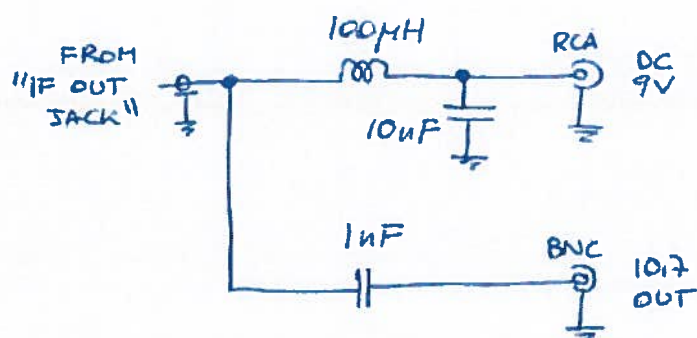


Using Sony AN-1 active antenna for Icom IC-R8500

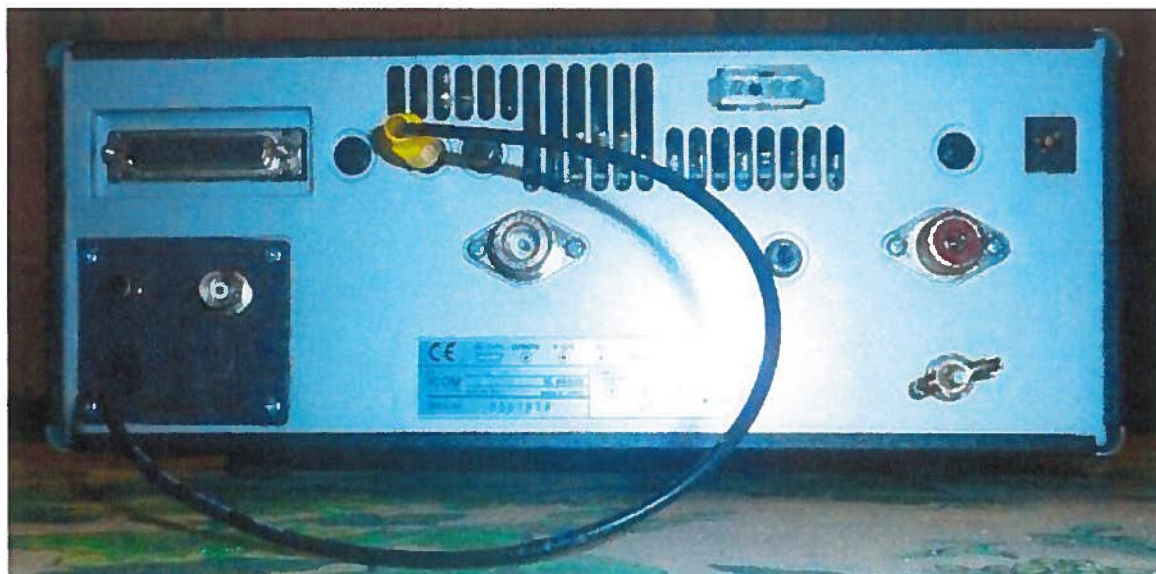
Author: Massimo IOMCF

I found the rather old external active antenna Sony AN-1 a good companion for the IC-R8500 to receive HF signals. I think that is due to the fact the AN-1 shows low gain as compared to similar products I tested, so it is less prone to push the 8500's front end to non linearity zone.

The IC-R8500 is provided by a rear-mounted connector named "IF OUT JACK", originally designed to give signal and power to the TV-R7100 "TV RECEIVE ADAPTER" which claims 9 V at 100 mA to operate. The good news is the AN-1 sinks something around 10 mA at 9V, so the IF OUT JACK can power the AN-1: a simple rf blocking filter is all that is needed:



To accommodate for the necessary circuitry (a $100\mu\text{H}$ series inductor and a 10nF shunt capacitor) I noted the little rectangular cavity located on the rear-low-left corner of the receiver and covered with a square metallic cover. On that cover I drilled three holes: one for the coaxial cable coming from the IF OUT JACK, one for an RCA phono jack to provide 9V dc-power to AN-1 and the last for a bnc which (through a series 1nF DC blocking capacitor) outputs the 10,7 MHz IF signal at a level similar to the corresponding antenna signal (the IF signal can be sent to a second receiver):



Now, the AN-1 is powered only when the IC-R8500 is on so needs no specific power supply.

Concerning the added bnc, I use it to drive an Elad FDM-S1 sdr receiver which, tuned to 10,7 MHz, adds to the 8500 more flexibility and direct DRM reception.

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