

Sheet: Tayloe Detector

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IMPORTANT: The SI5351 module is placed on the PCB but should be connected to the I2C bus with a pair of wires!!!

== EXTERNAL COMPONENTS ==

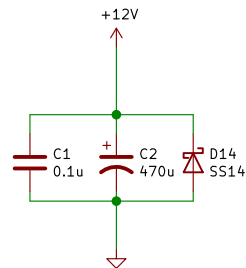
- 0802 I2C LCD: connect to 5V, GND and to the I2C bus
- "VOL": 10K pot, connect to J5
- "EAR" socket: connect to J6 through 220u capacitors
- "KEY" socket: connect to KEY_DIT_B12, KEY_DAH_B13
- "FREQ" and "CLAR" rotary encoders
- "LOCK", "FAST", "BAND", "KEYER", "CLAR" buttons
- ON/OFF switch
- DC socket
- Antenna connector

For more details see the schematic.

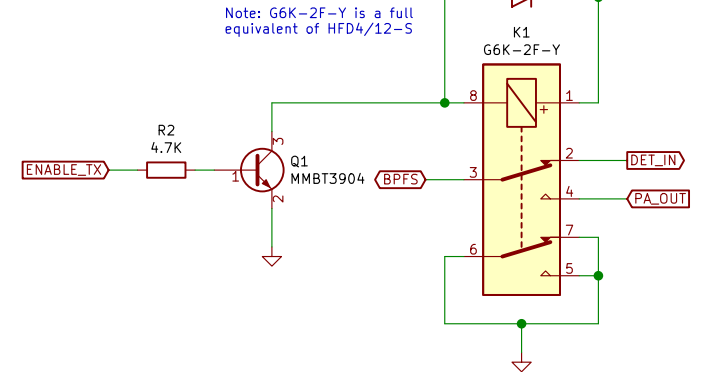
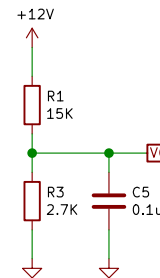
FREQ_ROT_A8
FREQ_ROT_B_A9
CLAR_ROT_A15
CLAR_ROT_B_B3

LOCK_BTN_B10
FAST_BTN_B15
BAND_BTN_B14
KEYER_BTN_A7
CLAR_BTN_B1

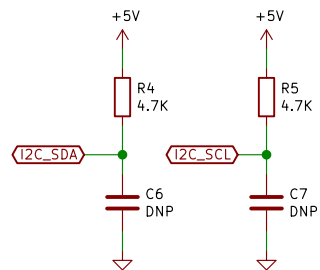
KEY_DIT_B12
KEY_DAH_B13



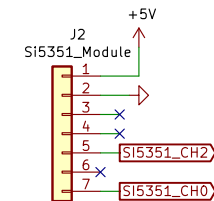
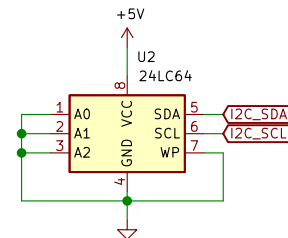
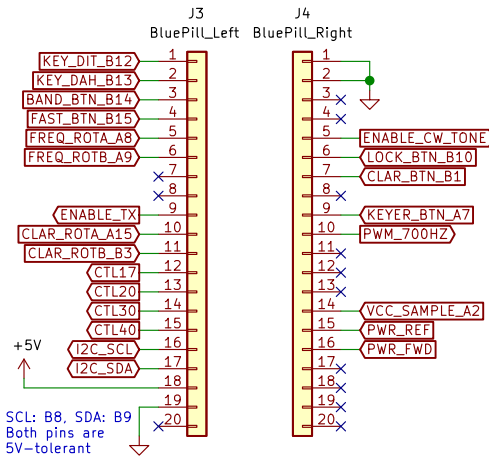
<- Reverse polarity protection.
Use with an external fuse.
Also consider soldering the diode on the DC jack instead so it would be easier to replace if necessary.



Note: G6K-2F-Y is a full equivalent of HFD4/12-S

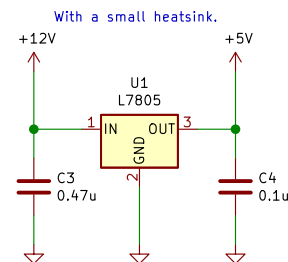


~ These components are optional.
The SI5351 module already has built-in pull-up resistors for the I2C bus.



CH0: CW
CH1: Calibration
CH2: LO x 4

PIN3: SDA, PIN4: SCL
These pins should be connected to the I2C bus with a pair of wires!



With a small heatsink.

Sheet: /

File: ayn-dc.sch

Title: AYN/DC by R2AUK ::: <https://eax.me/ayn-dc-transceiver/>

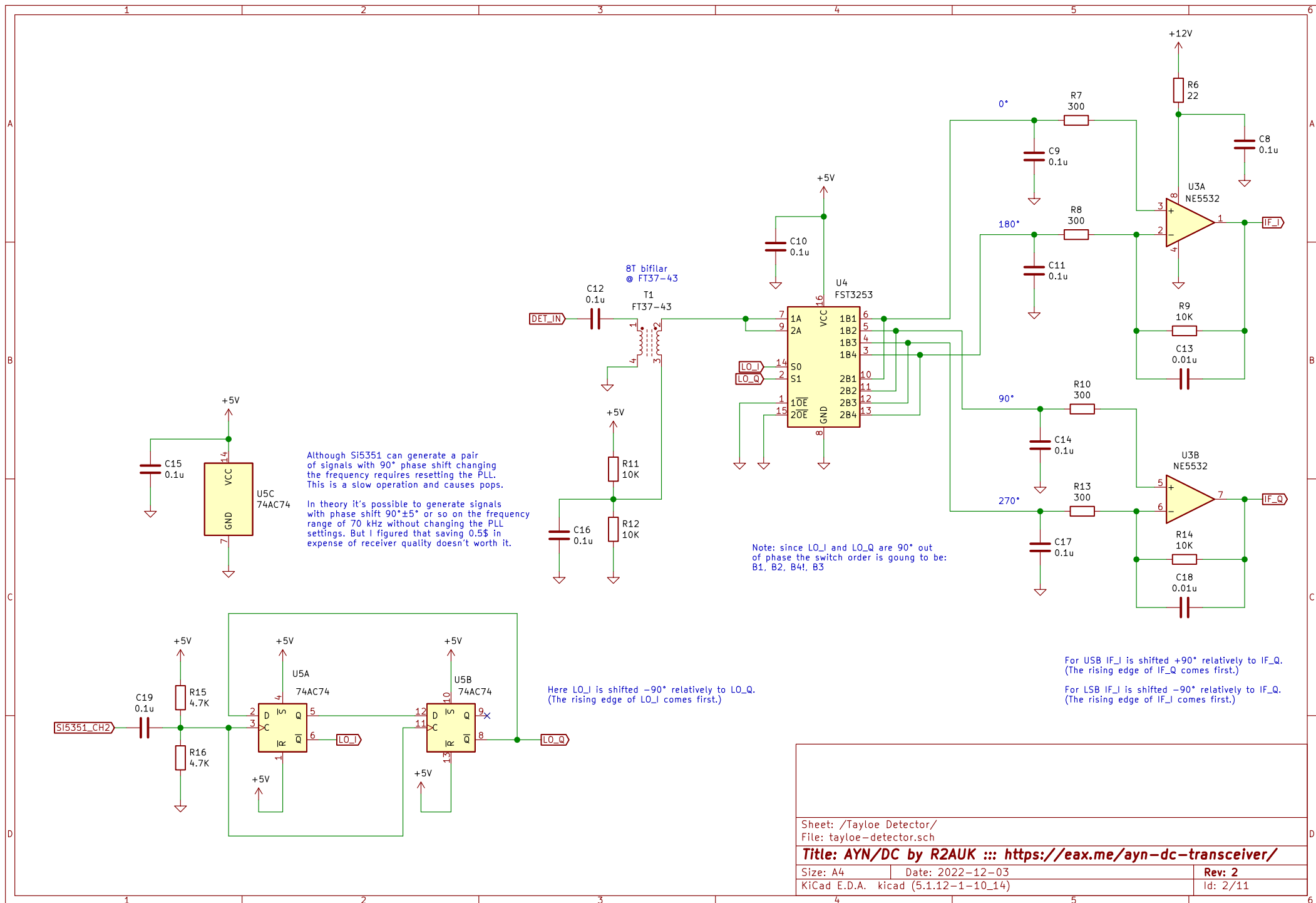
Size: A4

Date: 2022-12-03

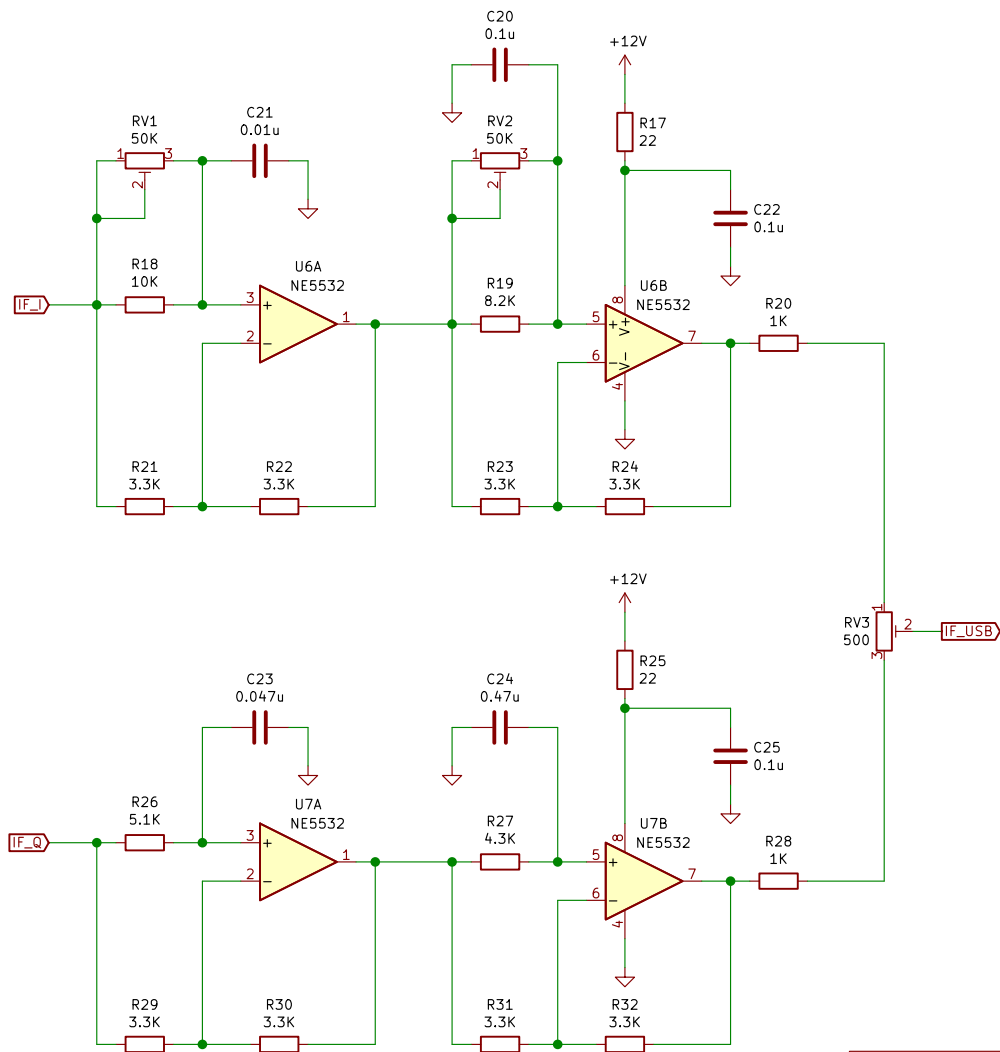
Rev: 2

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Id: 1/11



NC2030 / QCX style audio phase shift network.
This circuit is for receiving USB. For LSB swap I and Q.



Sheet: /Audio Phase Shift/
File: audio-phase-shift.sch

Title: AYN/DC by R2AUK ::: <https://eax.me/ayn-dc-transceiver/>

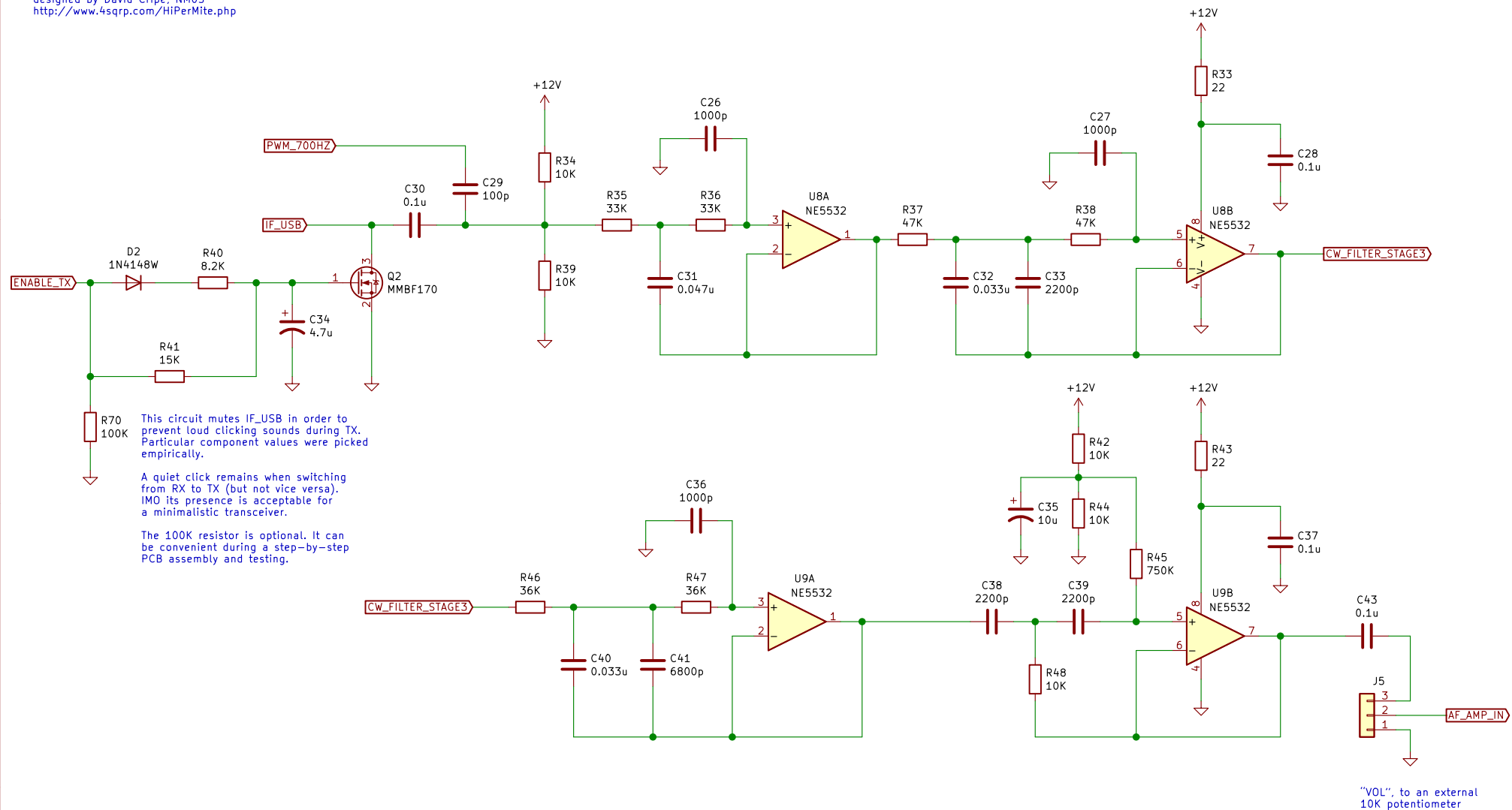
Size: A4 Date: 2022-12-03

KiCad E.D.A. kicad (5.1.12-1-10_14)

Rev: 2

Id: 3/11

HI-PER-MITE CW filter
designed by David Cripe, NMOS
<http://www.4sqr.com/HiPerMite.php>



"VOL", to an external
10K potentiometer

Sheet: /Active Filter/
File: active-filter.sch

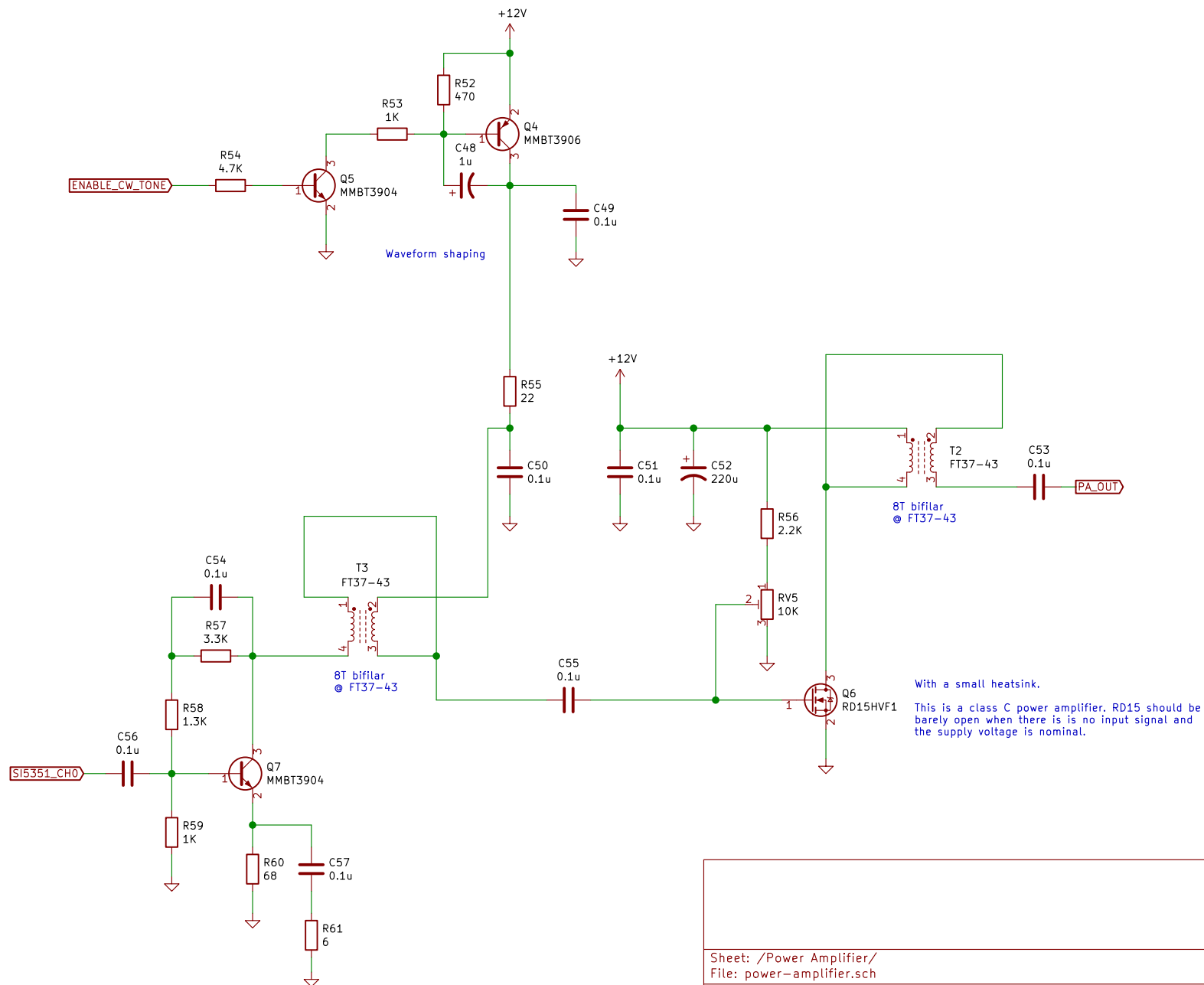
Title: AYN/DC by R2AUK ::: <https://eax.me/ayn-dc-transceiver/>

Size: A4	Date: 2022-12-03
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Size: A4	Date: 2022-12-05
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Rev: 2

Id: 4/11



Sheet: /Power Amplifier/
File: power-amplifier.sch

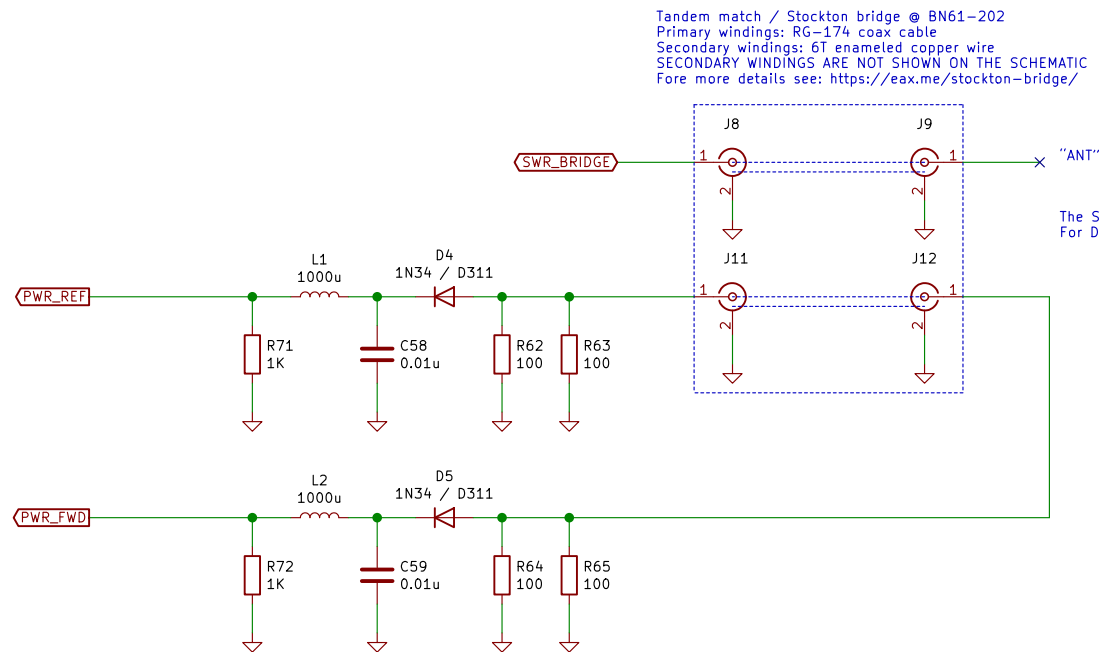
Title: AYN/DC by R2AUK ::: <https://eax.me/ayn-dc-transceiver/>

Size: A4 Date: 2022-12-03

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Rev: 2

Id: 6/11



Tandem match / Stockton bridge © BN61-202
 Primary windings: RG-174 coax cable
 Secondary windings: 6T enameled copper wire
 SECONDARY WINDINGS ARE NOT SHOWN ON THE SCHEMATIC
 Fore more details see: <https://eax.me/stockton-bridge/>

The SWR bridge works as a static bleeder too.
 For DC "ANT" is shorted to ground.

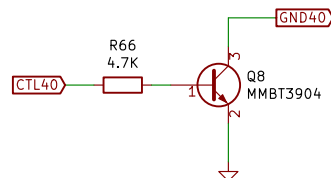
The diodes should be matched
 by the voltage drop.

Sheet: /SWR Bridge/
 File: swr-bridge.sch

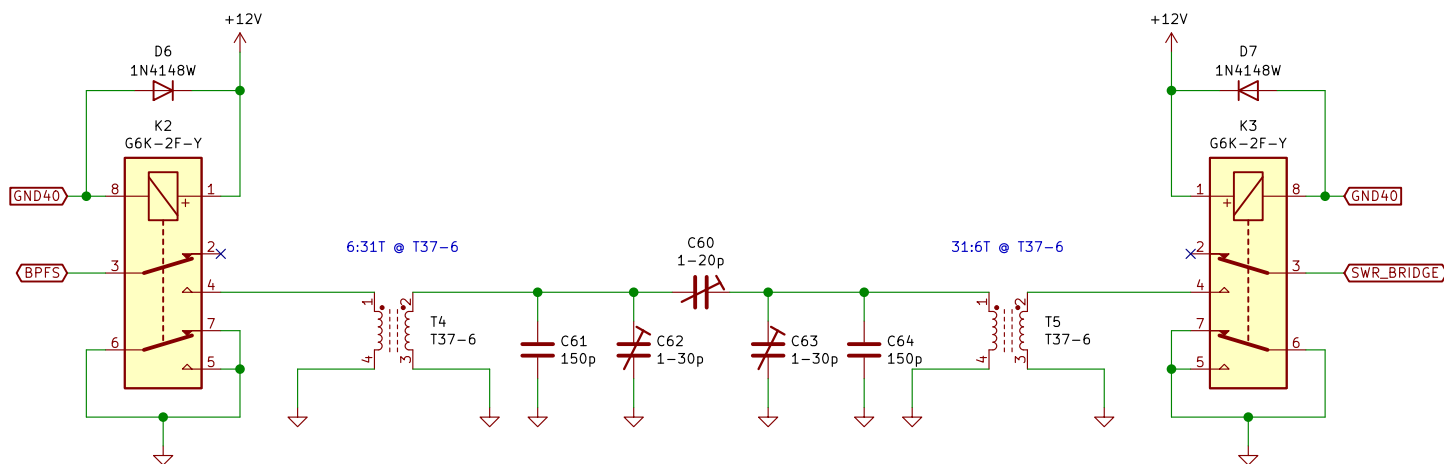
Title: AYN/DC by R2AUK ::: <https://eax.me/ayn-dc-transceiver/>

Size: A4 Date: 2022-12-03
 KiCad E.D.A. kicad (5.1.12-1-10_14)

Rev: 2
 Id: 7/11



BPFS are used for both RX and TX.
This is a double-tuned circuit.
Insertion losses are reasonably low,
about 0.6 dB, and the 2nd harmonic
is typically suppressed by 30+ dB,
so it works quite well in this particular
transceiver.

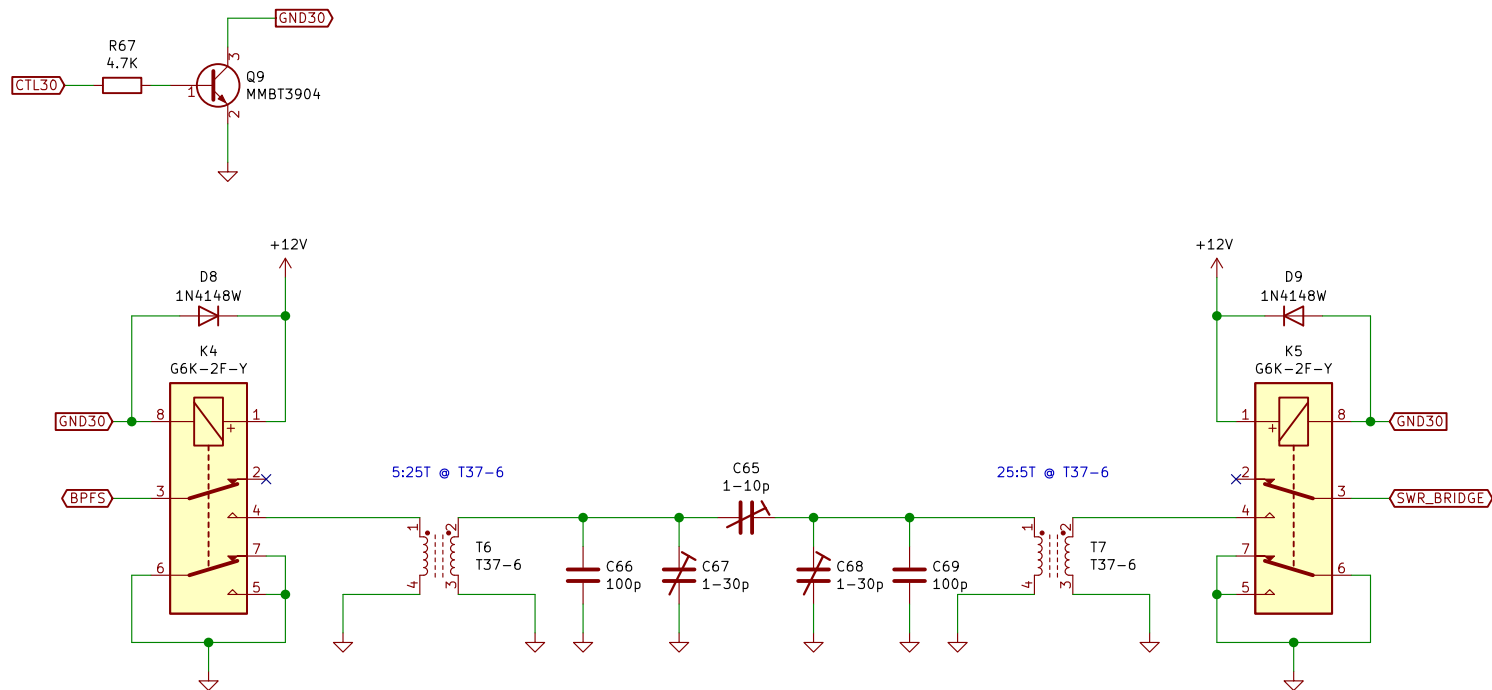


Sheet: /BPF40/
File: bpf40.sch

Title: AYN/DC by R2AUK ::: <https://eax.me/ayn-dc-transceiver/>

Size: A4
KiCad E.D.A. kicad (5.1.12-1-10_14)

Rev: 2
Id: 8/11



Sheet: /BPF30/
File: bpf30.sch

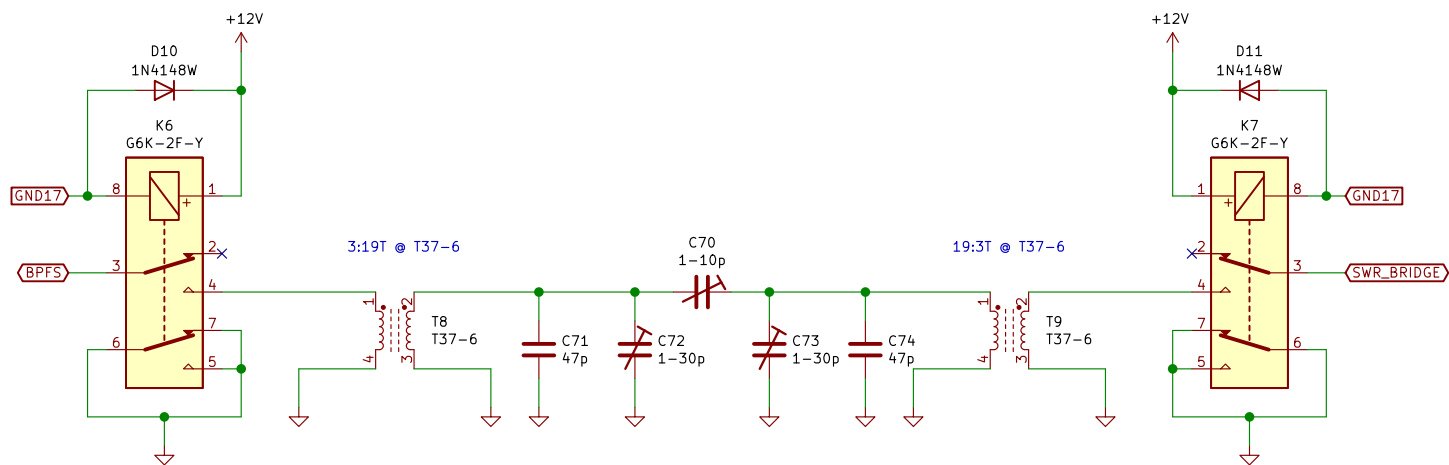
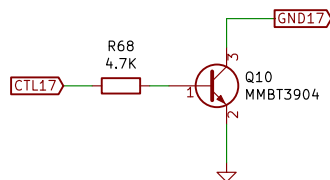
Title: AYN/DC by R2AUK ::: <https://eax.me/ayn-dc-transceiver/>

Size: A4
KiCad E.D.A. kicad (5.1.12-1-10_14)

Date: 2022-12-03

Rev: 2

Id: 9/11

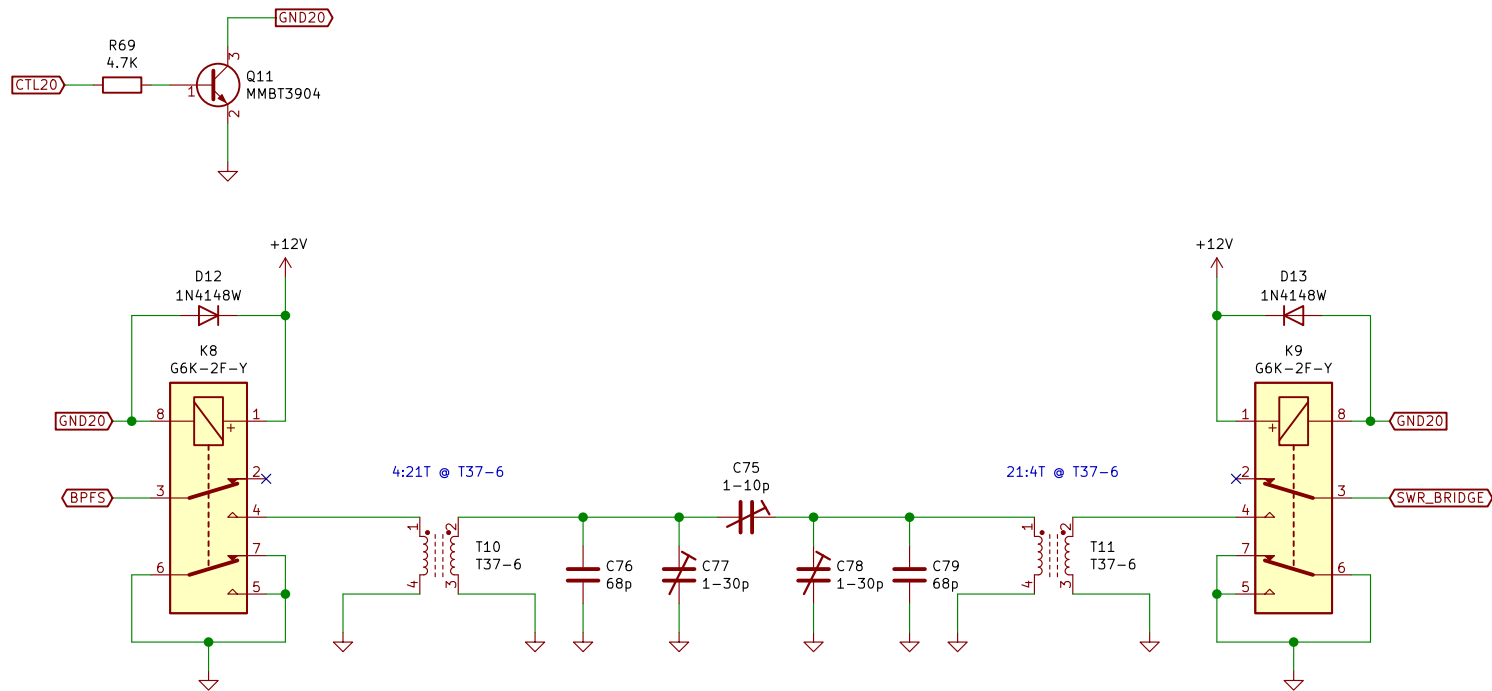


Sheet: /BPF17/
File: bpf17.sch

Title: AYN/DC by R2AUK ::: <https://eax.me/ayn-dc-transceiver/>

Size: A4 Date: 2022-12-03
KiCad E.D.A. kicad (5.1.12-1-10_14)

Rev: 2
Id: 10/11



Sheet: /BPF20/
File: bpf20.sch

Title: AYN/DC by R2AUK ::: <https://eax.me/ayn-dc-transceiver/>

Size: A4 Date: 2022-12-03
KiCad E.D.A. kicad (5.1.12-1-10_14)

Rev: 2
Id: 11/11