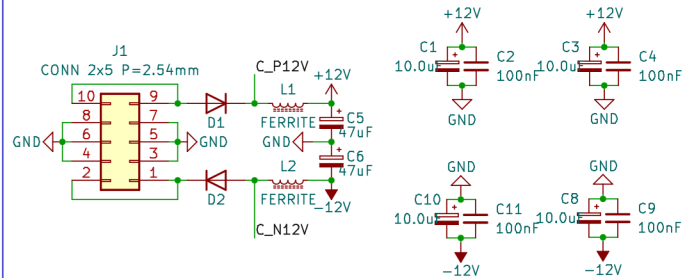
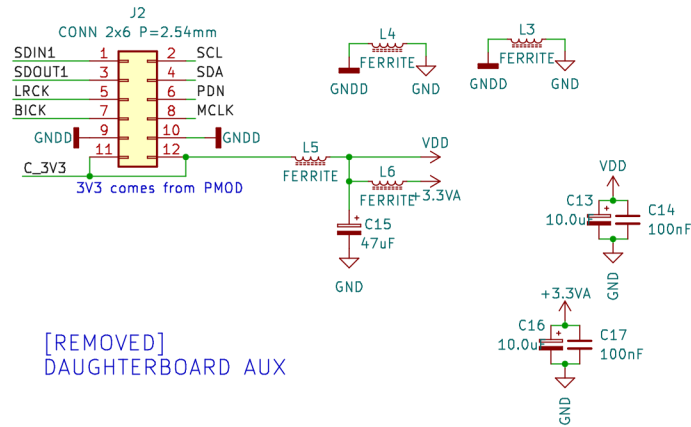


## +/- 12V IN



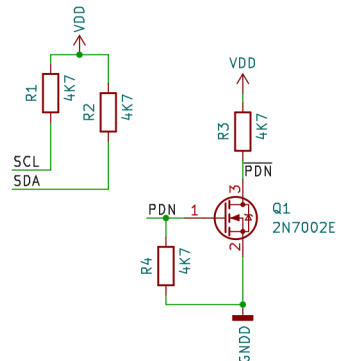
## PMOD, +3.3V IN



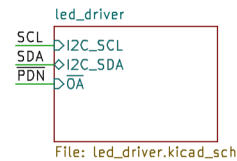
[REMOVED]  
DAUGHTERBOARD AUX

## INPUT CONDITIONING

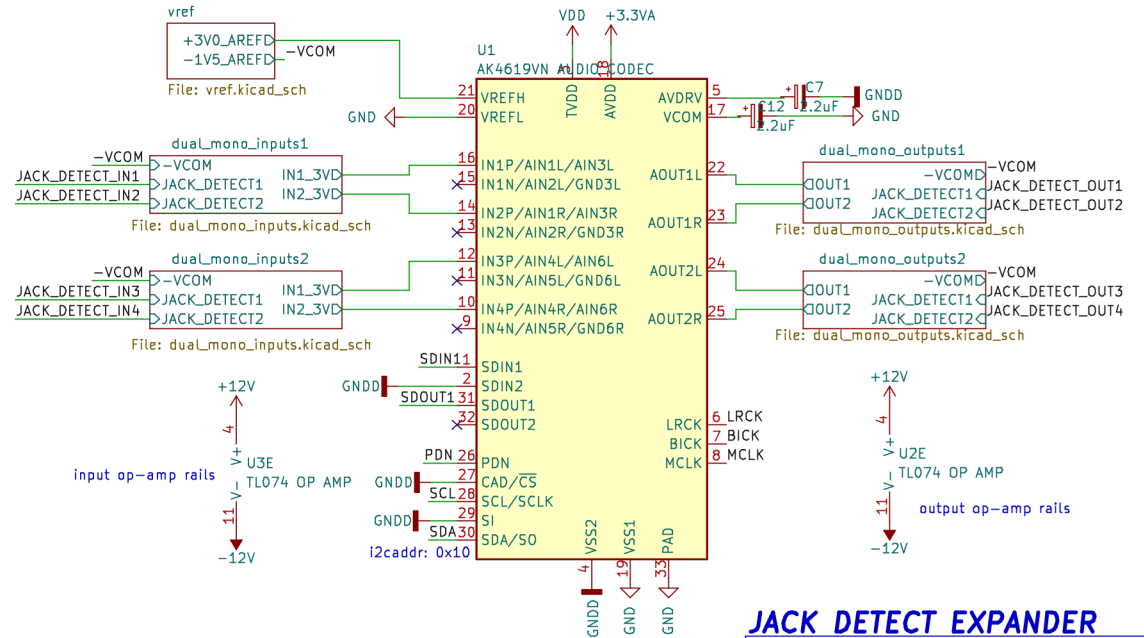
[REMOVED]  
INPUT ESD CLAMPS



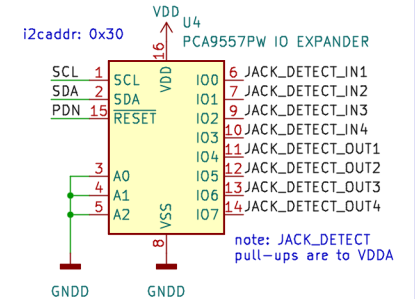
## LED DRIVER



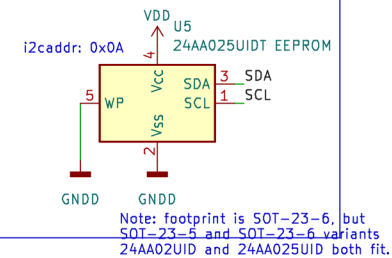
## CODEC, IN+OUT



## JACK DETECT EXPANDER



## CAL MEMORY

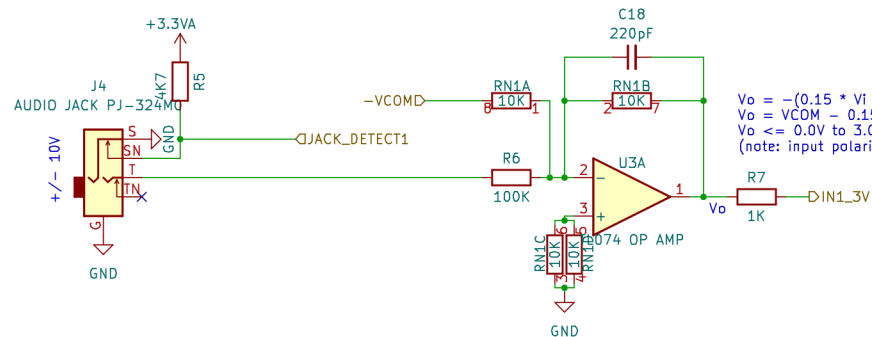


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Title:

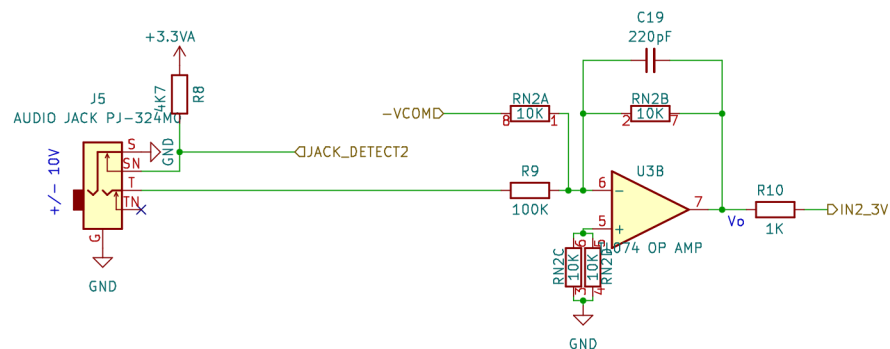
Size: A4 Date:  
KiCad E.D.A. kicad 7.0.5-ubuntu20.04.1

Rev:  
Id: 1/7



$V_o = -(0.15 * V_i + -V_{COM})$   
 $V_o = V_{COM} - 0.15 * V_{in}$   
 $V_o \leq 0.0V$  to  $3.0V$ ,  $V_{in}$  inverted  
 (note: input polarity inverted here)

$V_{INA}$  (ADC absolute max.) =  $-0.3V$  to  $3.6V$   
 $V_o = V_{INA} = V_{COM} - 0.15 * V_{in}$   
 $V_{in}$  (max. tolerated) =  $-13V$  to  $+13V$   
 Outside  $\pm 12V$  is impossible, no need for diode clamps before ADC

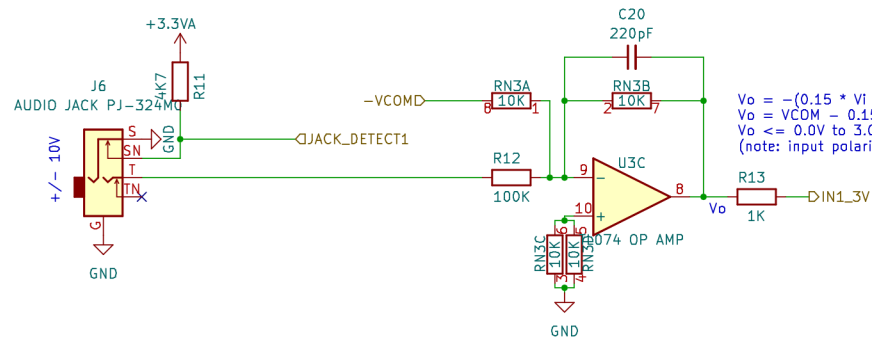


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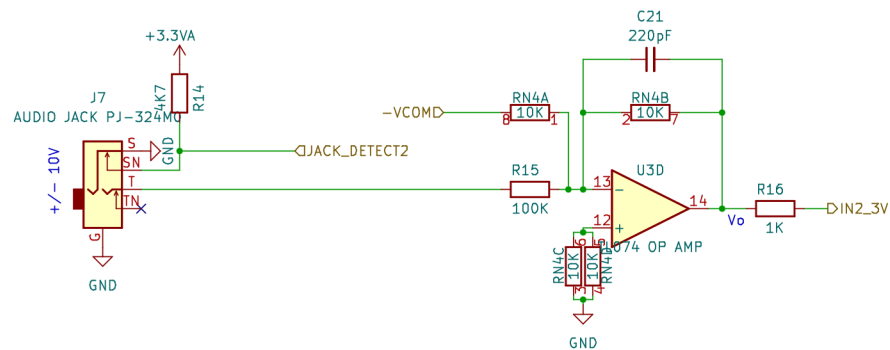
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 KiCad E.D.A. kicad 7.0.5-7.0.5-ubuntu20.04.1

Date:  
 Rev: 2/7



$V_o = -(0.15 * V_i + -V_{COM})$   
 $V_o = V_{COM} - 0.15 * V_{in}$   
 $V_o \leq 0.0V$  to  $3.0V$ ,  $V_{in}$  inverted  
 (note: input polarity inverted here)

$V_{INA}$  (ADC absolute max.) =  $-0.3V$  to  $3.6V$   
 $V_o = V_{INA} = V_{COM} - 0.15 * V_{in}$   
 $V_{in}$  (max. tolerated) =  $-13V$  to  $+13V$   
 Outside  $\pm 12V$  is impossible, no need for diode clamps before ADC



Sheet: /dual\_mono\_inputs2/  
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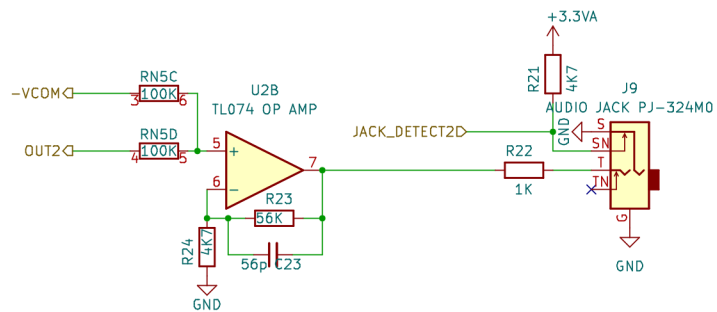
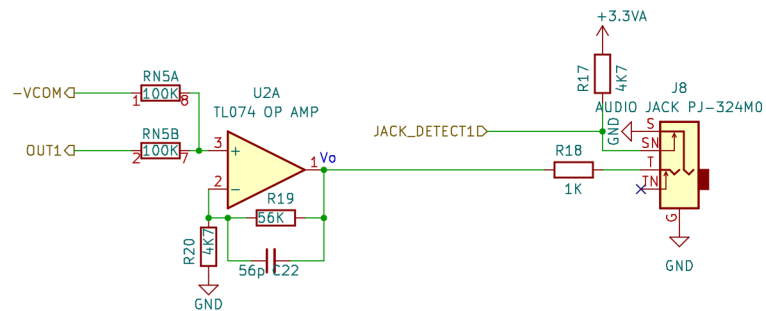
Size: A4  
 KiCad E.D.A. kicad 7.0.5-7.0.5-ubuntu20.04.1

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Rev:

Id: 3/7

$V_o = (1 + 56/4.7)(AOUT - VCOM)/2$   
 $V_o = 6.46 * (AOUT - 1.65V)$   
 0.1V in => -10V out, 3.2V in => +10V out



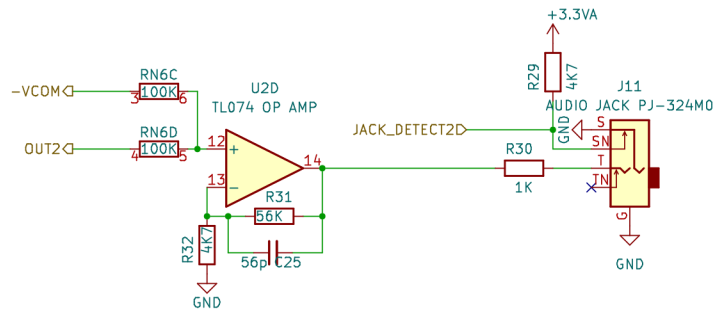
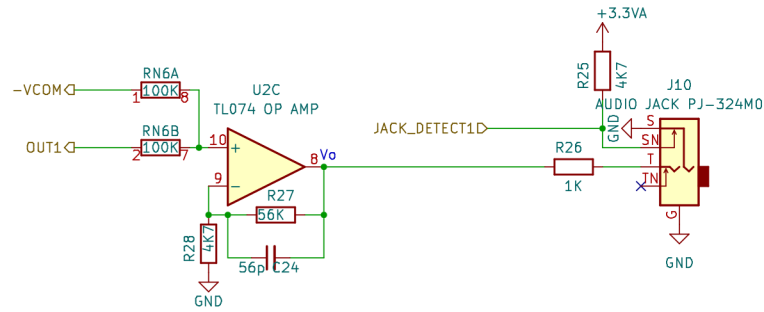
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**Rev:**  
 Id: 4/7

$V_o = (1 + 56/4.7)(AOUT - VCOM)/2$   
 $V_o = 6.46 * (AOUT - 1.65V)$   
 0.1V in => -10V out, 3.2V in => +10V out

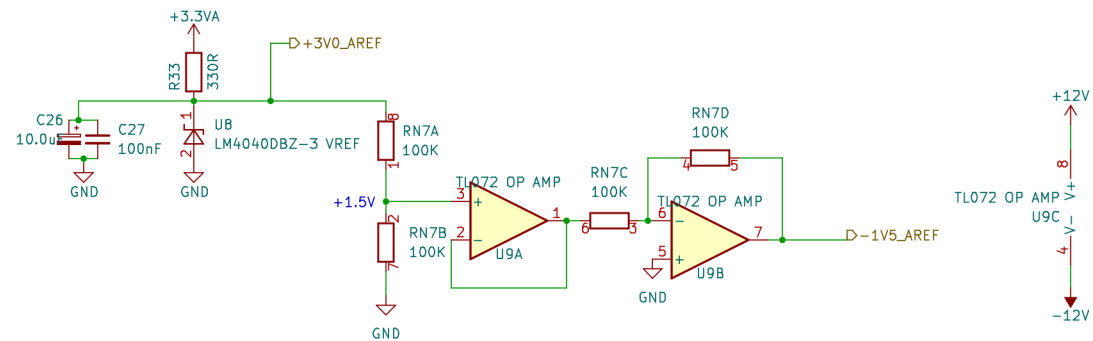


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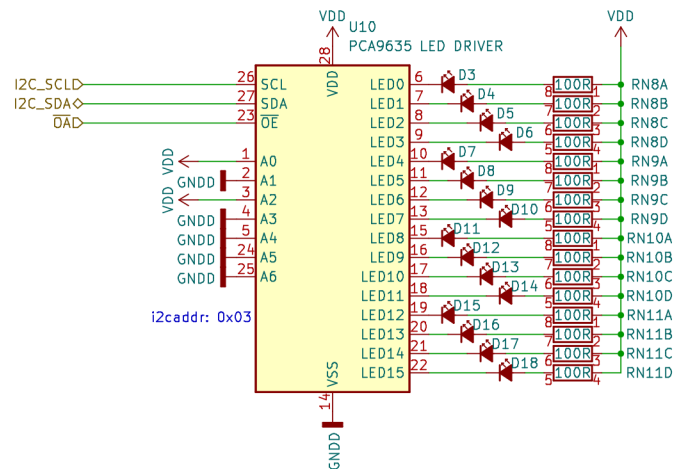


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**Rev:**  
Id: 6/7



Rev:  
Id: 7/7