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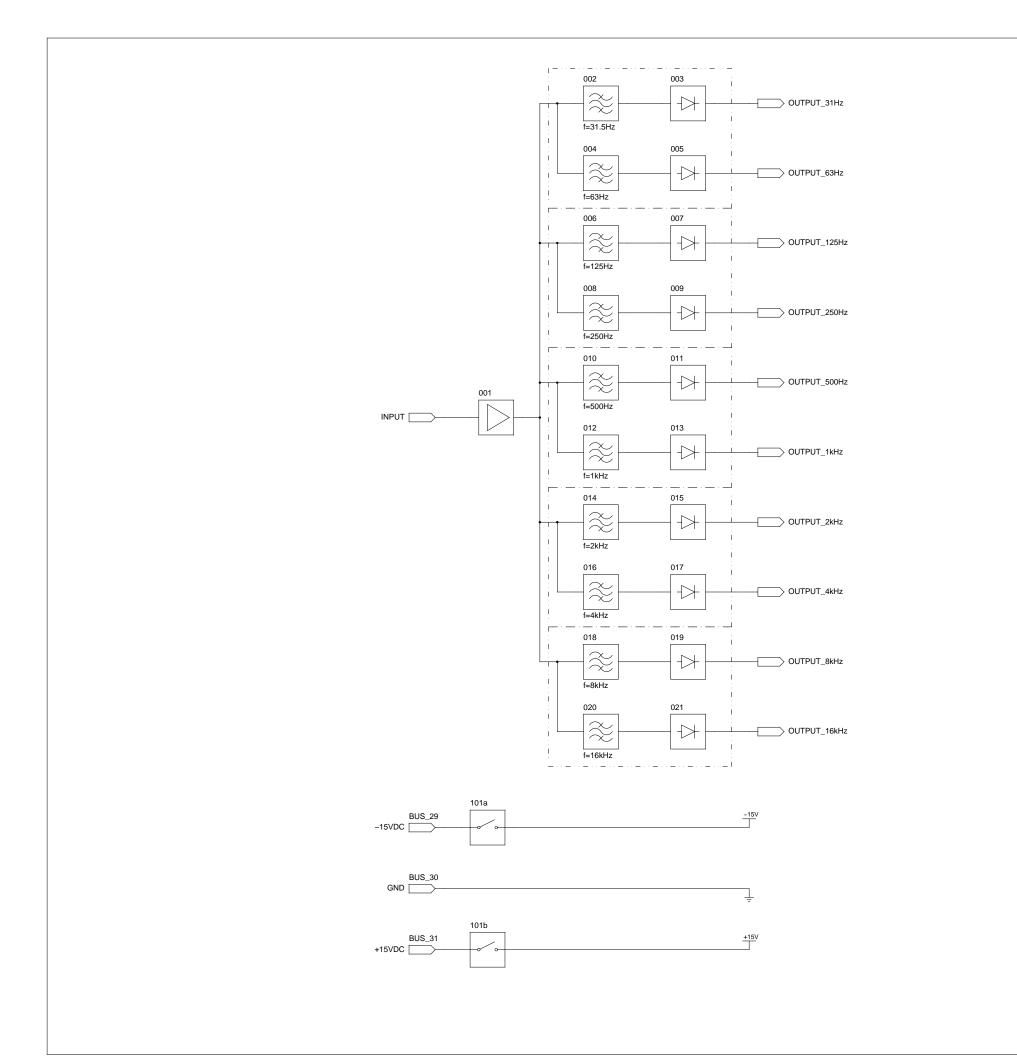
FILE: 26.000.00.00.01.sch

PAGE 01

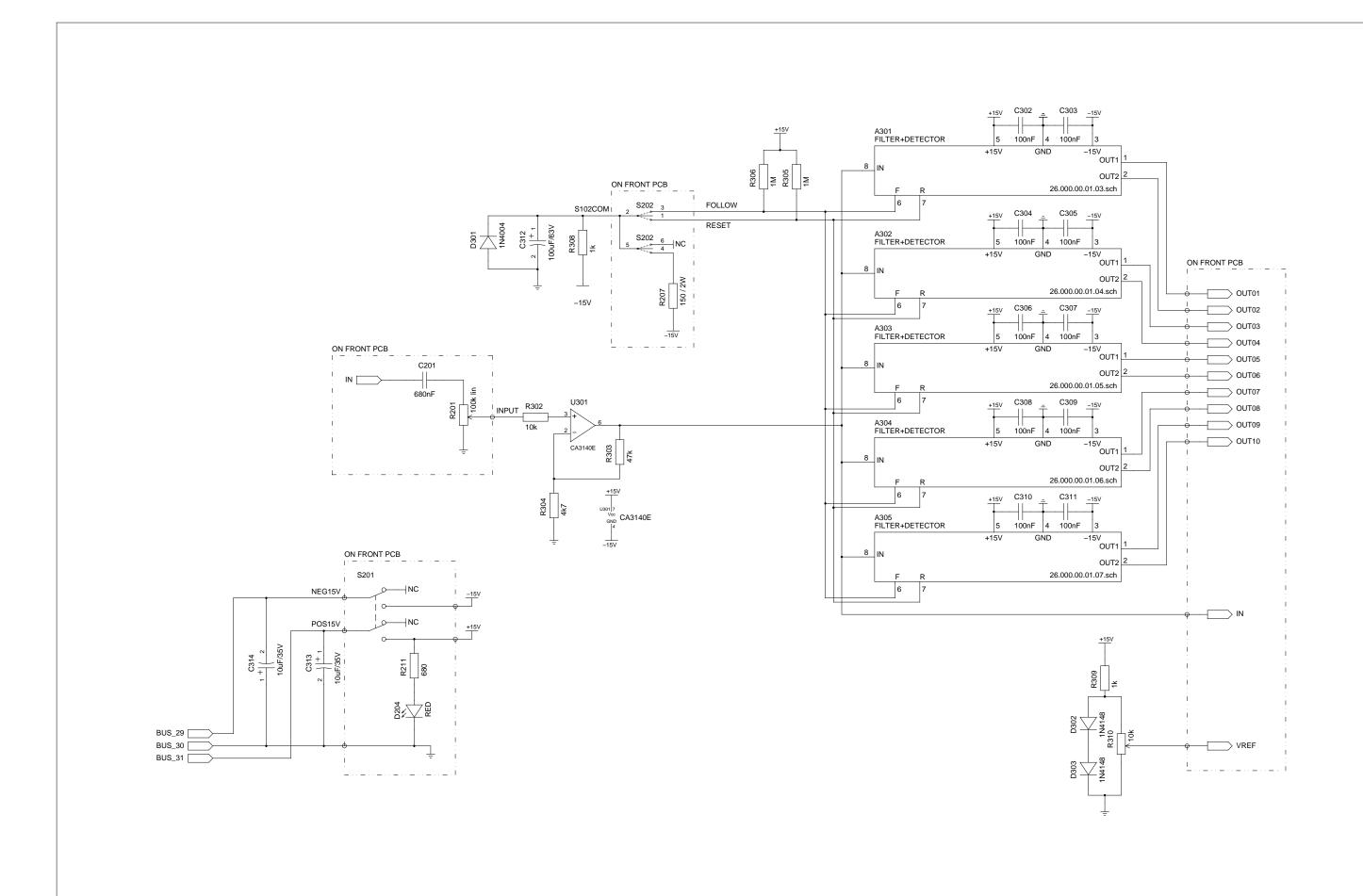
OF 01

REVISION: 20180513

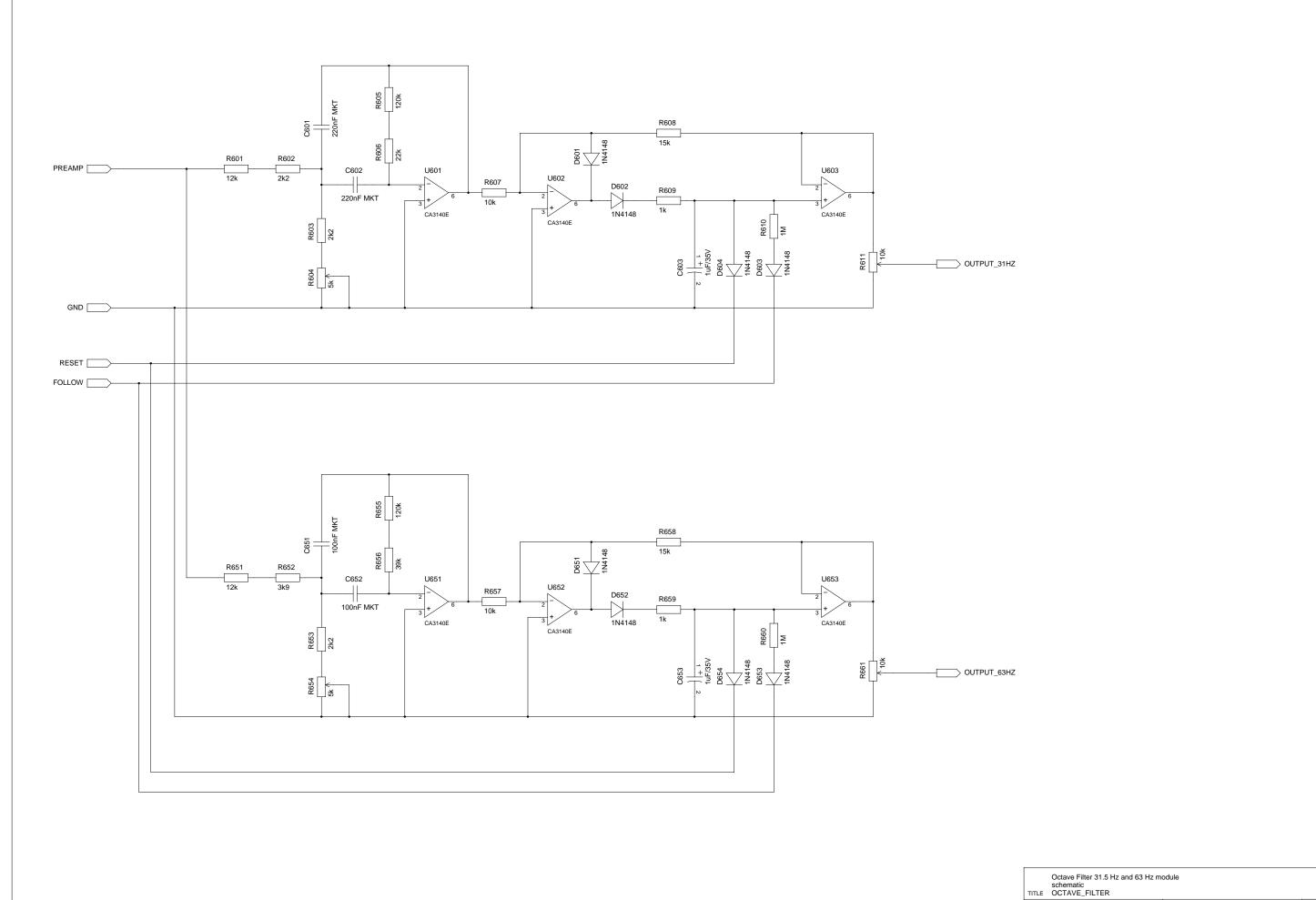
DRAWN BY: Bert Timmerman



Octave Filter block diagram TITLE OCTAVE_FILTER						
FILE:	26.000.00.01	.01.sch	REVISION:	20180603	Λ1	
PAGE	01	OF 07	DRAWN BY:	Bert Timmerman	Ai	

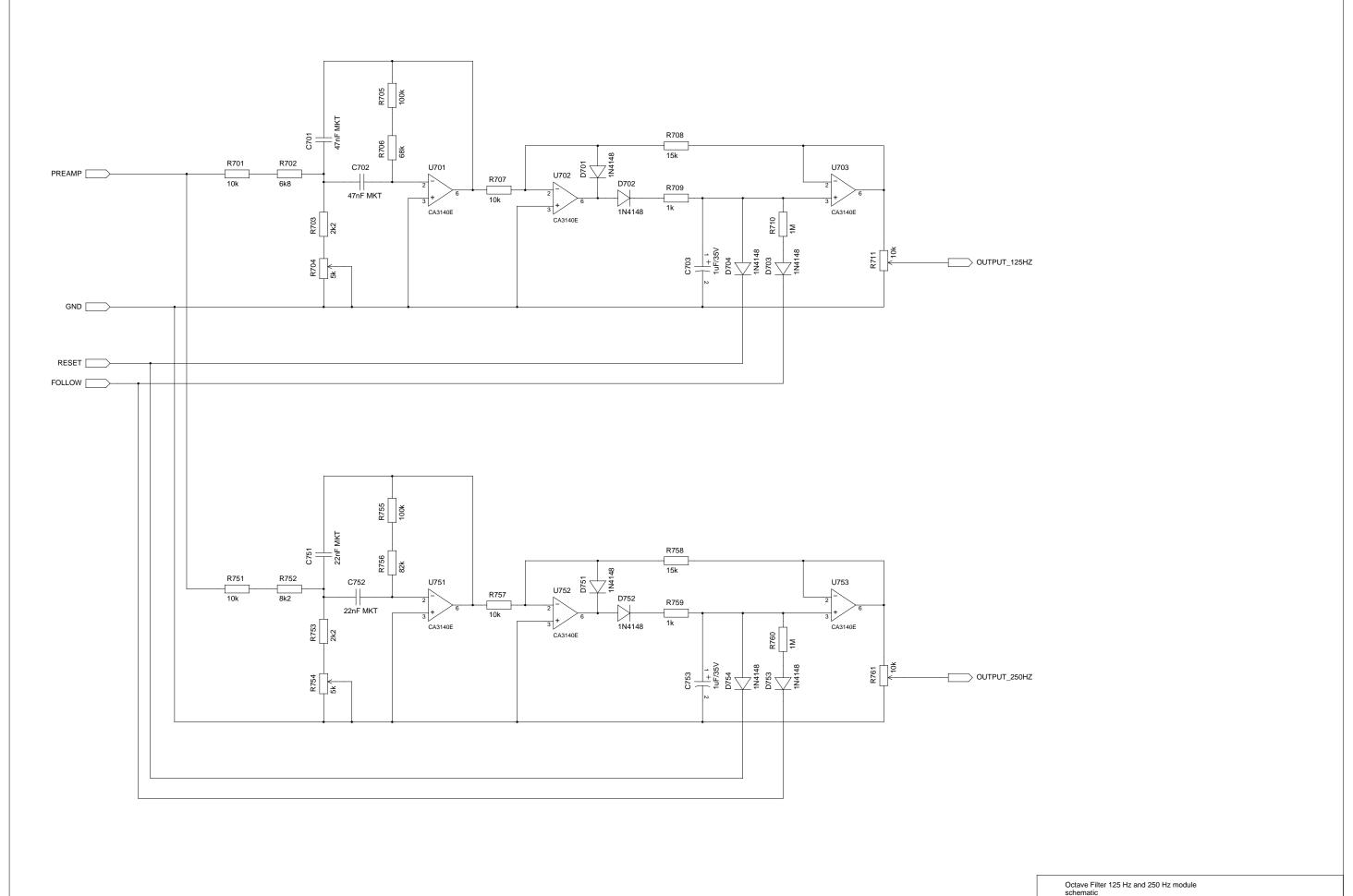


TITLE	Octave Filter schematic OCTAVE_FILTER		
FILE:	26.000.00.01.02.sch	REVISION: 20190513	۸1
PAGE	02 OF 07	DRAWN BY: Bert Timmerman	^



 FILE:
 26.000.00.01.03.sch
 REVISION:
 20180513

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 03
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 07
 DRAWN BY:
 Bert Timmermar



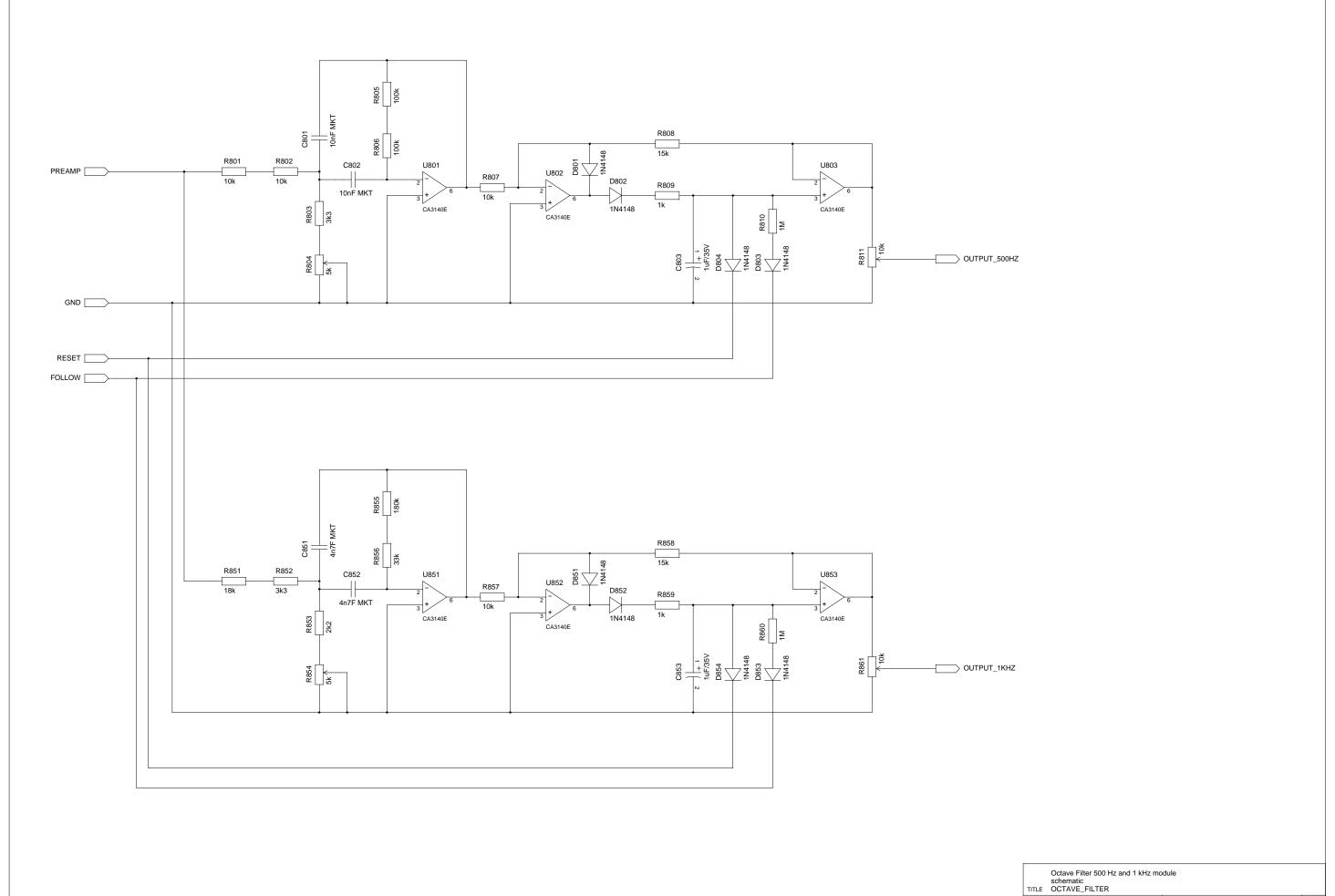
Octave Filter 125 Hz and 250 Hz module schematic

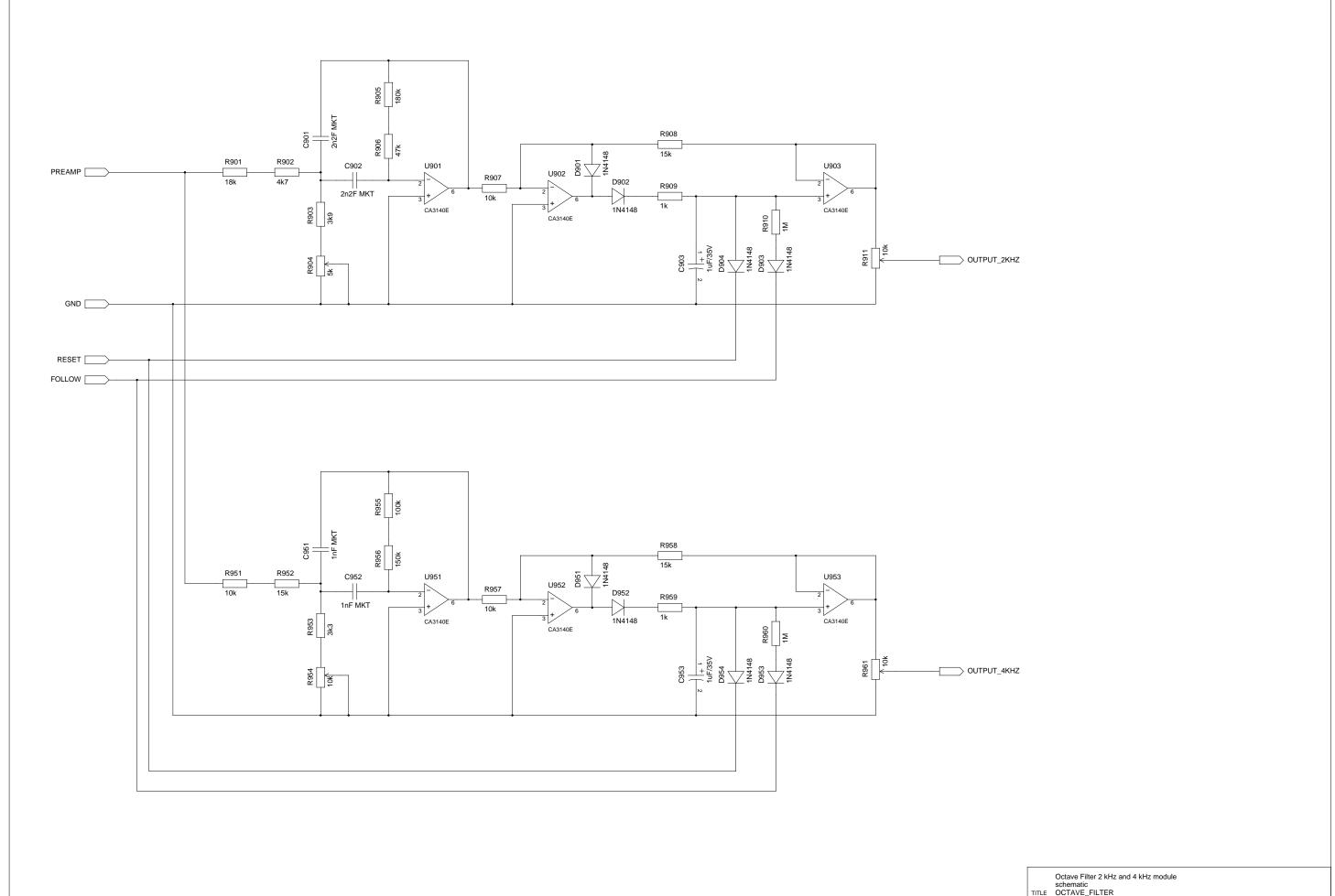
TITLE OCTAVE_FILTER

FILE: 26.000.00.01.04.sch REVISION: 20180513

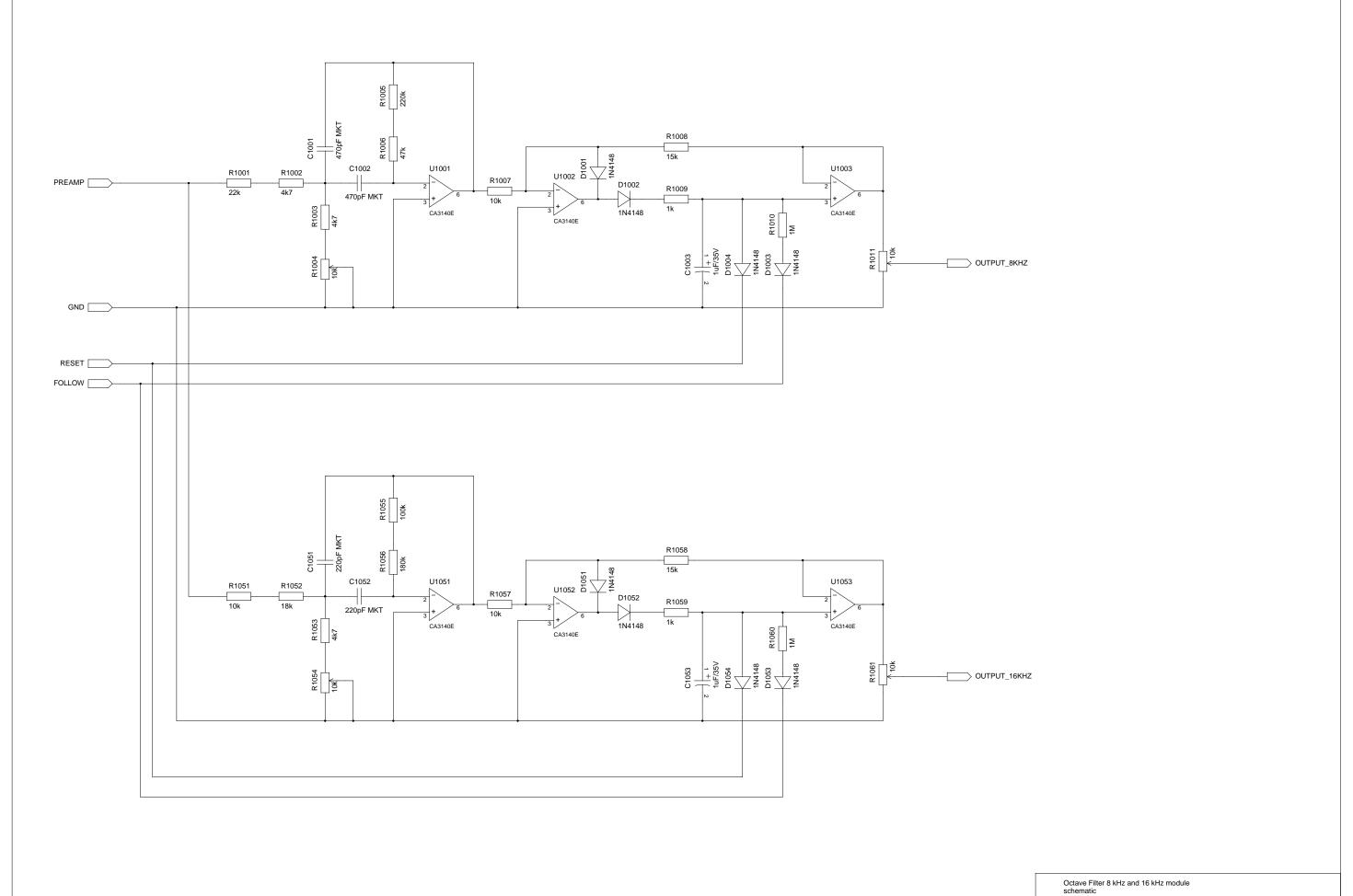
PAGE 04 OF 07 DRAWN BY: Bert Timmerman

A1





Octave Filter 2 kHz and 4 kHz module schematic
TITLE OCTAVE_FILTER FILE: 26.000.00.01.06.sch PAGE 06 OF 07 REVISION: 20180513 A1 DRAWN BY: Bert Timmermar



Octave Filter 8 kHz and 16 kHz module schematic

TITLE OCTAVE_FILTER

FILE: 26.000.00.01.07.sch REVISION: 20180513
PAGE 07 OF 07 DRAWN BY: Bert Timmerman

.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

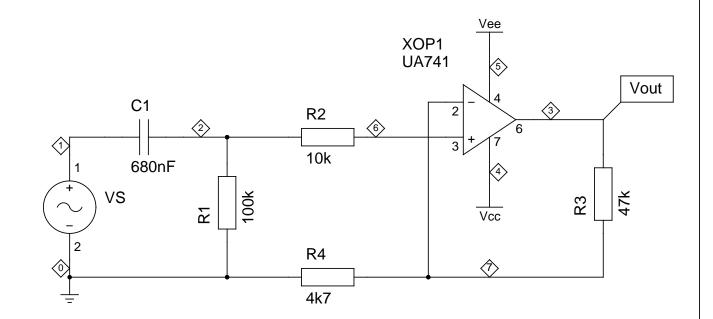
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.01.sch

PAGE 01 OF 01

REVISION: 20200205

DRAWN BY: Bert Timmerman

.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

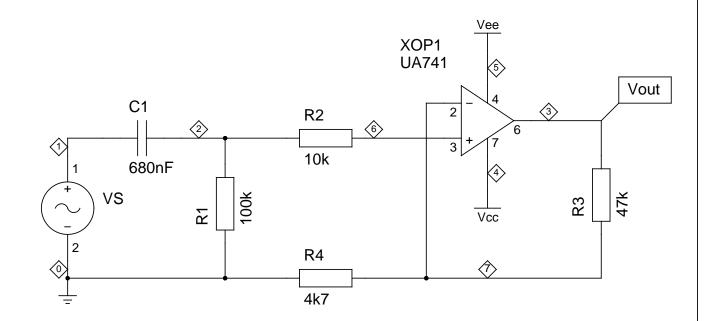
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.02.sch

PAGE 01 OF 01

REVISION: 20200207

DRAWN BY: Bert Timmerman

.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

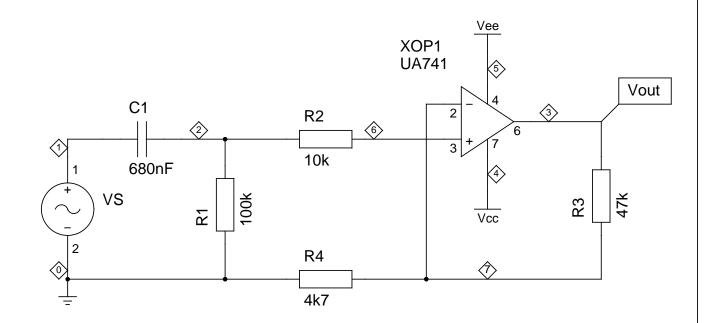
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.03.sch

PAGE 01 OF 01

REVISION: 20200207

DRAWN BY: Bert Timmerman

.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

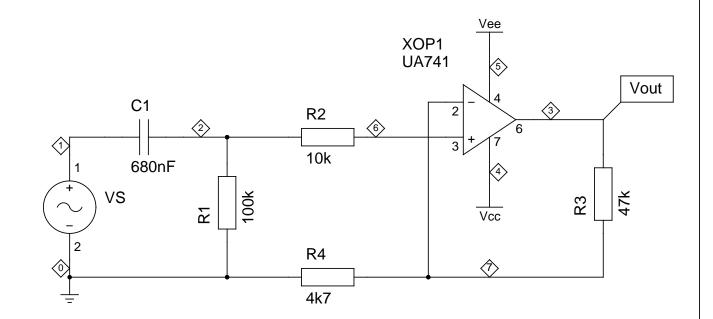
.PRINT OP Iter(0) V(3)

.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

TITLE OCTAVE_FILTER

FILE: 26.000.00.02.04.sch

PAGE 01 OF 01

REVISION: 20200207

DRAWN BY: Bert Timmerman

.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

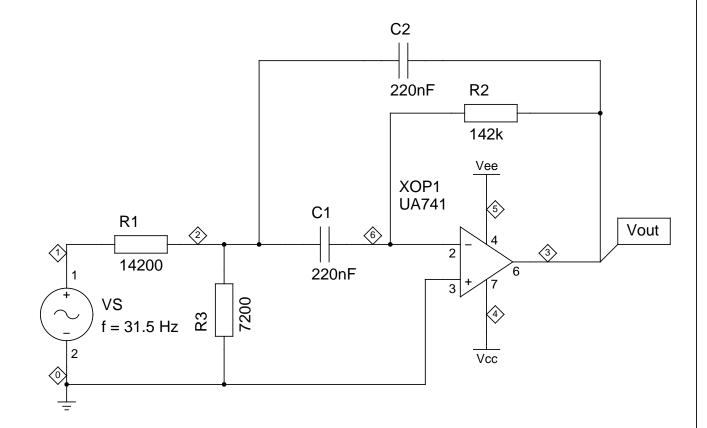
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.05.sch

PAGE 01 OF 01

REVISION: 20200205

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

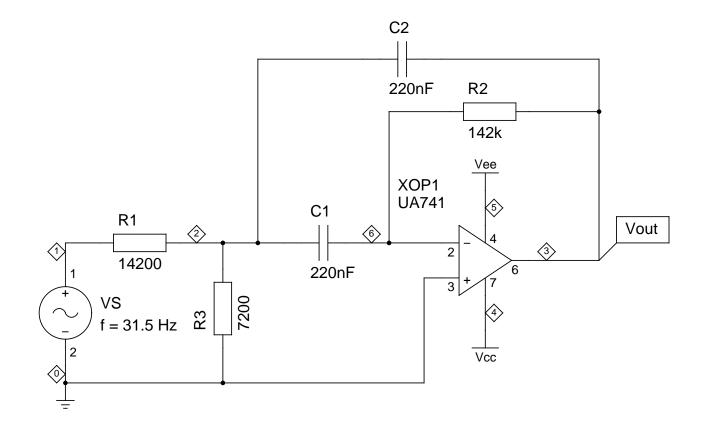
.PRINT OP Iter(0) V(3)

.PRINT TRAN 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

FILE: 26.000.00.02.06.sch
PAGE 01 OF 01

DRAWN BY: Bert Timmerman

REVISION: 20200207

.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

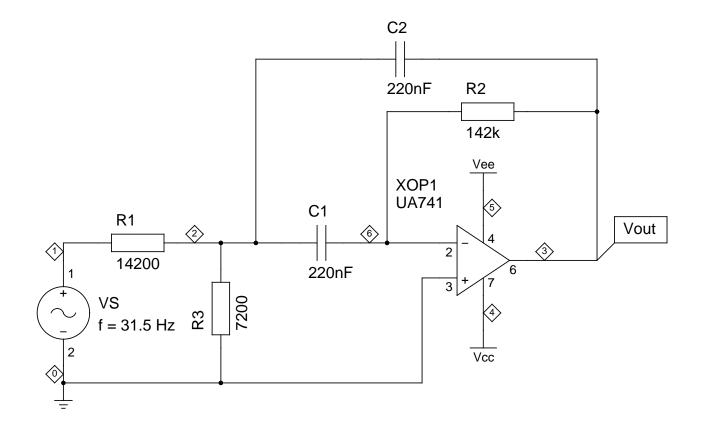
.PRINT OP Iter(0) V(3)

.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

PAGE 01 OF 01

REVISION: 20200206

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

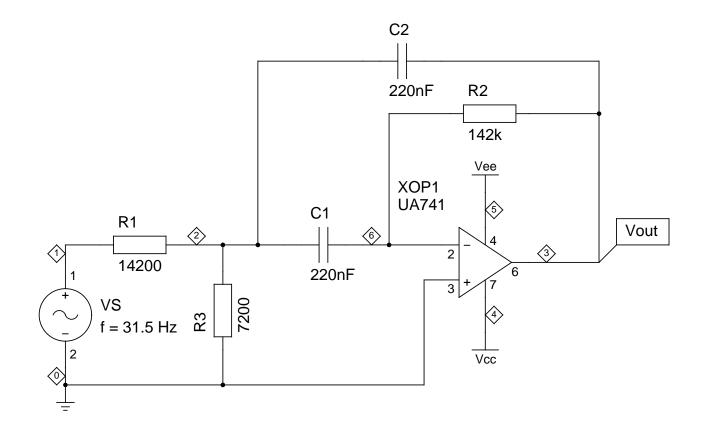
.PRINT OP Iter(0) V(3)

.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

PAGE 01

FILE: 26.000.00.02.08.sch

OF 01

DRAWN BY: Bert Timmerman

REVISION: 20200206

.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

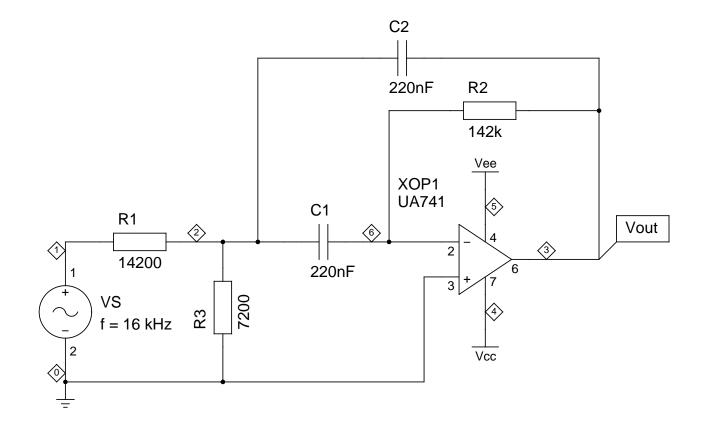
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.09.sch

PAGE 01 OF 01

REVISION: 20200207

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

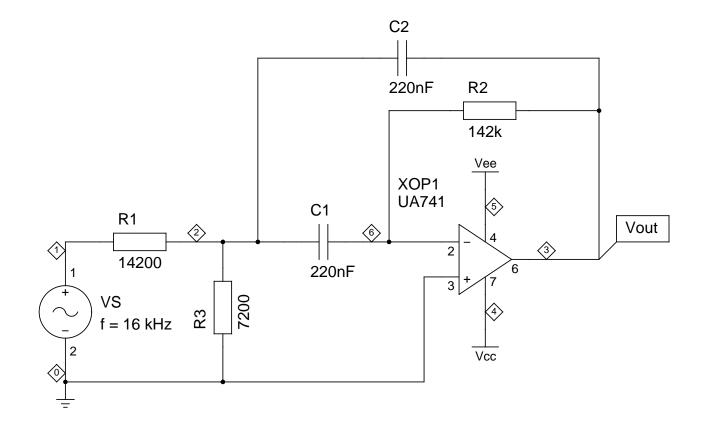
.PRINT OP Iter(0) V(3)

.PRINT TRAN 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

FILE: 26.000.00.02.10.sch

PAGE 01 OF 01

REVISION: 20200206

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

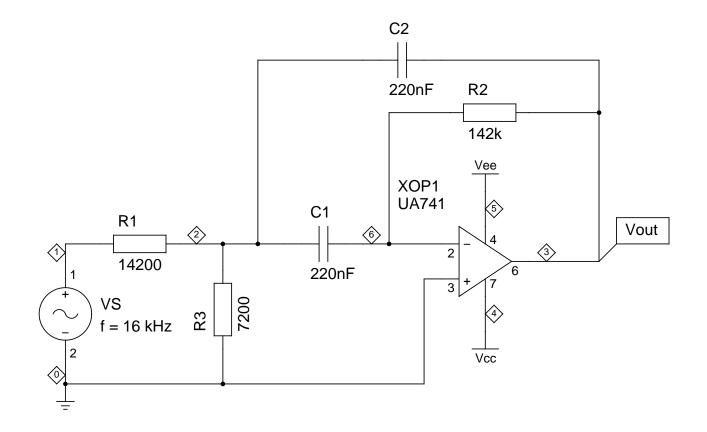
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.11.sch

PAGE 01 OF 01

REVISION: 20200206

DRAWN BY: Bert Timmerman

.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

XOP2 7 8 0 4 5 9 UA741

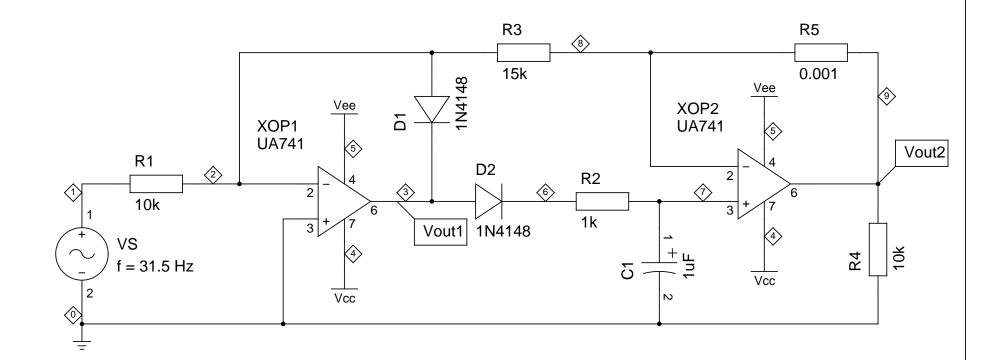
.PRINT OP Iter(0) V(3)

.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 31.5 Hz module (for simulation) schematic

TITLE OCTAVE_FILTER

PAGE 01

FILE: 26.000.00.02.12.sch

OF 01

REVISION: 20200209

DRAWN BY: Bert Timmerman

.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

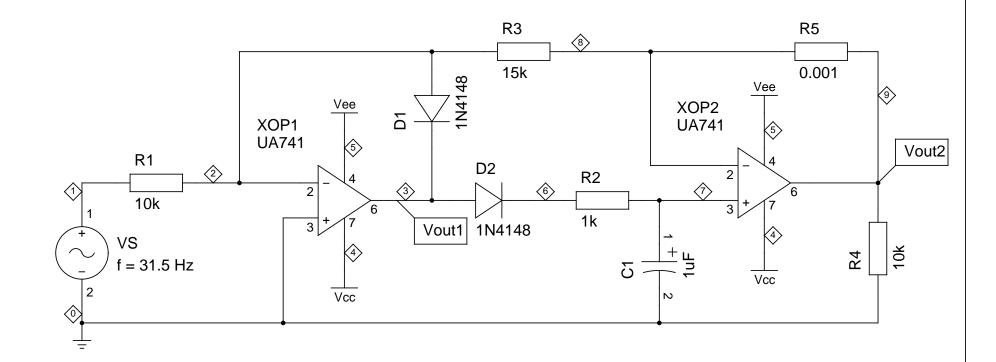
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.13.sch

PAGE 01 OF 01

REVISION: 20200207

DRAWN BY: Bert Timmerman

.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

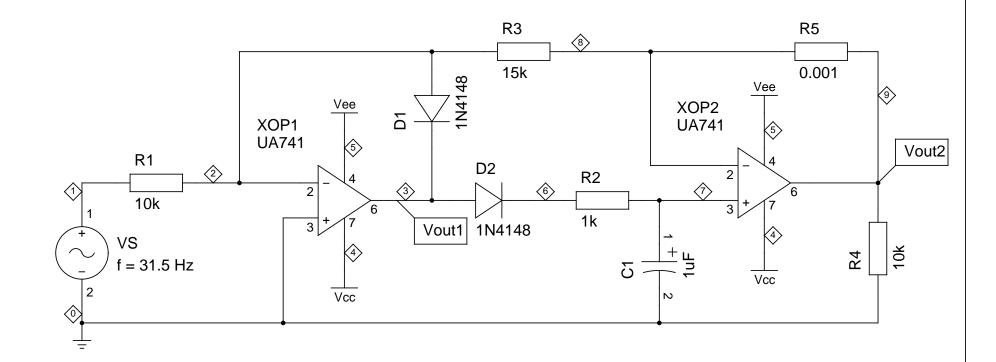
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.14.sch

PAGE 01 OF 01

REVISION: 20200206

DRAWN BY: Bert Timmerman

.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

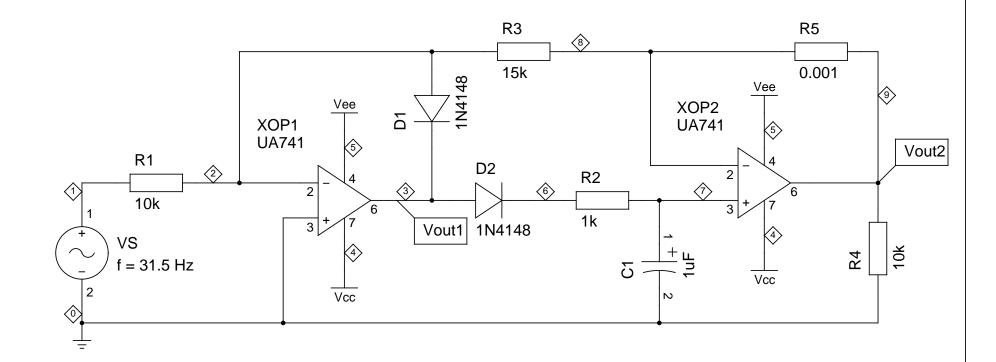
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.15.sch

PAGE 01 OF 01

REVISION: 20200207

DRAWN BY: Bert Timmerman

.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

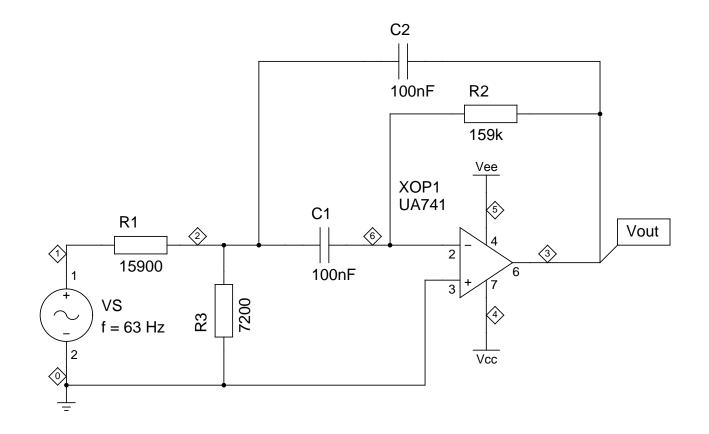
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.16.sch

PAGE 01 OF 01

REVISION: 20200207

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 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

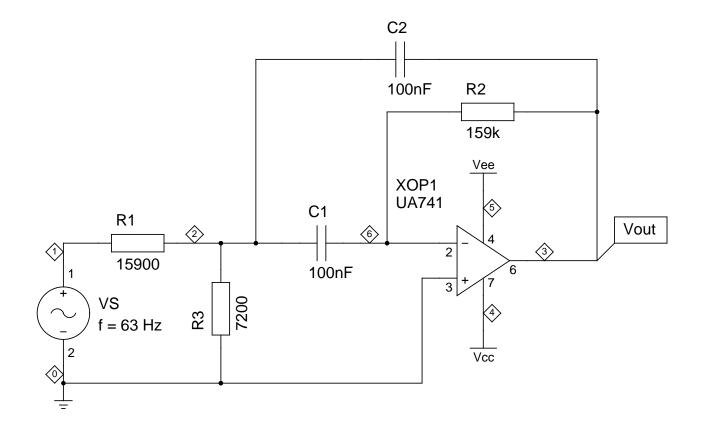
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.17.sch

PAGE 01 OF 01

REVISION: 20200207

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 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

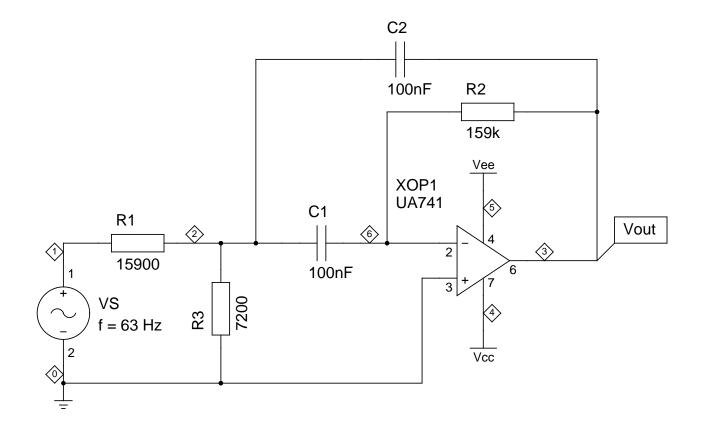
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.18.sch

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REVISION: 20200207

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 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

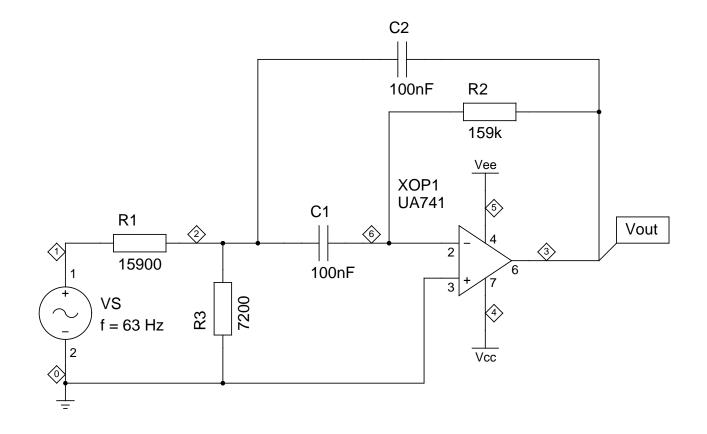
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.19.sch

PAGE 01 OF 01

REVISION: 20200207

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

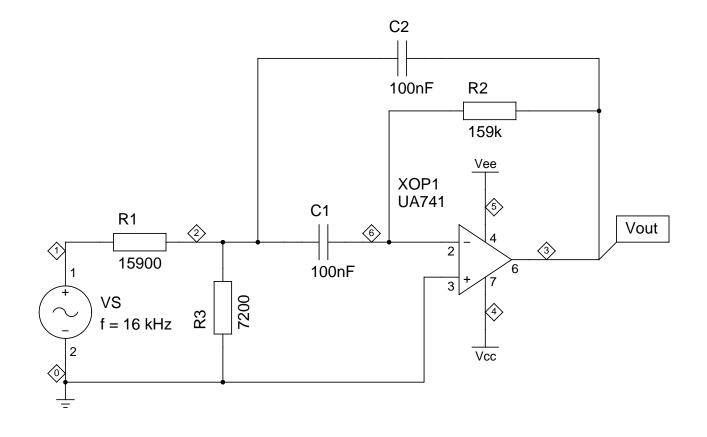
.PRINT OP Iter(0) V(3)

.PRINT TRAN 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

FILE: 26.000.00.02.20.sch

PAGE 01 OF 01

REVISION: 20200207

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

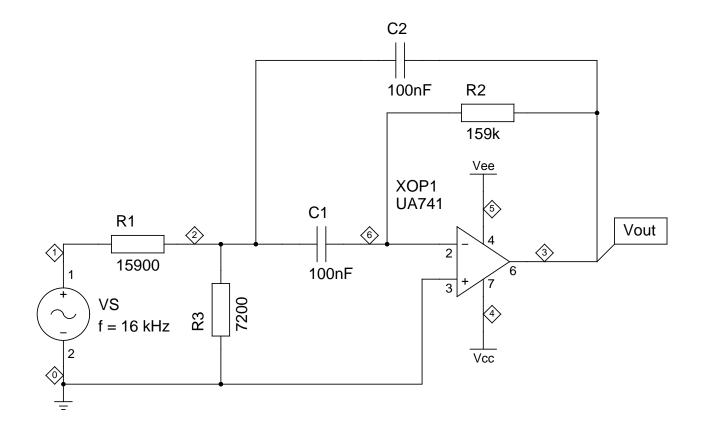
.PRINT OP Iter(0) V(3)

.PRINT TRAN 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

PAGE 01 OF 01

REVISION: 20200207

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

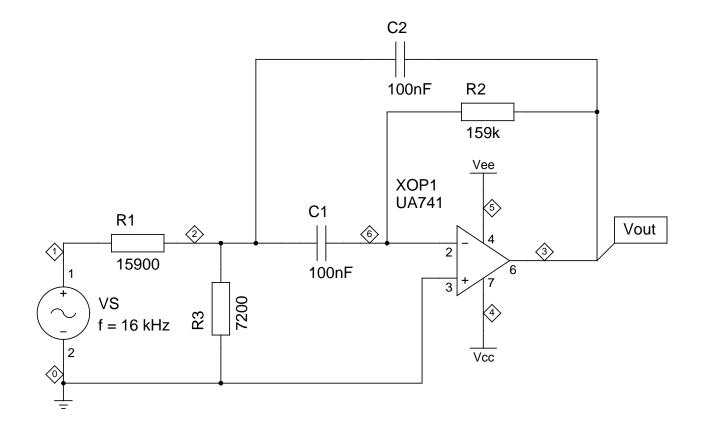
.PRINT OP Iter(0) V(3)

.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

PAGE 01 OF 01

REVISION: 20200207

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

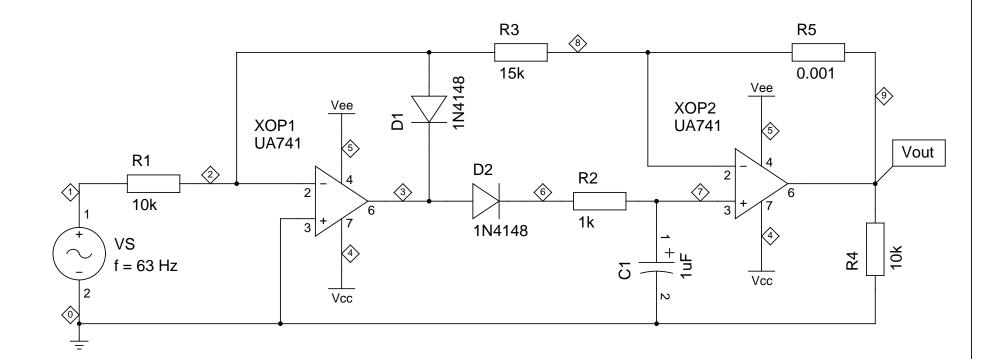
XOP2 7 8 0 4 5 9 UA741

.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

FILE: 26.000.00.02.23.sch

PAGE 01 OF 01

REVISION: 20200207

DRAWN BY: Bert Timmerman

.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

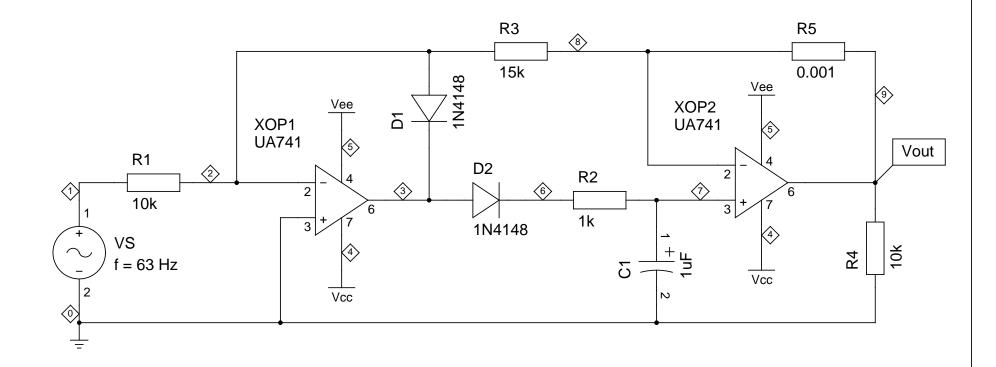
.PRINT OP Iter(0) V(3)

.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

OF 01

DRAWN BY: Bert Timmerman

REVISION: 20200207

.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

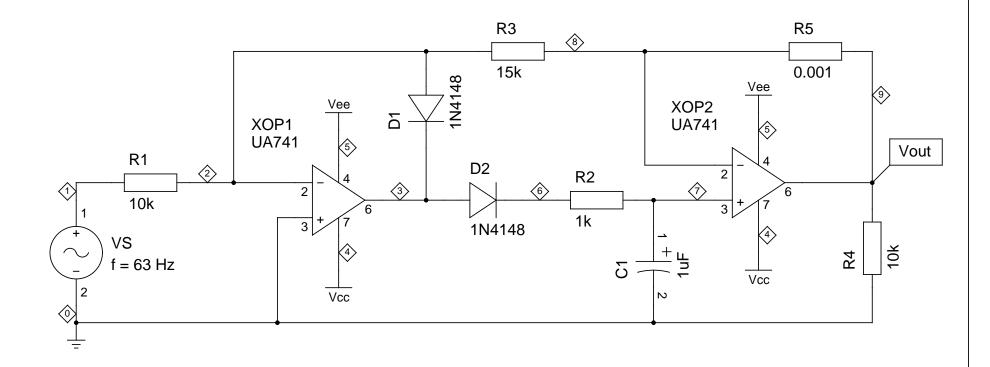
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.25.sch

PAGE 01 OF 01

REVISION: 20200207

DRAWN BY: Bert Timmerman

.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

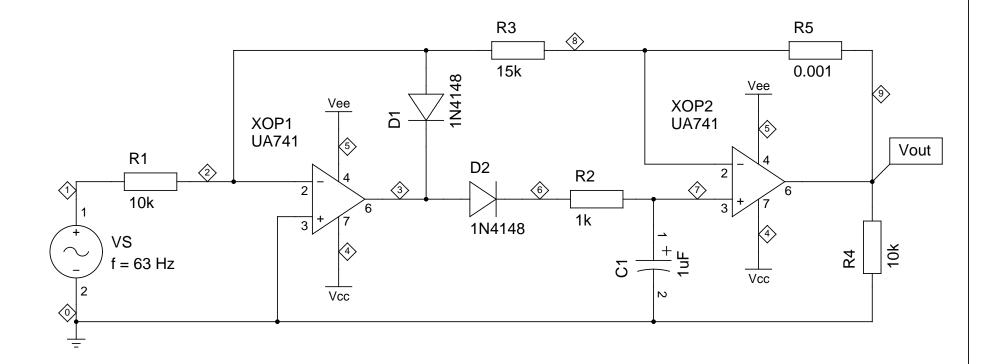
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.26.sch

PAGE 01 OF 01

REVISION: 20200207

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

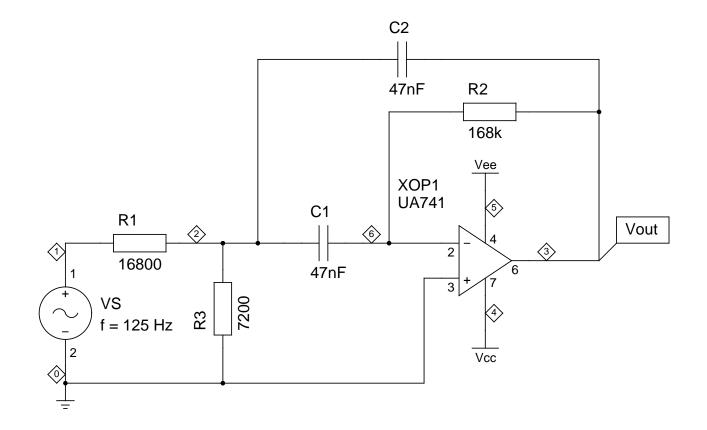
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.27.sch

PAGE 01 OF 01

REVISION: 20200208

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

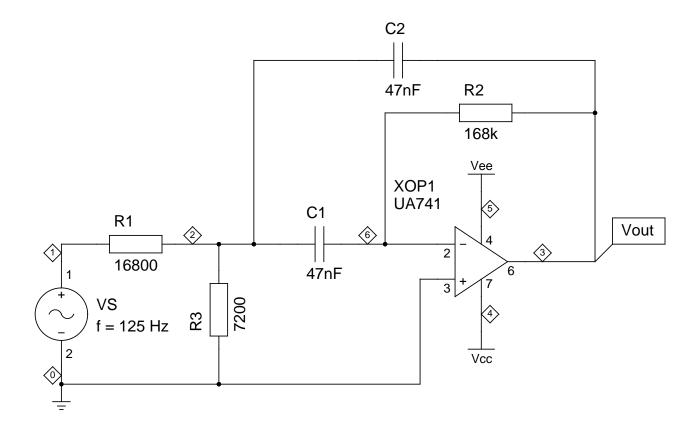
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.28.sch

PAGE 01 OF 01

REVISION: 20200208

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

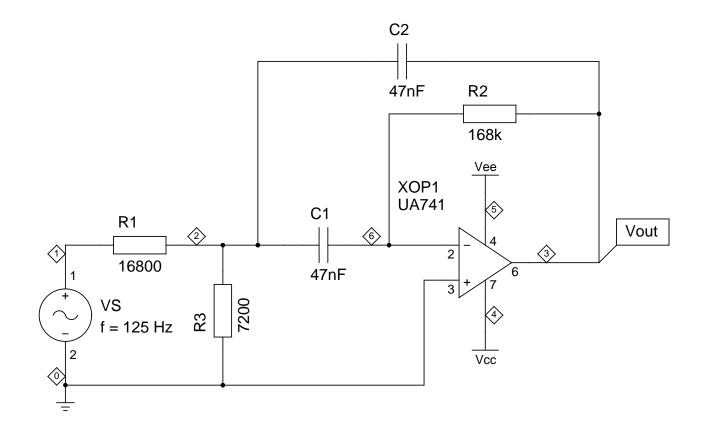
.PRINT OP Iter(0) V(3)

.PRINT TRAN 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

FILE: 26.000.00.02.29.sch

PAGE 01 OF 01

REVISION: 20200208

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

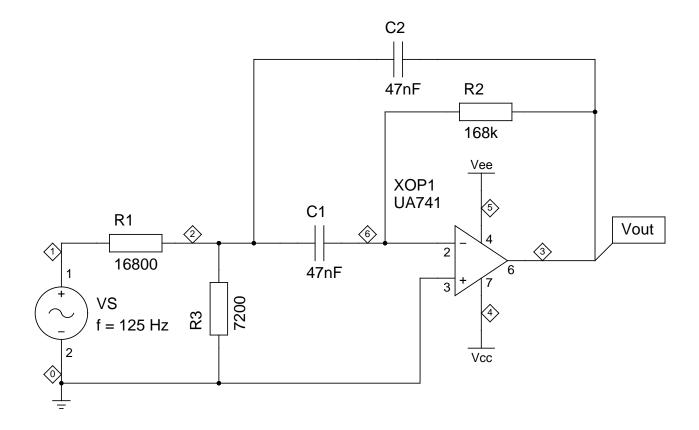
.PRINT OP Iter(0) V(3)

.PRINT TRAN 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

FILE: 26.000.00.02.30.sch

PAGE 01 OF 01

REVISION: 20200208

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

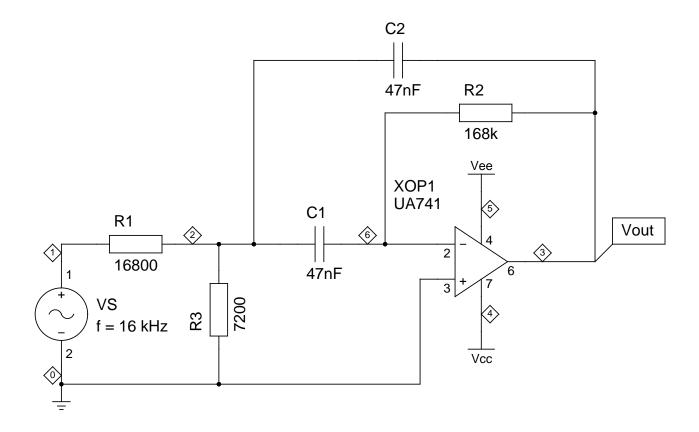
.PRINT OP Iter(0) V(3)

.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

FILE: 26.000.00.02.31.sch

PAGE 01 OF 01

REVISION: 20200209

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

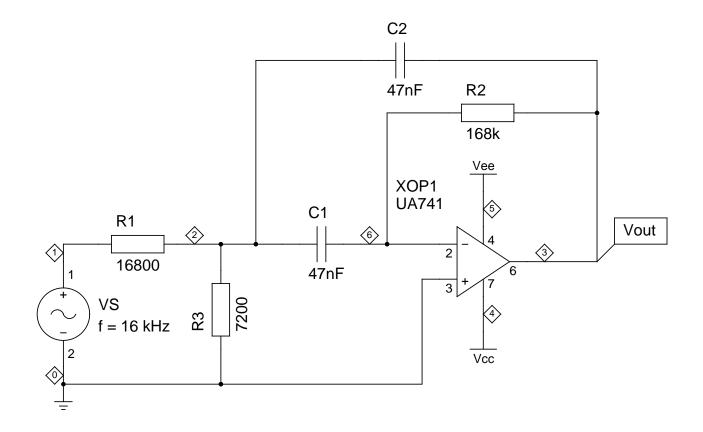
.PRINT OP Iter(0) V(3)

.PRINT TRAN 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

FILE: 26.000.00.02.32.sch

PAGE 01 OF 01

REVISION: 20200209

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

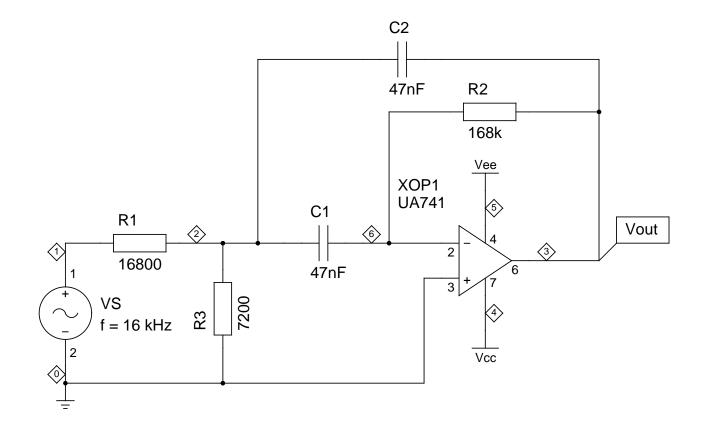
.PRINT OP Iter(0) V(3)

.PRINT TRAN 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

FILE: 26.000.00.02.33.sch

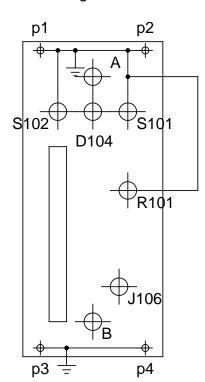
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А3

Mounting holes:



CC BY-SA

Made in NL

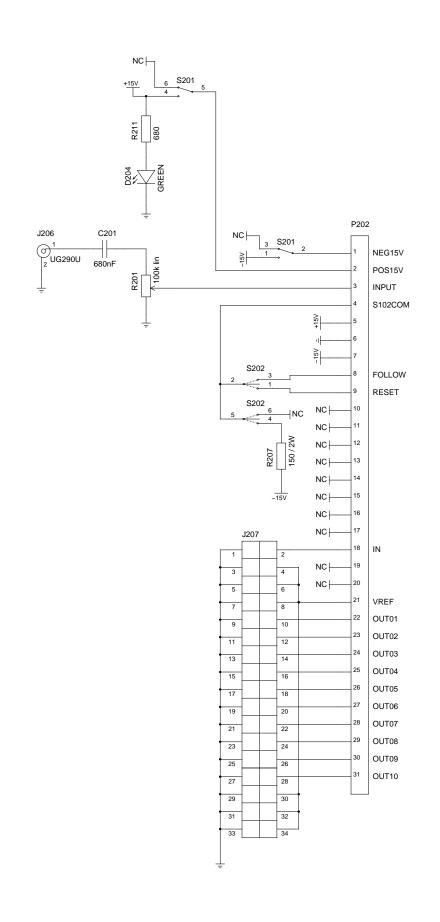
Octave Filter
Front Panel
TITLE OCTAVE_FILTER

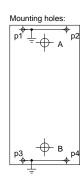
FILE: 26.001.00.01.01.sch

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DRAWN BY: Bert Timmerman

А3



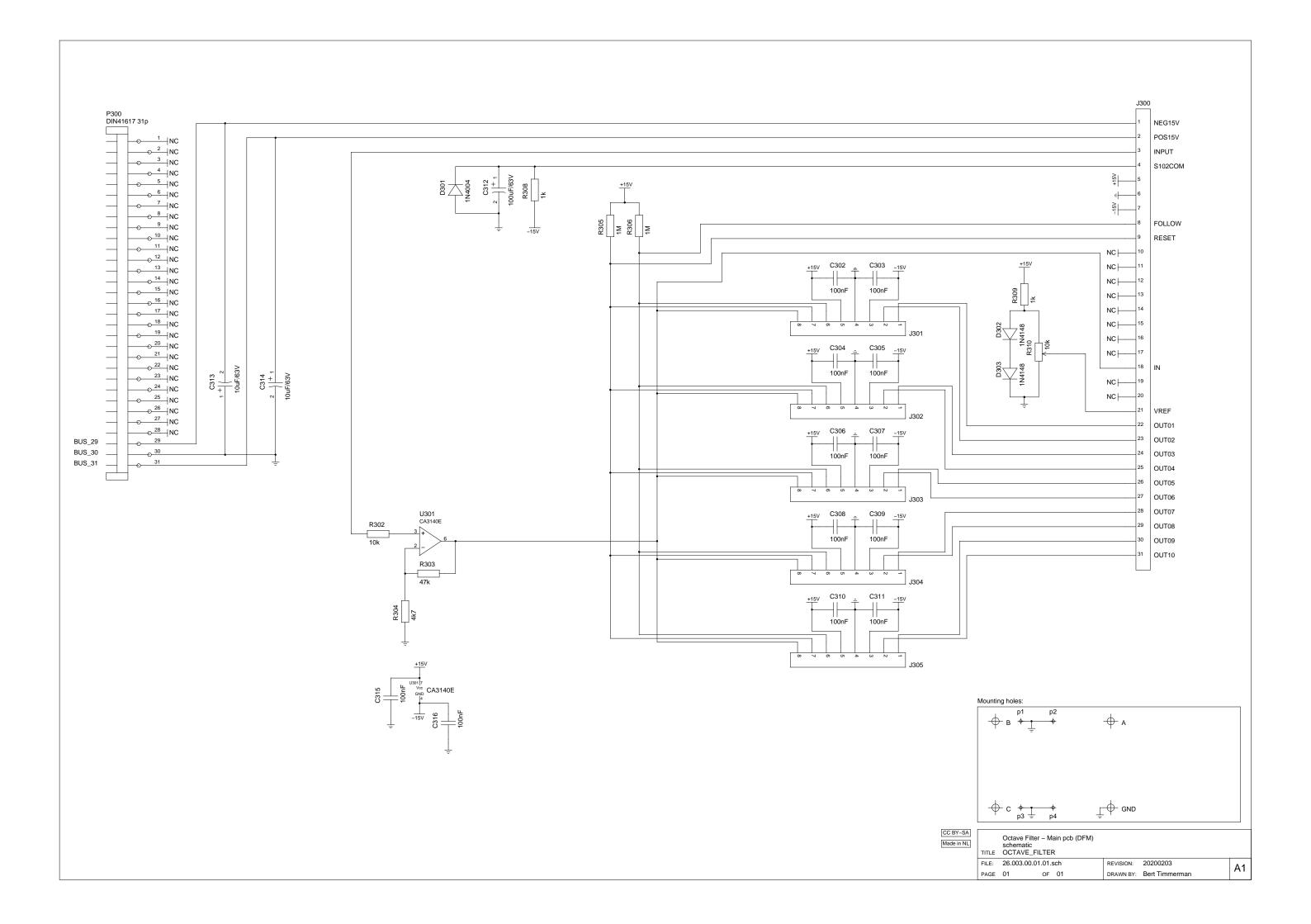


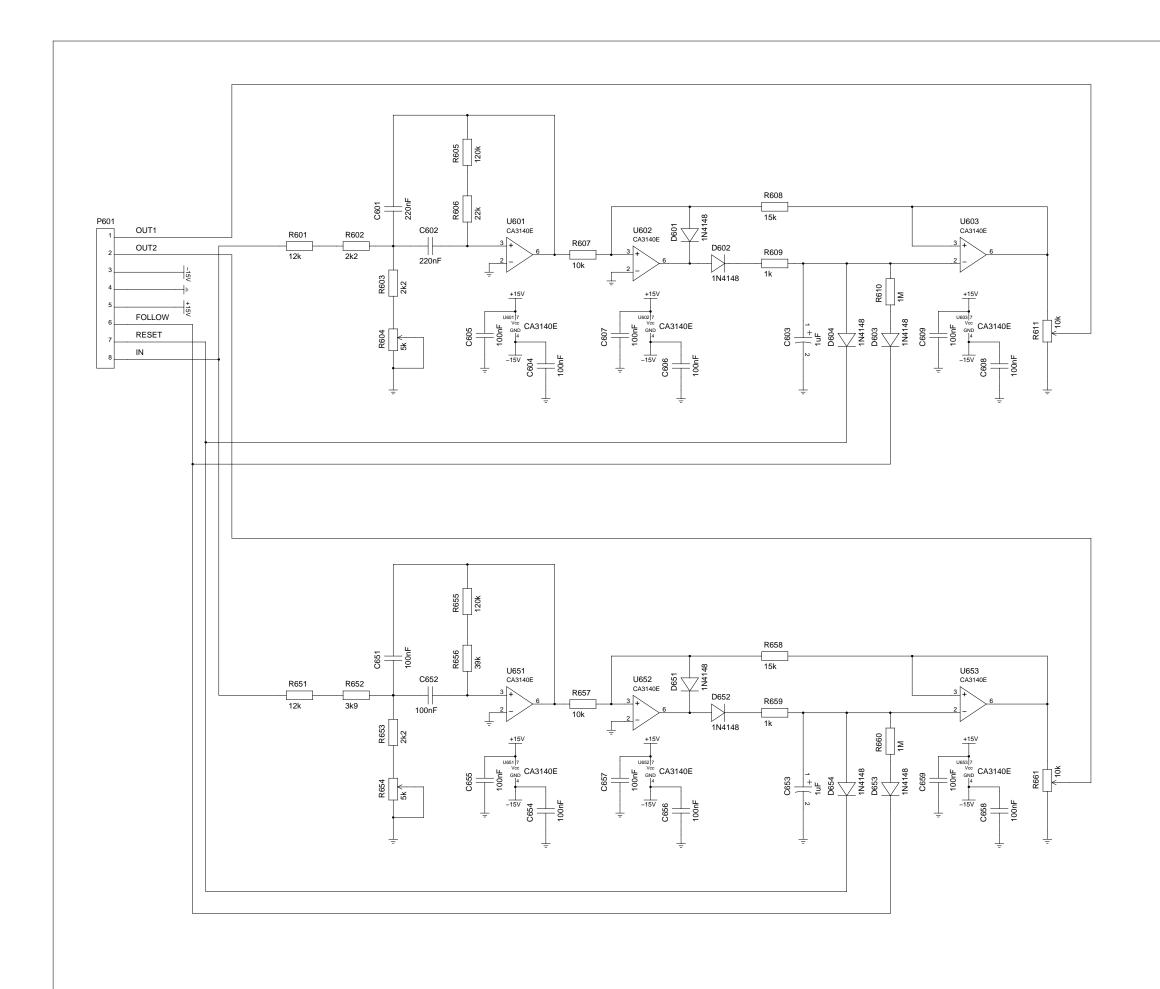
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Made in NL

Octave Filter front pcb (DFM) schematic
TITLE OCTAVE_FILTER

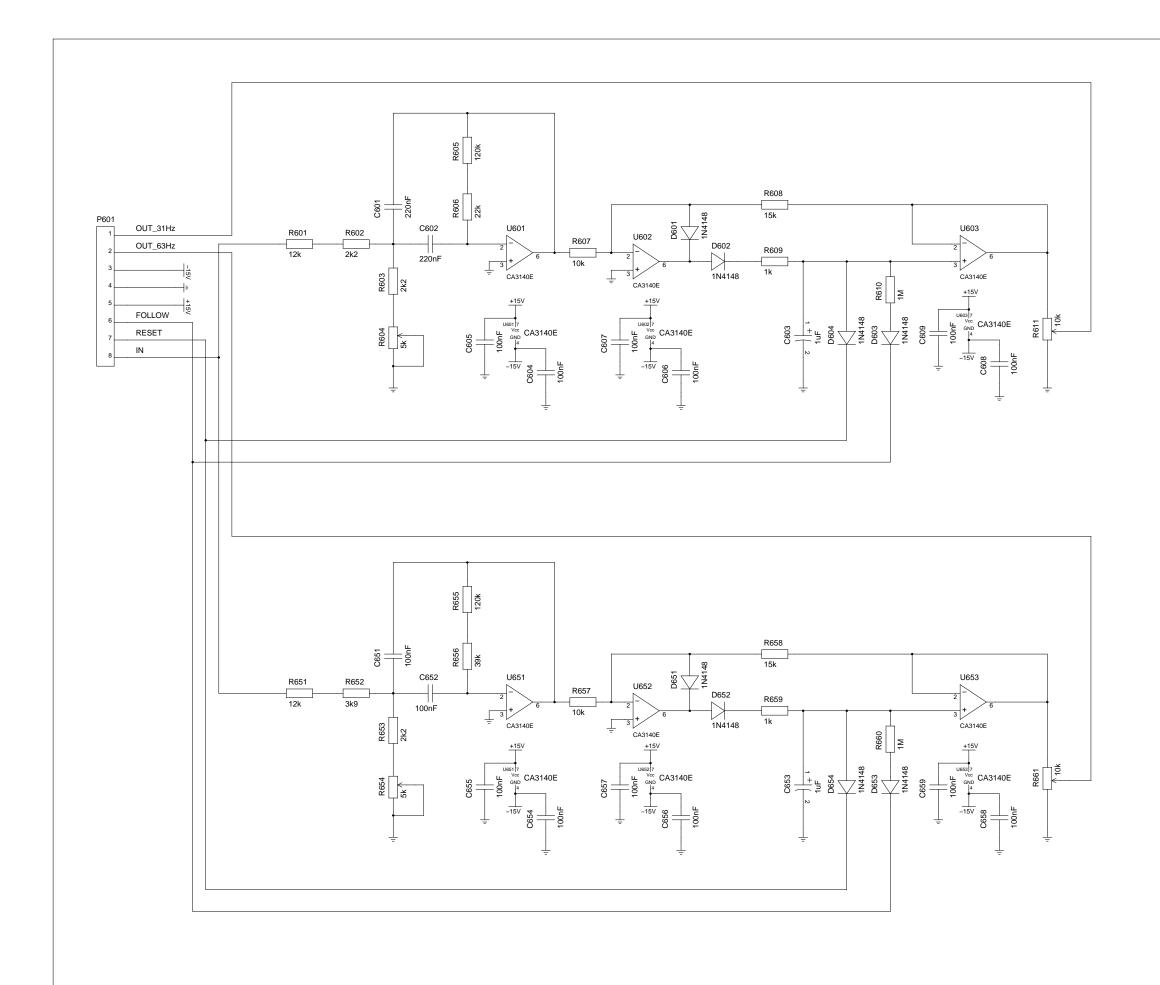
FILE: 26.002.00.01.01.sch REVISION: 20200203 PAGE 01

DRAWN BY: Bert Timmerman

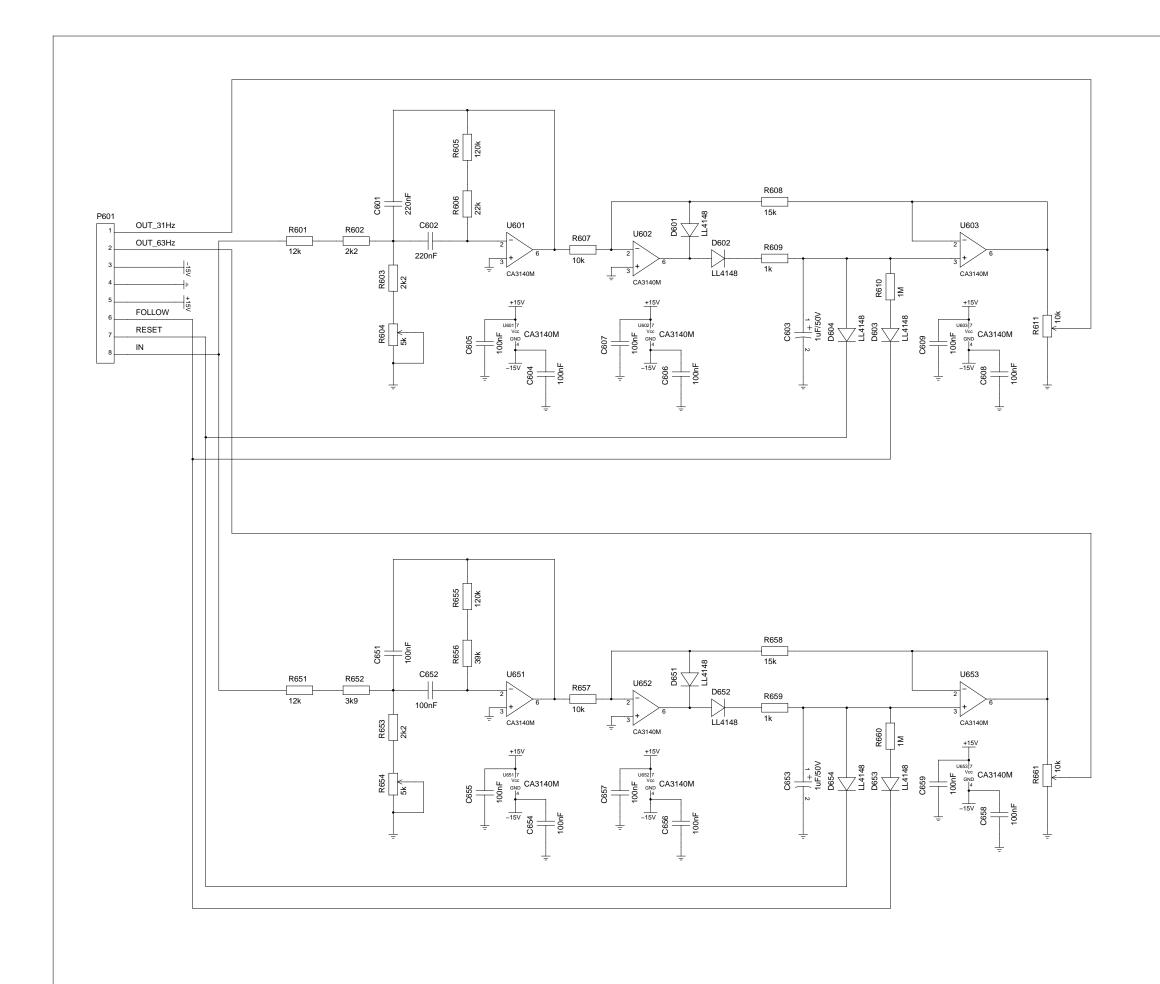




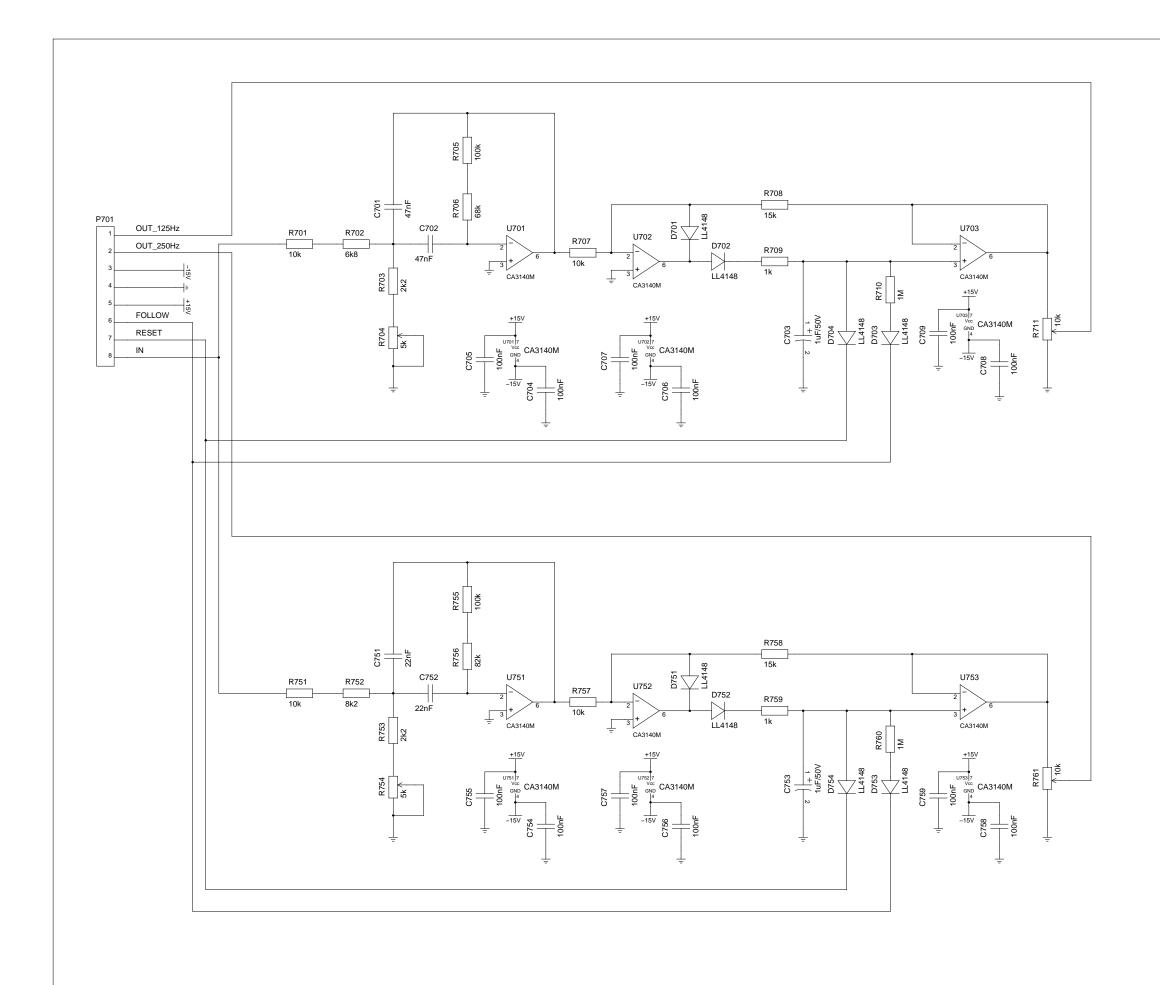
Octave Filter 31.5 Hz and 63 Hz module (DFM – PTH) schematic TITLE OCTAVE_FILTER			
FILE:	26.006.00.01.01.sch	REVISION: 20170805	۸ 1
PAGE	01 OF 01	DRAWN BY: Bert Timmerman	Αı



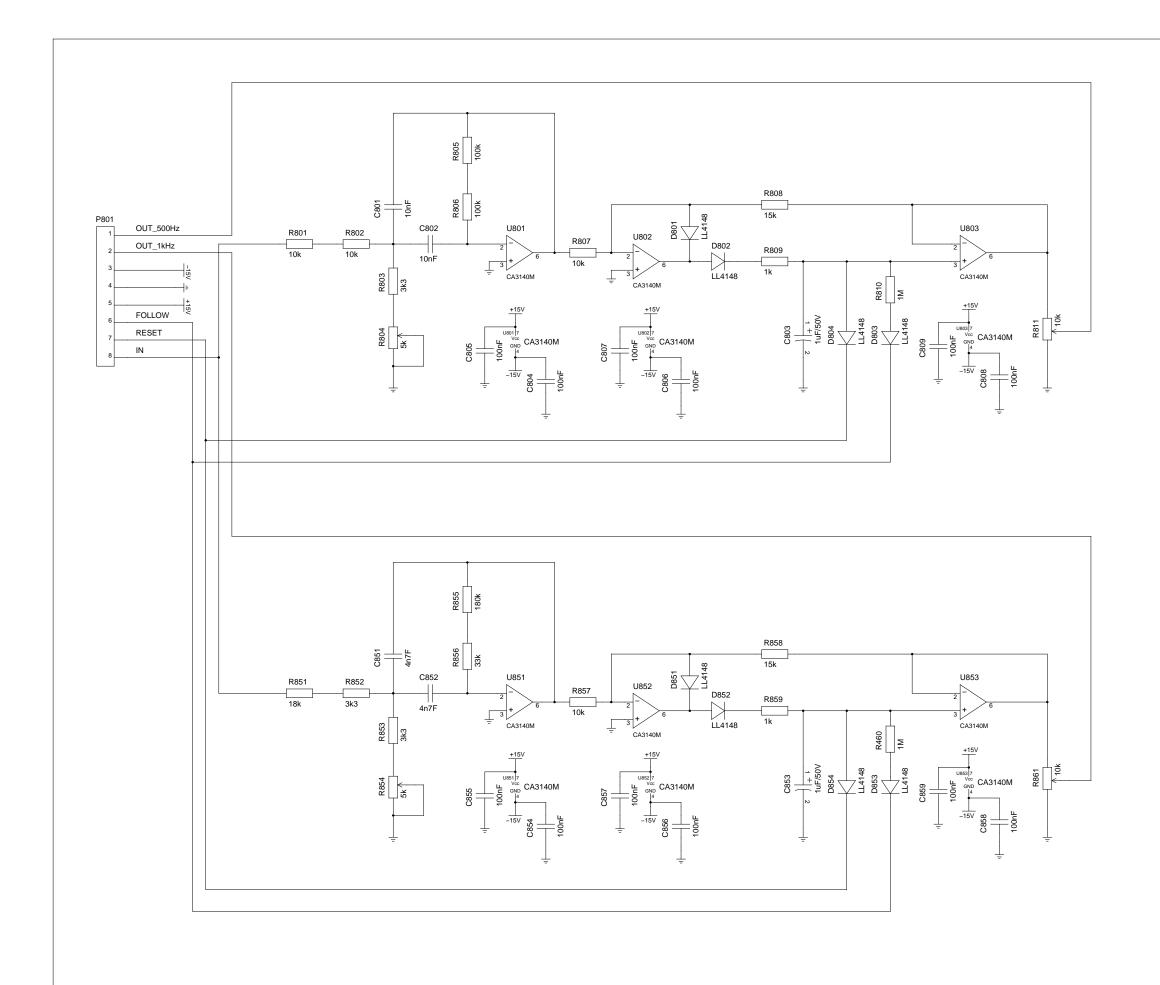
Octave Filter 31.5 Hz and 63 Hz module (DFM – PTH) schematic TITLE OCTAVE_FILTER			
FILE:	26.006.01.01.01.sch	REVISION: 20180513	۸ 1
PAGE	01 OF 01	DRAWN BY: Bert Timmerman	Αı



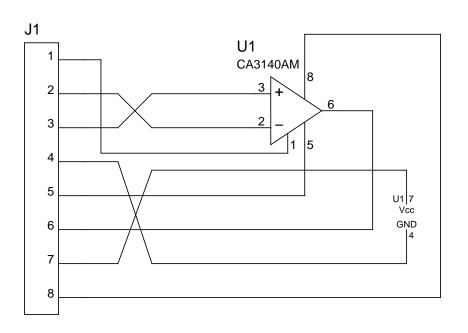
TITLE	Octave Filter 31.5 Hz and 63 Hz module (DFM – PTH+SMT) schematic OCTAVE_FILTER		
FILE:	26.006.02.01.01.sch	REVISION: 20180603	۸1
PAGE	01 OF 01	DRAWN BY: Bert Timmerman	Λ1



TITLE	Octave Filter 125 Hz and 250 Hz module (DFM – PTH+SMT) schematic OCTAVE_FILTER		
FILE:	26.007.01.01.01.sch	REVISION: 20180514	۸1
PAGE	01 OF 01	DRAWN BY: Bert Timmerman	Λ1



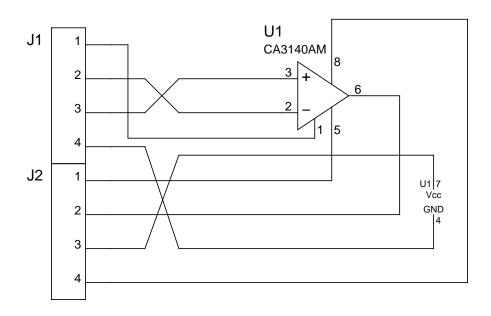
TITLE	Octave Filter 500 Hz and 1 kHz module (DFM – PTH+SMT) schematic OCTAVE_FILTER		
FILE:	26.008.01.01.01.sch	REVISION: 20180514	۸1
PAGE	01 OF 01	DRAWN BY: Bert Timmerman	Λ1



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

FILE: 26.999.00.01.01.sch REVISION: 20180629

PAGE 01 OF 01 DRAWN BY: Bert Timmerman



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

FILE: 26.999.01.01.01.sch REVISION: 20180728

PAGE 01 OF 01 DRAWN BY: Bert Timmerman