

the larger of the two inductances in each coupled inductor are critical – they are part of the parallel LC tank. you will definitely need to adjust these in place. it is easier to remove windings than add windings. you will need a VNA for this.

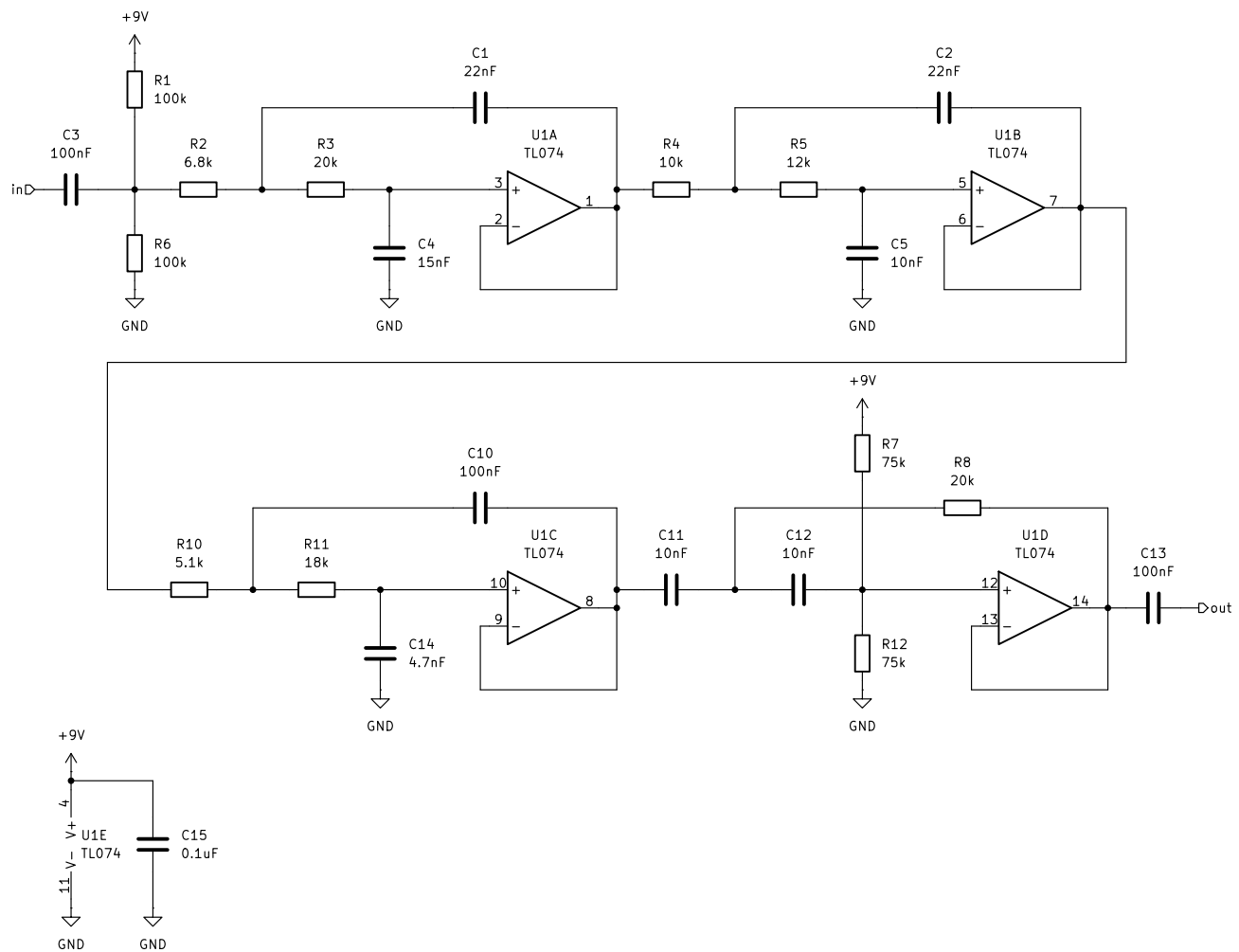
the overall turns ratio is non-critical other than for adjusting input/output impedance or overall Q (depending on which you take to be a fixed value) – in this application, this is not important, as neither the antenna nor mixer inputs are matched.

L1 and L2 should be wound on T37-6 toroids as illustrated for 40m. larger inductance should be 5.02uH. consult <https://qrp-labs.com/images/bpfkit/bpf3.pdf> for other configurations.

if using bare copperclad fr4 – go ahead and solder the tab to the board. that should be sufficient heatsinking.

| | |
|--|------------------|
| Sheet: / | |
| File: transceiver.kicad_sch | |
| Title: direct conversion receiver | |
| Size: A4 | Date: 2026-02-01 |
| KiCad E.D.A. 9.0.7 | Rev: 1 |
| | Id: 1/3 |

ideally, all caps (except C15) here should be film caps.
 does it matter if they are ceramics? probably not!
 use resistor tolerances no greater than 5%



Sheet: /AF BPF/
 File: af-bpf.kicad_sch

Title: AF CW filter

Size: A4 Date: 2026-02-01

KiCad E.D.A. 9.0.7

Rev: 1

Id: 2/3

