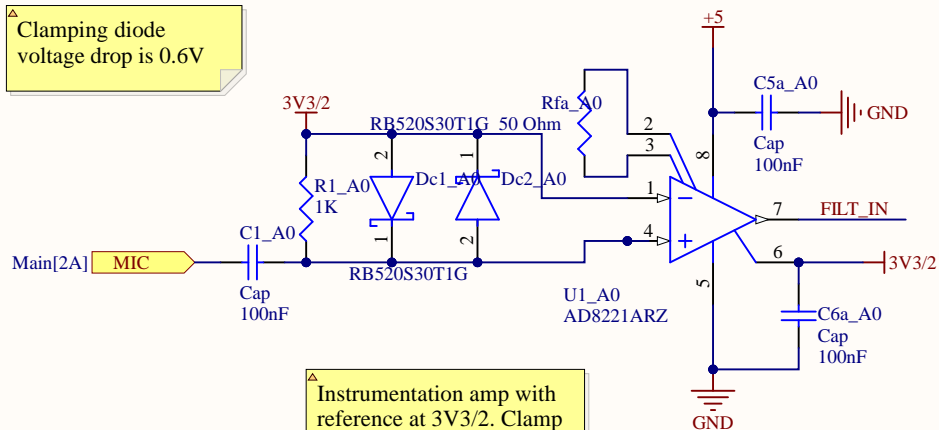


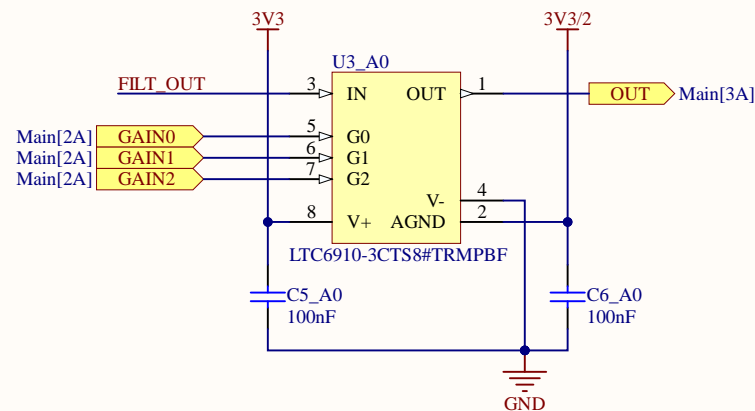


Clamping diode voltage drop is 0.6V



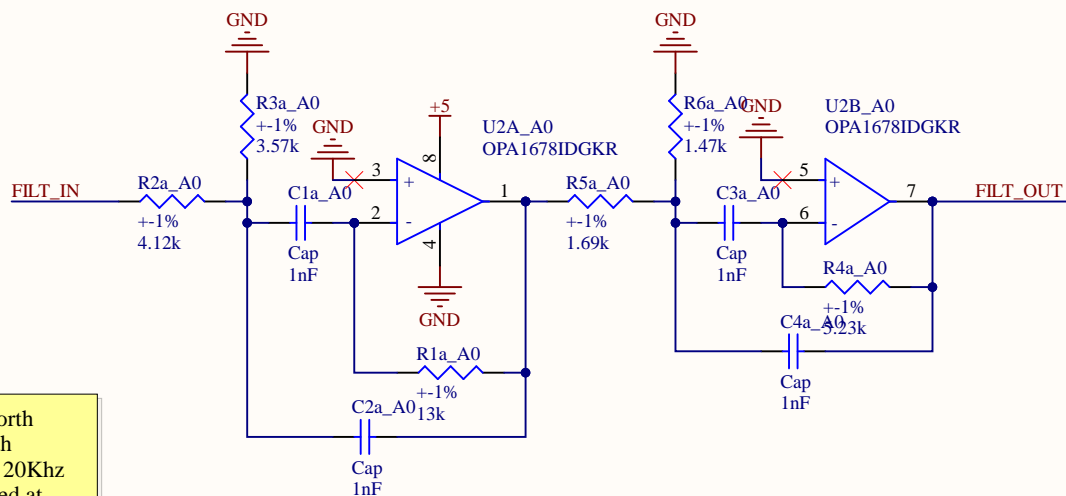
Instrumentation amp with reference at 3V3/2. Clamp between 3V3/2  $\pm$  0.6 V. Gain: 1000.

## Fixed Amp Stage



## Programmable Amp Stage

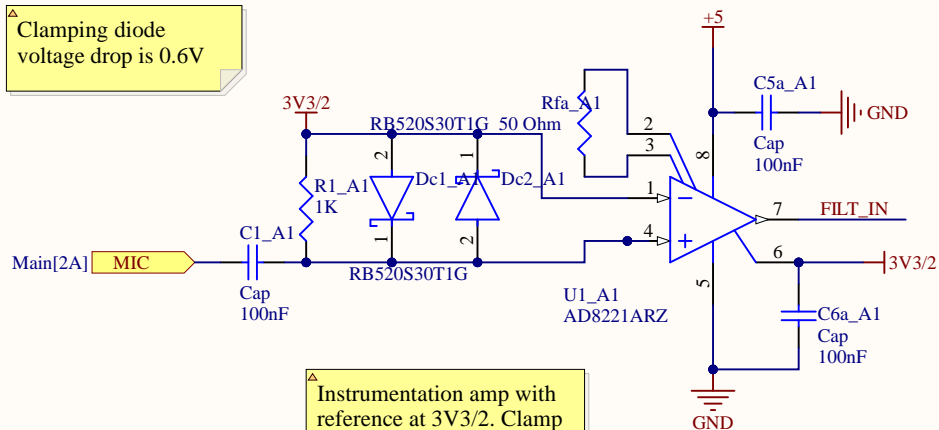
## Filter Stage



4th-order Butterworth bandpass filter with passband between 20Khz and 80Khz, centered at 50Khz

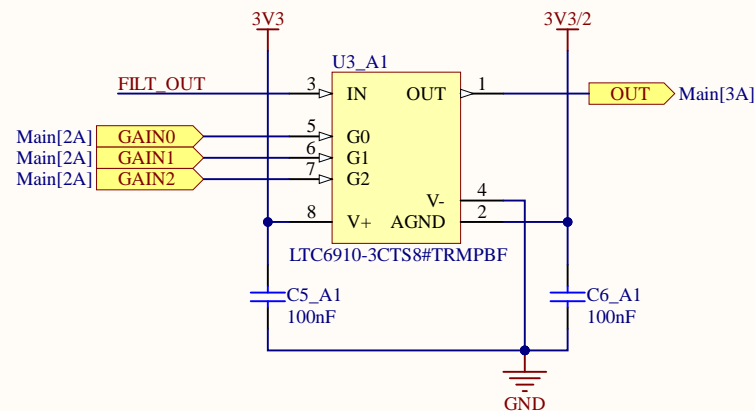
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| Size  | Number                         | Revision  |
| A     |                                |           |
| Date: | 4/10/2023                      | Sheet of  |
| File: | C:\Users\...\Amplifiers.SchDoc | Drawn By: |

Clamping diode voltage drop is 0.6V



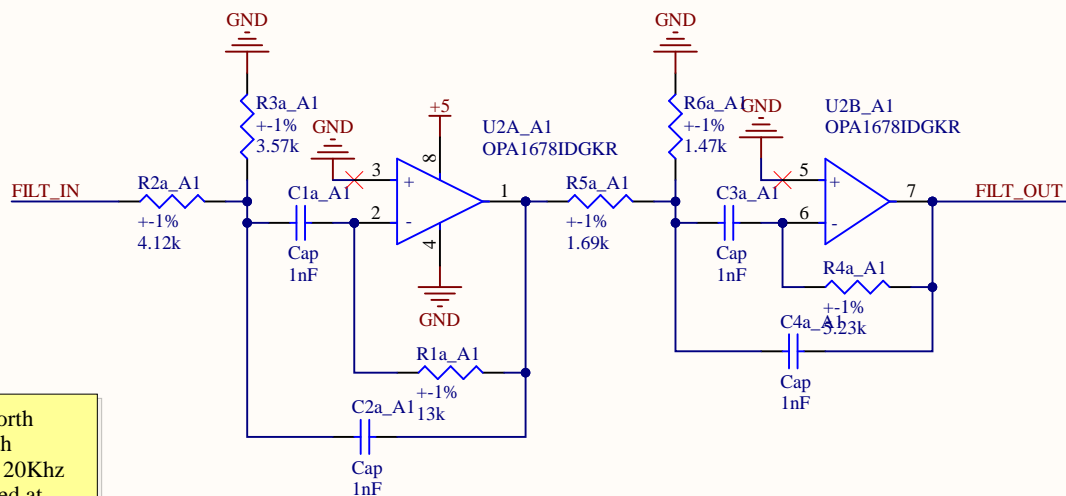
Instrumentation amp with reference at 3V3/2. Clamp between 3V3/2  $\pm$  0.6 V. Gain: 1000.

## Fixed Amp Stage



## Programmable Amp Stage

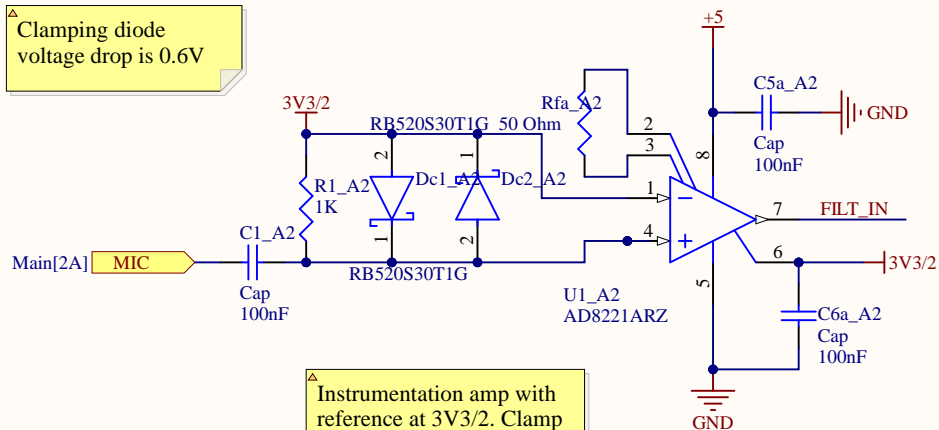
## Filter Stage



4th-order Butterworth bandpass filter with passband between 20Khz and 80Khz, centered at 50Khz

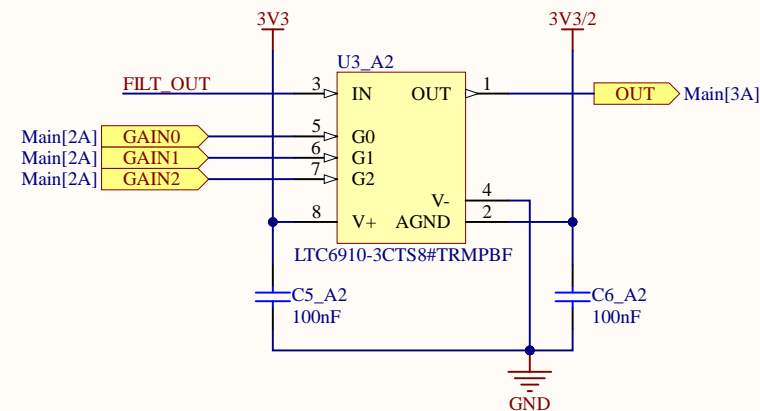
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| File: | C:\Users\...\Amplifiers.SchDoc | Drawn By: |

Clamping diode voltage drop is 0.6V



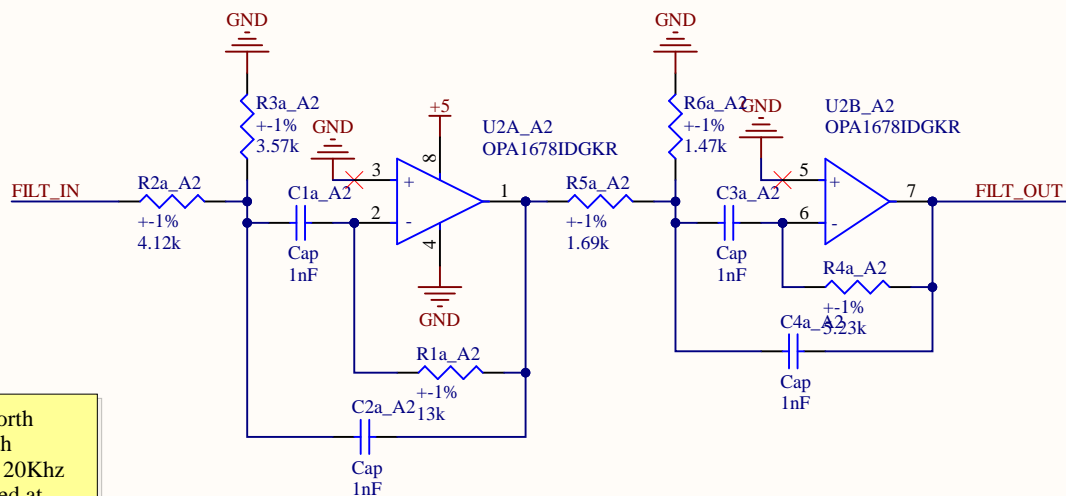
Instrumentation amp with reference at 3V3/2. Clamp between 3V3/2  $\pm$  0.6 V. Gain: 1000.

## Fixed Amp Stage



## Programmable Amp Stage

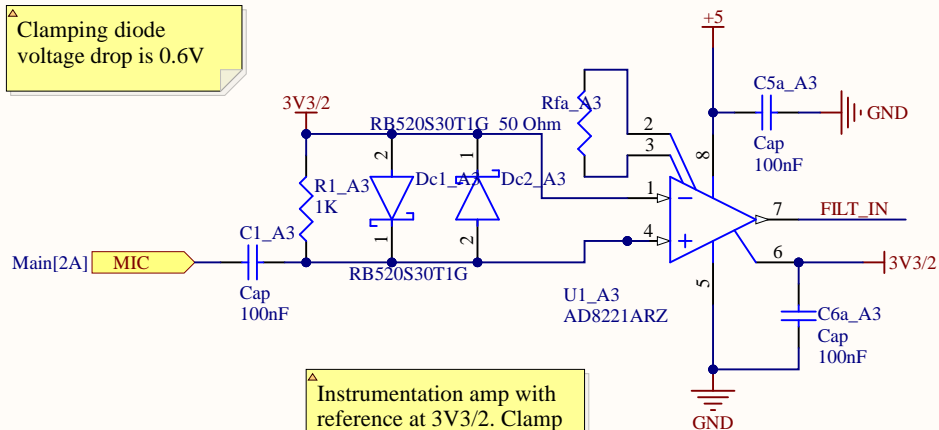
## Filter Stage



4th-order Butterworth bandpass filter with passband between 20Khz and 80Khz, centered at 50Khz

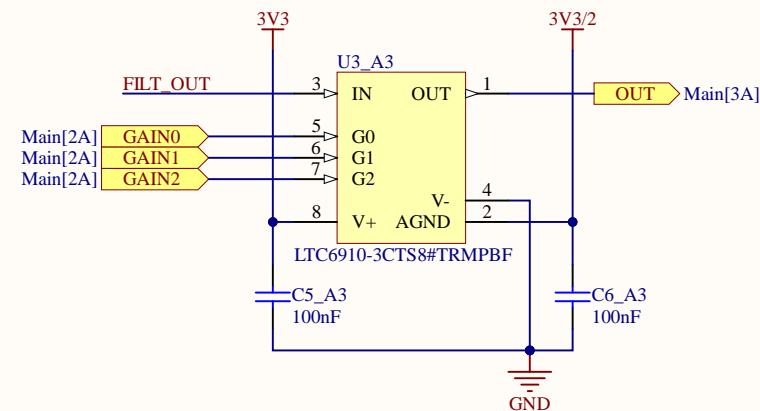
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| File: | C:\Users\...\Amplifiers.SchDoc | Drawn By: |

Clamping diode voltage drop is 0.6V



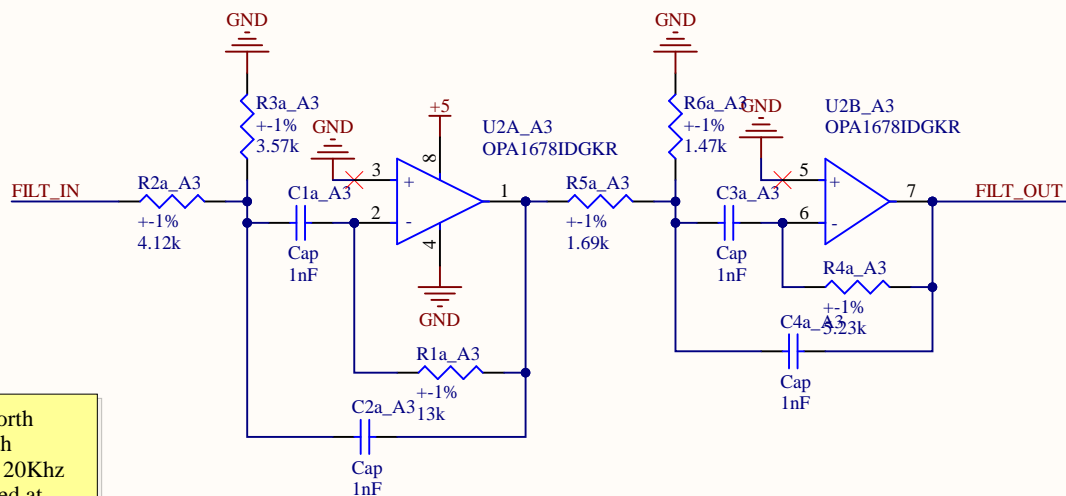
Instrumentation amp with reference at 3V3/2. Clamp between 3V3/2  $\pm$  0.6 V. Gain: 1000.

## Fixed Amp Stage



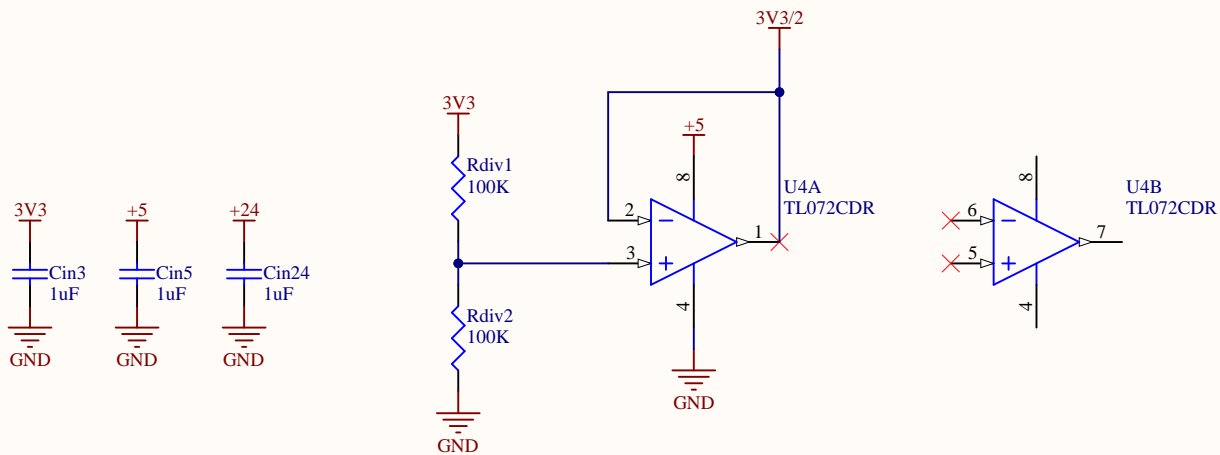
## Programmable Amp Stage

## Filter Stage



4th-order Butterworth bandpass filter with passband between 20Khz and 80Khz, centered at 50Khz

|       |                                |           |
|-------|--------------------------------|-----------|
| Title |                                |           |
| Size  | Number                         | Revision  |
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# Carnegie Mellon University TartanAUV

Rev A-Spring 2023

H0

H1

H2

H3

CTRL

S0

S1

PWR



Victor Zayakov

