

Vocal Filter

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Only access to biquads

- We only want to combine channels on the vocal range
 - Singing vocal range
 - 150Hz to 3000Hz
- Use band pass filter to remove vocal range
 - $H(z) = \frac{b_0 + b_1 z^{-1} + b_2 z^{-2}}{a_0 + a_1 z^{-1} + a_2 z^{-2}}$
 - Create band stop to take remaining, invert band pass
 - $1 - H(z) = 1 - \frac{b_0 + b_1 z^{-1} + b_2 z^{-2}}{a_0 + a_1 z^{-1} + a_2 z^{-2}} = \frac{a_0 - b_0 + (a_1 - b_1)z^{-1} + (a_2 - b_2)z^{-2}}{a_0 + a_1 z^{-1} + a_2 z^{-2}}$
 - Low pass/high pass combinations
- Filtering methods