

Tyrrell Zalbatsu

Sheet: /  
File: xover.sch

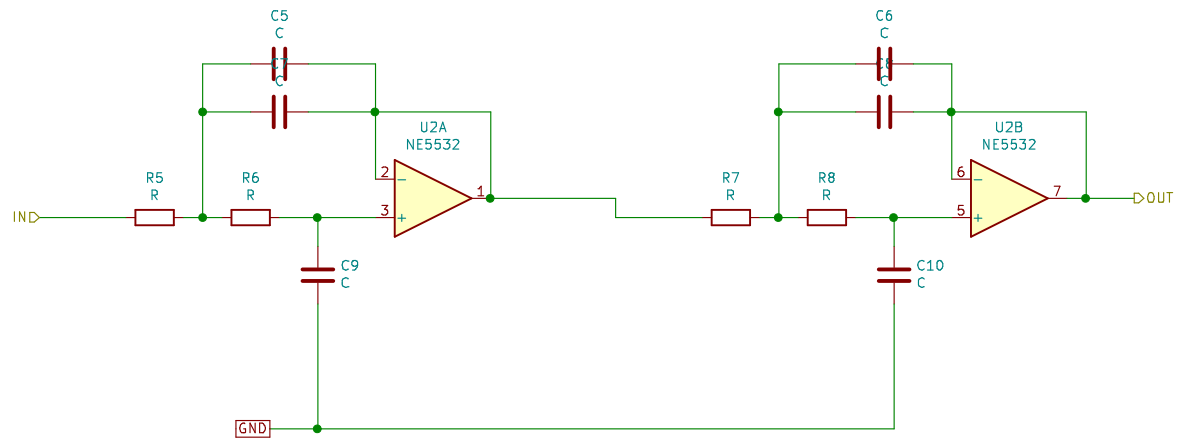
**Title: Active Crossovers for 2x2.1 Speakers**

Size: A4 Date: 2021-10-03

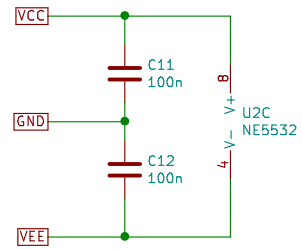
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Rev: A

Id: 1/17



$$f = 1 / (\pi \cdot 2^2 \cdot 1.5 \cdot R \cdot C)$$



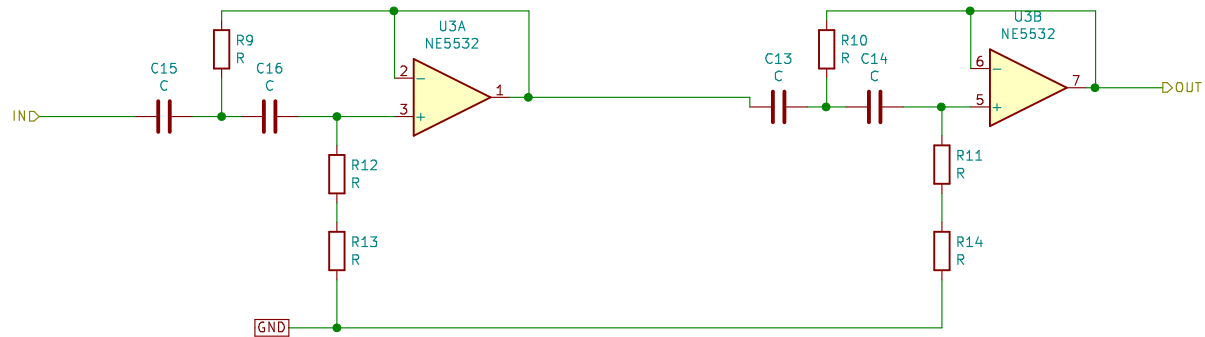
**Tyrrell Zalbatsu**

Sheet: /LP mid L/  
File: LR4LP.sch

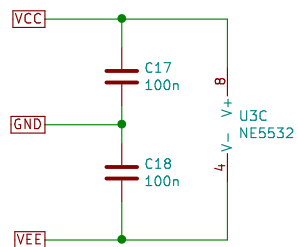
**Title: 4th Order Linkwitz-Riley Low-Pass**

Size: A4 Date: 2021-10-03  
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

**Rev: A**  
Id: 2/17



$$f=1/(\pi*2^{1.5}*R*C)$$



**Tyrrell Zalbatsu**

Sheet: /HP mid R/

File: LR4HP.sch

**Title: 4th Order Linkwitz-Riley High-Pass**

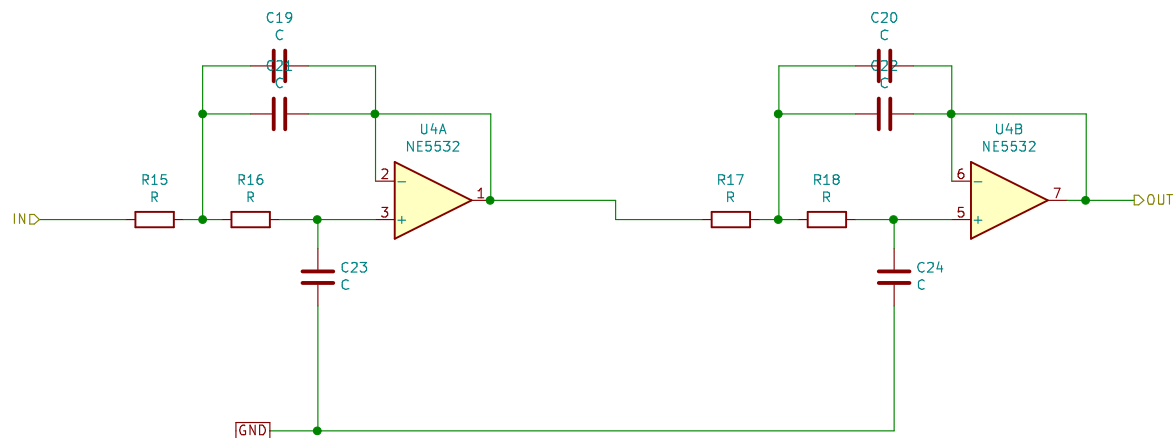
Size: A4

Date: 2021-10-03

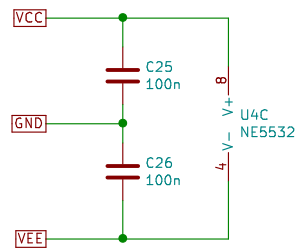
**Rev: A**

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 3/17



$$f=1/(\pi^2 \cdot 1.5 \cdot R \cdot C)$$



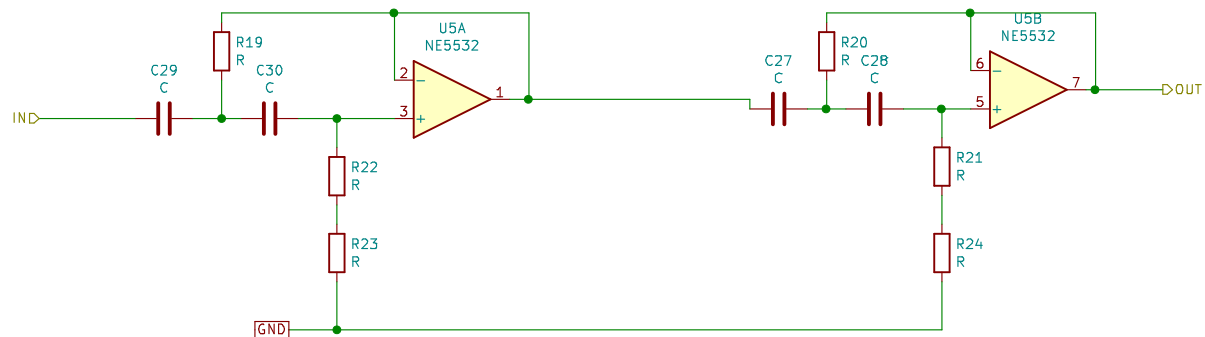
**Tyrrell Zalbatsu**

Sheet: /LP mid R/  
File: LR4LP.sch

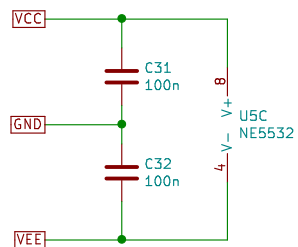
**Title: 4th Order Linkwitz-Riley Low-Pass**

Size: A4 Date: 2021-10-03  
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Rev: A  
Id: 4/17



$$f=1/(\pi*2*1.5*R*C)$$



**Tyrrell Zalbatsu**

Sheet: /HP tweet L/

File: LR4HP.sch

**Title: 4th Order Linkwitz-Riley High-Pass**

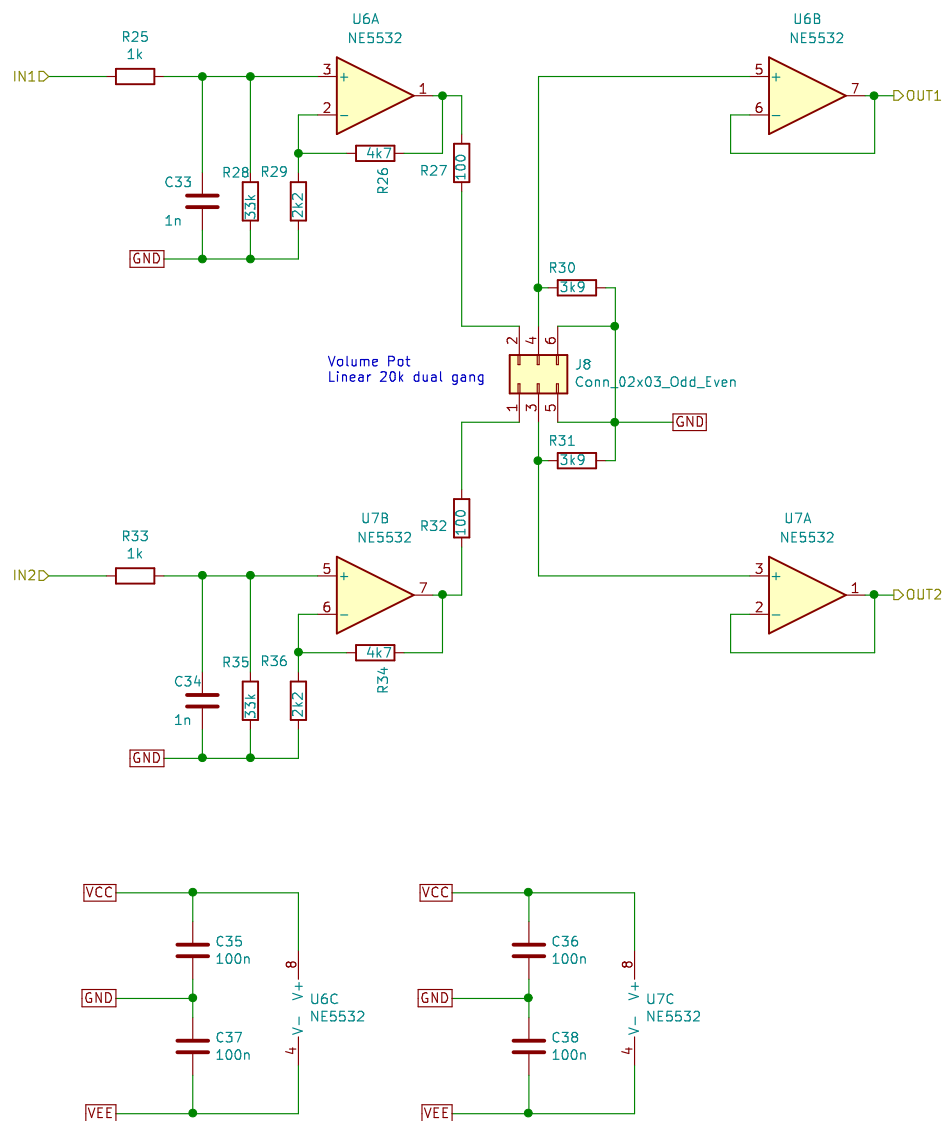
Size: A4

Date: 2021-10-03

**Rev: A**

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 5/17



**Tyrrell Zalbatsu**

Sheet: /inbuf/

File: inbuf.sch

**Title: Input Buffers, 10dB Gain**

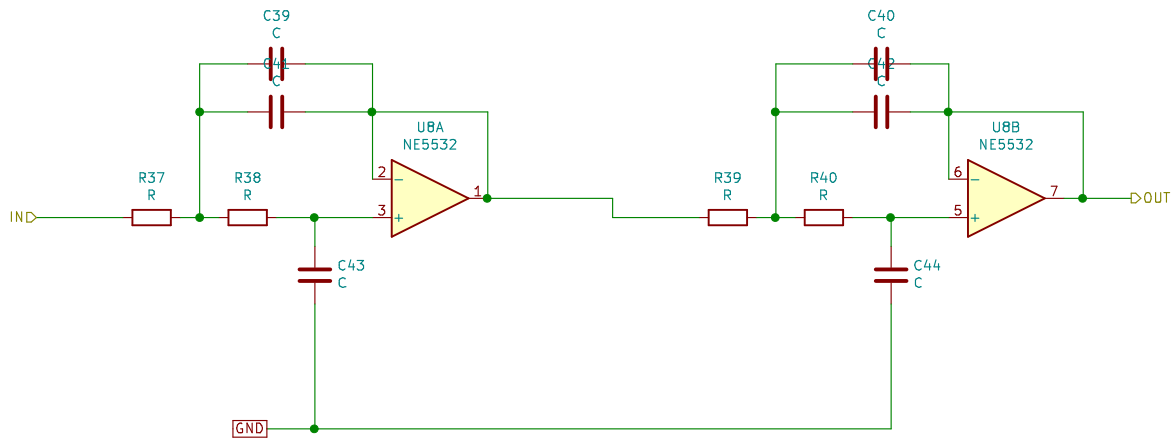
Size: A4

Date: 2021-10-03

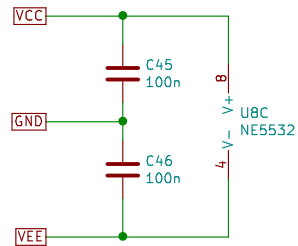
**Rev: A**

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 6/17



$$f = 1 / (\pi^2 \cdot 1.5 \cdot R \cdot C)$$



**Tyrrell Zaibatsu**

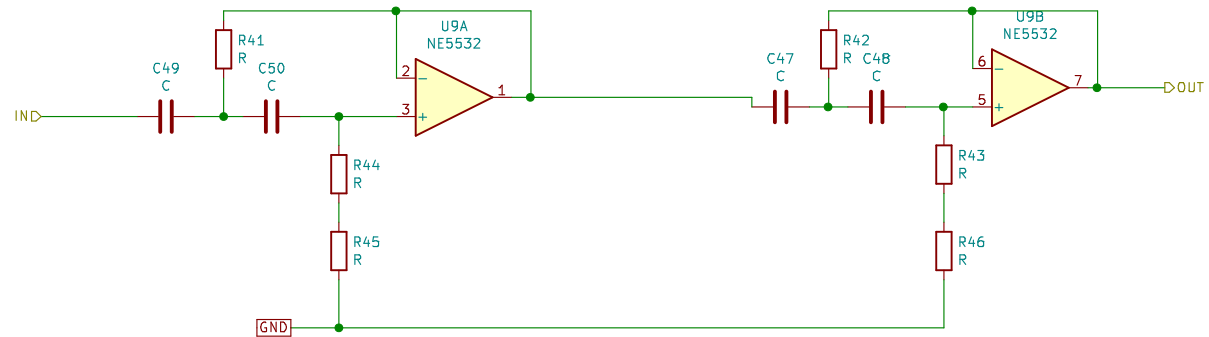
Sheet: /LP sub/  
File: LR4LP.sch

**Title: 4th Order Linkwitz-Riley Low-Pass**

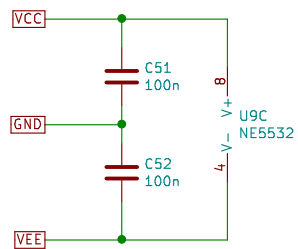
Size: A4  
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Date: 2021-10-03

Rev: A  
Id: 7/17



$$f=1/(\pi*2*1.5*R*C)$$



**Tyrrell Zalbatsu**

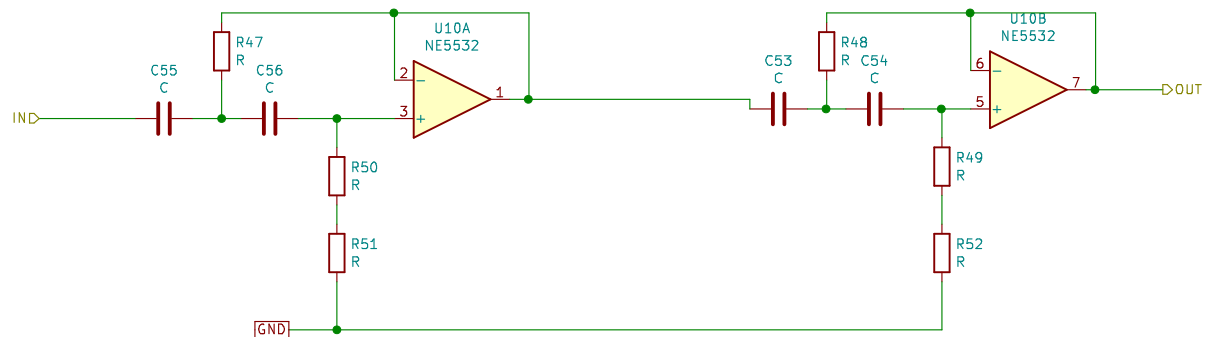
Sheet: /HP mid L/  
File: LR4HP.sch

**Title: 4th Order Linkwitz-Riley High-Pass**

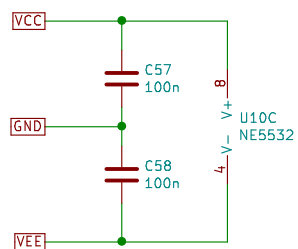
Size: A4  
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Rev: A  
Id: 8/17





$$f=1/(\pi*2*1.5*R*C)$$



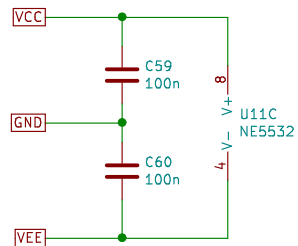
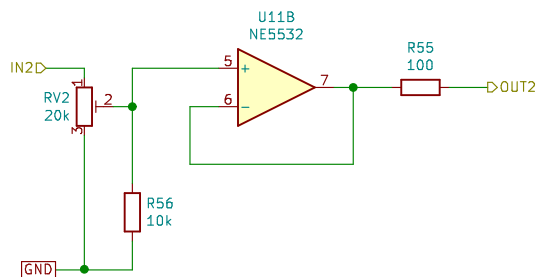
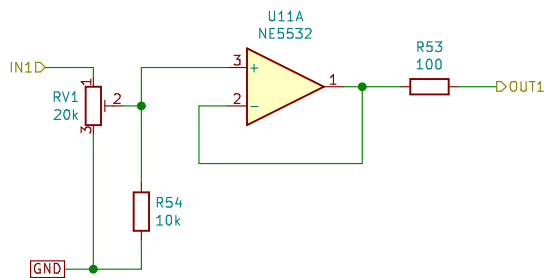
**Tyrrell Zalbatsu**

Sheet: /HP tweet R/  
File: LR4HP.sch

**Title: 4th Order Linkwitz-Riley High-Pass**

Size: A4  
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Rev: A  
Id: 9/17



**Tyrrell Zalbatsu**

Sheet: /mid gain/

File: gain.sch

**Title: Output Gain Controls**

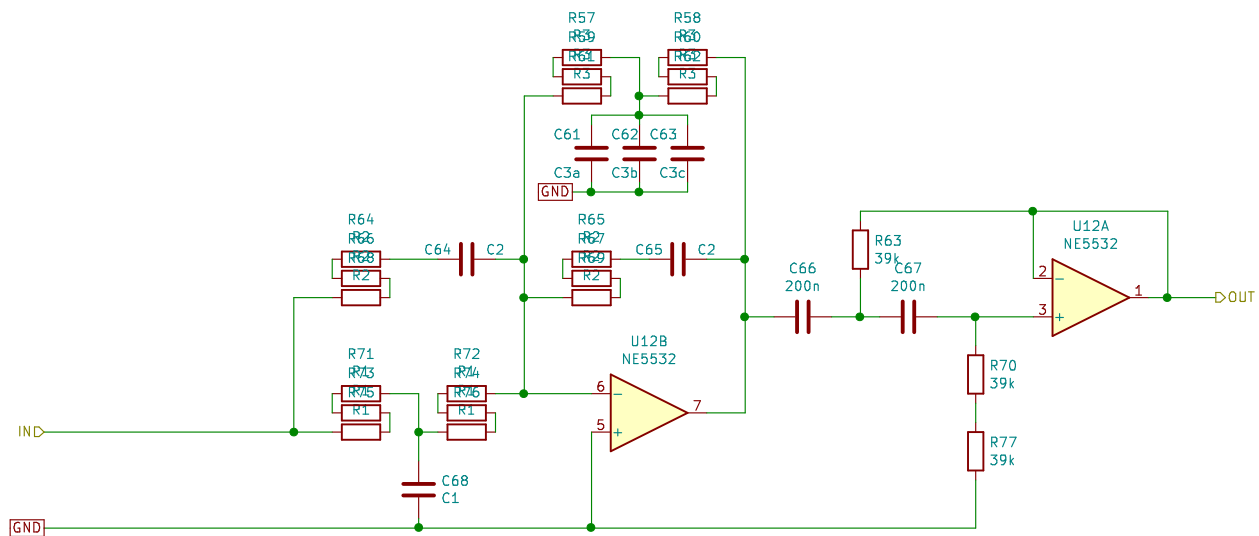
Size: A4

Date: 2021-10-03

**Rev: A**

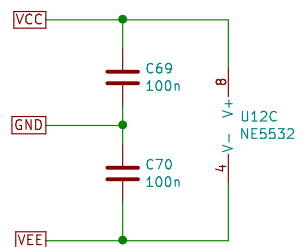
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 10/17



Linkwitz Transform is inverting!

Butterworth High Pass, subsonic filter  
 $f=1/(\pi \cdot 2 \cdot 1.5 \cdot R \cdot C)$



**Tyrrell Zalbatsu**

Sheet: /equaliser/

File: equaliser.sch

**Title: Linkwitz Transform**

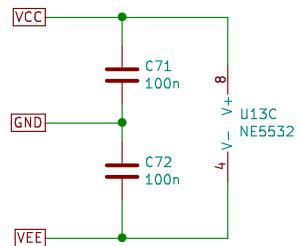
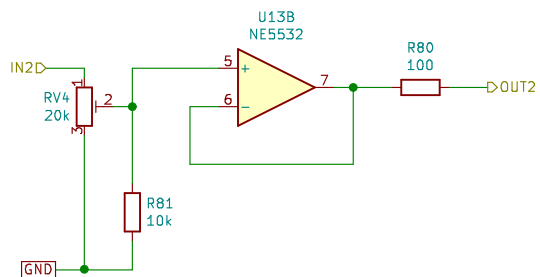
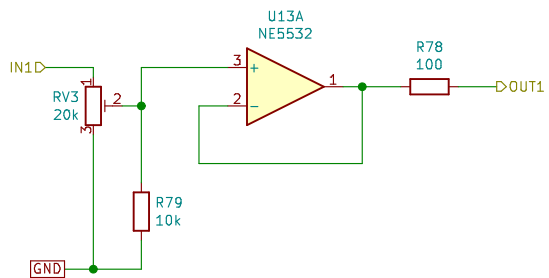
Size: A4

Date: 2021-10-03

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

**Rev: A**

Id: 11/17



**Tyrrell Zalbatsu**

Sheet: /tweet gain/

File: gain.sch

**Title: Output Gain Controls**

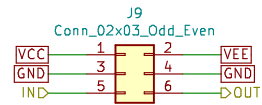
Size: A4

Date: 2021-10-03

**Rev: A**

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 12/17



**Tyrrell Zalbatsu**

Sheet: /APF L/

File: extern.sch

**Title: Header for external transform**

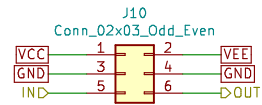
Size: A4

Date: 2021-10-05

**Rev: A**

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 13/17



**Tyrrell Zalbatsu**

Sheet: /APF R/

File: extern.sch

**Title: Header for external transform**

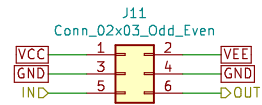
Size: A4

Date: 2021-10-05

**Rev: A**

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 14/17



**Tyrrell Zalbatsu**

Sheet: /BSC L/

File: extern.sch

**Title: Header for external transform**

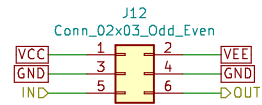
Size: A4

Date: 2021-10-05

**Rev: A**

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 15/17



**Tyrrell Zalbatsu**

Sheet: /BSC R/

File: extern.sch

**Title: Header for external transform**

Size: A4

Date: 2021-10-05

**Rev: A**

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 16/17



