

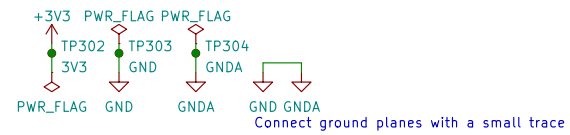
Sheet: /Interface/  
File: interface.kicad\_sch

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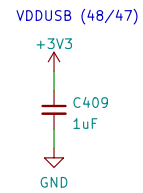
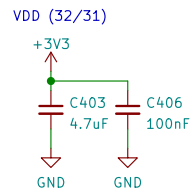
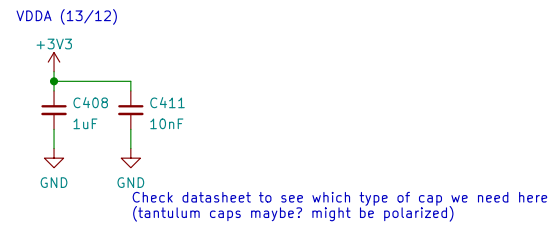
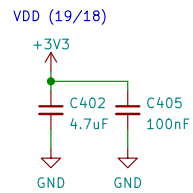
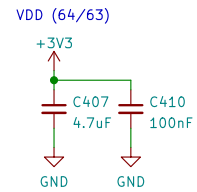
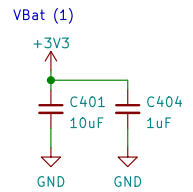
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KiCad E.D.A. kicad (6.0.1-0)

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Layout note: Make sure these bypass caps are physically close to the noted pin

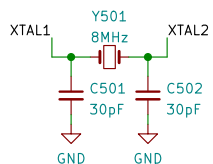
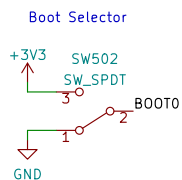
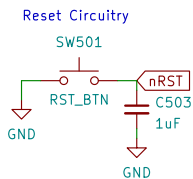
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File: bypass\_micro.kicad\_sch

**Title:**

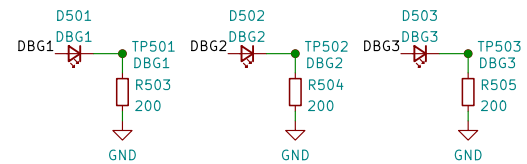
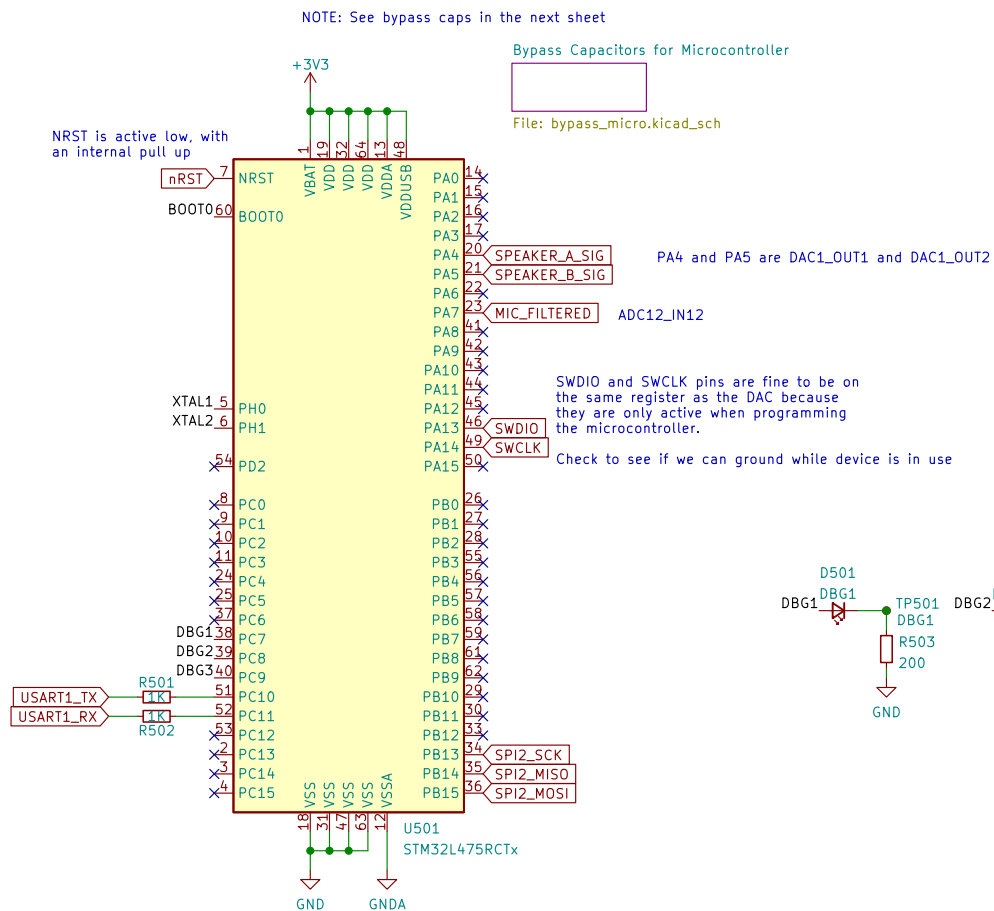
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KiCad E.D.A. kicad (6.0.1-0)

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Assuming 3pF stray capacitance  
 $CX1 = CX2 = 2(\text{load cap} - \text{stray cap})$   
 $= 2(18\text{pF} - 3\text{pF}) = 30\text{pF}$

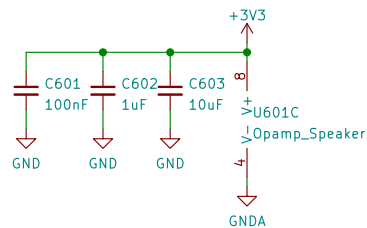
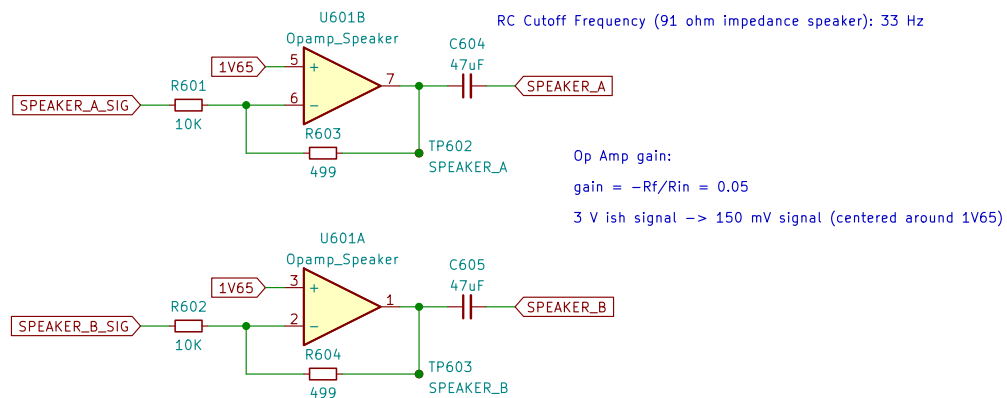
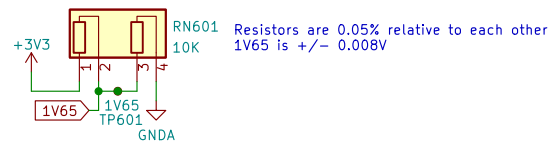


Sheet: /Microcontroller/  
File: microcontroller.kicad\_sch

Title:

Size: A4  
KiCad E.D.A. kicad (6.0.1-0)

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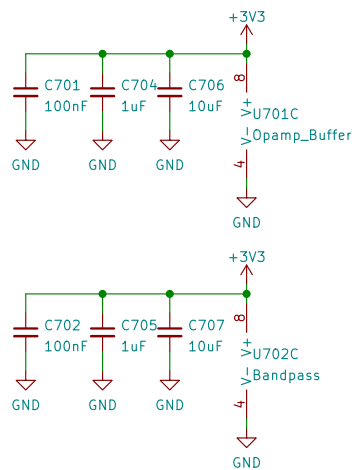
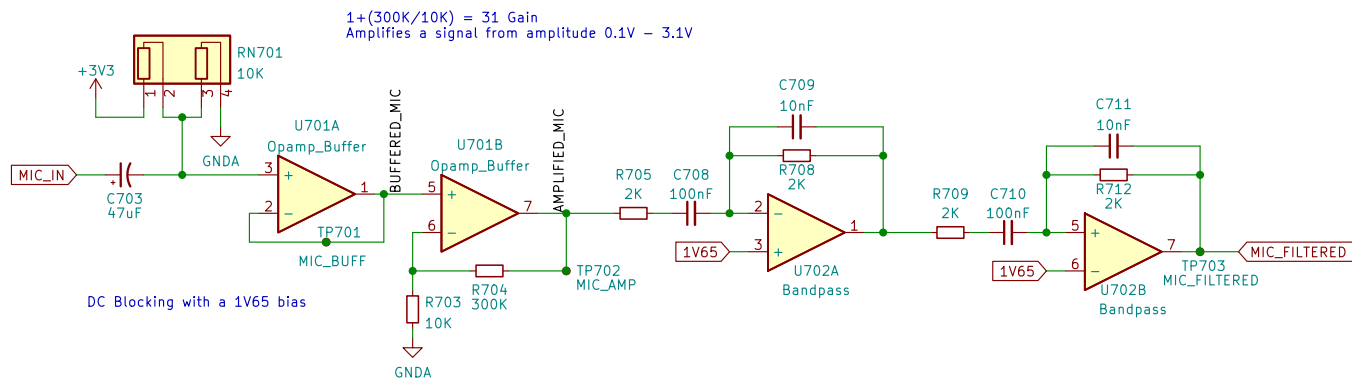
Sheet: /Speaker Amps/  
File: speaker\_amp.kicad\_sch

**Title:**

Size: A4  
KiCad E.D.A. kicad (6.0.1-0)

Date:

Rev:  
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Frequency range of distortion products: 1.89kHz, 2.49kHz, 4.5kHz

Cutoff Frequencies:  
 Lower:  $1/(2\pi \cdot R \cdot C) = 1/(2\pi \cdot 2K \cdot 100nF) = 795Hz$   
 Upper:  $1/(2\pi \cdot R \cdot C) = 1/(2\pi \cdot 2K \cdot 10nF) = 7.96kHz$

Sheet: /Microphone Filters and Amp/  
 File: microphone\_filter.kicad\_sch

**Title:**

Size: A4

Date:

KiCad E.D.A. kicad (6.0.1-0)

**Rev:**

Id: 7/7