

20 dB RECEIVER RF ATTENUATOR AND SSB AVC IMPROVEMENT FOR YOUR DRAKE TR4.

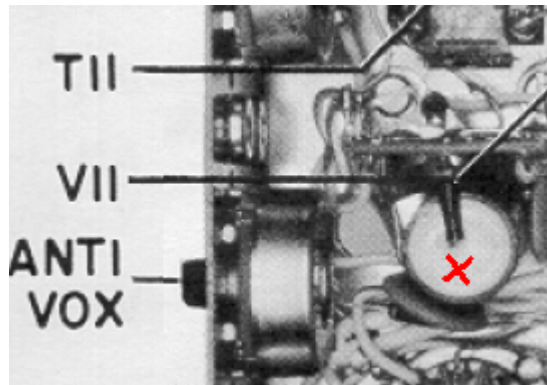
Here you will find two receiver improvements to the DRAKE TR4.

The first one is a 20 dB attenuator for the receiver. Here in Europe it is sometimes useful to attenuate the received RF signals when s 9+50 broadcasts are overloading my antenna few kHz away in 40 m. We will use the separate receiver side switch to activate the attenuator. The switch will then permit attenuated reception when set to external receiver; the external receiver will still operate normally as before.

Just prepare a series connected 470 ohm $\frac{1}{2}$ W resistor and a 22 nF capacitor. The two terminals of the combination must then be respectively connected to the central pole of the side switch and the pole nearer to the front panel. See picture:



RX 20 dB attenuator



AVC capacitor

Comparing the R4B to the TR4 I noticed that the TR4 was somehow noisier while receiving SSB, but with manual RF gain the difference disappeared. I concluded that the AVC time constant of the TR4 was too small and the noise rose between one spoken word and the other. Just connect in parallel to the AVC capacitor C115 an additional capacitor .68 or 1 uF (microfarad). The mod is not good for AM (too slow gain recover while tuning and during fading). I used a free switch of a relay activated by the MOS driver of the AM filter (see other mod sheet) to disconnect the additional capacitor in AM mode. Use shielded cables for the connections, the shield must be connected to ground.

...Another step towards the perfect TR4.

Best Regards. IN3IEX Giorgio.