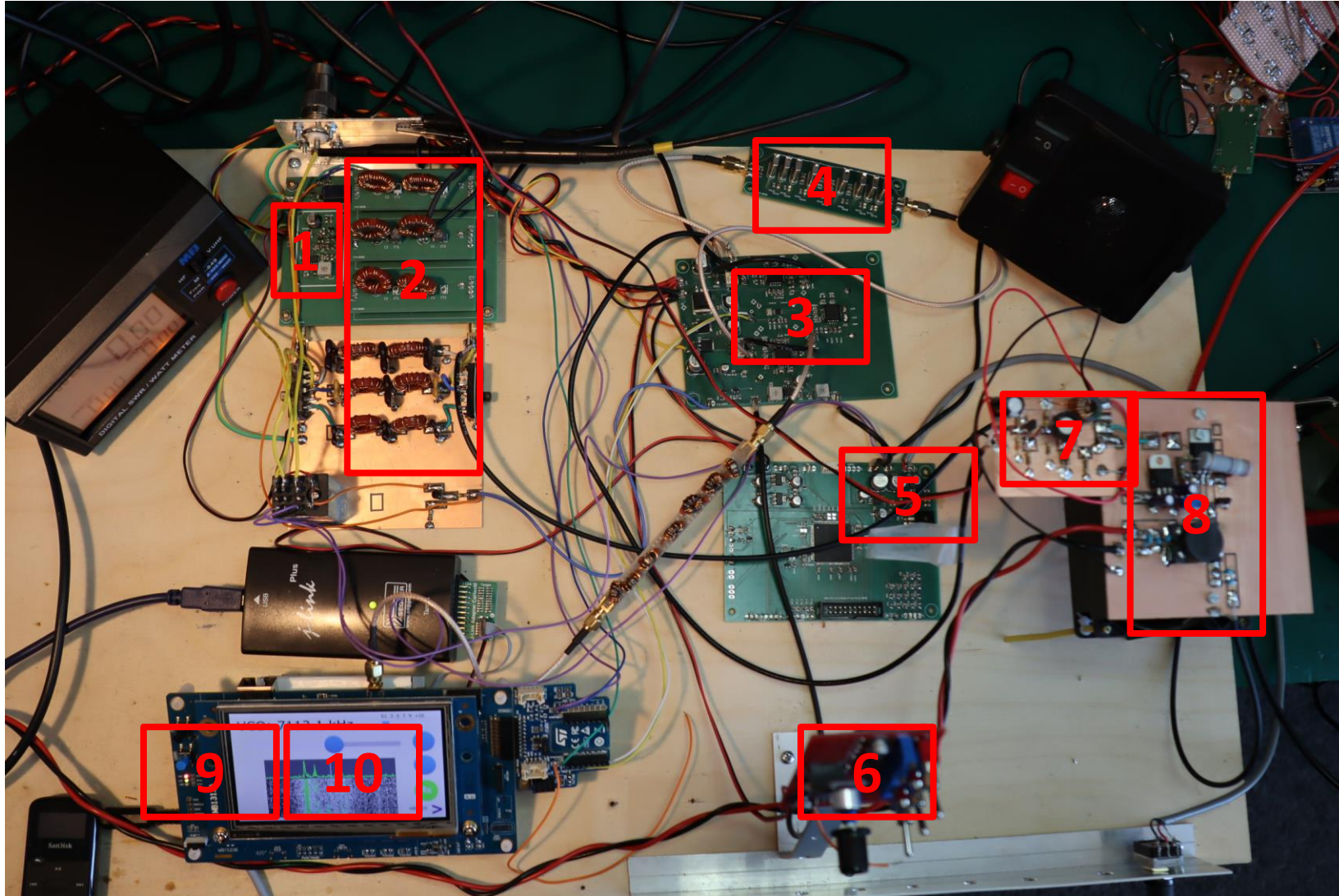
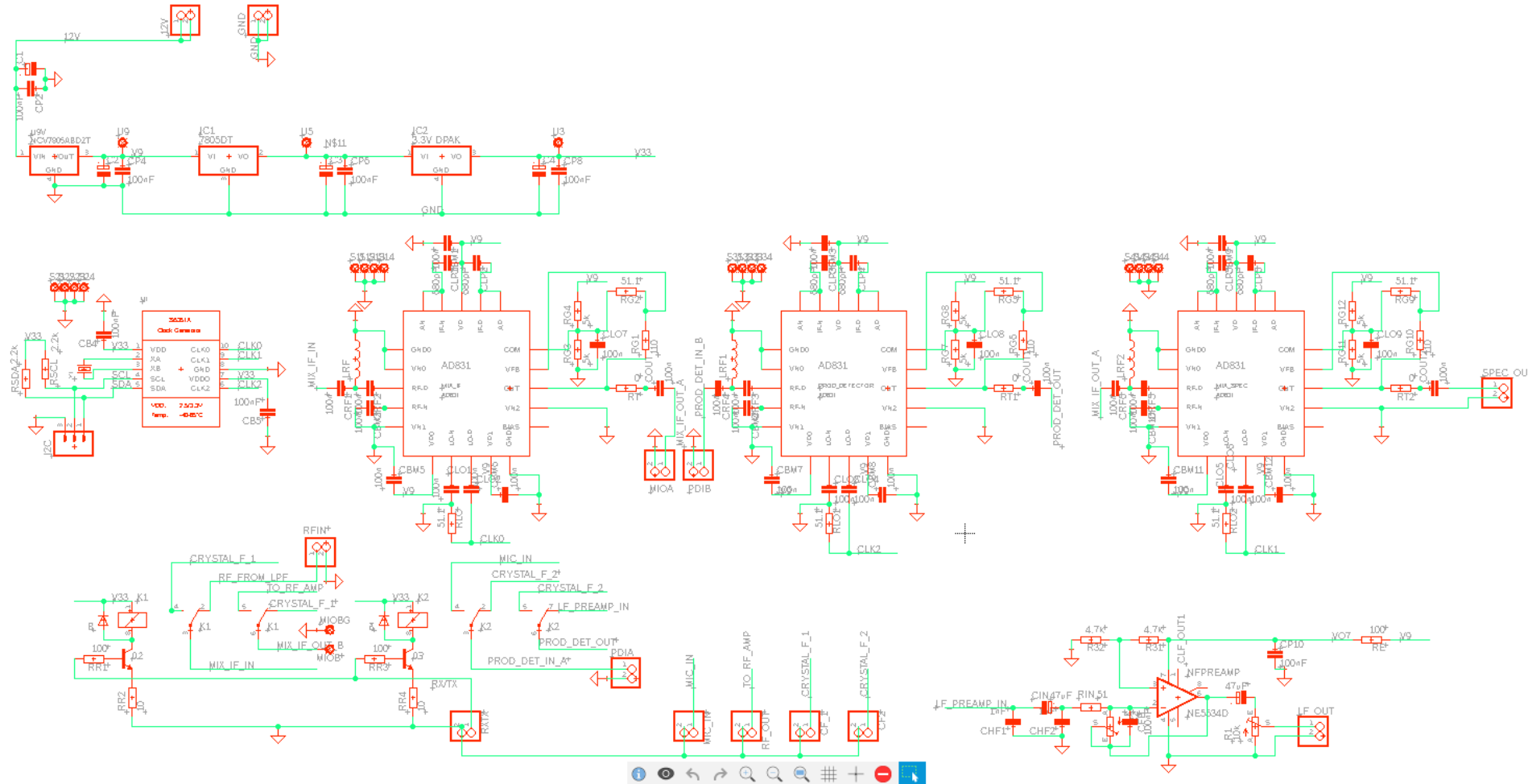


# The DIY super-het transceiver



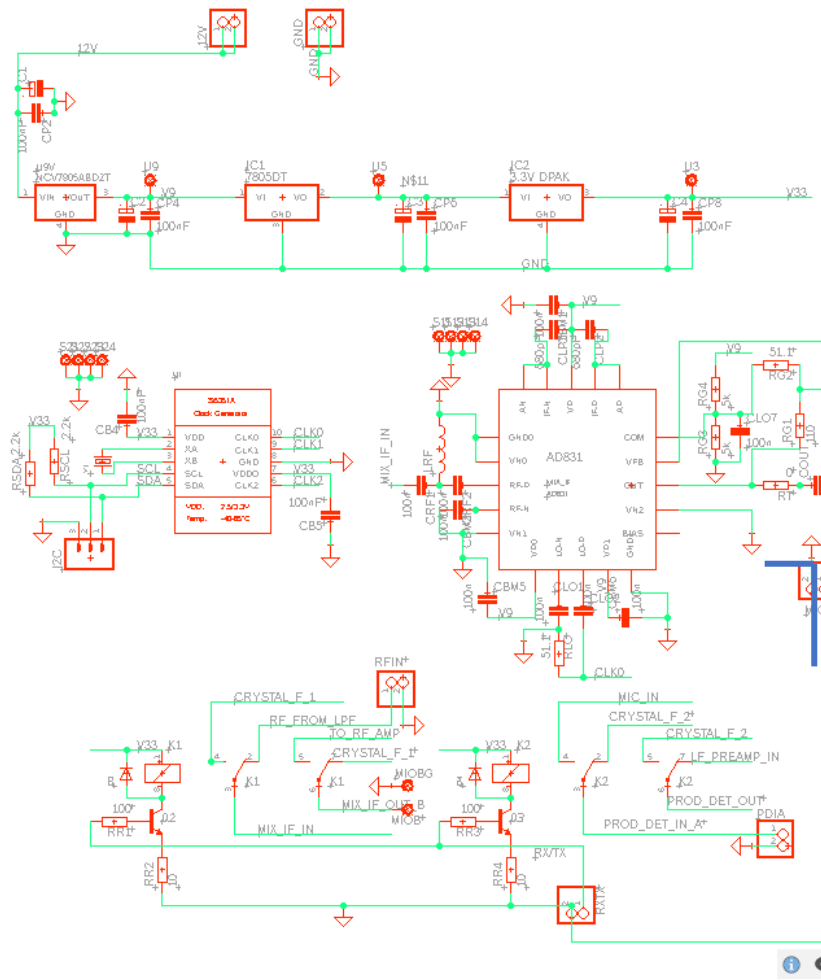
1. Antenna amp
2. BP and LP filters
3. DDS and mixers
4. Crystal ladder filter
5. AF amp
6. Microphone amp and 2-tone gen.
7. PWR pre amp
8. PWR amp
9. Touch GFX
10. FFT

# Mixer-Stage of the DIY Transceiver





# Mixer-Stage of the DIY Transceiver





A BJT can be used as a multiplier...

# Diode Ring Double Balanced Mixer

not bridge rectifier!

- Diodes used as switches
- Usually, schottky diodes used for lower forward voltage of 0.3V, low on resistor and good high freq. response
- Choose 20dB higher signal on LO vs. RF to drive the diodes from LO
- LO must be  $> 7\text{dBm}$
- Analog switches can be used as well