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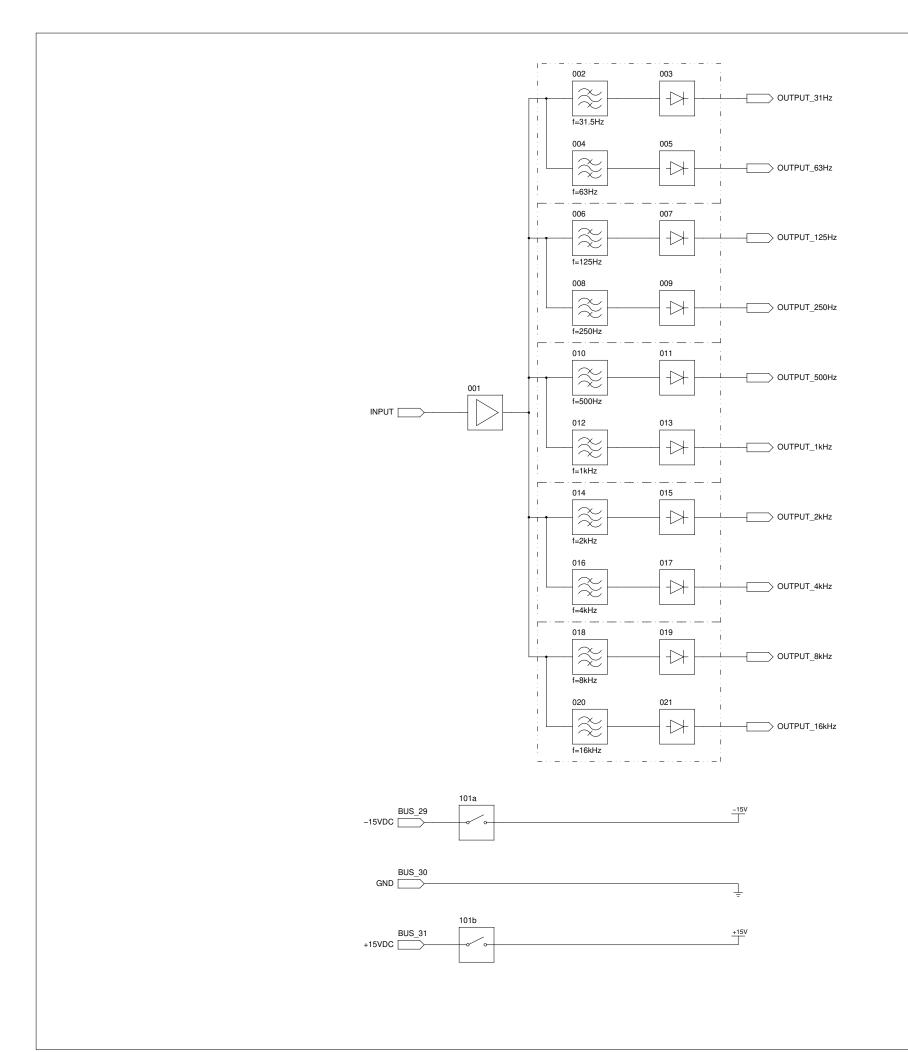
Octave Filter
Front Page
TITLE OCTAVE_FILTER

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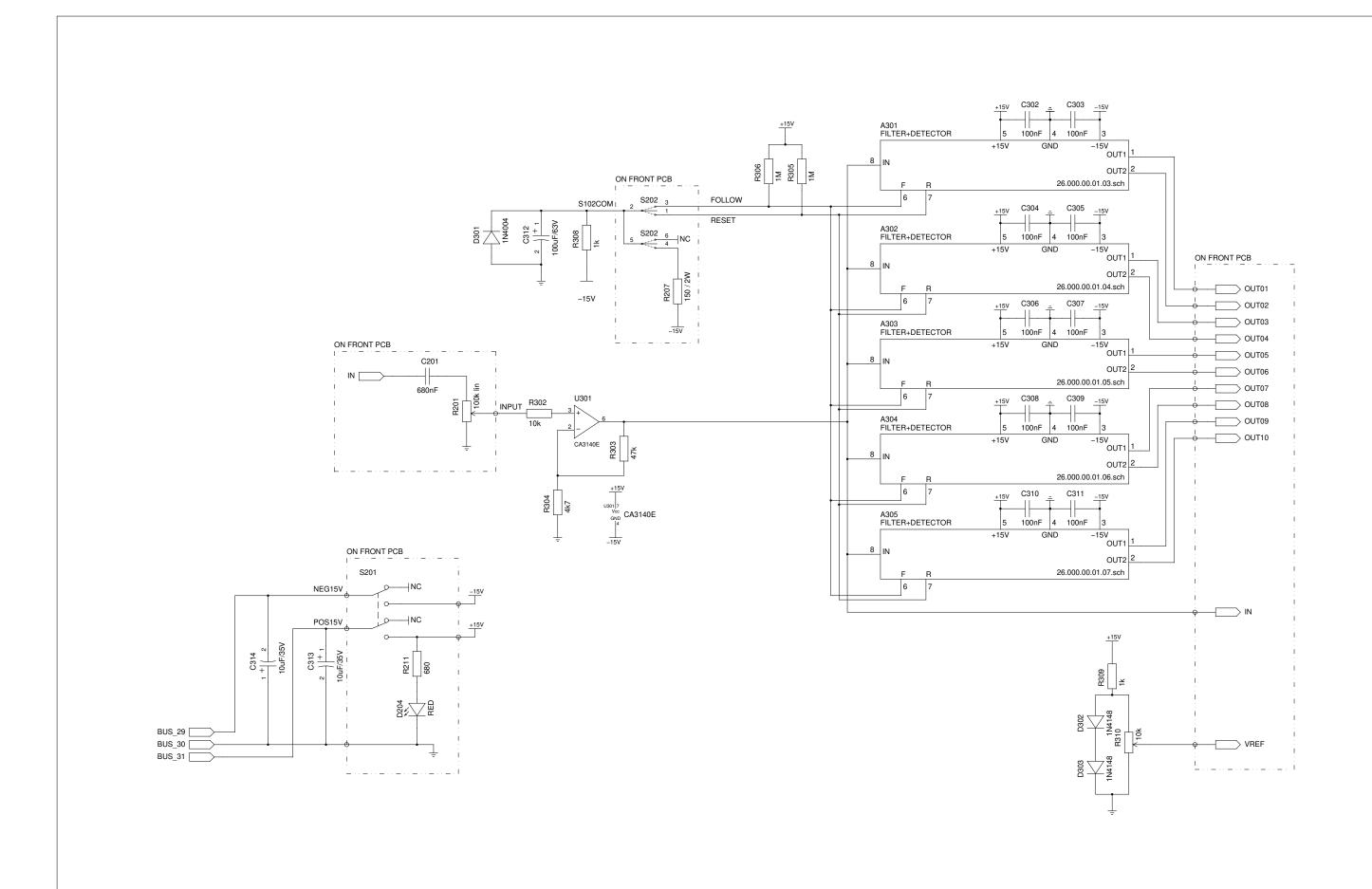
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TITLE	Octave Filter block diagram OCTAVE_FILTER				
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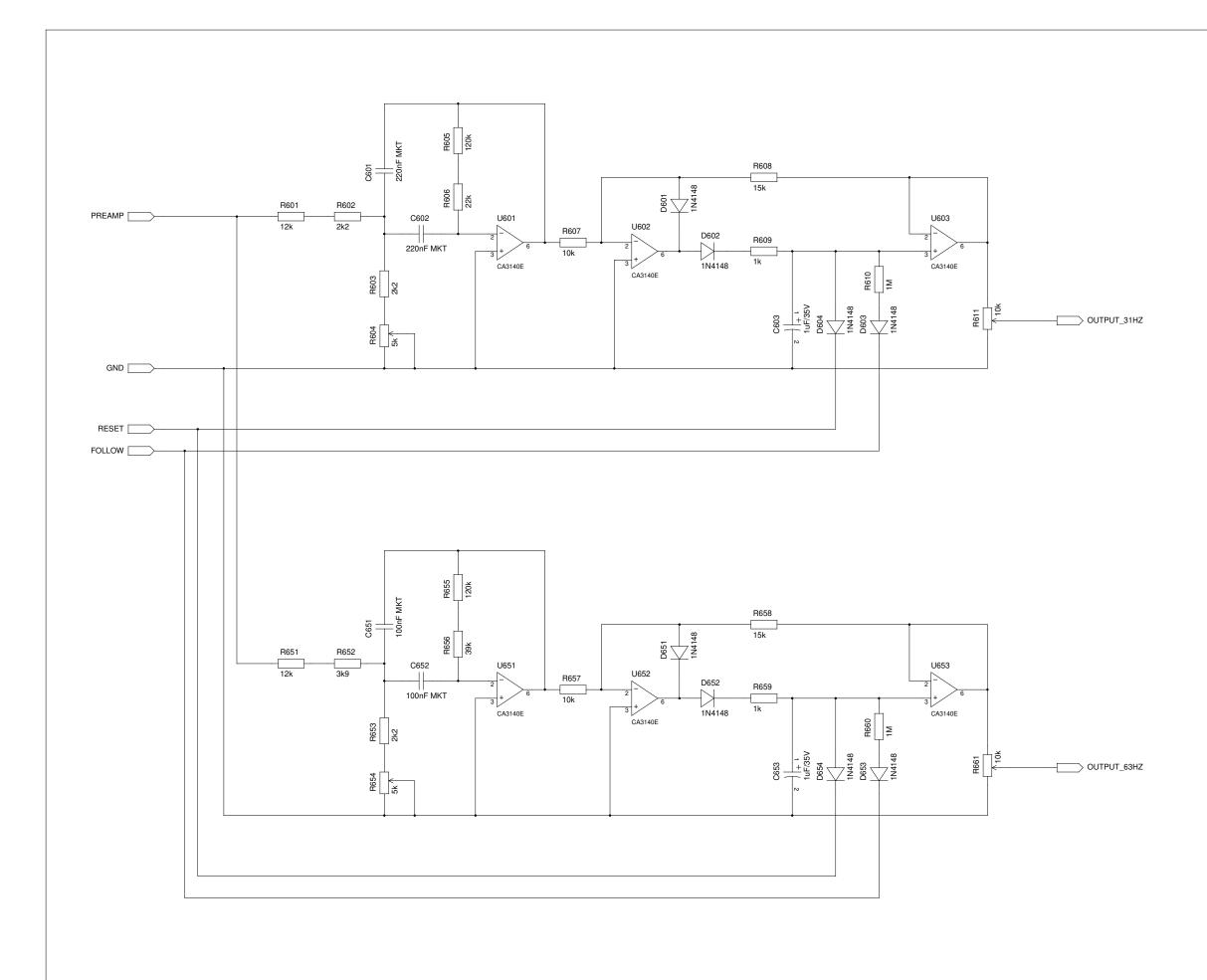
Octave Filter schematic

TITLE OCTAVE_FILTER

FILE: 26.000.00.01.02.sch REVISION: 20220422

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Α1

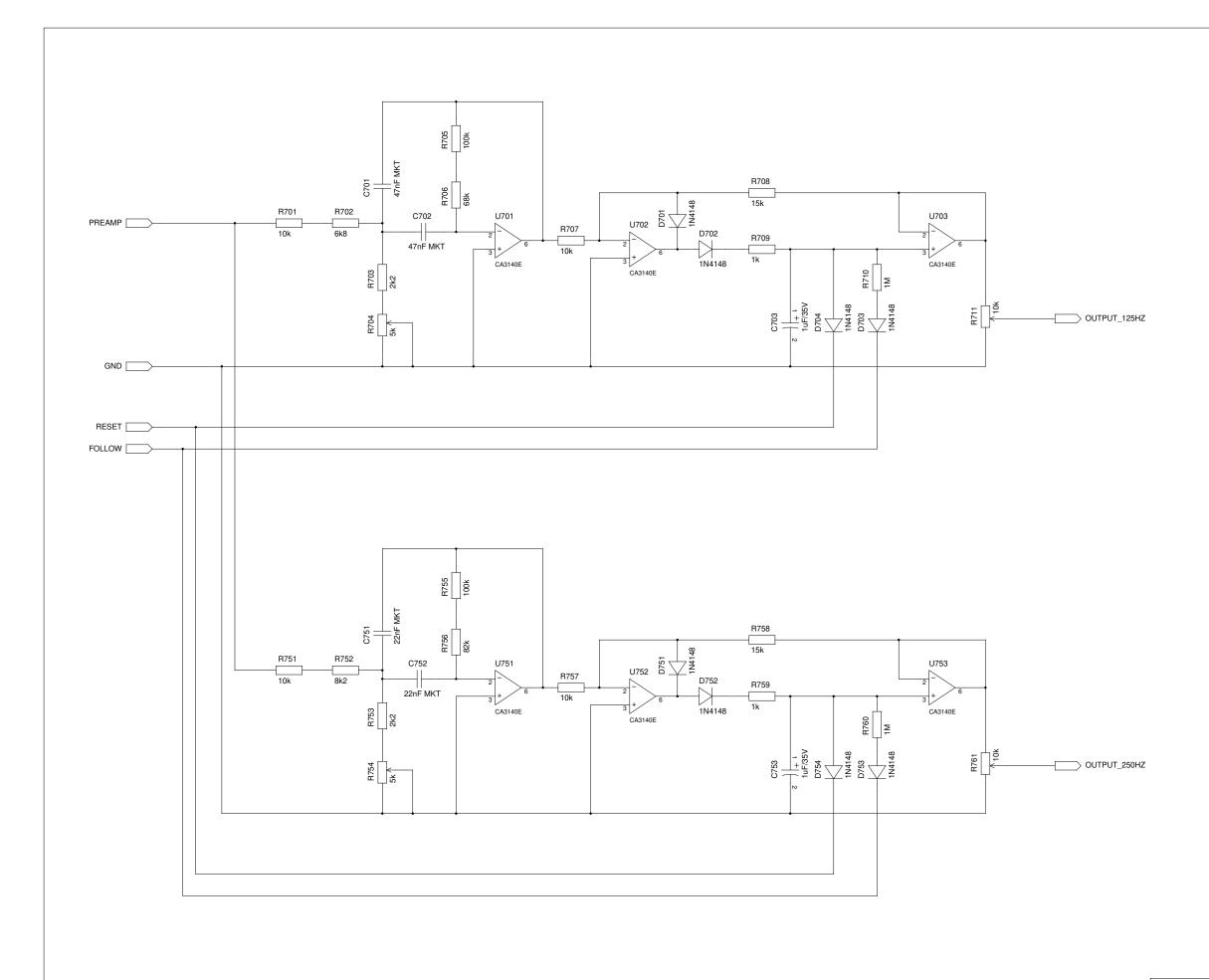




Octave Filter 31.5 Hz and 63 Hz module schematic
TITLE OCTAVE_FILTER

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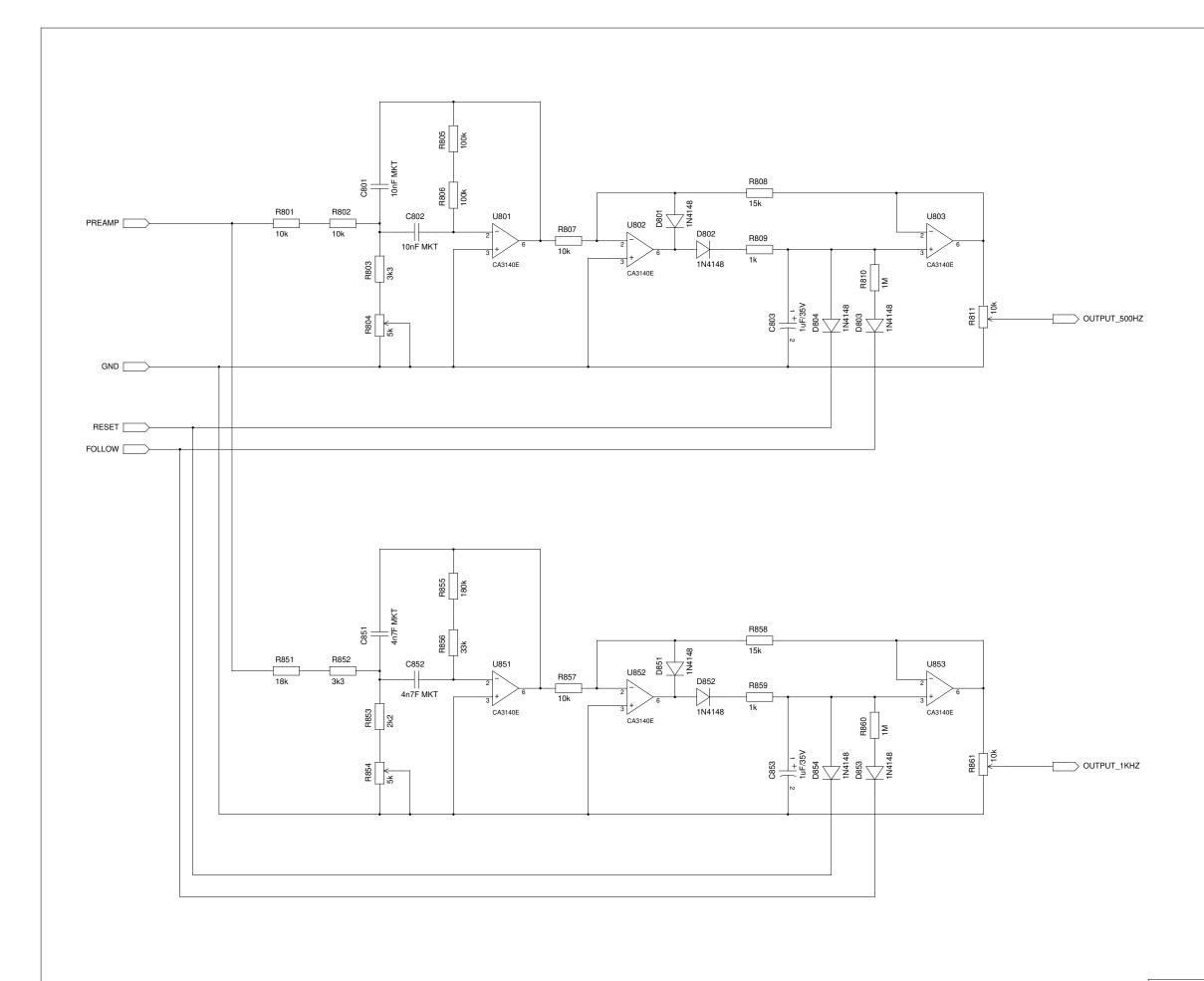


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Octave Filter 125 Hz and 250 Hz module schematic
TITLE OCTAVE_FILTER

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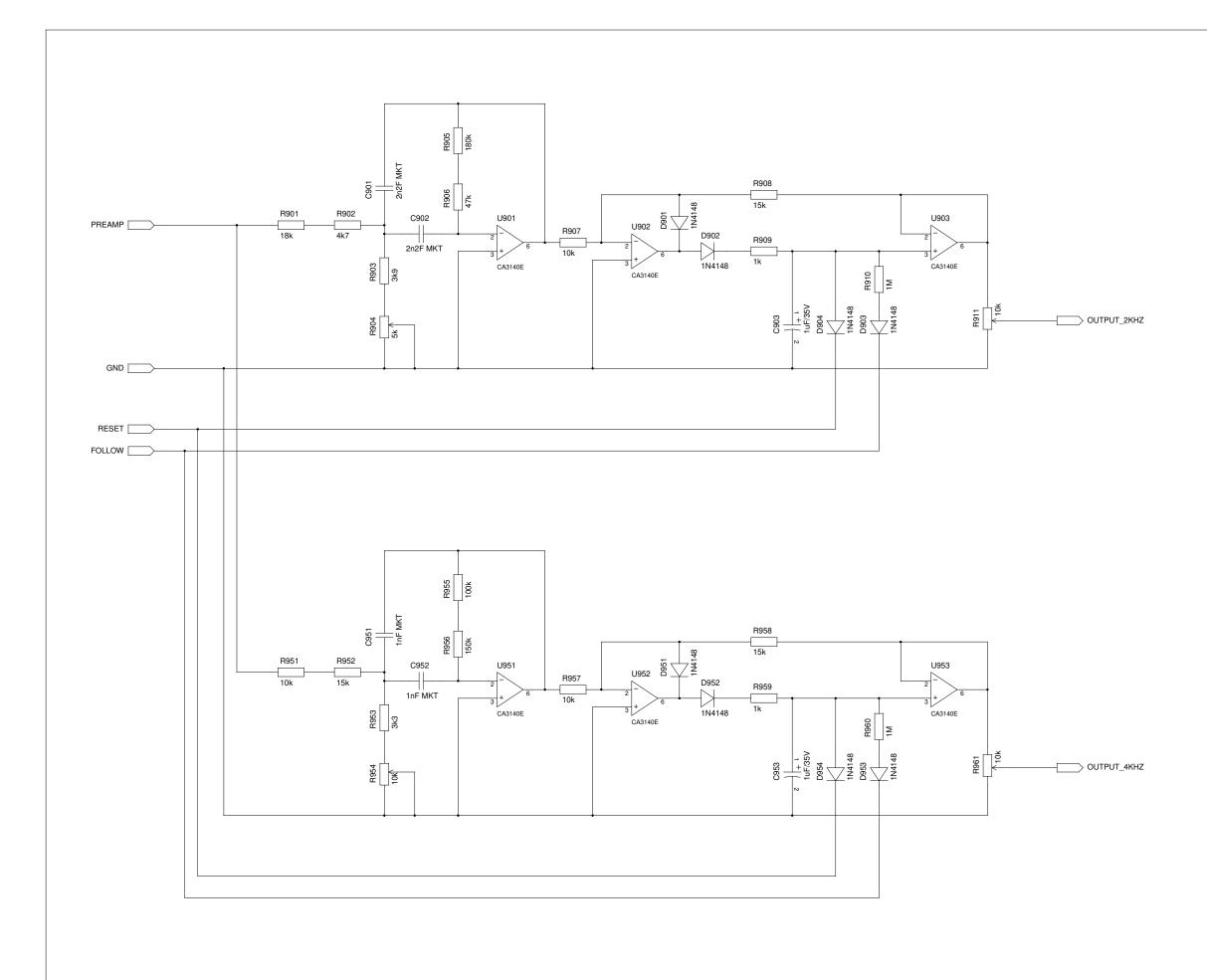
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Octave Filter 500 Hz and 1 kHz module schematic
TITLE OCTAVE_FILTER

FILE: 26.000.00.01.05.sch REVISION: 20220422

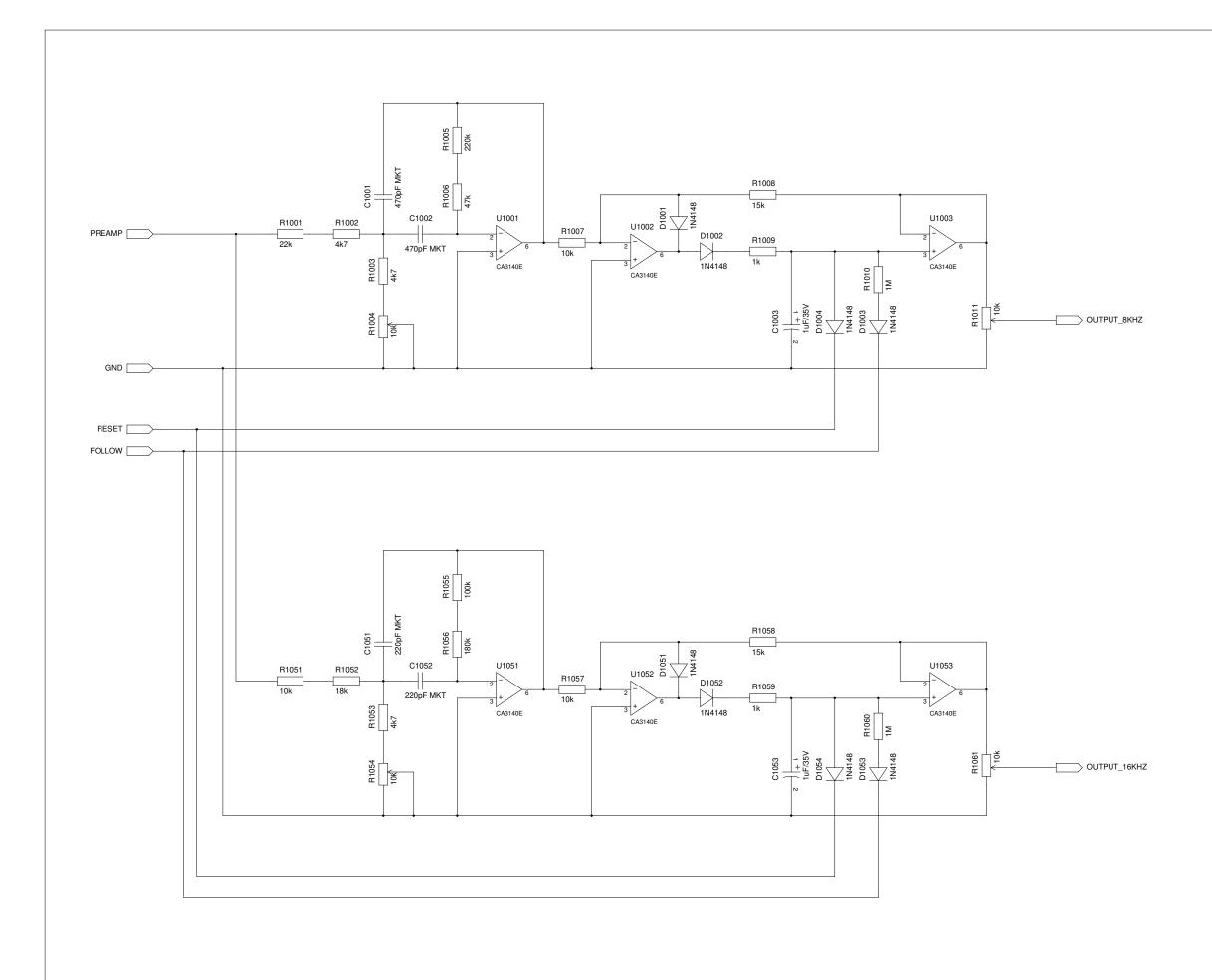
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Octave Filter 2 kHz and 4 kHz module schematic
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Octave Filter 8 kHz and 16 kHz module schematic
TITLE OCTAVE_FILTER

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.TITLE OCTAVE FILTER – MAIN BOARD – INPUT STAGE – FREQUENCY RESPONSE

.INCLUDE UA741.subckt

VCC 4 0 15 VEE 5 0 -15

VS 1 0 AC 1 SIN(0 0.1 100)

C1 1 2 680n

R1 0 2 100k

R2 2 6 10K

R3 3 7 47k

R4 7 0 4700

XOP1 6 7 0 4 5 3 UA741

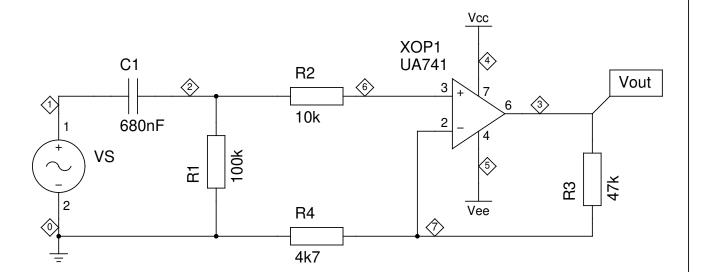
.PRINT OP Iter(0) V(3)

.PRINT AC VDB(3)

* FROM TO STEP .TRAN 0.00001 0.2 0.0001

* #STEPS/DECADE FROM TO .AC DEC 20 0.01 10Meg

.END





Octave Filter – Main board – Input stage (for simulation) schematic

TITLE OCTAVE_FILTER

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.TITLE OCTAVE FILTER - MAIN BOARD - INPUT STAGE - TRANSIENT RESPONSE

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 0.141 31.5)

C1 1 2 680n

R1 0 2 100k

R2 2 6 10K

R3 3 7 47k

R4 7 0 4700

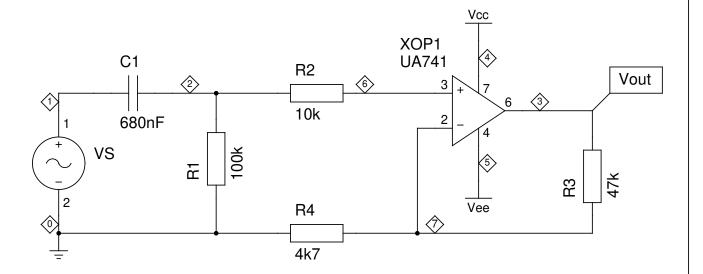
XOP1 6 7 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(4) V(5)

* FROM TO STEP .TRAN 0 0.4 0.00001 TRACE ALL

.END





Octave Filter – Main board – Input stage (for simulation) schematic

TITLE OCTAVE_FILTER

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.TITLE OCTAVE FILTER - MAIN BOARD - INPUT STAGE - TRANSIENT RESPONSE

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1 16k)

C1 1 2 680n

R1 0 2 100k

R2 2 6 10K

R3 3 7 47k

R4 7 0 4700

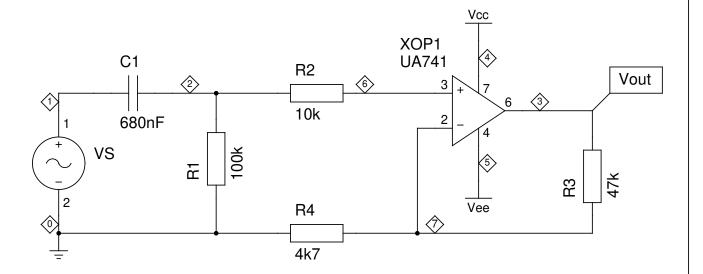
XOP1 6 7 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(4) V(5)

* FROM TO STEP .TRAN 0 0.01 0.000001 TRACE ALL

.END





Octave Filter – Main board – Input stage (for simulation) schematic

TITLE OCTAVE_FILTER

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.TITLE OCTAVE FILTER - MAIN BOARD - INPUT STAGE - TRANSIENT RESPONSE

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 0.141 1k)

C1 1 2 680n

R1 0 2 100k

R2 2 6 10K

R3 3 7 47k

R4 7 0 4700

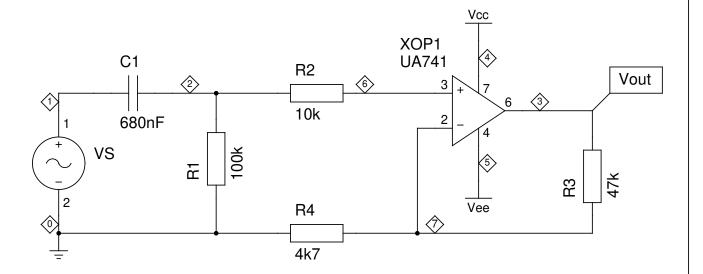
XOP1 6 7 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(4) V(5)

* FROM TO STEP .TRAN 0 0.02 0.000001 TRACE ALL

.END





Octave Filter – Main board – Input stage (for simulation) schematic

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.TITLE OCTAVE FILTER - 31.5 HZ SECTION - BPF STAGE - FREQUENCY RESPONSE

.INCLUDE UA741.subckt

VCC 4 0 15 VEE 5 0 –15

VS 1 0 AC 1 SIN(0 0.1 100) R1 1 2 14200 R2 3 6 142K R3 0 2 7200 C1 2 6 220nF C2 3 2 220nF

XOP1 0 6 0 4 5 3 UA741

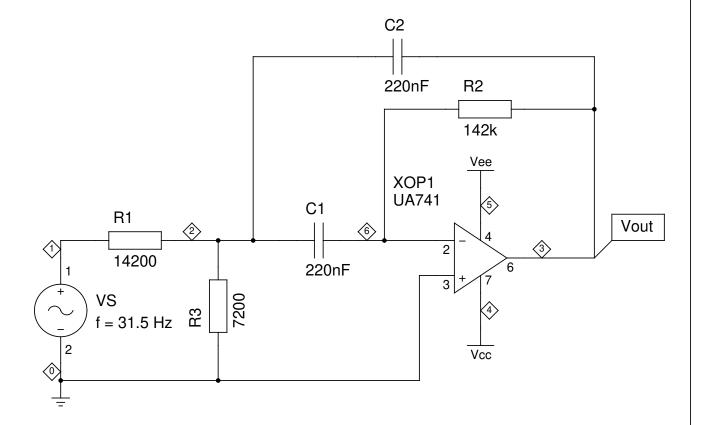
.PRINT OP Iter(0) V(3)

.PRINT AC VDB(3)

* FROM TO STEP .TRAN 0.00001 0.2 0.0001

* #STEPS/DECADE FROM TO .AC DEC 20 0.1 100k

.END





Octave Filter – First stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 31.5)

R1 1 2 14200

R2 3 6 142K

R3 0 2 7200

C1 2 6 220nF

C2 3 2 220nF

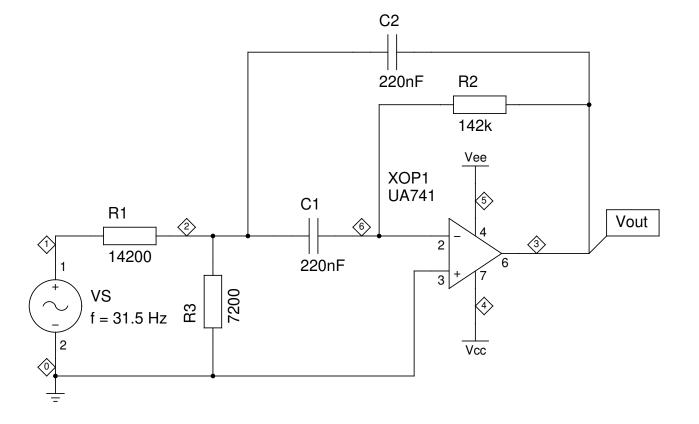
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(4) V(5)

* FROM TO STEP .TRAN 0 0.2 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 31.5)

R1 1 2 14200

R2 3 6 142K

R3 0 2 7200

C1 2 6 220nF

C2 3 2 220nF

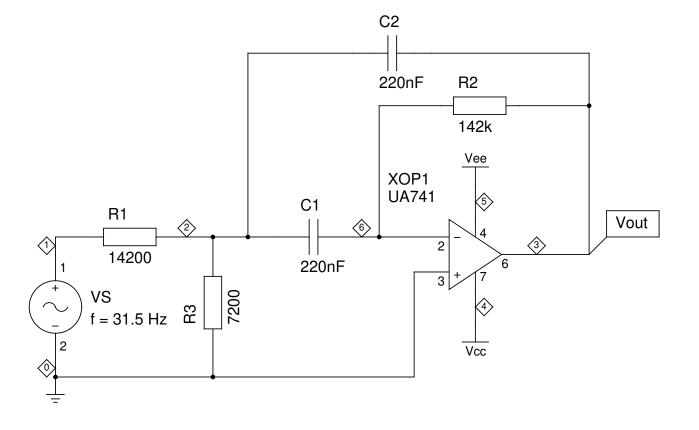
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN I(R1) I(R2) I(R3)

* FROM TO STEP .TRAN 0 0.2 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

FILE: 26.000.00.02.07.sch REVISION: 20220422 PAGE 01 OF 01

DRAWN BY: Bert Timmerman

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 31.5)

R1 1 2 14200

R2 3 6 142K

R3 0 2 7200

C1 2 6 220nF

C2 3 2 220nF

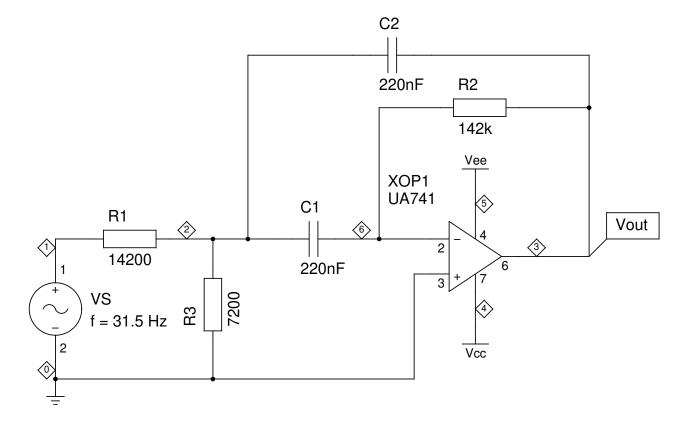
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN P(R1) P(R2) P(R3)

* FROM TO STEP .TRAN 0 0.2 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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DRAWN BY: Bert Timmerman

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 16k)

R1 1 2 14200

R2 3 6 142K

R3 0 2 7200

C1 2 6 220nF

C2 3 2 220nF

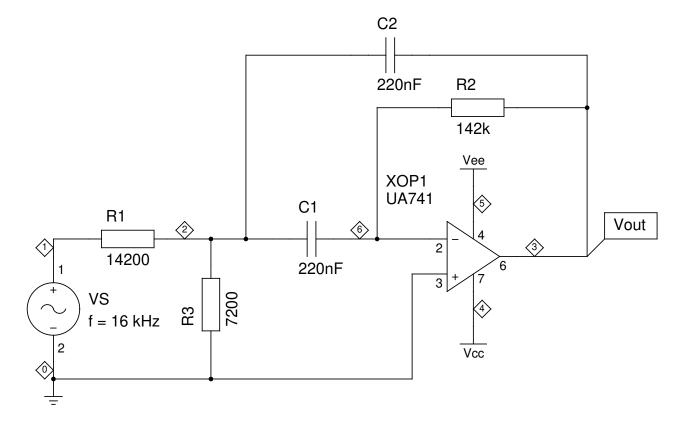
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(4) V(5)

* FROM TO STEP .TRAN 0 0.01 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 16k)

R1 1 2 14200

R2 3 6 142K

R3 0 2 7200

C1 2 6 220nF

C2 3 2 220nF

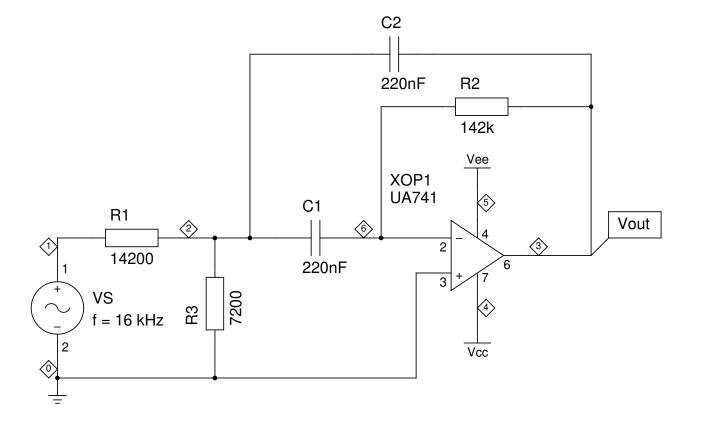
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN I(R1) I(R2) I(R3)

* FROM TO STEP .TRAN 0 0.001 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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DRAWN BY: Bert Timmerman

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 16k)

R1 1 2 14200

R2 3 6 142K

R3 0 2 7200

C1 2 6 220nF

C2 3 2 220nF

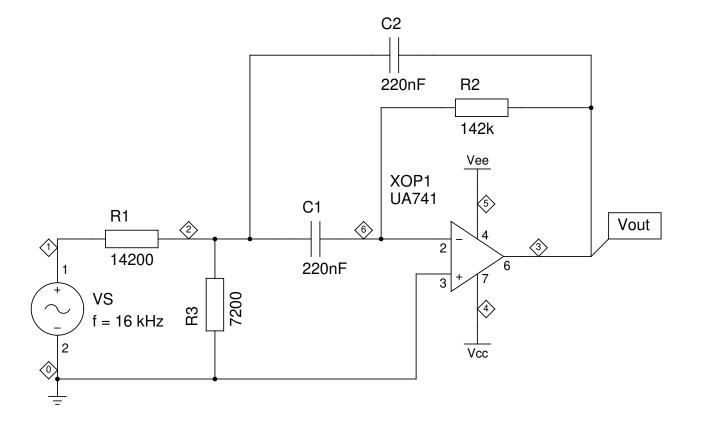
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN P(R1) P(R2) P(R3)

* FROM TO STEP .TRAN 0 0.001 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

PAGE 01

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DRAWN BY: Bert Timmerman

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.TITLE OCTAVE FILTER – 31.5 HZ SECTION – DETECTOR STAGE – FREQUENCY RESPONSE

.INCLUDE UA741.subckt

.MODEL 1N4148 D IS=2e-14

VCC 4 0 15 VEE 5 0 –15

VS 1 0 AC 1 SIN(0 0.1 31.5)

C1 0 7 1uF D1 2 3 1N4148 D2 3 6 1N4148 R1 1 2 10000 R2 6 7 1000 R3 8 2 15000 R4 0 9 10000 R5 8 9 .001 XOP1 0 2 0 4 5 3 UA741

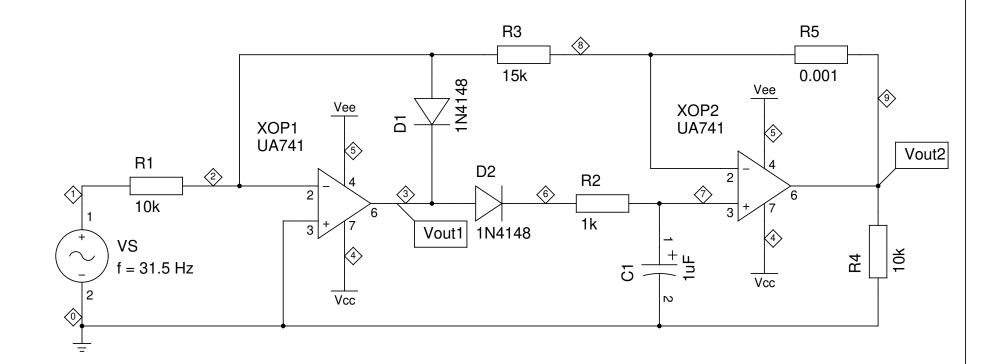
.PRINT OP Iter(0) V(3)

XOP2 7 8 0 4 5 9 UA741

.PRINT AC VDB(3) VDB(9)

- * FROM TO STEP .TRAN 0.00001 0.2 0.0001
- * #STEPS/DECADE FROM TO .AC DEC 20 0.1 100k

.END





Octave Filter – Second stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE FILTER

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.TITLE OCTAVE FILTER - 31.5 HZ SECTION - DETECTOR STAGE - TRANSIENT RESPONSE

.INCLUDE UA741.subckt

.MODEL 1N4148 D IS=2e-14

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 31.5)

C1 0 7 1uF

D1 2 3 1N4148

D2 3 6 1N4148

R1 1 2 10000

R2 6 7 1000

R3 8 2 15000

R4 0 9 10000

R5 8 9 .001

XOP1 0 2 0 4 5 3 UA741

XOP2 7 8 0 4 5 9 UA741

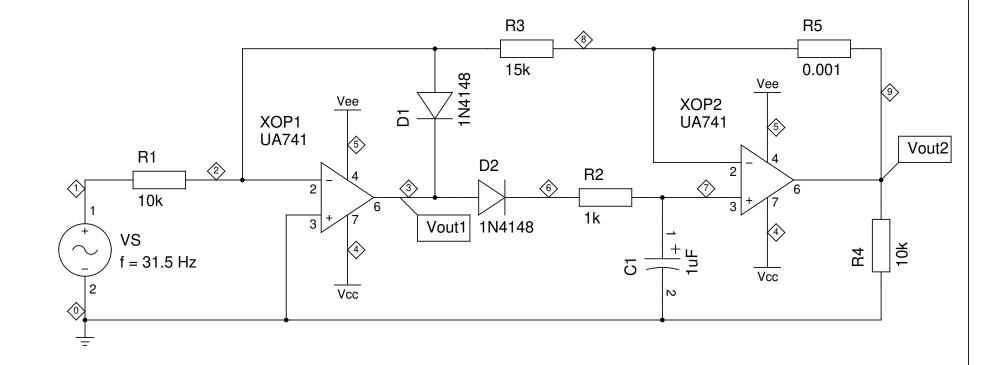
.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(9) V(4) V(5)

* FROM TO STEP

.TRAN 0 0.4 0.00001 TRACE ALL

.END





Octave Filter – Second stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE FILTER

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REVISION: 20220422

.TITLE OCTAVE FILTER - 31.5 HZ SECTION - DETECTOR STAGE - TRANSIENT RESPONSE

.INCLUDE UA741.subckt

.MODEL 1N4148 D IS=2e-14

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 31.5)

C1 0 7 1uF

D1 2 3 1N4148

D2 3 6 1N4148

R1 1 2 10000

R2 6 7 1000

R3 8 2 15000

R4 0 9 10000

R5 8 9 .001

XOP1 0 2 0 4 5 3 UA741

XOP2 7 8 0 4 5 9 UA741

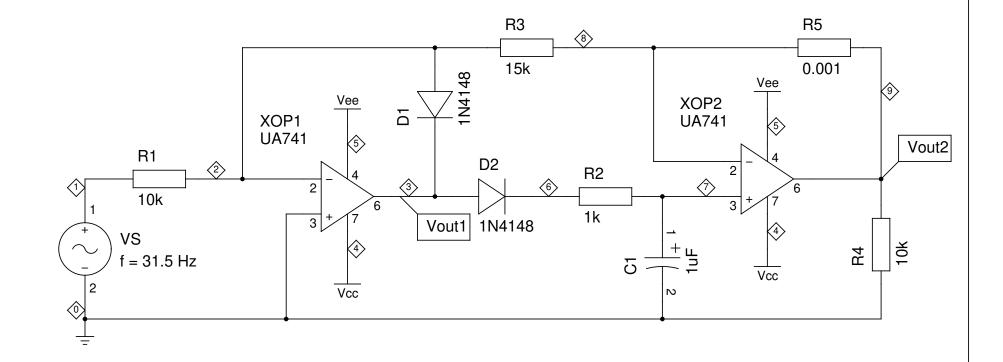
.PRINT OP Iter(0) V(3)

.PRINT TRAN I(R1) I(R2) I(R3) I(R4) I(R5)

* FROM TO STEP

.TRAN 0 0.4 0.00001 TRACE ALL

.END





Octave Filter – Second stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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.TITLE OCTAVE FILTER - 31.5 HZ SECTION - DETECTOR STAGE - TRANSIENT RESPONSE

.INCLUDE UA741.subckt

.MODEL 1N4148 D IS=2e-14

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 31.5)

C1 0 7 1uF

D1 2 3 1N4148

D2 3 6 1N4148

R1 1 2 10000

R2 6 7 1000

R3 8 2 15000

R4 0 9 10000

R5 8 9 .001

XOP1 0 2 0 4 5 3 UA741

XOP2 7 8 0 4 5 9 UA741

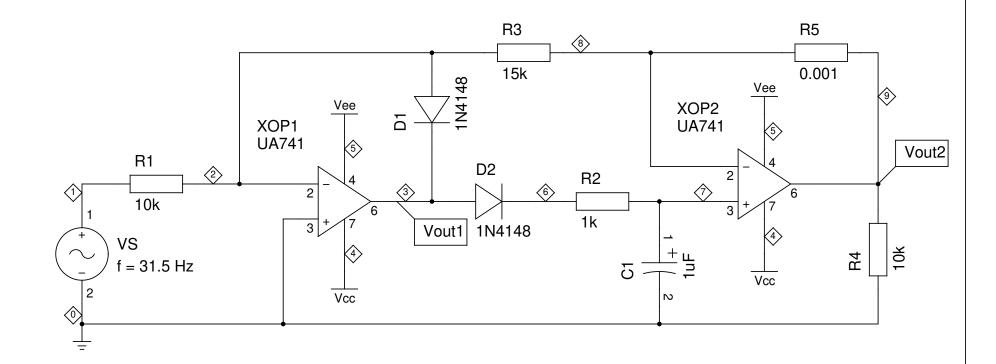
.PRINT OP Iter(0) V(3)

.PRINT TRAN P(R1) P(R2) P(R3) P(R4) P(R5) P(D1) P(D2)

* FROM TO STEP

.TRAN 0 0.4 0.00001 TRACE ALL

.END





Octave Filter – Second stage of the 31.5 Hz module (for simulation) schematic

TITLE OCTAVE FILTER

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.TITLE OCTAVE FILTER – 63 HZ SECTION – BPF STAGE – FREQUENCY RESPONSE

.INCLUDE UA741.subckt

VCC 4 0 15 VEE 5 0 -15

VS 1 0 AC 1 SIN(0 0.1 100)

R1 1 2 15900

R2 3 6 159K

R3 0 2 7200

C1 2 6 100nF

C2 3 2 100nF

XOP1 0 6 0 4 5 3 UA741

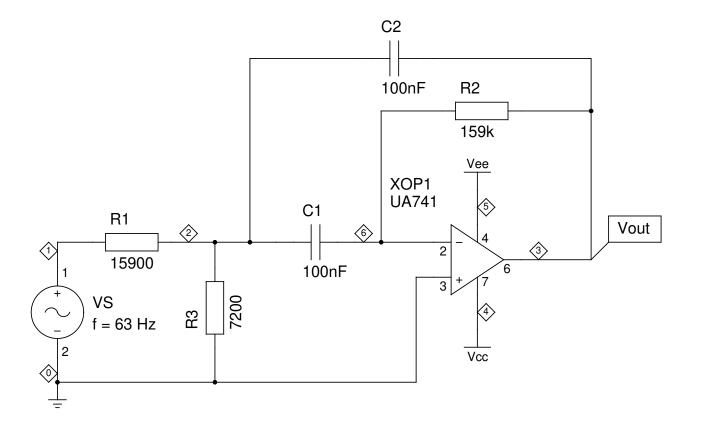
.PRINT OP Iter(0) V(3)

.PRINT AC VDB(3)

* FROM TO STEP .TRAN 0.00001 0.2 0.0001

* #STEPS/DECADE FROM TO .AC DEC 20 0.1 100k

.END





Octave Filter – First stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 0.141 63)

R1 1 2 15900

R2 3 6 159K

R3 0 2 7200

C1 2 6 100nF

C2 3 2 100nF

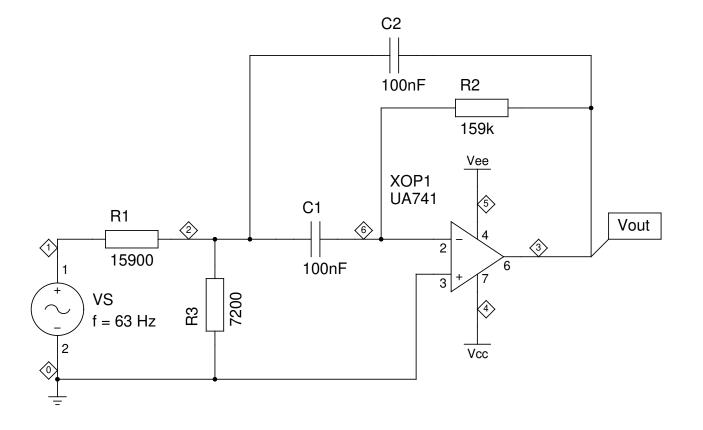
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(4) V(5)

* FROM TO STEP .TRAN 0 0.2 0.0001 TRACE ALL

.END





Octave Filter – First stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 0.141 63)

R1 1 2 15900

R2 3 6 159K

R3 0 2 7200

C1 2 6 100nF

C2 3 2 100nF

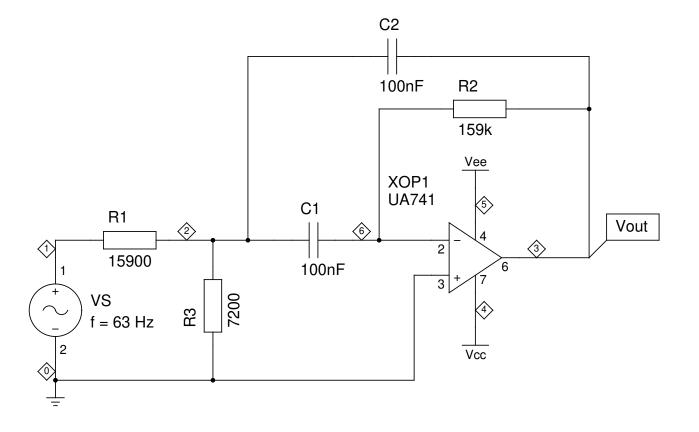
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN I(R1) I(R2) I(R3)

* FROM TO STEP .TRAN 0 0.2 0.0001 TRACE ALL

.END





Octave Filter – First stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 0.141 63)

R1 1 2 15900

R2 3 6 159K

R3 0 2 7200

C1 2 6 100nF

C2 3 2 100nF

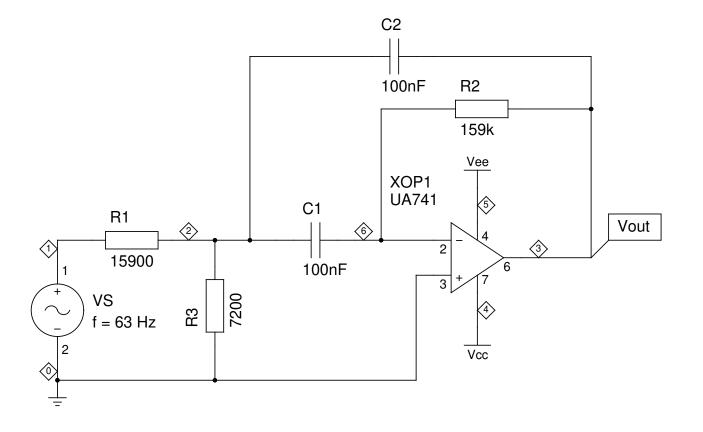
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN P(R1) P(R2) P(R3)

* FROM TO STEP .TRAN 0 0.2 0.0001 TRACE ALL

.END





Octave Filter – First stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 0.141 16k)

R1 1 2 15900

R2 3 6 159K

R3 0 2 7200

C1 2 6 100nF

C2 3 2 100nF

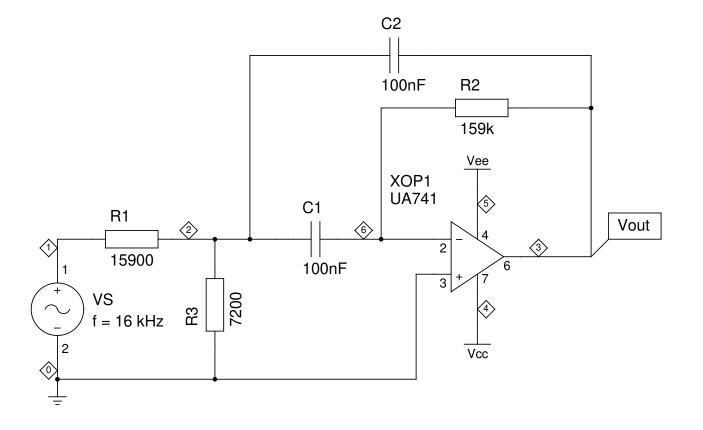
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(4) V(5)

* FROM TO STEP .TRAN 0 0.01 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

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FILE: 26.000.00.02.20.sch

OF 01

DRAWN BY: Bert Timmerman

REVISION: 20220422

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 0.141 16k)

R1 1 2 15900

R2 3 6 159K

R3 0 2 7200

C1 2 6 100nF

C2 3 2 100nF

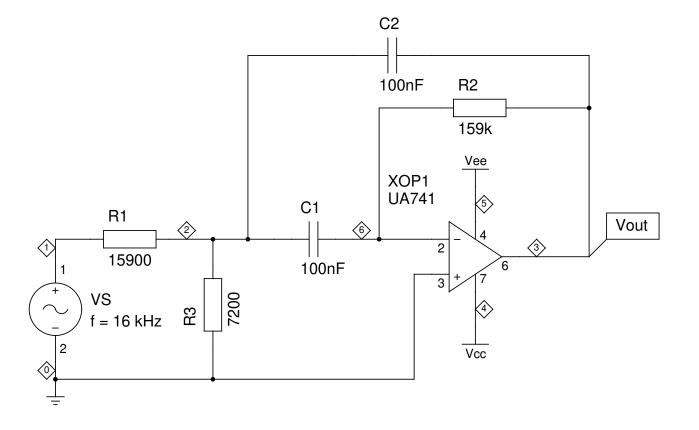
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN I(R1) I(R2) I(R3)

* FROM TO STEP .TRAN 0 0.01 0.0001 TRACE ALL

.END





Octave Filter – First stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

FILE: 26.000.00.02.21.sch REVISION: 20220422 PAGE 01 OF 01

DRAWN BY: Bert Timmerman

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 0.141 16k)

R1 1 2 15900

R2 3 6 159K

R3 0 2 7200

C1 2 6 100nF

C2 3 2 100nF

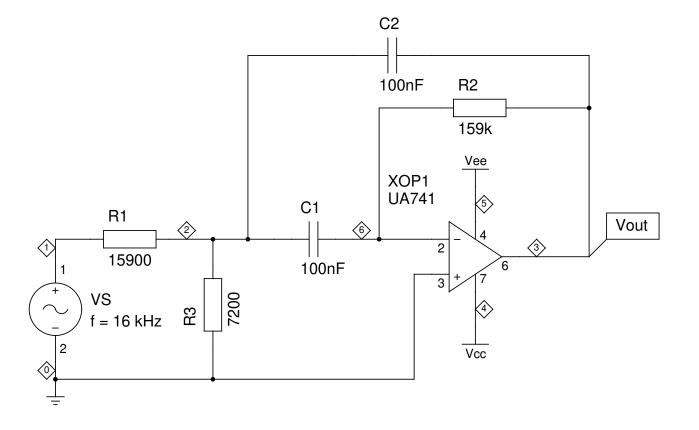
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN P(R1) P(R2) P(R3)

* FROM TO STEP .TRAN 0 0.01 0.0001 TRACE ALL

.END





Octave Filter – First stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

FILE: 26.000.00.02.22.sch REVISION: 20220422 PAGE 01 OF 01

DRAWN BY: Bert Timmerman

.TITLE OCTAVE FILTER - 63 HZ SECTION - DETECTOR STAGE - FREQUENCY RESPONSE

.INCLUDE UA741.subckt

.MODEL 1N4148 D IS=2e-14

VCC 4 0 15 VEE 5 0 -15

VS 1 0 AC 1 SIN(0 0.1 63)

C1 0 7 1uF

D1 2 3 1N4148

D2 3 6 1N4148

R1 1 2 10000

R2 6 7 1000

R3 8 2 15000

R4 0 9 10000

R5 8 9 .001

XOP1 0 2 0 4 5 3 UA741

XOP2 7 8 0 4 5 9 UA741

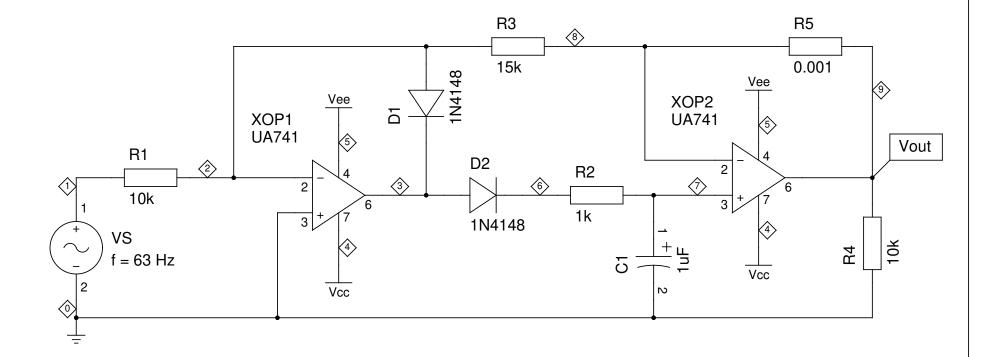
.PRINT OP Iter(0) V(3)

.PRINT AC VDB(3) VDB(9)

* FROM TO STEP .TRAN 0.00001 0.2 0.0001

* #STEPS/DECADE FROM TO .AC DEC 20 0.1 100k

.END





Octave Filter – Second stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE FILTER

PAGE 01

FILE: 26.000.00.02.23.sch

OF 01

DRAWN BY: Bert Timmerman

REVISION: 20220422

.TITLE OCTAVE FILTER – 63 HZ SECTION – DETECTOR STAGE – TRANSIENT RESPONSE

.INCLUDE UA741.subckt

.MODEL 1N4148 D IS=2e-14

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 63)

C1 0 7 1uF

D1 2 3 1N4148

D2 3 6 1N4148

R1 1 2 10000

R2 6 7 1000

R3 8 2 15000

R4 0 9 10000

R5 8 9 .001

XOP1 0 2 0 4 5 3 UA741

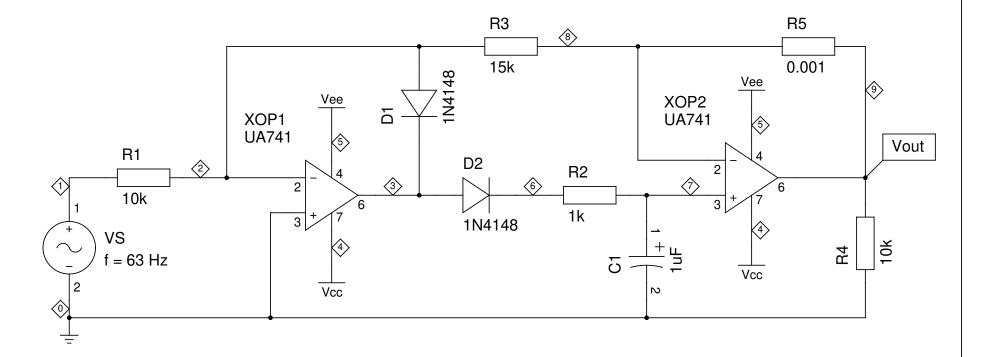
XOP2 7 8 0 4 5 9 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(9) V(4) V(5)

* FROM TO STEP .TRAN 0 0.4 0.00001

.END





Octave Filter – Second stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE FILTER

PAGE 01

FILE: 26.000.00.02.24.sch REVISION: 20220422 OF 01

DRAWN BY: Bert Timmerman

.TITLE OCTAVE FILTER – 63 HZ SECTION – DETECTOR STAGE – TRANSIENT RESPONSE

.INCLUDE UA741.subckt

.MODEL 1N4148 D IS=2e-14

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 63)

C1 0 7 1uF

D1 2 3 1N4148

D2 3 6 1N4148

R1 1 2 10000

R2 6 7 1000

R3 8 2 15000

R4 0 9 10000

R5 8 9 .001

XOP1 0 2 0 4 5 3 UA741

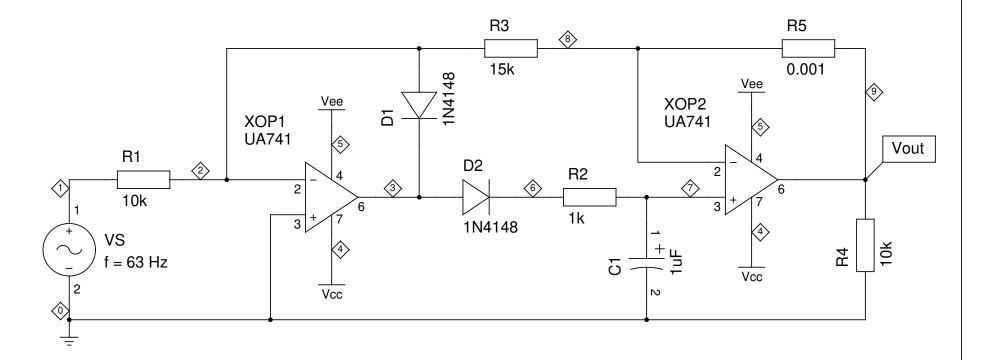
XOP2 7 8 0 4 5 9 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN I(R1) I(R2) I(R3) I(R4) I(R5) I(D1) I(D2)

* FROM TO STEP .TRAN 0 0.1 0.00001

.END





Octave Filter – Second stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE FILTER

PAGE 01

FILE: 26.000.00.02.25.sch REVISION: 20220422

OF 01

DRAWN BY: Bert Timmerman

.TITLE OCTAVE FILTER – 63 HZ SECTION – DETECTOR STAGE – TRANSIENT RESPONSE

.INCLUDE UA741.subckt

.MODEL 1N4148 D IS=2e-14

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 63)

C1 0 7 1uF

D1 2 3 1N4148

D2 3 6 1N4148

R1 1 2 10000

R2 6 7 1000

R3 8 2 15000

R4 0 9 10000

R5 8 9 .001

XOP1 0 2 0 4 5 3 UA741

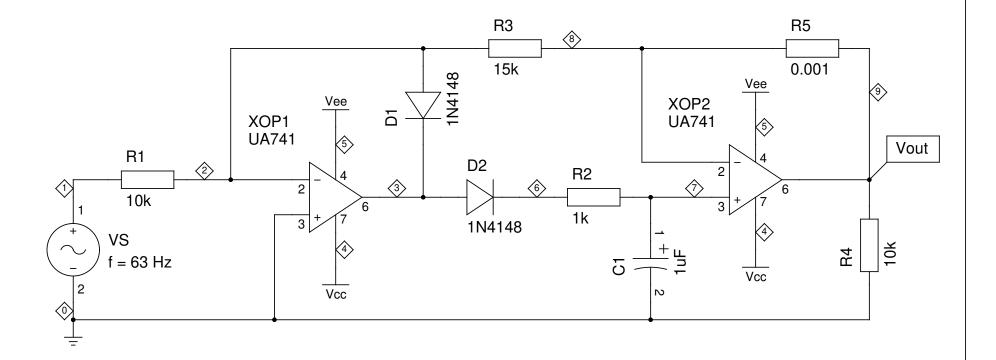
XOP2 7 8 0 4 5 9 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN P(R1) P(R2) P(R3) P(R4) P(R5) P(D1) P(D2)

* FROM TO STEP .TRAN 0 0.1 0.00001

.END





Octave Filter – Second stage of the 63 Hz module (for simulation) schematic

TITLE OCTAVE FILTER

PAGE 01

FILE: 26.000.00.02.26.sch REVISION: 20220422

OF 01

DRAWN BY: Bert Timmerman

.TITLE OCTAVE FILTER – 125 HZ MODULE – FIRST STAGE – FREQUENCY RESPONSE

.INCLUDE UA741.subckt

VCC 4 0 15 VEE 5 0 -15

VS 1 0 AC 1 SIN(0 0.1 100) R1 1 2 16800

R2 3 6 168K

R3 0 2 7200

C1 2 6 47nF

C2 3 2 47nF

XOP1 0 6 0 4 5 3 UA741

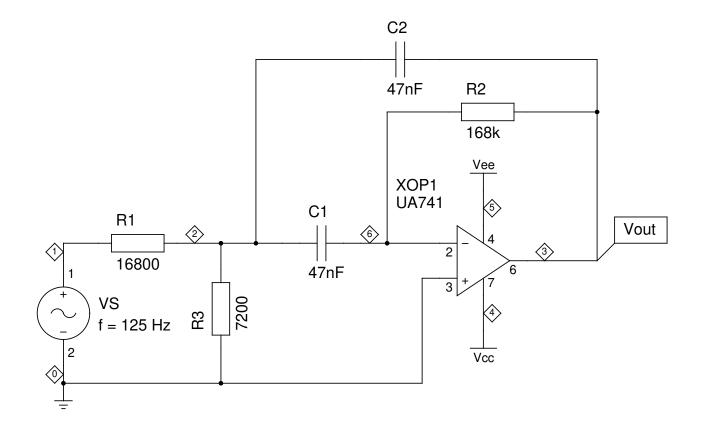
.PRINT OP Iter(0) V(3)

.PRINT AC VDB(3)

* FROM TO STEP .TRAN 0.00001 0.2 0.0001

* #STEPS/DECADE FROM TO .AC DEC 20 0.1 100k

.END





Octave Filter – First stage of the 125 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

PAGE 01

FILE: 26.000.00.02.27.sch

OF 01

REVISION: 20220422

DRAWN BY: Bert Timmerman

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 125)

R1 1 2 16800

R2 3 6 168K

R3 0 2 7200

C1 2 6 47nF

C2 3 2 47nF

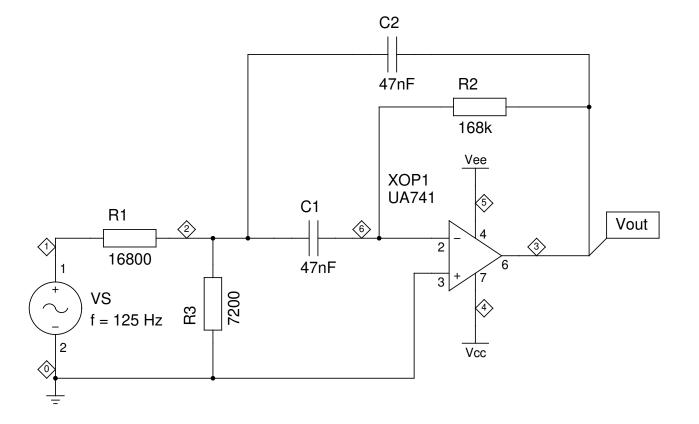
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(4) V(5)

* FROM TO STEP .TRAN 0 0.1 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 125 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

PAGE 01

FILE: 26.000.00.02.28.sch

OF 01

DRAWN BY: Bert Timmerman

REVISION: 20220422

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 125)

R1 1 2 16800

R2 3 6 168K

R3 0 2 7200

C1 2 6 47nF

C2 3 2 47nF

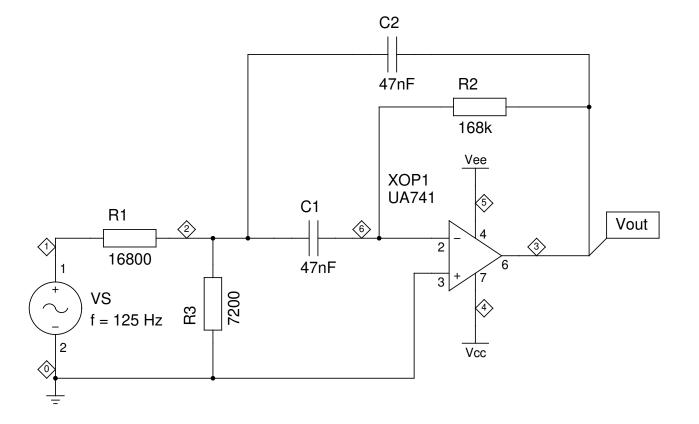
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN I(R1) I(R2) I(R3)

* FROM TO STEP .TRAN 0 0.1 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 125 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

PAGE 01

FILE: 26.000.00.02.29.sch

OF 01

DRAWN BY: Bert Timmerman

REVISION: 20220422

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 125)

R1 1 2 16800

R2 3 6 168K

R3 0 2 7200

C1 2 6 47nF

C2 3 2 47nF

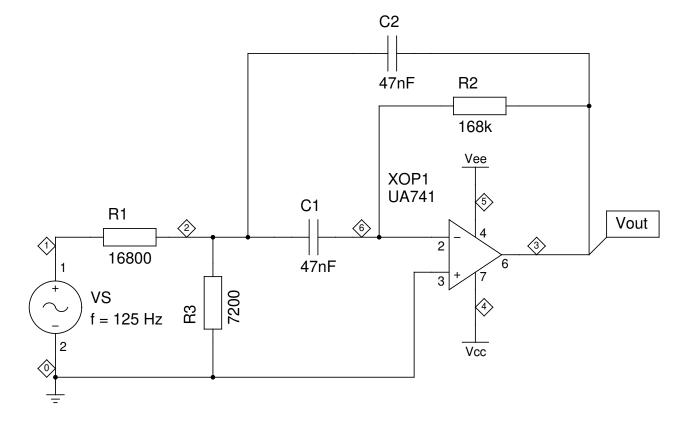
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN P(R1) P(R2) P(R3)

* FROM TO STEP .TRAN 0 0.1 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 125 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

PAGE 01

FILE: 26.000.00.02.30.sch

OF 01

REVISION: 20220422

DRAWN BY: Bert Timmerman

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 16k)

R1 1 2 16800

R2 3 6 168K

R3 0 2 7200

C1 2 6 47nF

C2 3 2 47nF

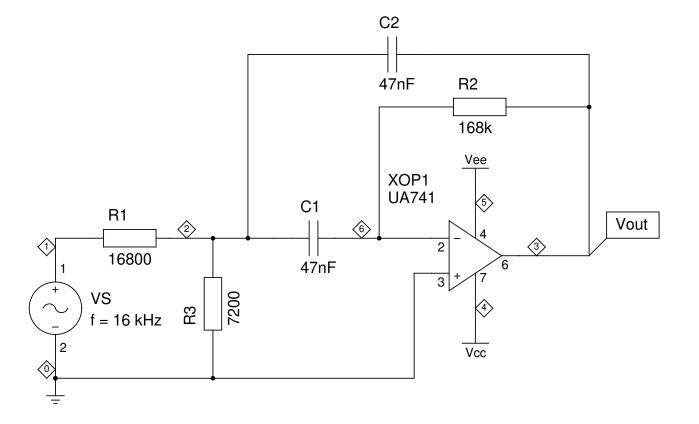
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN V(1) V(3) V(4) V(5)

* FROM TO STEP .TRAN 0 0.1 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 125 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

PAGE 01

FILE: 26.000.00.02.31.sch

OF 01

DRAWN BY: Bert Timmerman

REVISION: 20220422

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 16k)

R1 1 2 16800

R2 3 6 168K

R3 0 2 7200

C1 2 6 47nF

C2 3 2 47nF

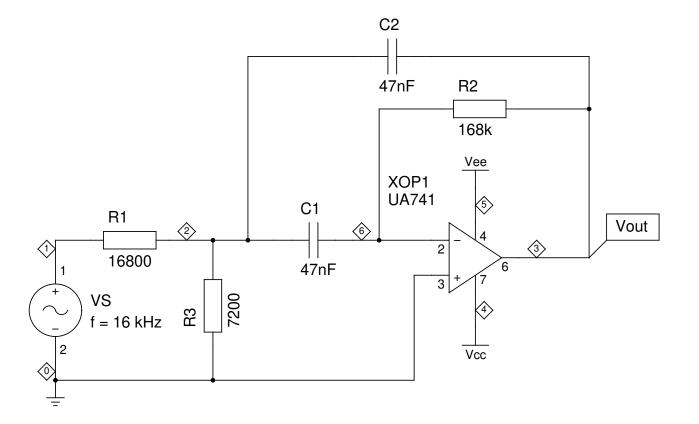
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN I(R1) I(R2) I(R3)

* FROM TO STEP .TRAN 0 0.1 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 125 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

PAGE 01

FILE: 26.000.00.02.32.sch

OF 01

DRAWN BY: Bert Timmerman

REVISION: 20220422

.INCLUDE UA741.subckt

VCC 4 0 pulse(iv=0 pv=15 rise=.01) VEE 5 0 pulse(iv=0 pv=-15 rise=.01)

VS 1 0 AC 1 SIN(0 1.41 16k)

R1 1 2 16800

R2 3 6 168K

R3 0 2 7200

C1 2 6 47nF

C2 3 2 47nF

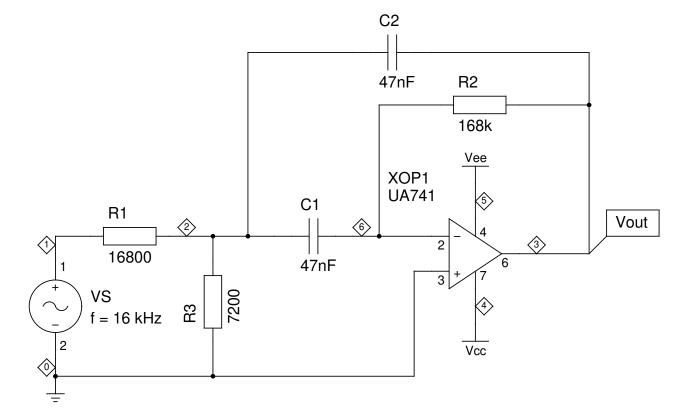
XOP1 0 6 0 4 5 3 UA741

.PRINT OP Iter(0) V(3)

.PRINT TRAN P(R1) P(R2) P(R3)

* FROM TO STEP .TRAN 0 0.1 0.00001 TRACE ALL

.END





Octave Filter – First stage of the 125 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

PAGE 01

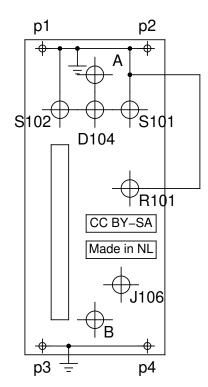
FILE: 26.000.00.02.33.sch

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Mounting holes:





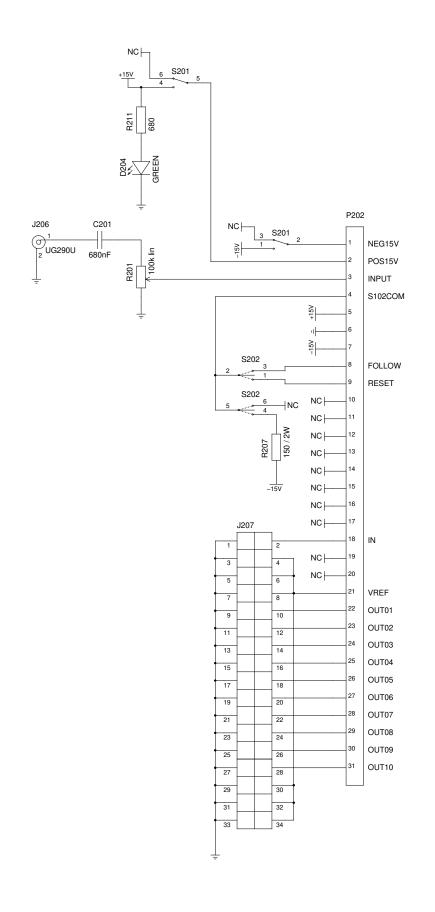
Octave Filter Front Panel TITLE OCTAVE_FILTER

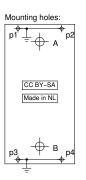
FILE: 26.001.00.01.01.sch PAGE 01

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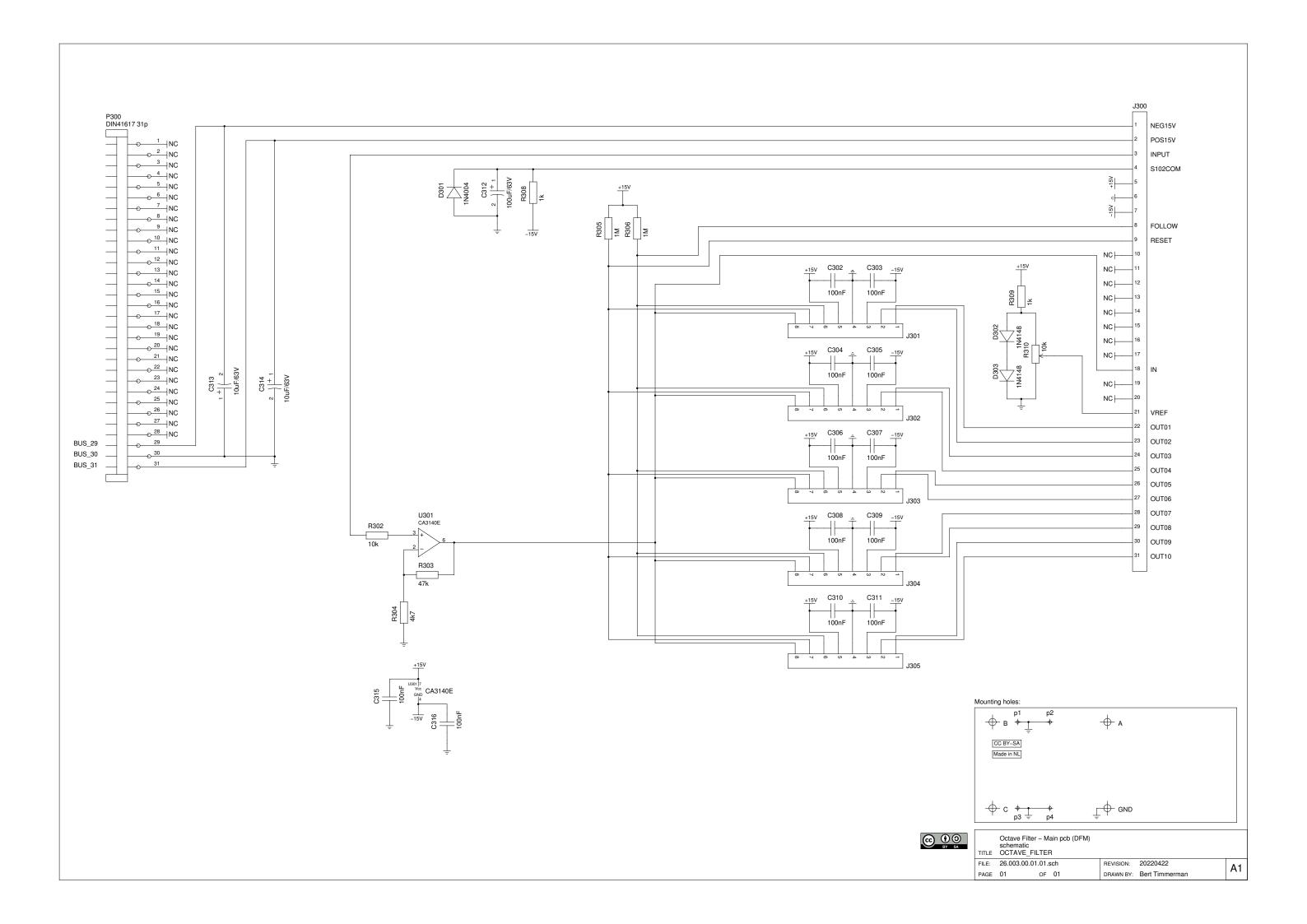


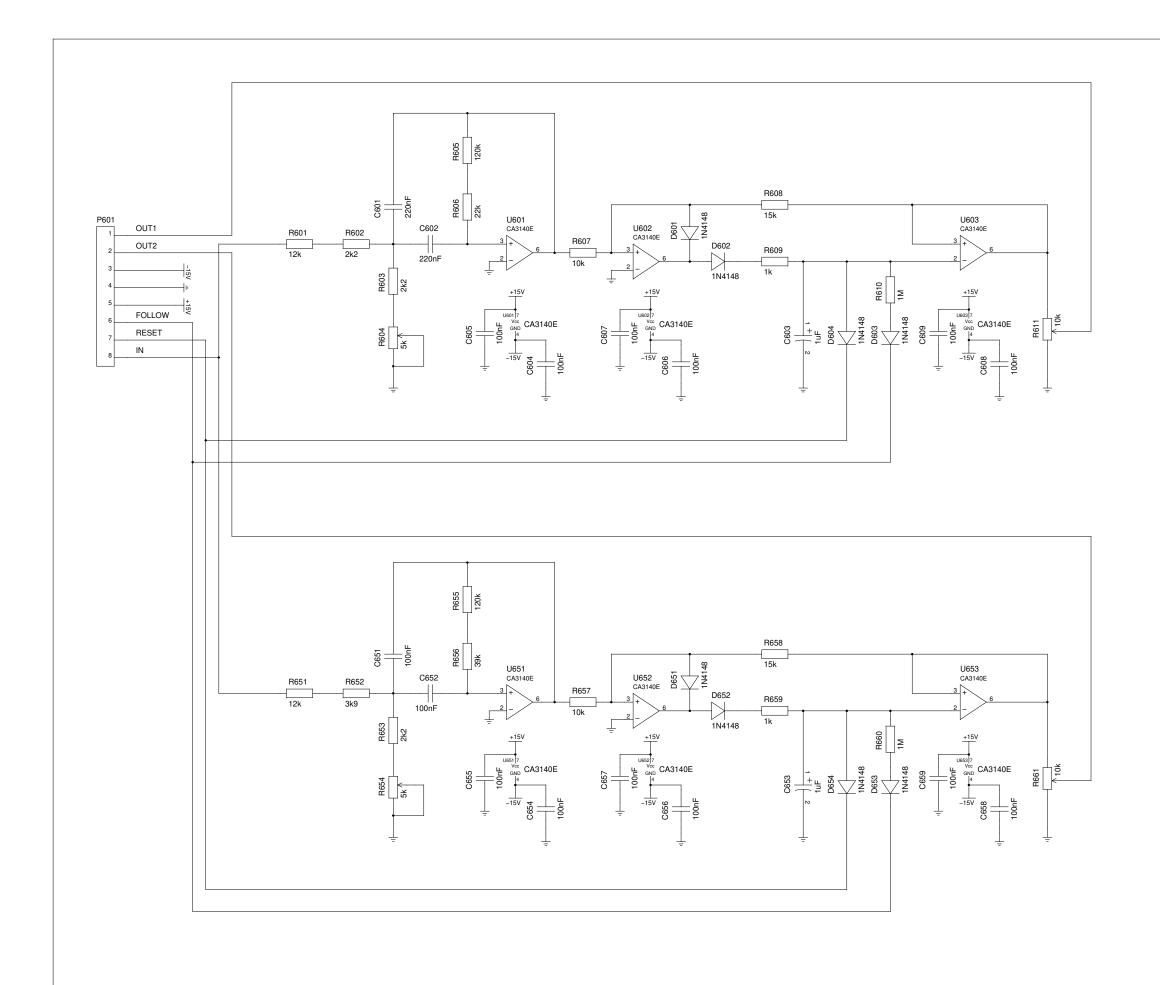


	Octave Filter from pcb (DFW)	
	schematic	
TLE	OCTAVE_FILTER	

FILE: 26.002.00.01.01.sch REVISION: 20220422 PAGE 01

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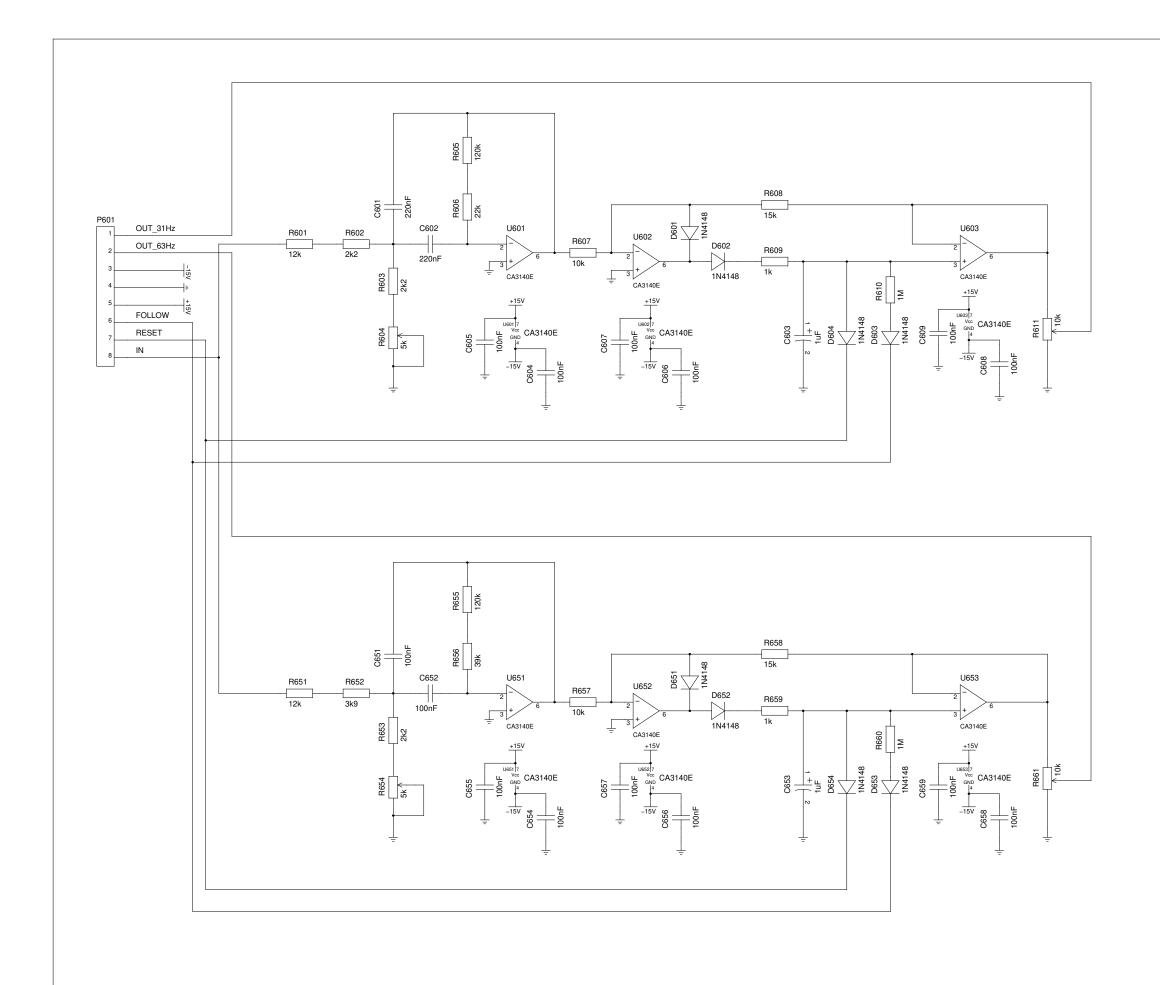


Octave Filter 31.5 Hz and 63 Hz module (DFM – PTH) schematic

TITLE OCTAVE_FILTER

FILE: 26.006.00.01.01.sch REVISION: 20220422

DRAWN BY: Bert Timmermar PAGE 01

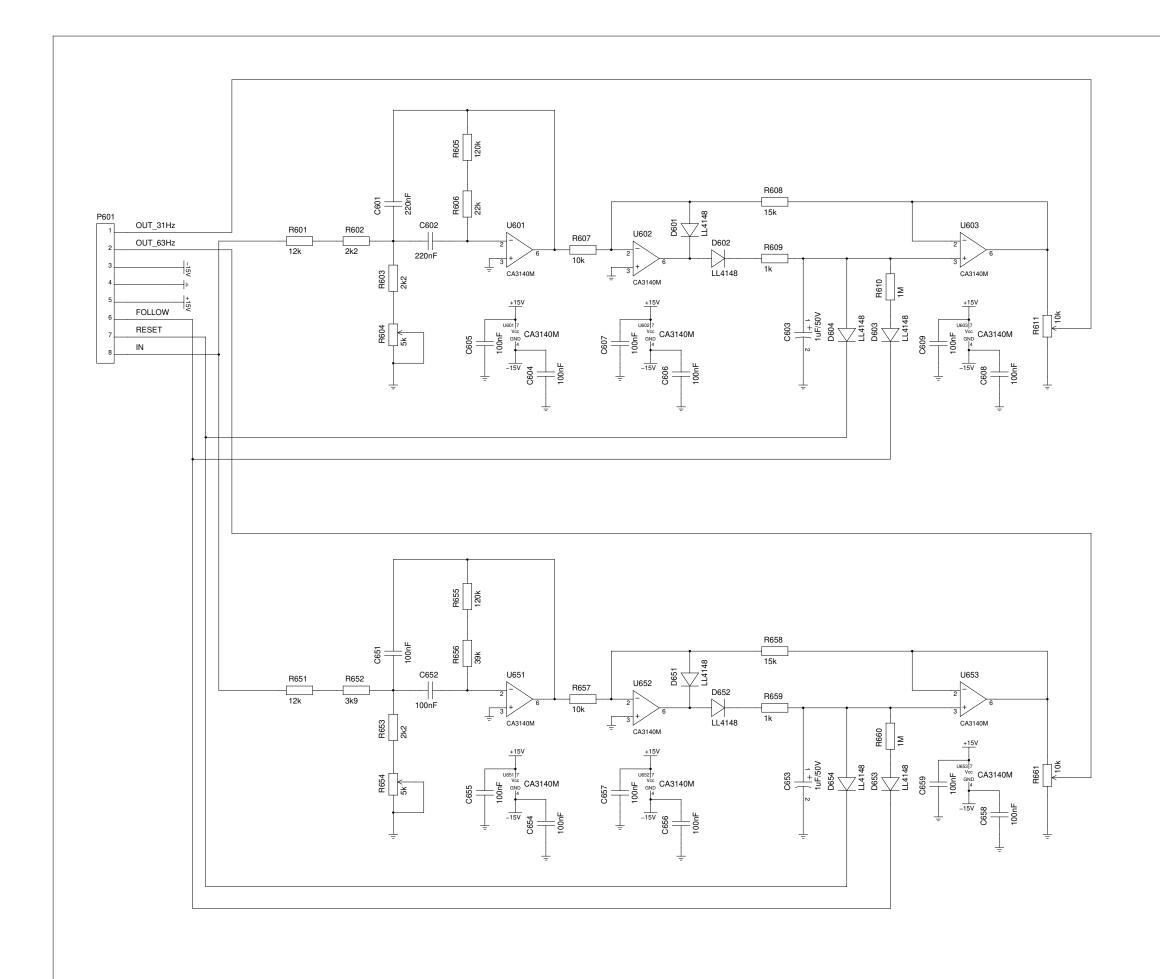


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Octave Filter 31.5 Hz and 63 Hz module (DFM – PTH) schematic
TITLE OCTAVE_FILTER

FILE: 26.006.01.01.01.sch REVISION: 20220422

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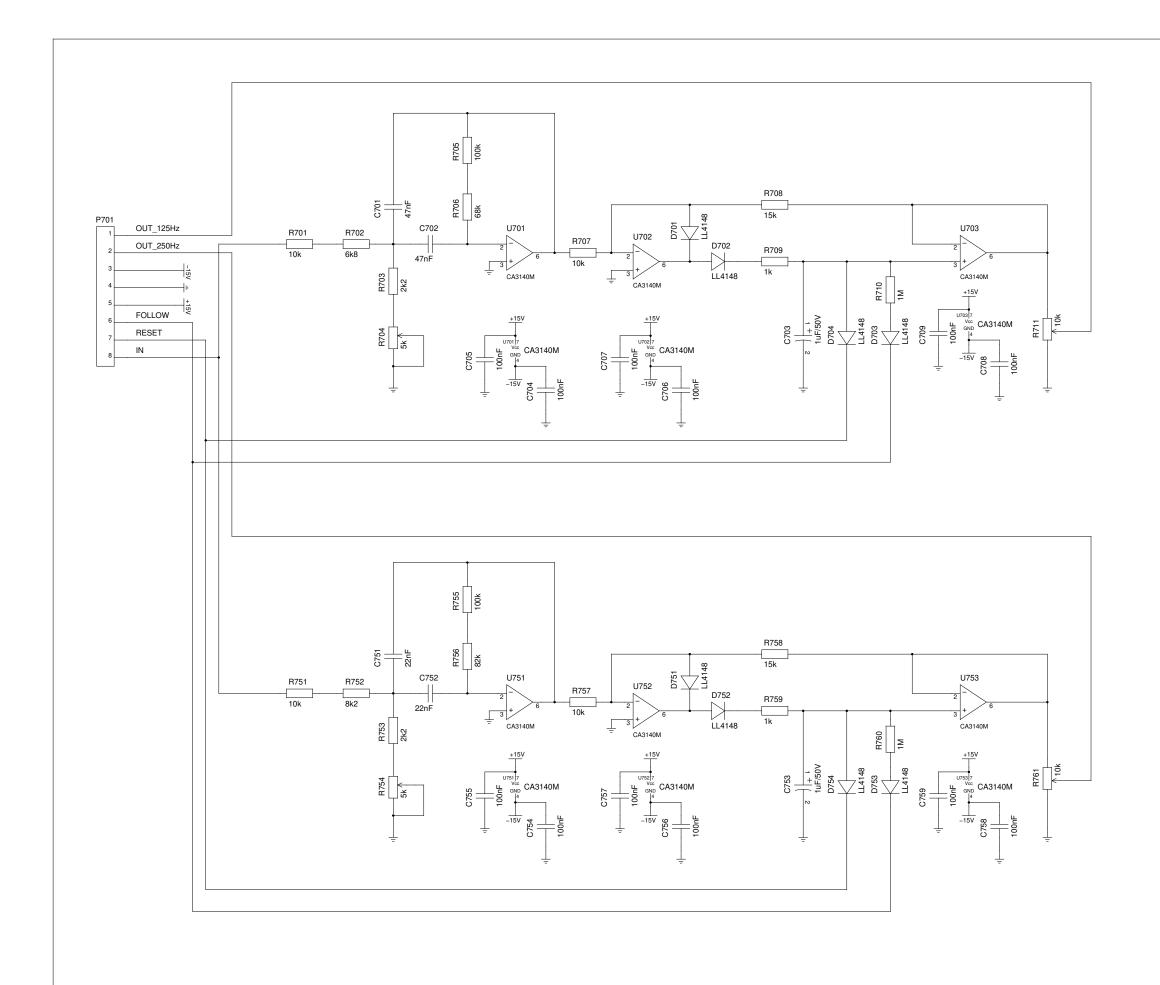




Octave Filter 31.5 Hz and 63 Hz module (DFM – PTH+SMT) schematic

TITLE OCTAVE_FILTER

FILE: 26.006.02.01.01.sch REVISION: 20220422 DRAWN BY: Bert Timmerma PAGE 01

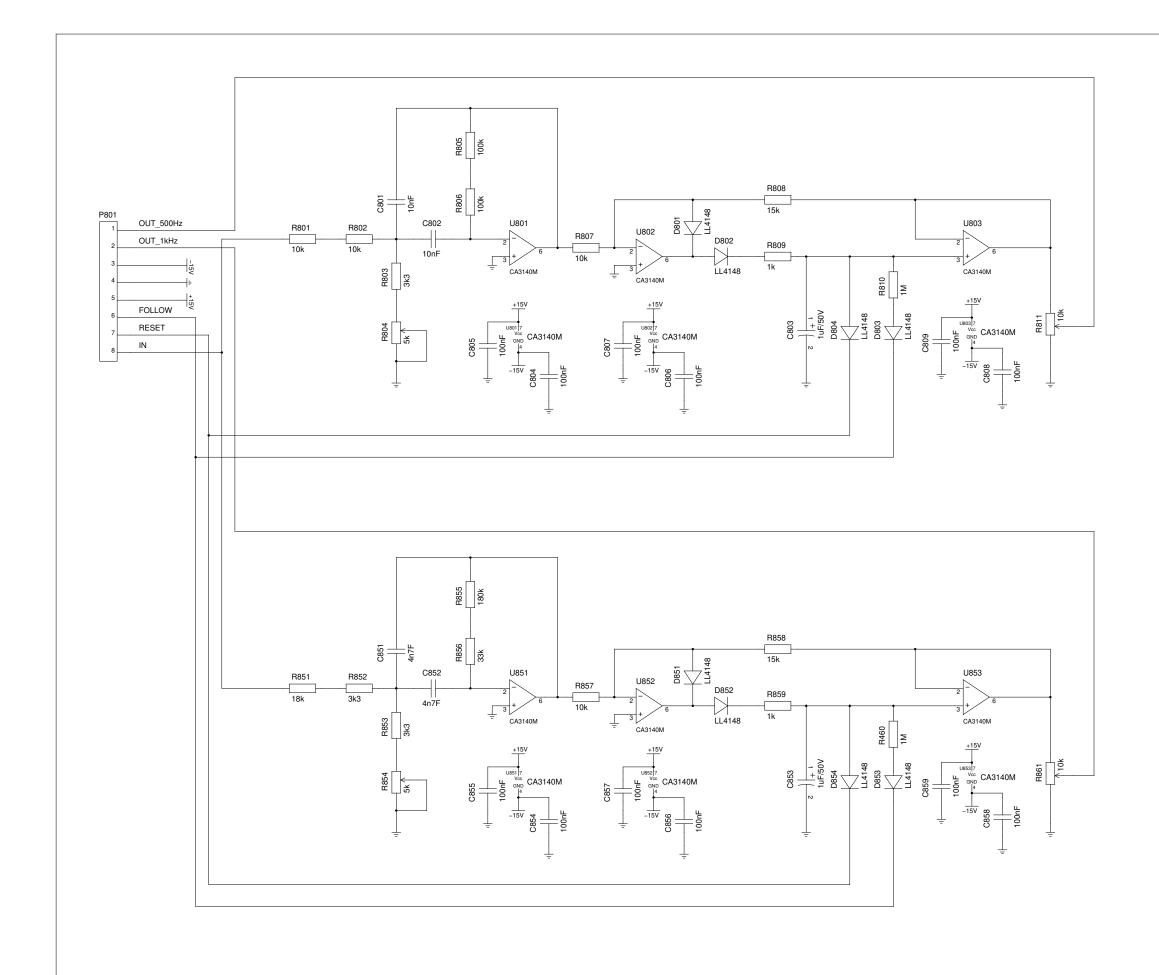


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Octave Filter 125 Hz and 250 Hz module (DFM – PTH+SMT) schematic

TITLE OCTAVE_FILTER

FILE: 26.007.01.01.01.sch REVISION: 20220422 DRAWN BY: Bert Timmerman PAGE 01

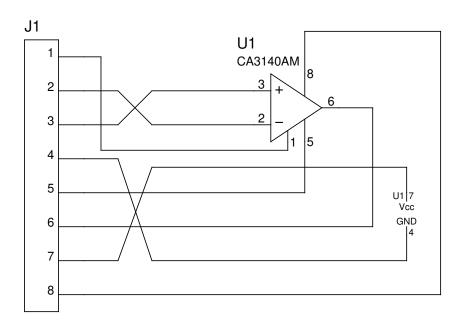


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Octave Filter 500 Hz and 1 kHz module (DFM – PTH+SMT) schematic

TITLE OCTAVE_FILTER

FILE: 26.008.01.01.01.sch REVISION: 20220422 DRAWN BY: Bert Timmerma PAGE 01

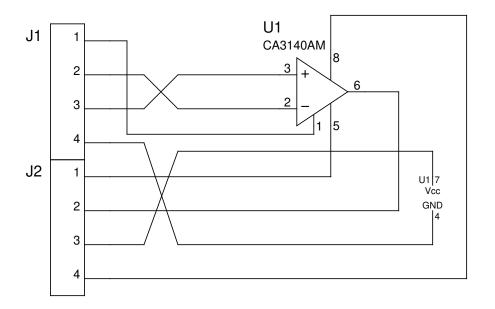




Octave Filter – CA3140M breakout pcb (DFM) schematic
TITLE OCTAVE_FILTER

FILE: 26.999.00.01.01.sch REVISION: 20220422

DRAWN BY: Bert Timmerman PAGE 01 OF 01





Octave Filter – CA3140M breakout pcb (DFM) schematic
TITLE OCTAVE_FILTER

FILE: 26.999.01.01.01.sch REVISION: 20220422 DRAWN BY: Bert Timmerman PAGE 01 OF 01