

Conversion TRW 24GHz Endwave module.

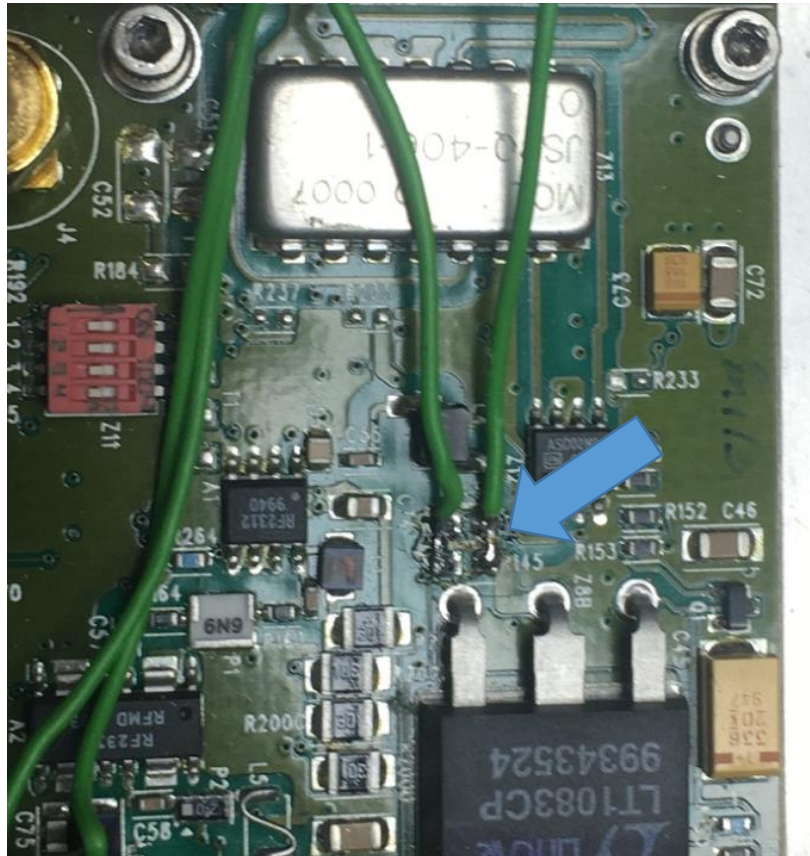
This document explains my conversion of the TRW 24GHz module. The existing power supply with the module uses a -48V rail supply. All my SHF equipment works the same, using DC power over the coaxial cable and rx-tx switch over is made by switching from 17V (rx) to 24V (tx). This means I made a new power supply to feed the module.

Enable RX –TX in the module

To enable tx in the module I use a relay contact to switch the DC power on the TX amplifier. Identify 2 resistors on the pcb. (blue arrow) Remove the 2 resistors and solder 2 wires on their soldering pads. By connecting both wires with each other the transverter enables TX.

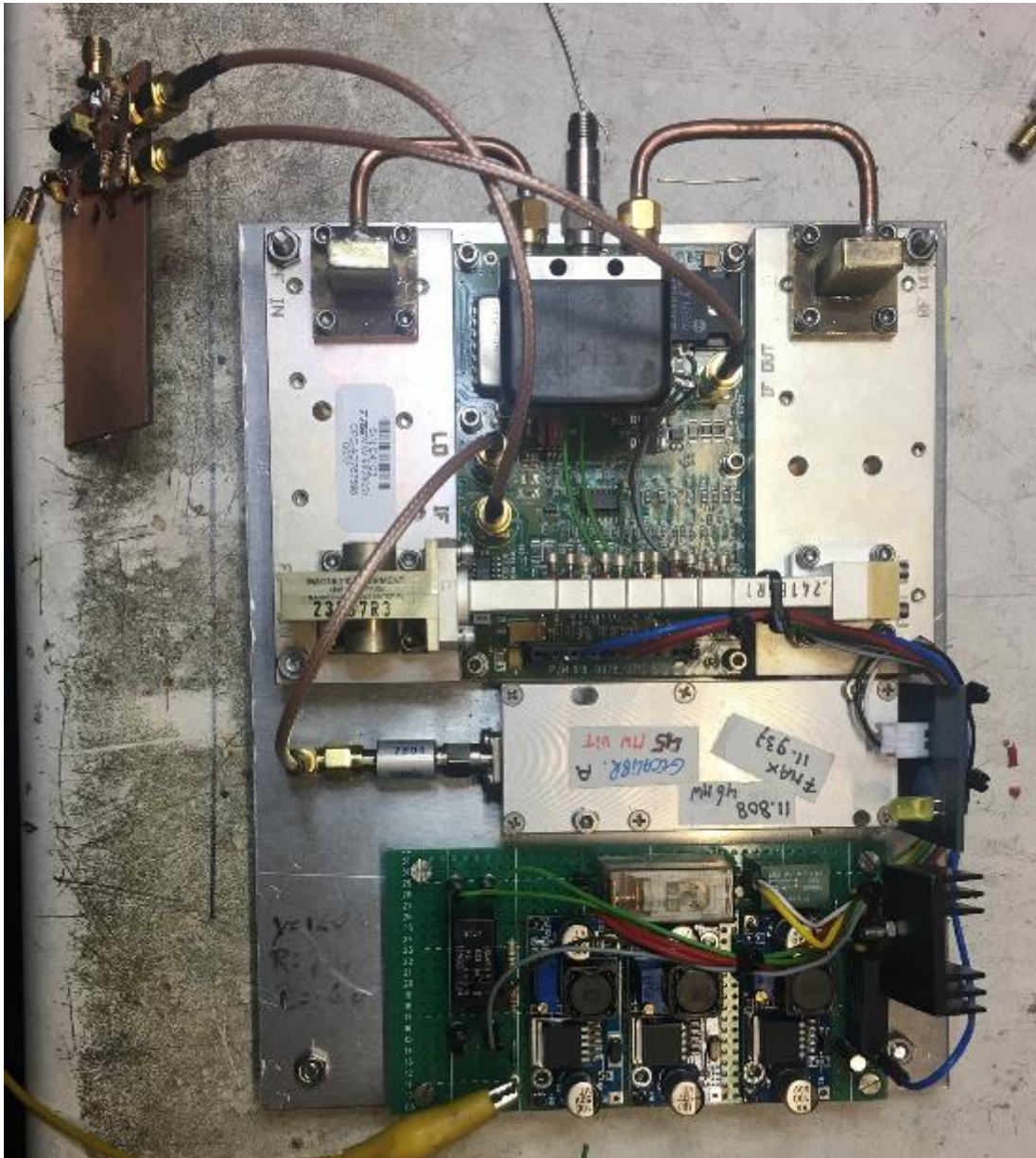
Short -> TX

Open -> RX



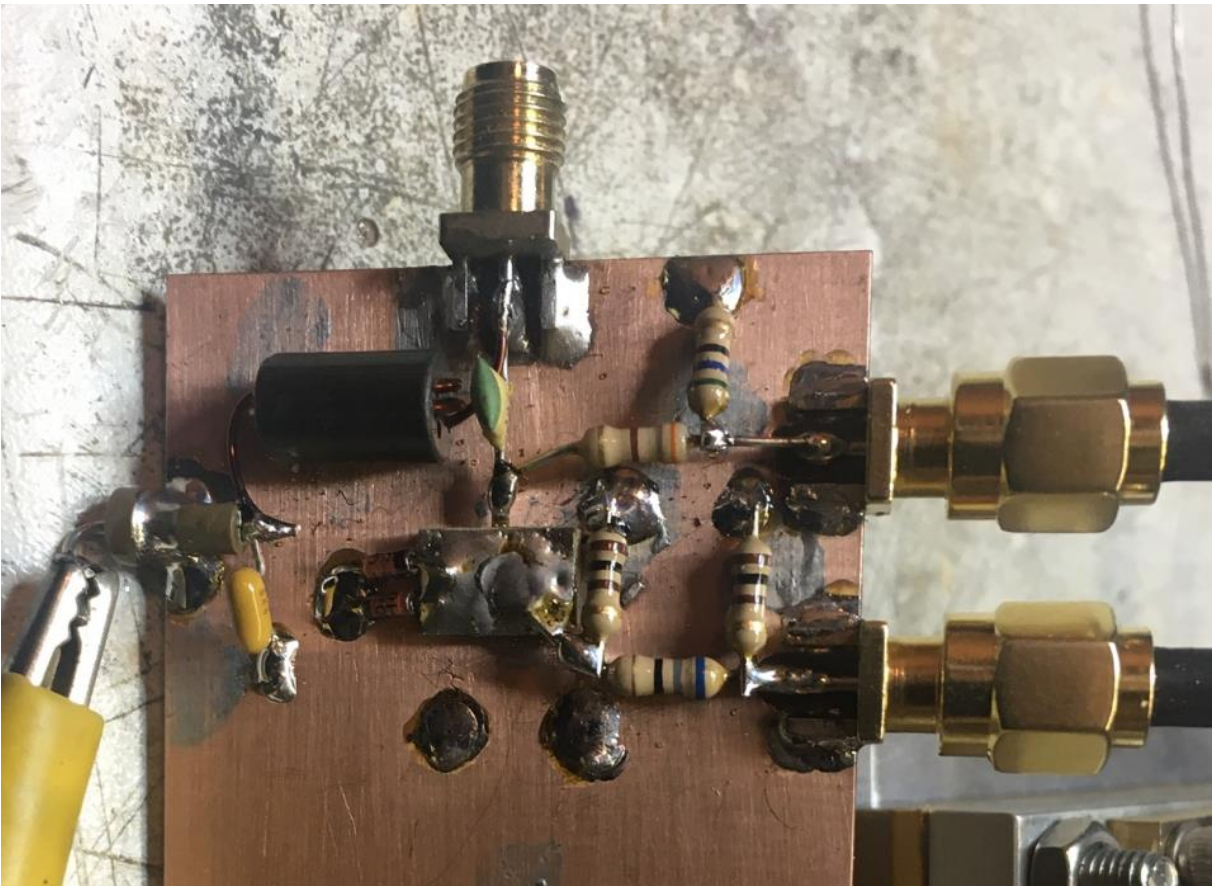
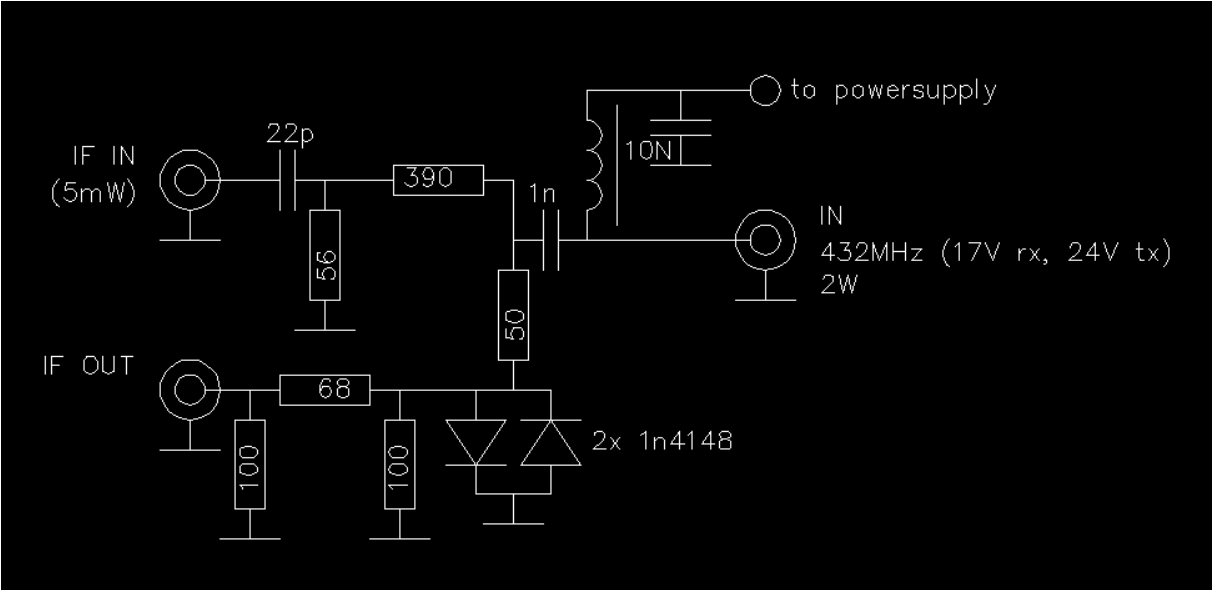
My setup

Below an overview of my layout. I use temporary a Nort module as LO. These modules make 40mW On 11GHz, the transverter needs +13dBm so a 3dB attenuator is inserted. The Nort module makes far to much phase noise, so I am going to build a new LO in the near future. For now it works.



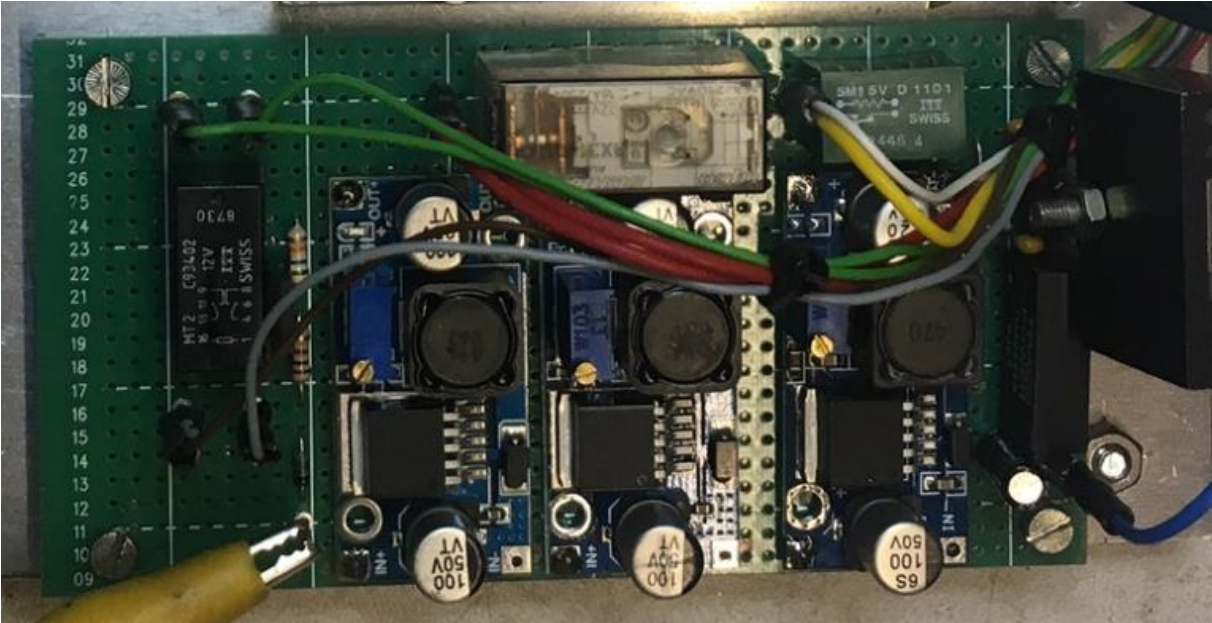
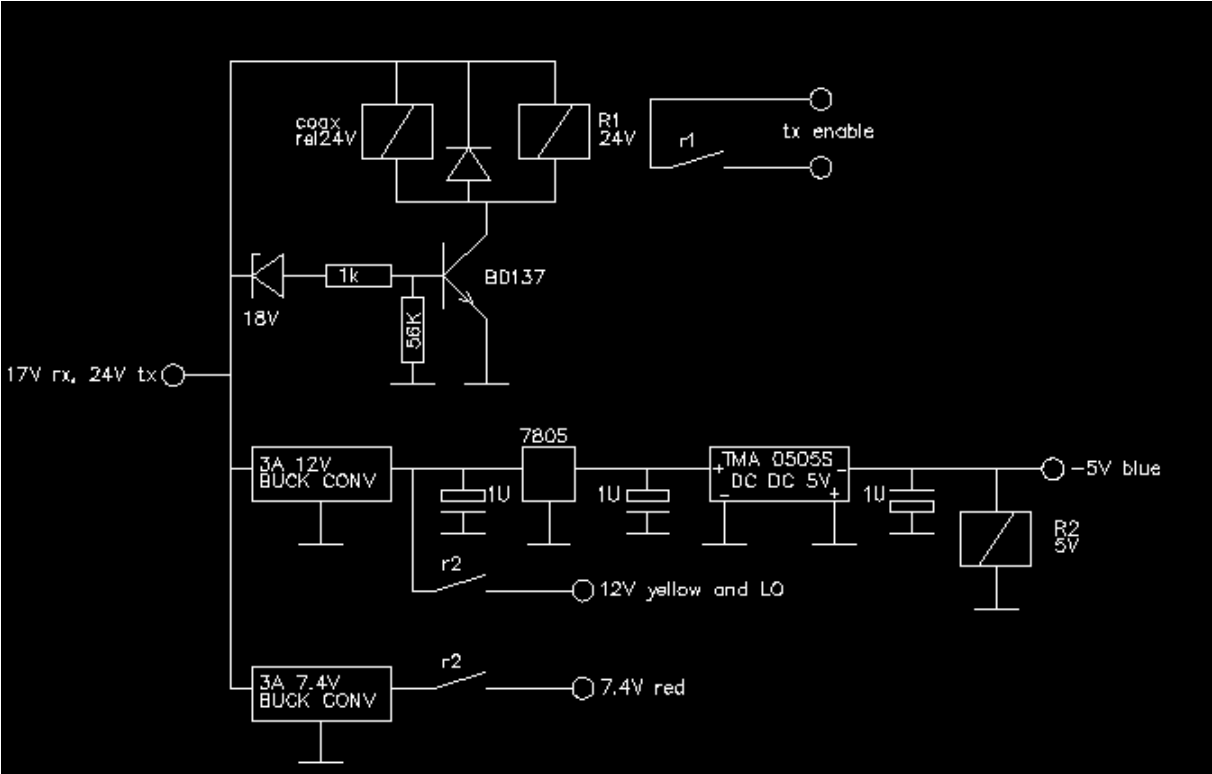
Left on top the IF change over and on the lower part my power supply. For the 7.4V I have 2 Buck converters in parrallel, but this is not nesessary the current stays below 3A.

IF change over



Speaks for itself! The 50 Ohm resistor should be 2W.

Power supply



Speaks also for itself! I have one relays more due to a missing contact on the 5V relay.

More info at www.hybridpretender.nl

73 PE1CKK