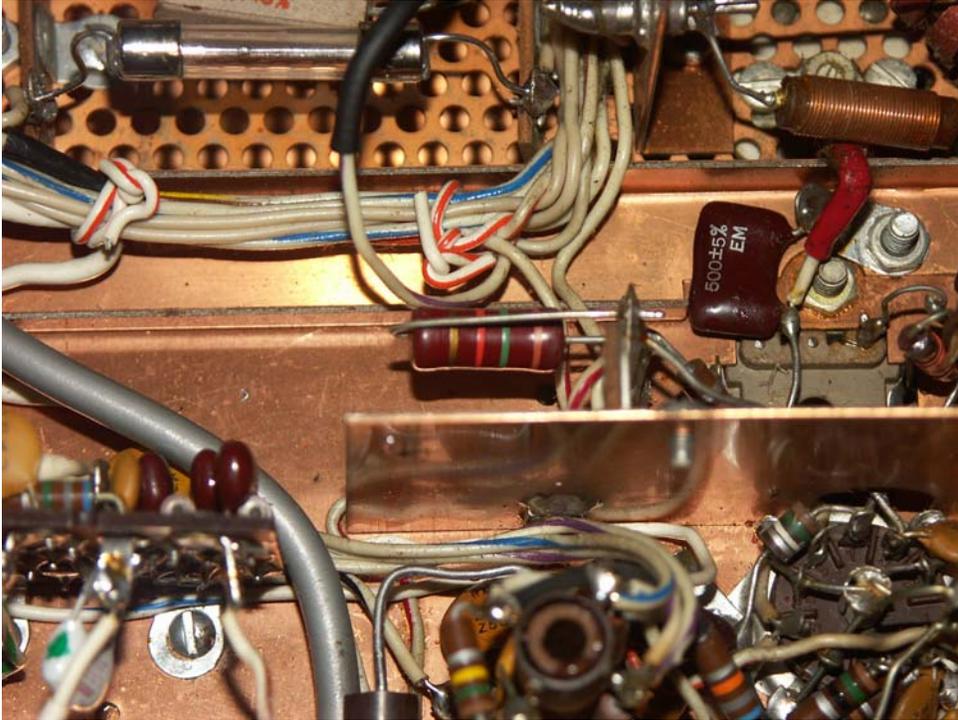


New components are underscored in RED.

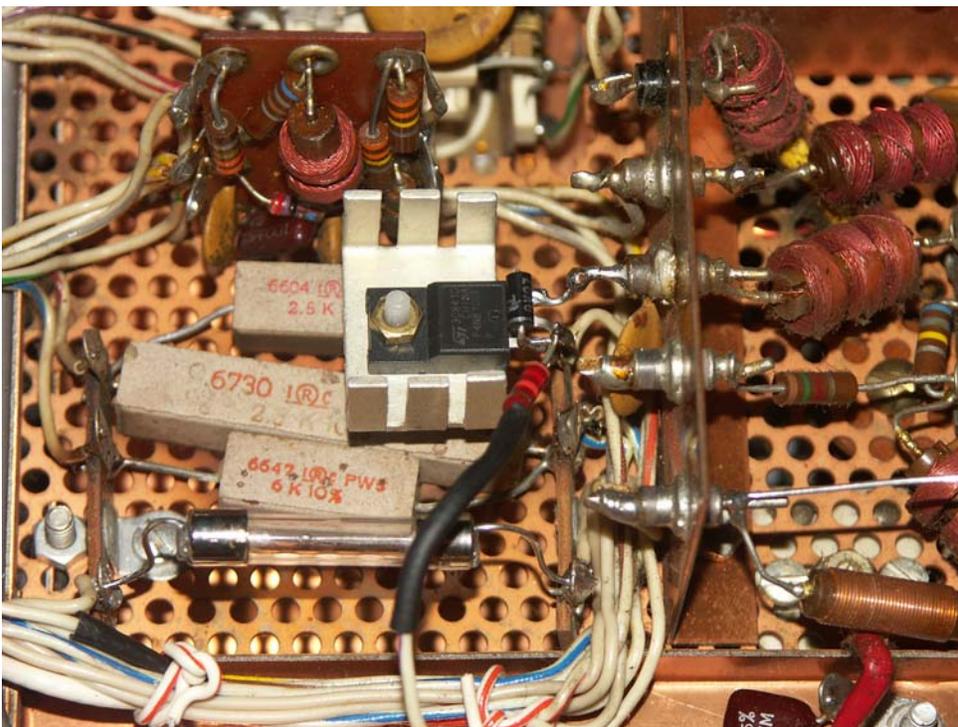
A small heathsink is required for the MOS.

This mod can be combined with the HiFi AM mods for your best sound on the AM net.

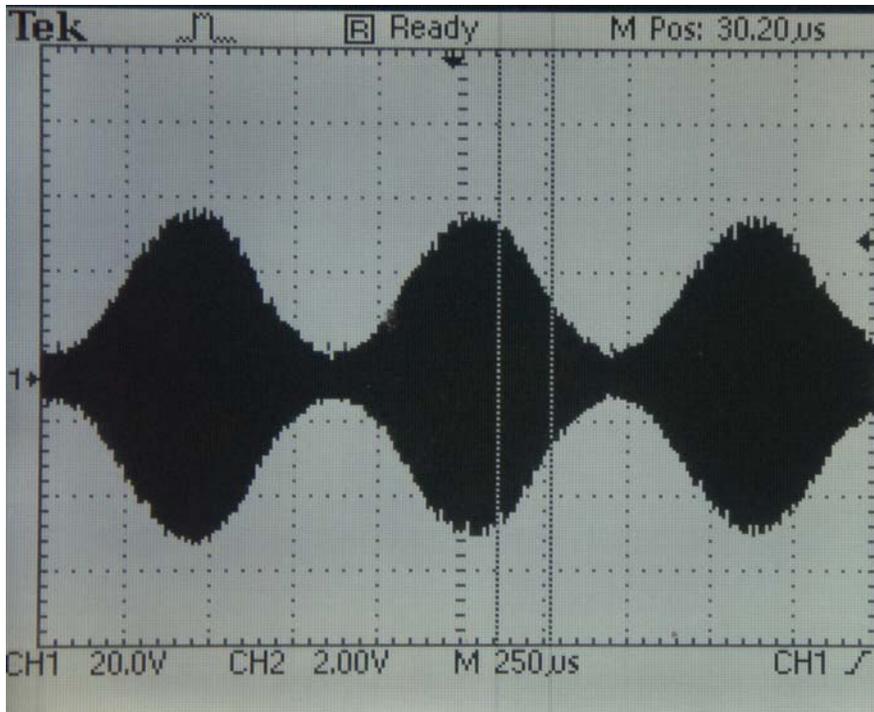
Some pictures on next page.



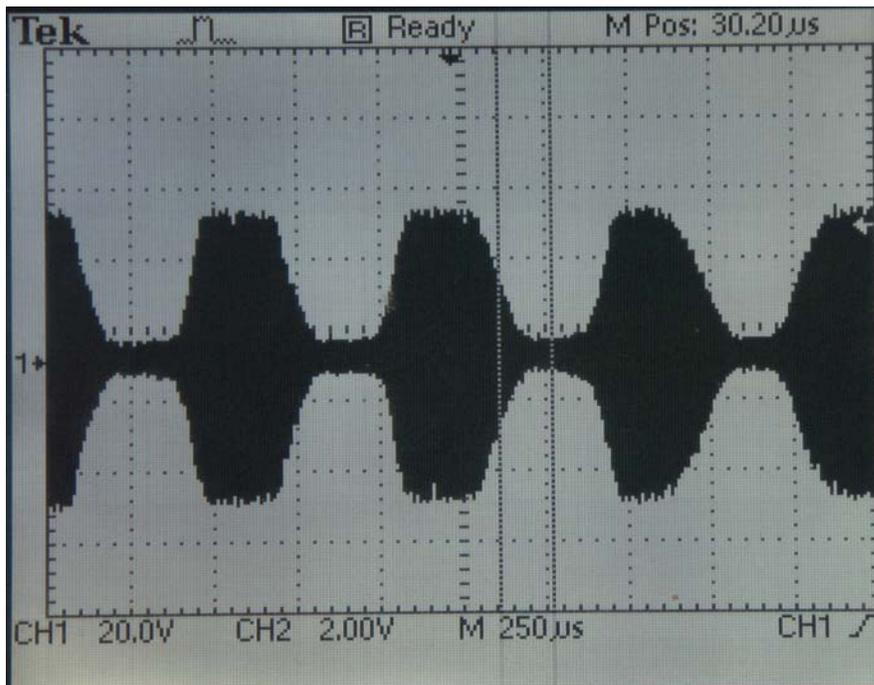
Remove the wire going to the 12BY7 screen grid, and drive the grid with 250V by the 15K resistor.



The wire with the modulation is now connected to the gate of the MOS. There is a free pad below for the 2.5 K resistor. Remember to move also the wire from the Tune switch to the pad.



AM envelope produced by the modulator at 7190 kHz.



AM envelope under clipping conditions at 7190 kHz.

IMPORTANT: always tune the T4XB in TUNE position for maximum output, then only with PLATE control and in TUNE position tune for minimum anode current, then switch to AM.

Best Regards. IN3IEX Giorgio.