

Sheet: Tayloe Detector

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Sheet: Audio Phase Shift

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Sheet: Power Amplifier

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== EXTERNAL COMPONENTS ==

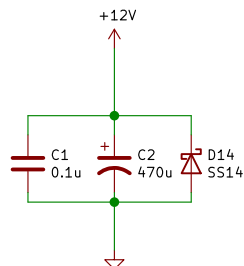
- 0802 I2C LCD: connect to 5V\_DIGITAL, GND and to the I2C bus
- "VOL" 10K pot, connect to J5
- "EAR" socket: connect to J6 through 220u capacitors
- "KEY" socket: connect to KEY\_DIT\_B12, KEY\_DAH\_B13
- "FREQ" and "CLAR" rotary encoders
- "LOCK", "FAST", "BAND", "KEYER", "CLAR" buttons
- ON/OFF switch
- DC socket
- Antenna connector

For more details see the schematic.

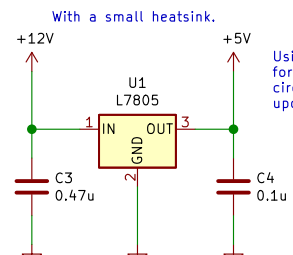
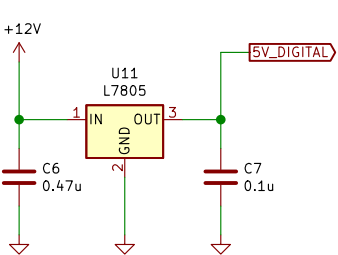
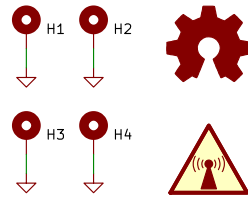
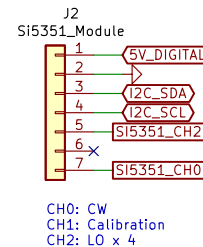
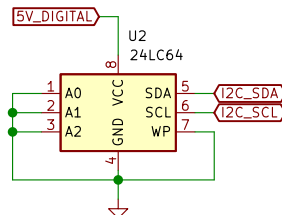
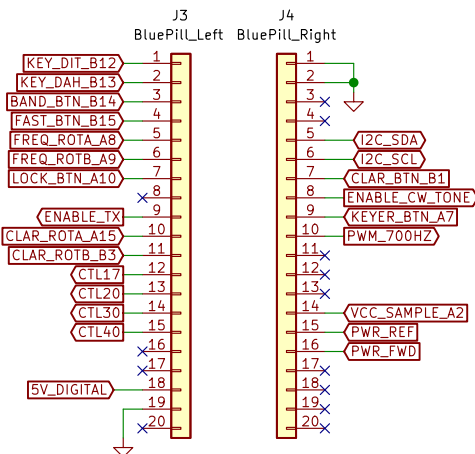
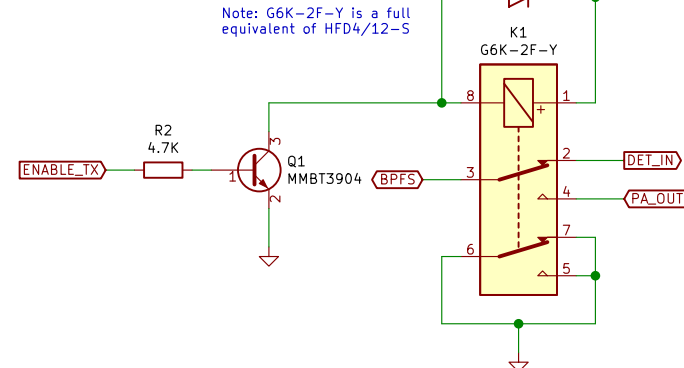
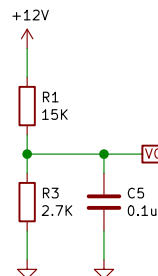
FREQ\_ROTA\_A8  
FREQ\_ROT\_B\_A9  
CLAR\_ROTA\_A15  
CLAR\_ROT\_B\_B3

LOCK\_BTN\_A10  
FAST\_BTN\_B15  
BAND\_BTN\_B14  
KEYER\_BTN\_A7  
CLAR\_BTN\_B1

KEY\_DIT\_B12  
KEY\_DAH\_B13

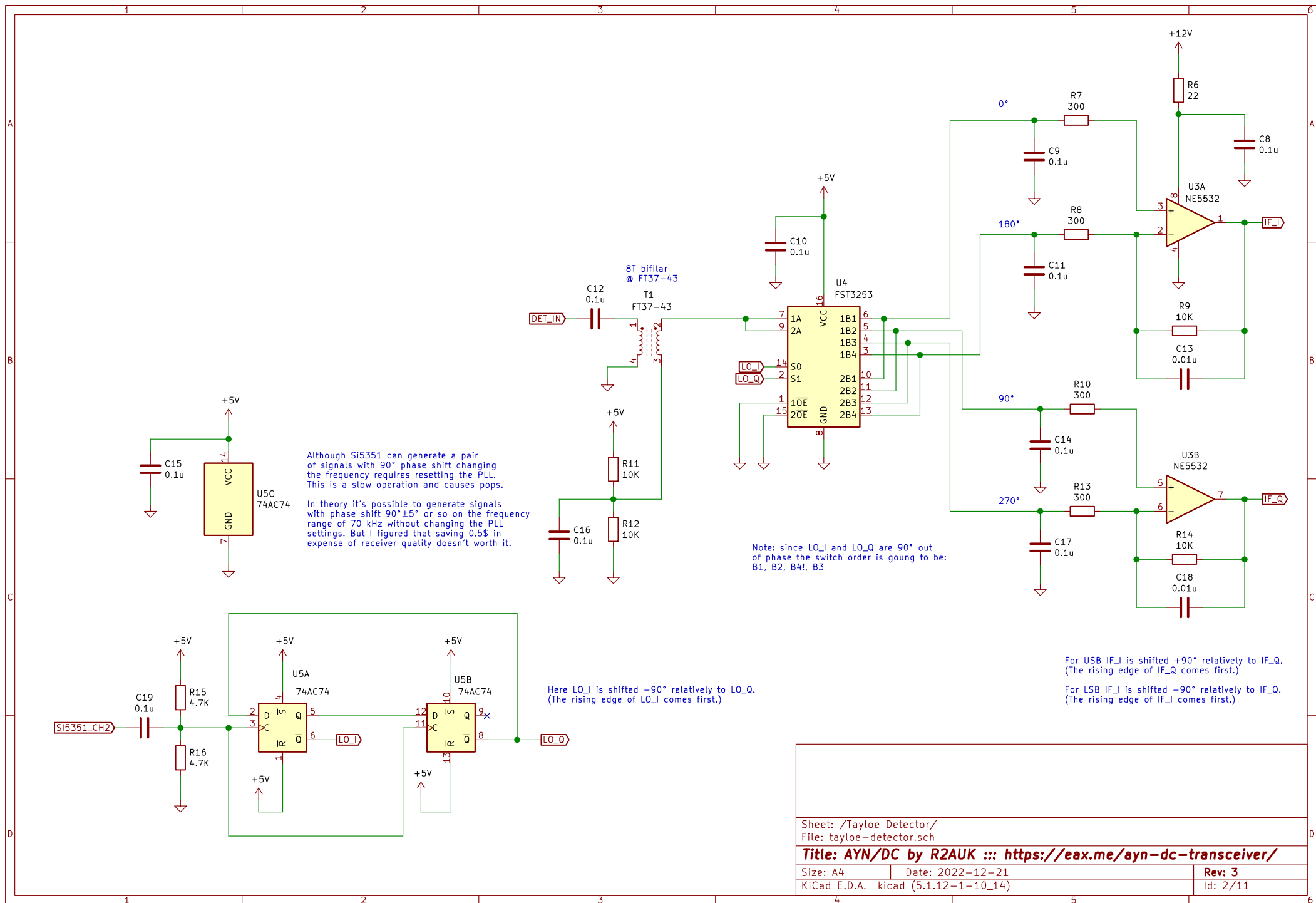


<- Reverse polarity protection.  
Use with an external fuse.  
Also consider soldering the diode to the DC jack instead so it would be easier to replace if necessary.

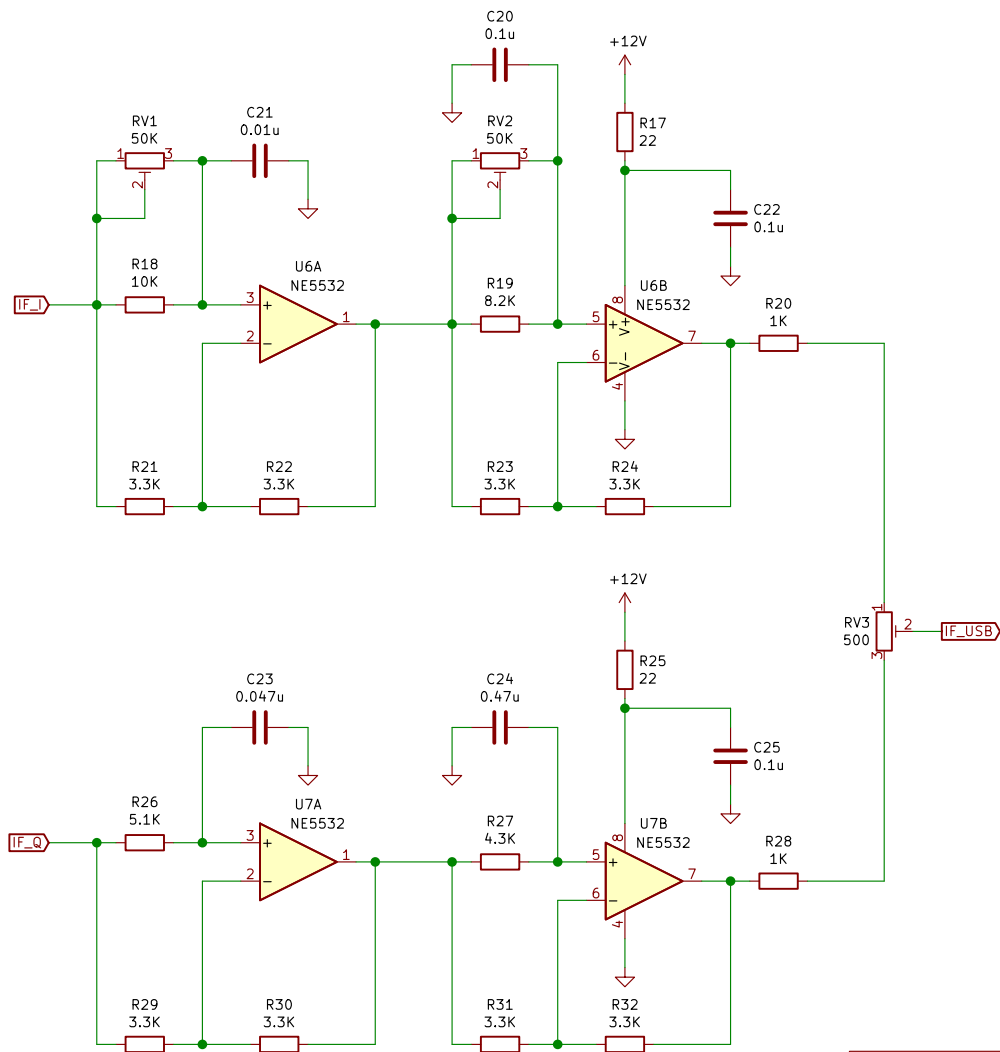


Using separate voltage regulators for digital and analog parts of the circuit prevents the noise when updating text on the LCD, etc.

Sheet: /	
File: ayn-dc.sch	
Title: AYN/DC by R2AUK ::: <a href="https://eax.me/ayn-dc-transceiver/">https://eax.me/ayn-dc-transceiver/</a>	
Size: A4	Date: 2022-12-21
KiCad E.D.A. kicad (5.1.12-1-10_14)	Rev: 3
	Id: 1/11



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



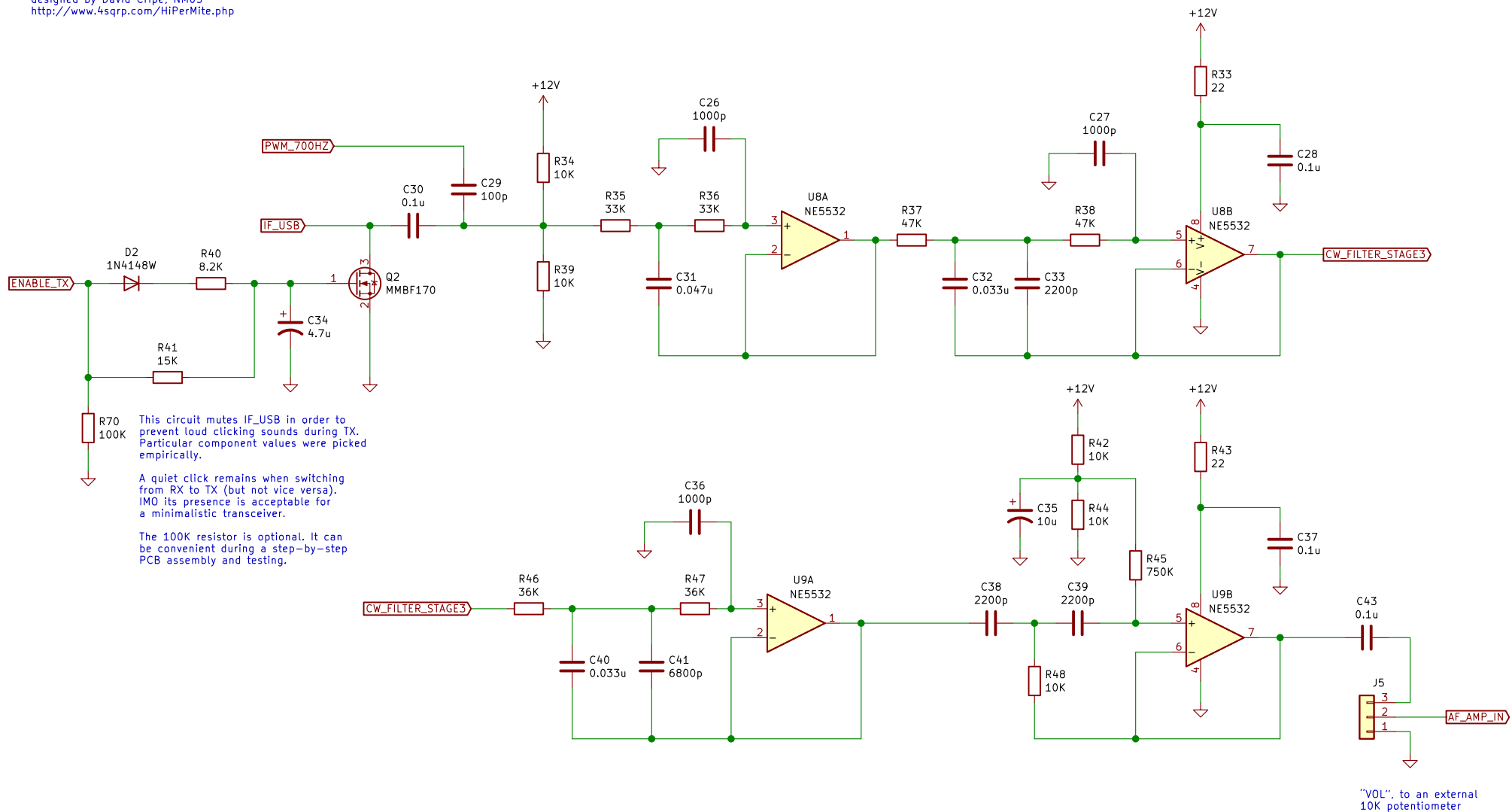
Sheet: /Audio Phase Shift/  
File: audio-phase-shift.sch

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

Size: A4 Date: 2022-12-21  
KiCad E.D.A. kicad (5.1.12-1-10\_14)

Rev: 3  
Id: 3/11

HI-PER-MITE CW filter  
designed by David Cripe, NM0S  
<http://www.4sqrp.com/HiPerMite.php>



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

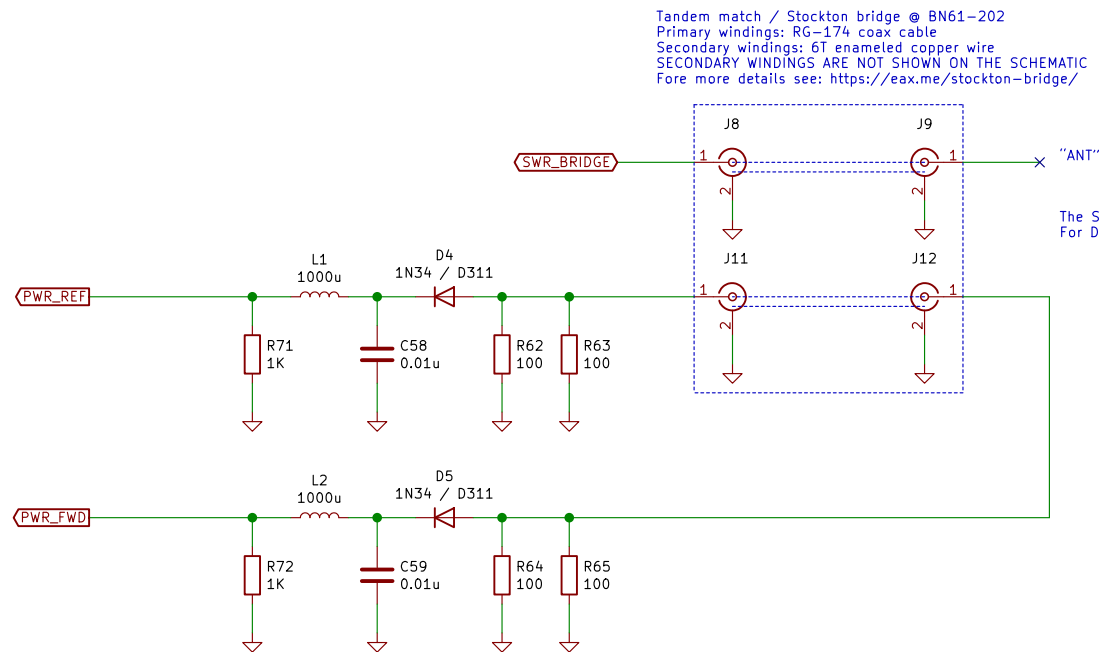
**Title: AYN/DC by R2AUK :::** <https://eax.me/ayn-dc-transceiver/>

Size: A4 Date: 2022-12-21  
KiCad E.D.A. kicad (5.1.12-1-10\_14)

Rev: 3  
Id: 4/11





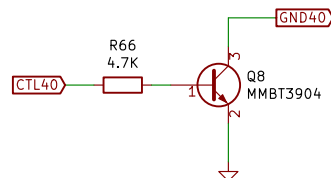


Tandem match / Stockton bridge © BN61-202  
 Primary windings: RG-174 coax cable  
 Secondary windings: 6T enameled copper wire  
 SECONDARY WINDINGS ARE NOT SHOWN ON THE SCHEMATIC  
 Fore more details see: <https://eax.me/stockton-bridge/>

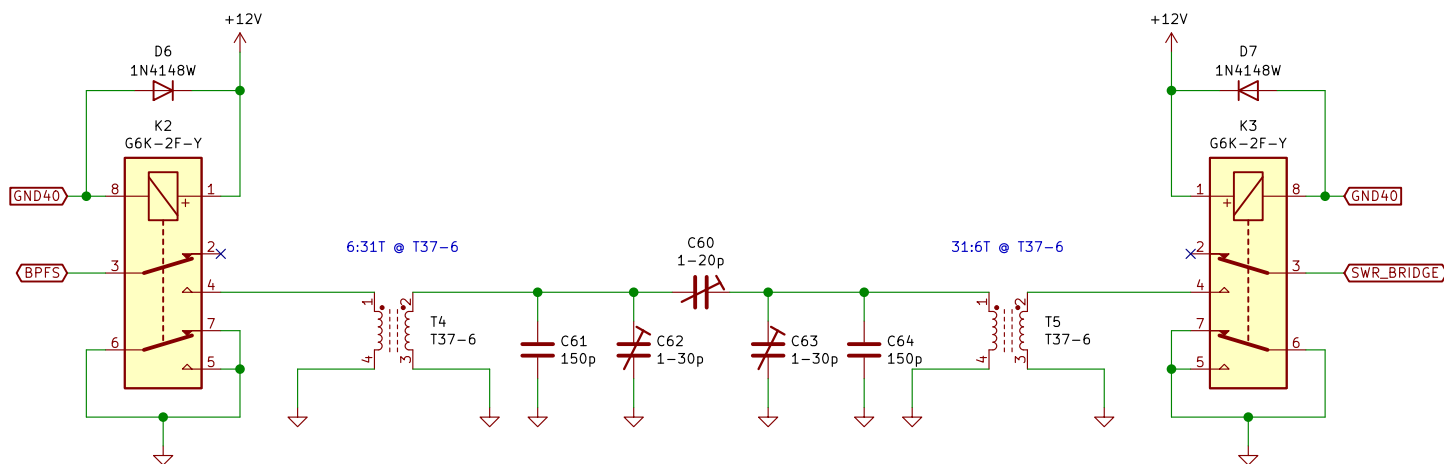
The SWR bridge works as a static bleeder too.  
 For DC "ANT" is shorted to ground.

The diodes should be matched  
 by the voltage drop.

Sheet: /SWR Bridge/ File: swr-bridge.sch		
<b>Title: AYN/DC by R2AUK ::: <a href="https://eax.me/ayn-dc-transceiver/">https://eax.me/ayn-dc-transceiver/</a></b>		
Size: A4	Date: 2022-12-21	Rev: 3
KiCad E.D.A. kicad (5.1.12-1-10_14)		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

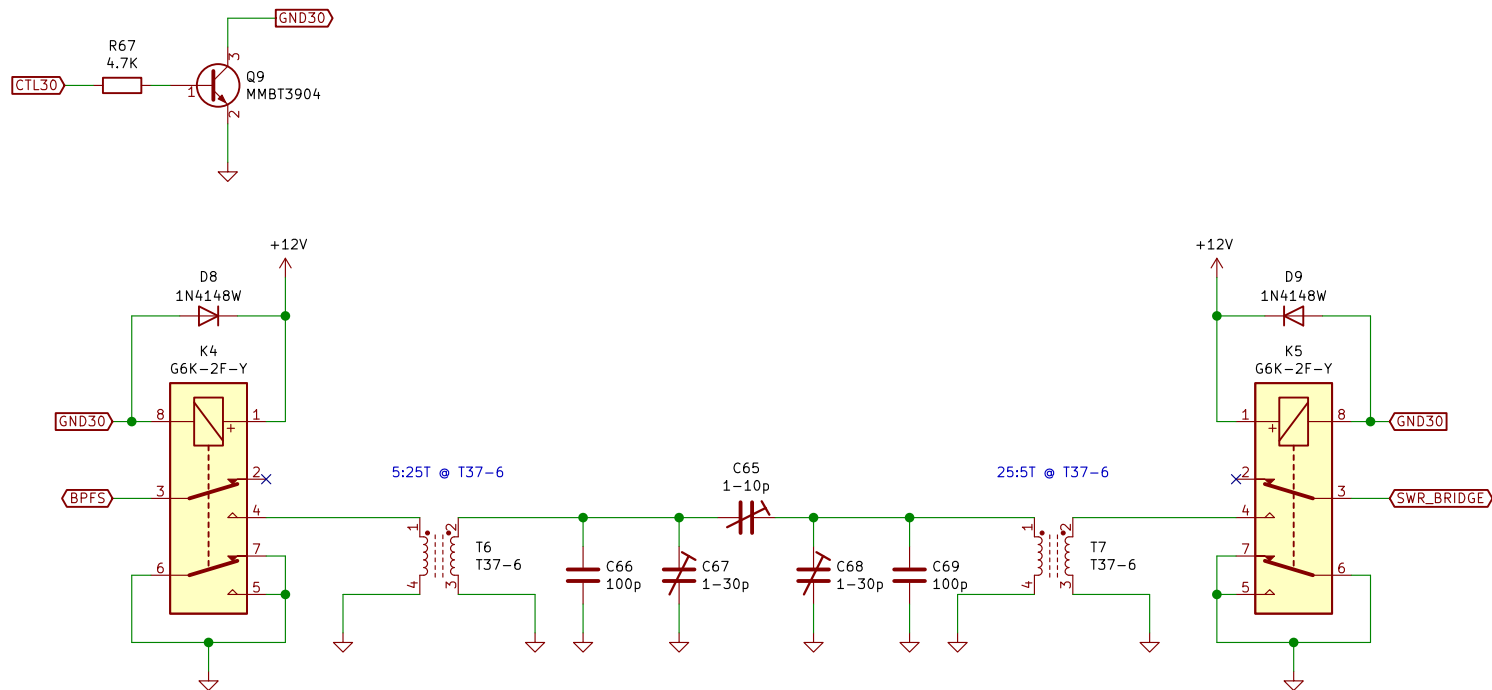
**Title: AYN/DC by R2AUK :::** <https://eax.me/ayn-dc-transceiver/>

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

Date: 2022-12-21

Rev: 3  
Id: 8/11



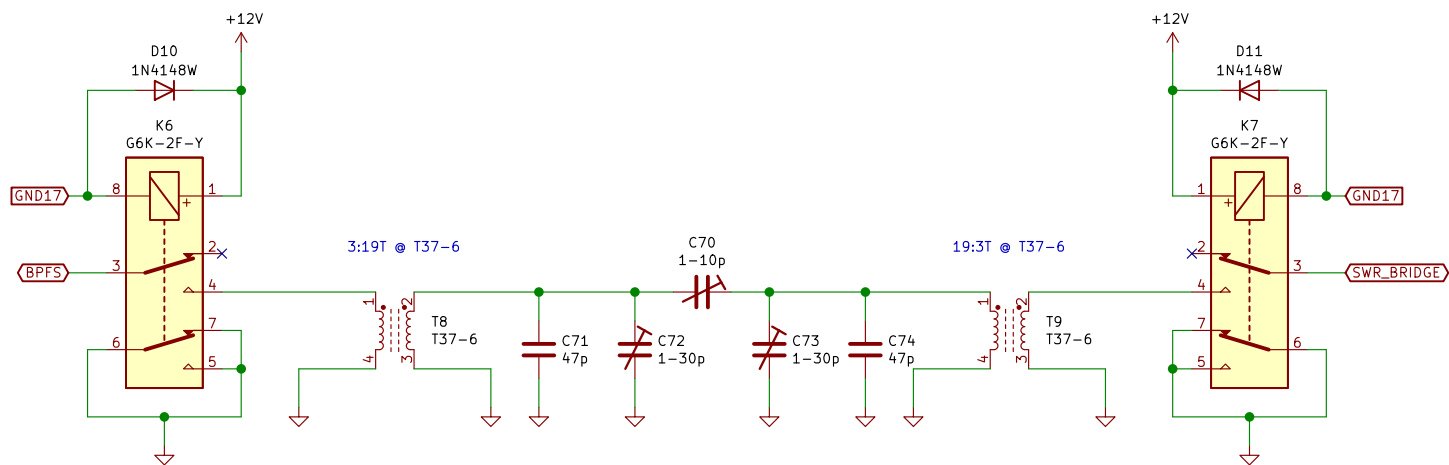
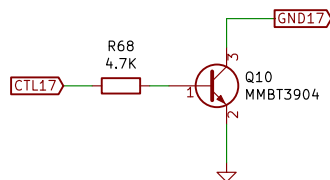


Sheet: /BPF30/  
File: bpf30.sch

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

Size: A4 Date: 2022-12-21  
KiCad E.D.A. kicad (5.1.12-1-10\_14)

Rev: 3  
Id: 9/11

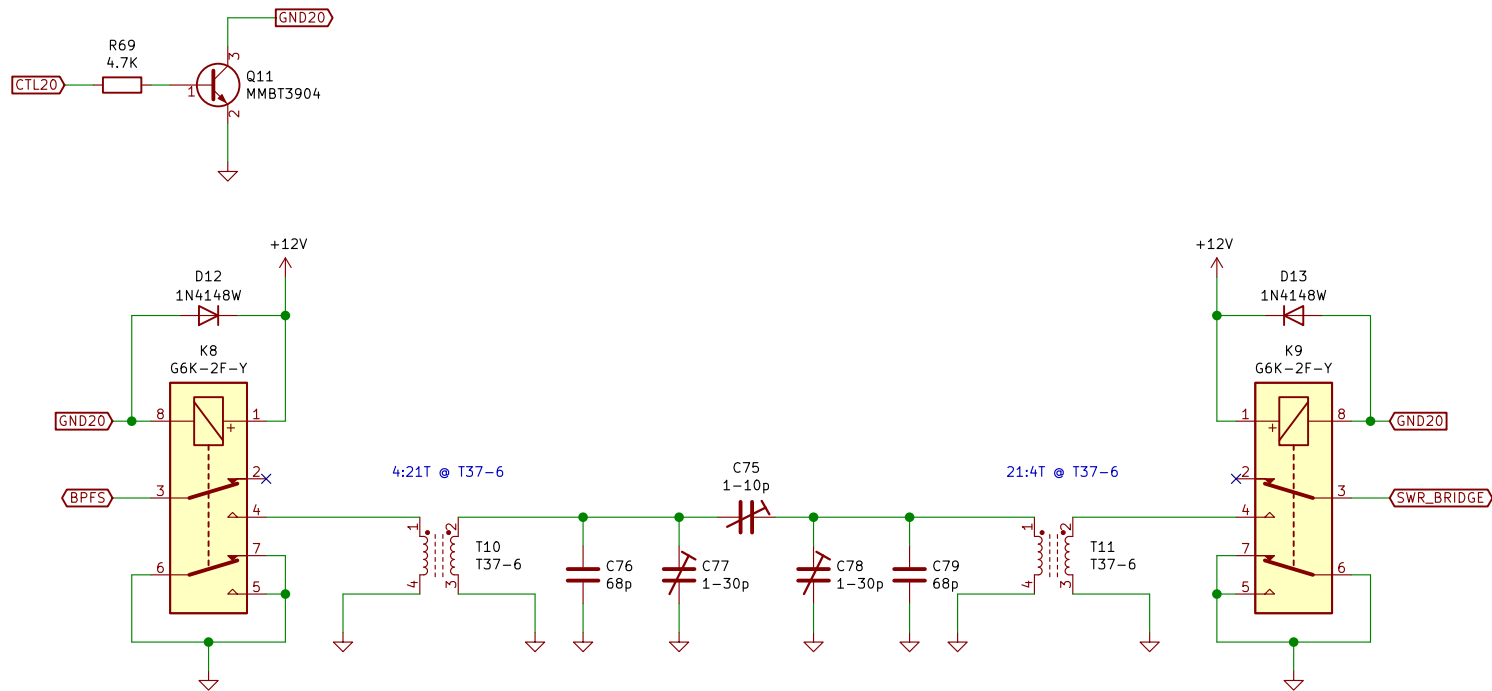


Sheet: /BPF17/  
File: bpf17.sch

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

Size: A4 Date: 2022-12-21  
KiCad E.D.A. kicad (5.1.12-1-10\_14)

Rev: 3  
Id: 10/11



Sheet: /BPF20/  
File: bpf20.sch

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

Size: A4 Date: 2022-12-21  
KiCad E.D.A. kicad (5.1.12-1-10\_14)

Rev: 3  
Id: 11/11