

Audio Spectrum Analyzing with a RGB LED Strip

Boston University eLab Open House

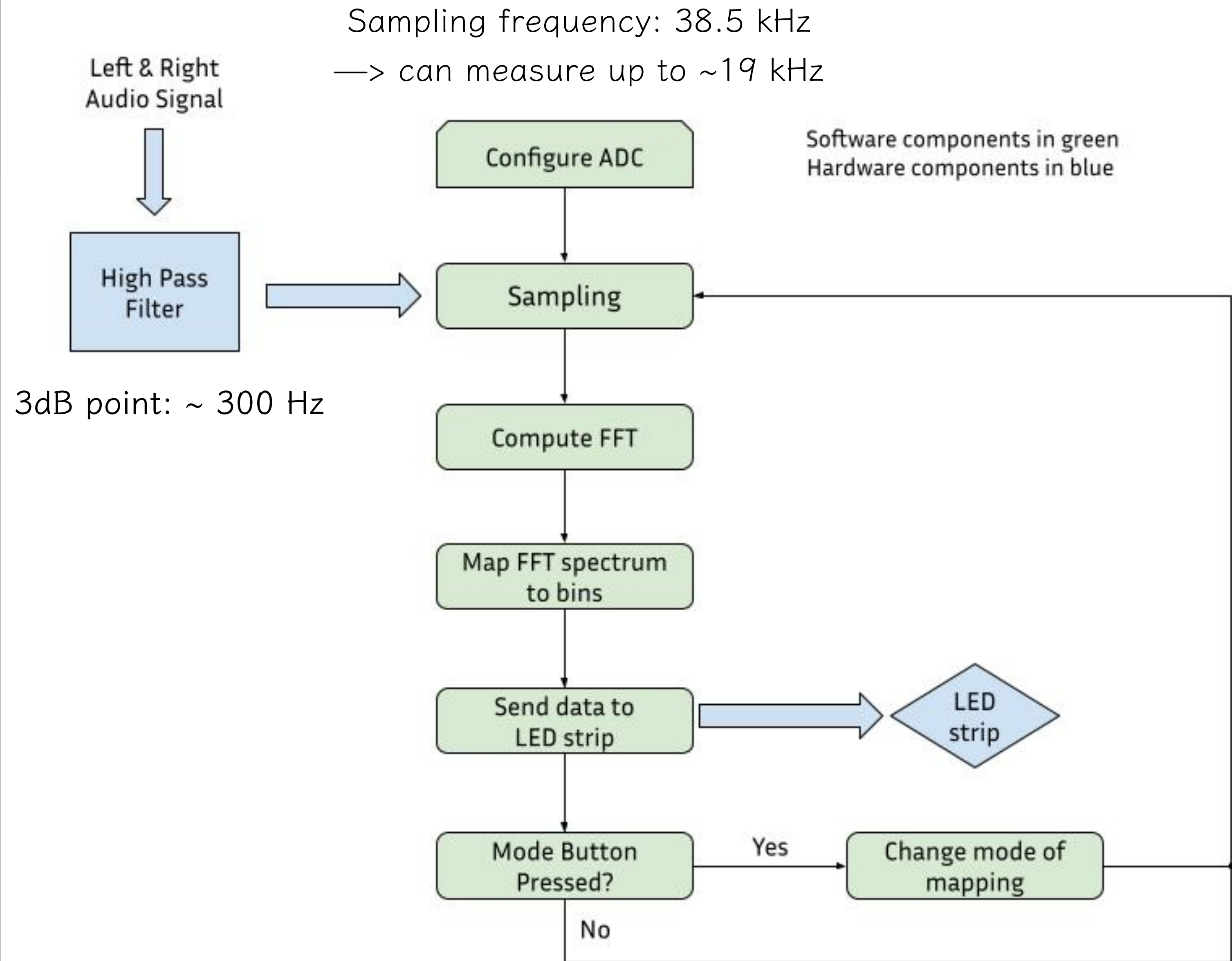
Jiin So
04/29/2021

Concept

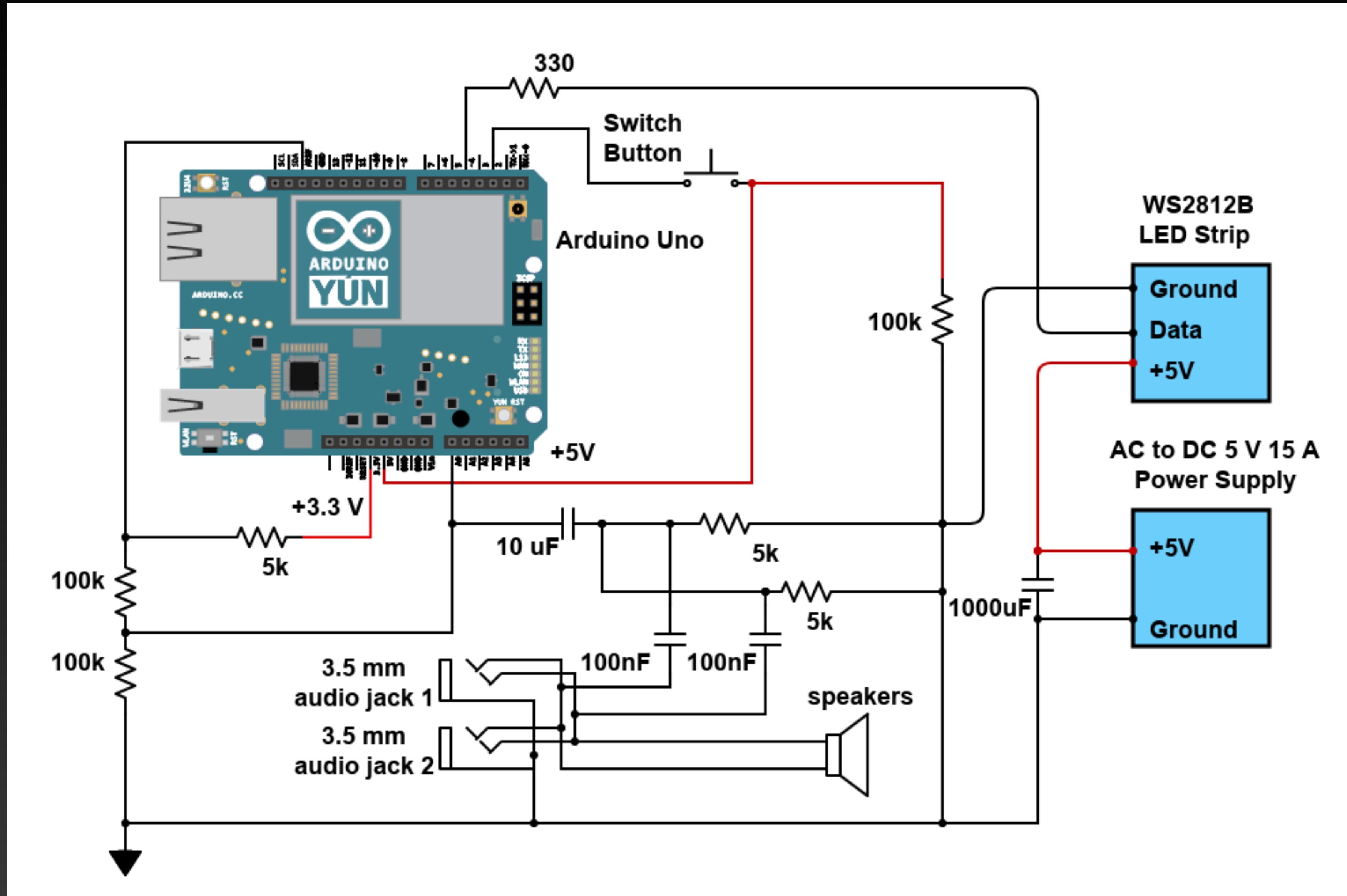


- What if we make RGB LEDs respond to audio signals?
- Frequency of the audio signal: which LED to turn on
- Amplitude of specific frequency range: which color the LED will be
- Add different color modes to cycle through controlled by a button

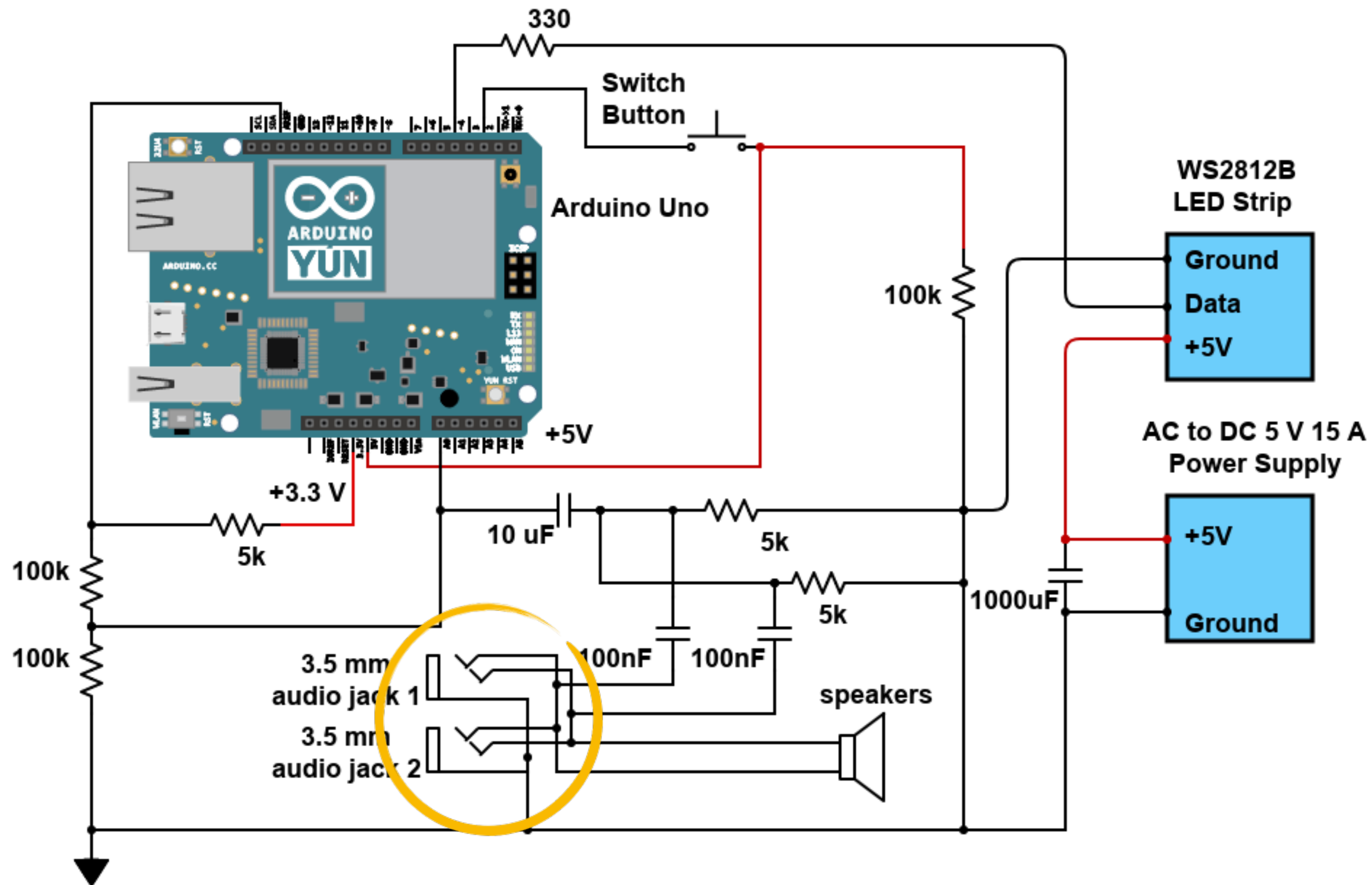
Flow Chart



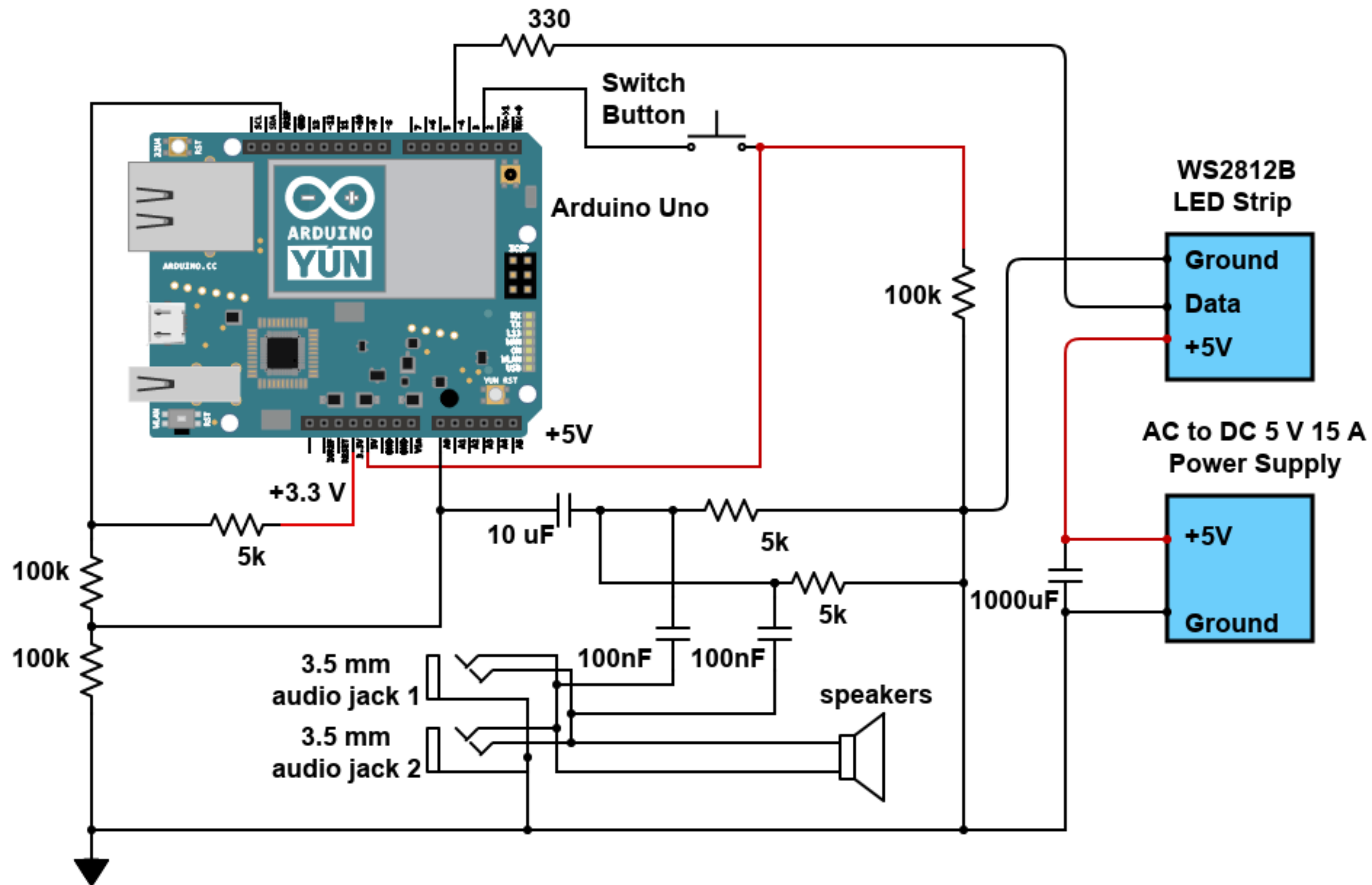
Electronic Schematic



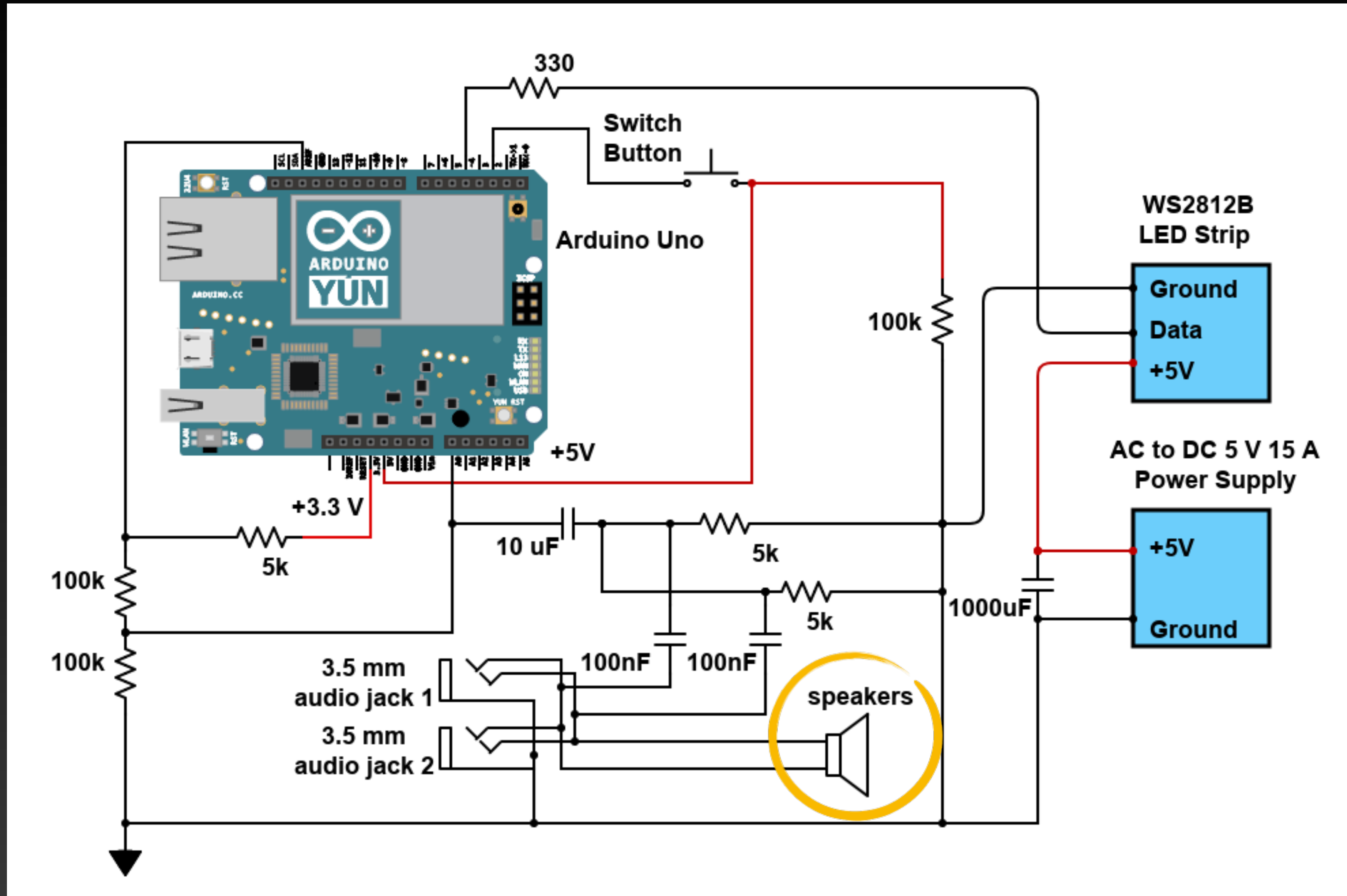
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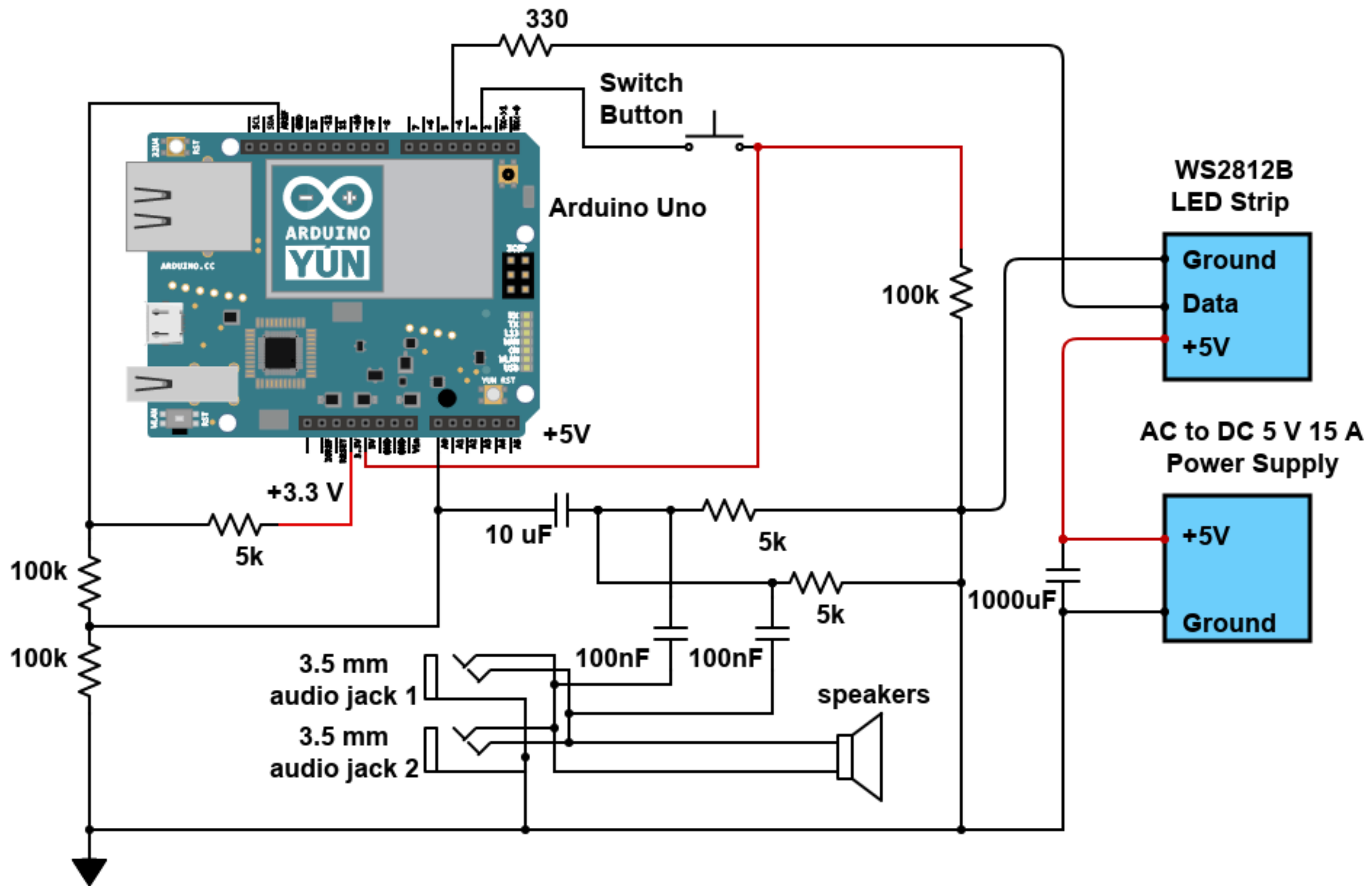
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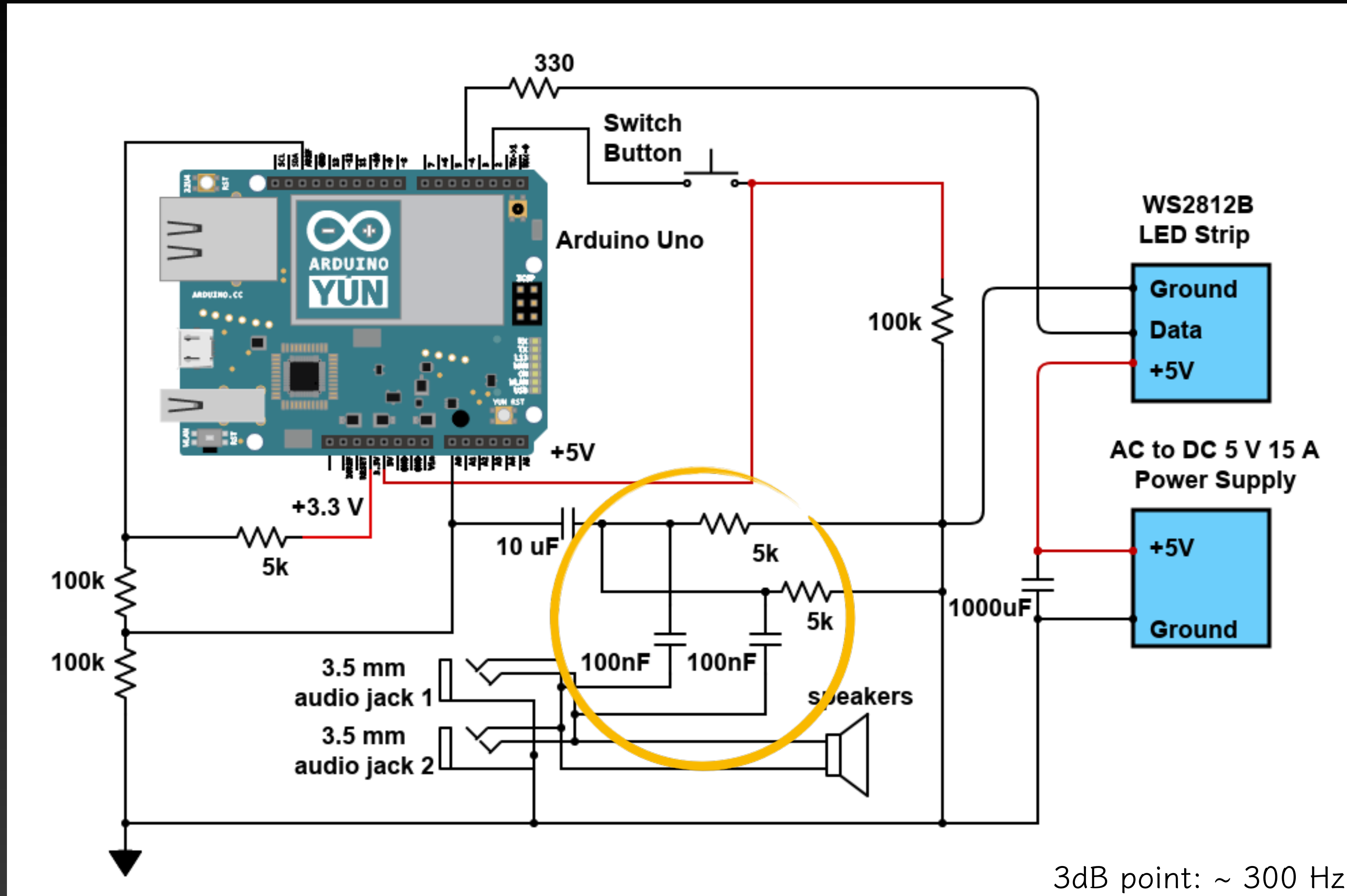
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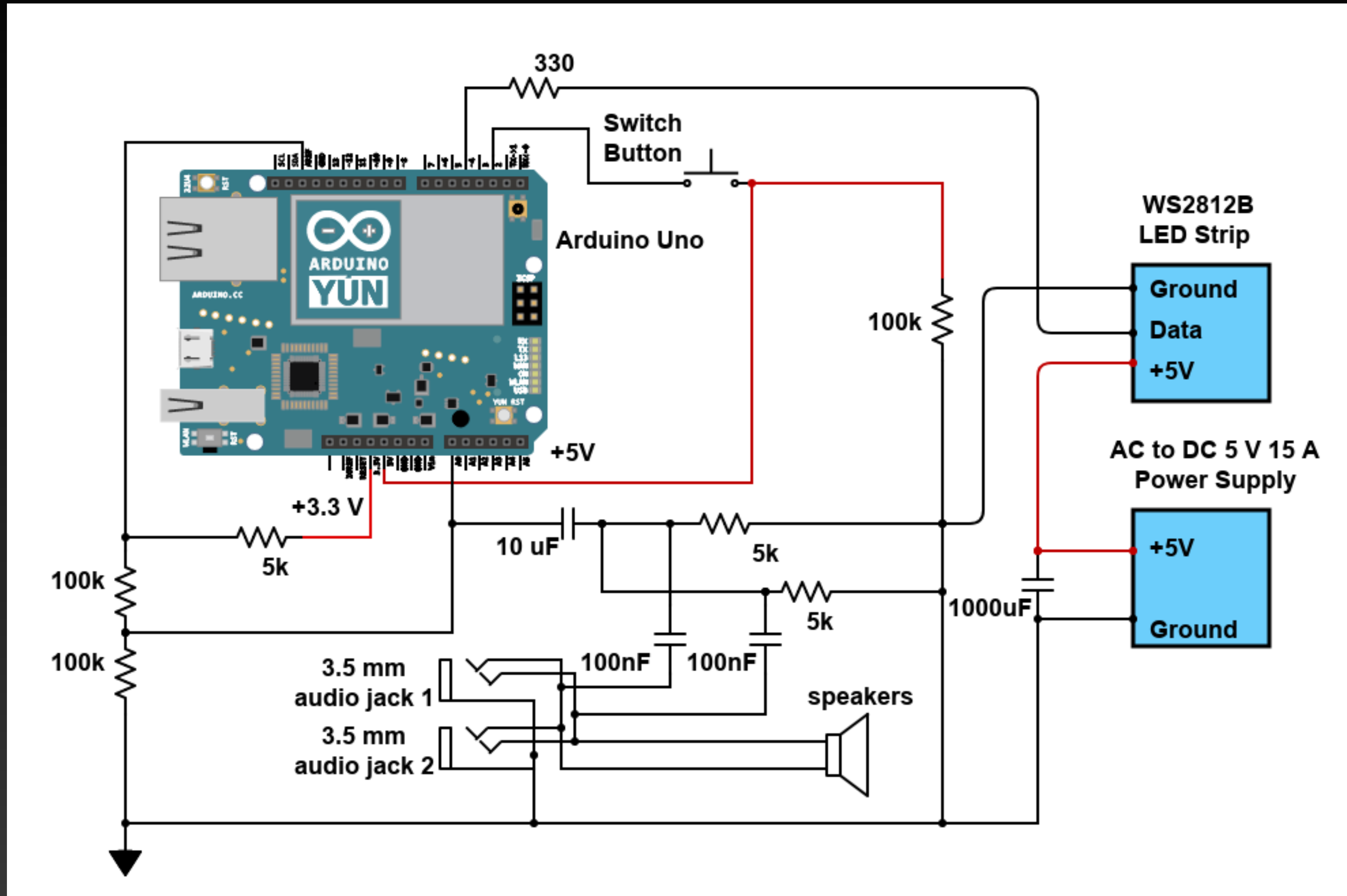
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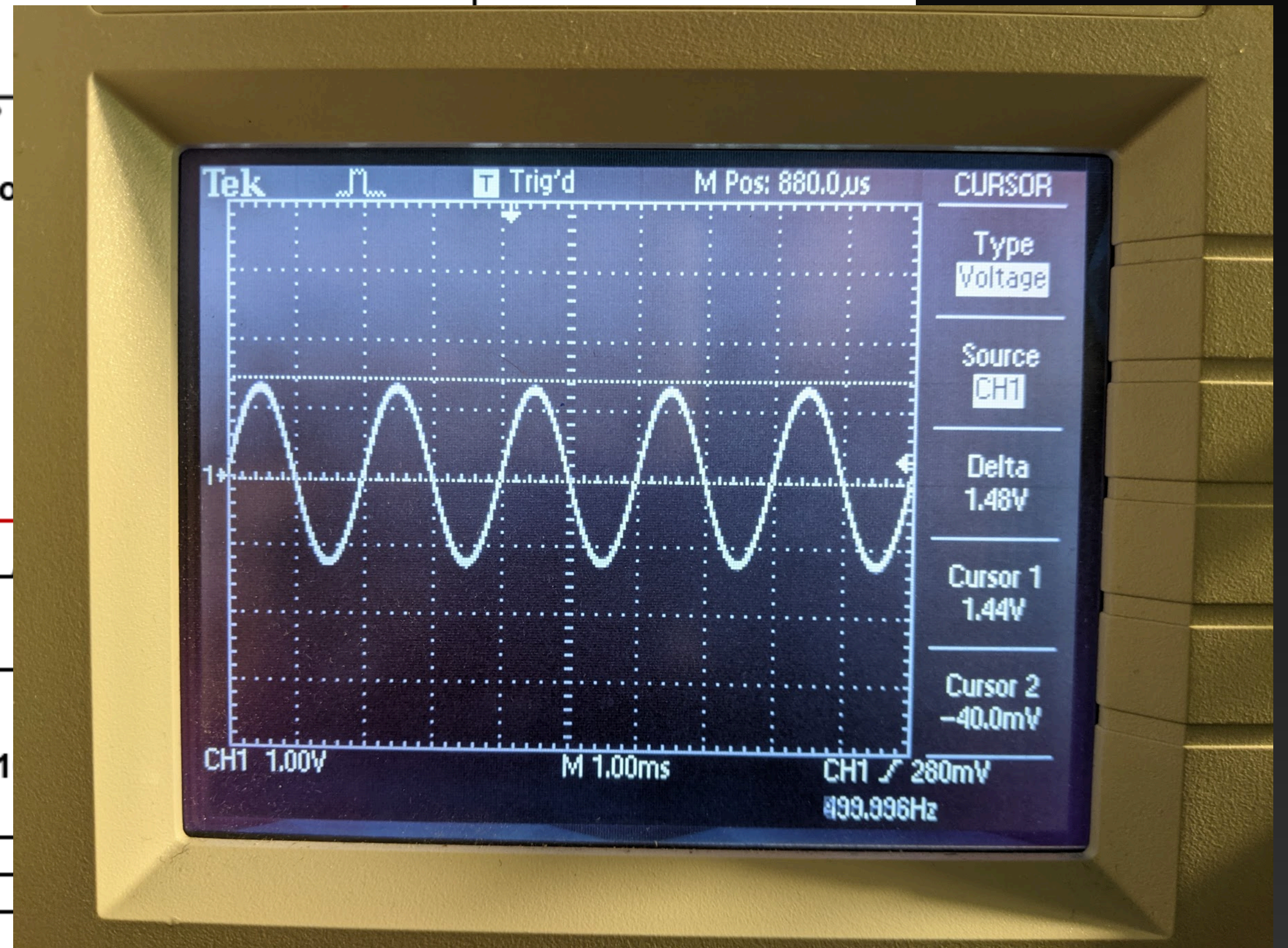
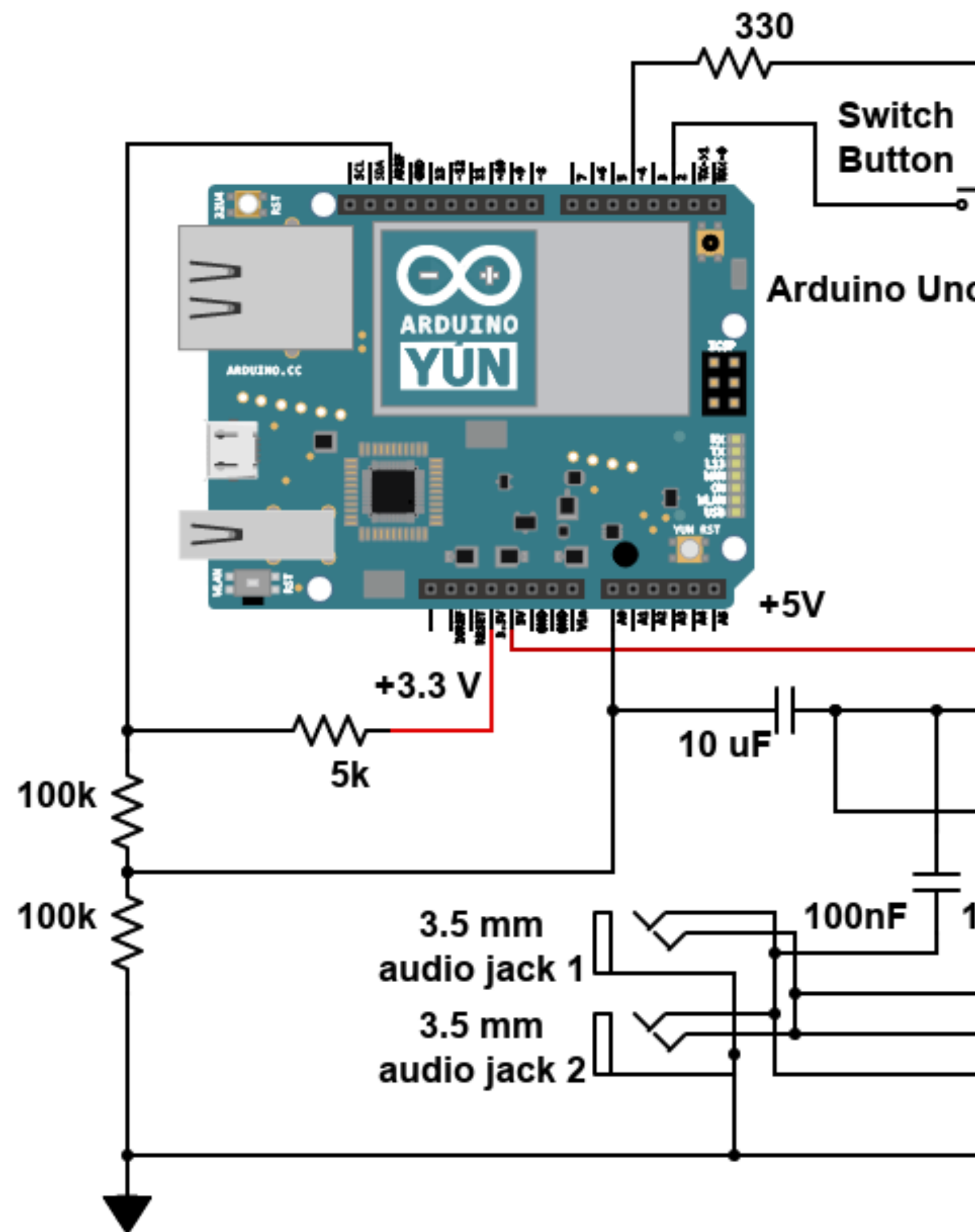
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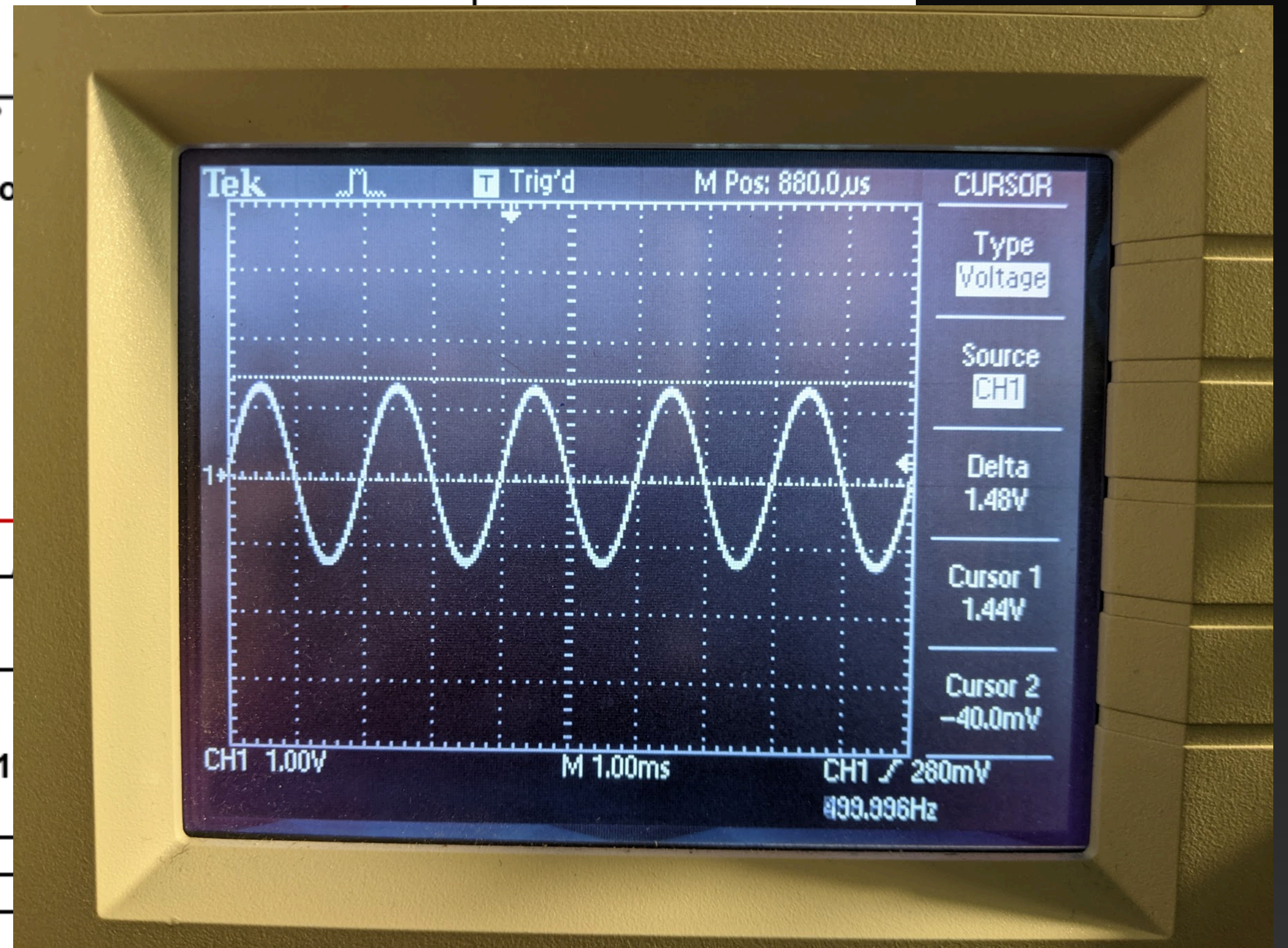
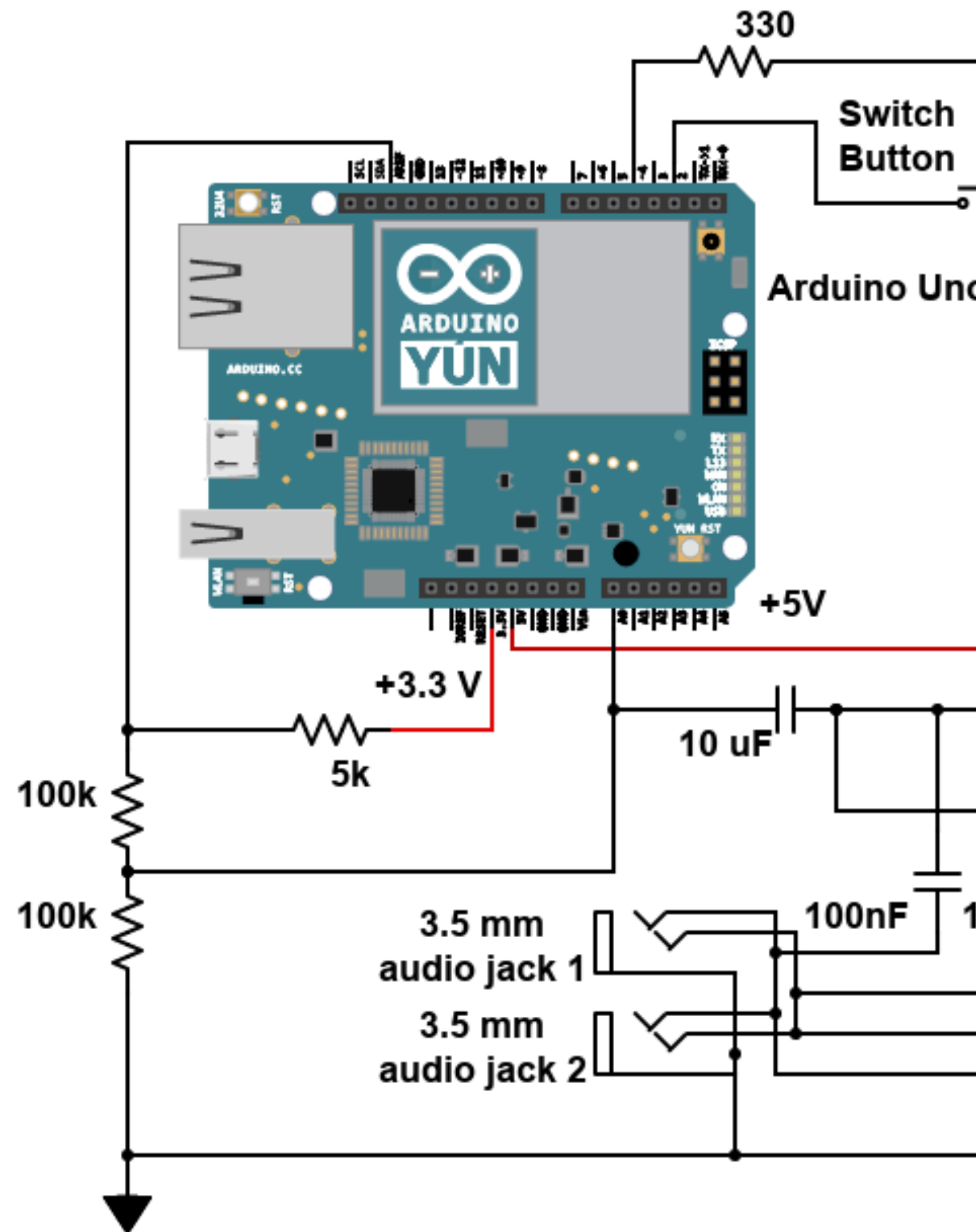
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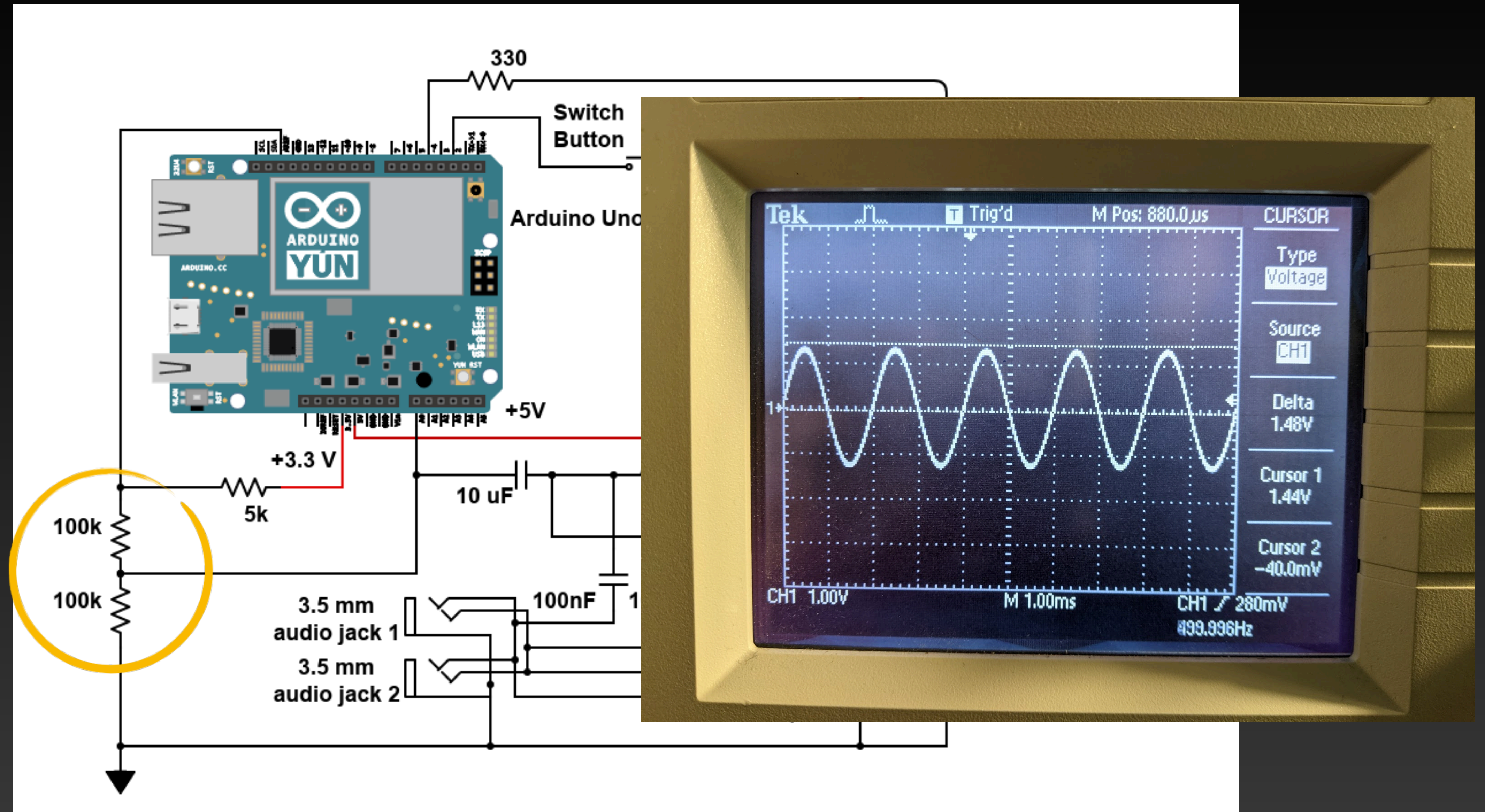
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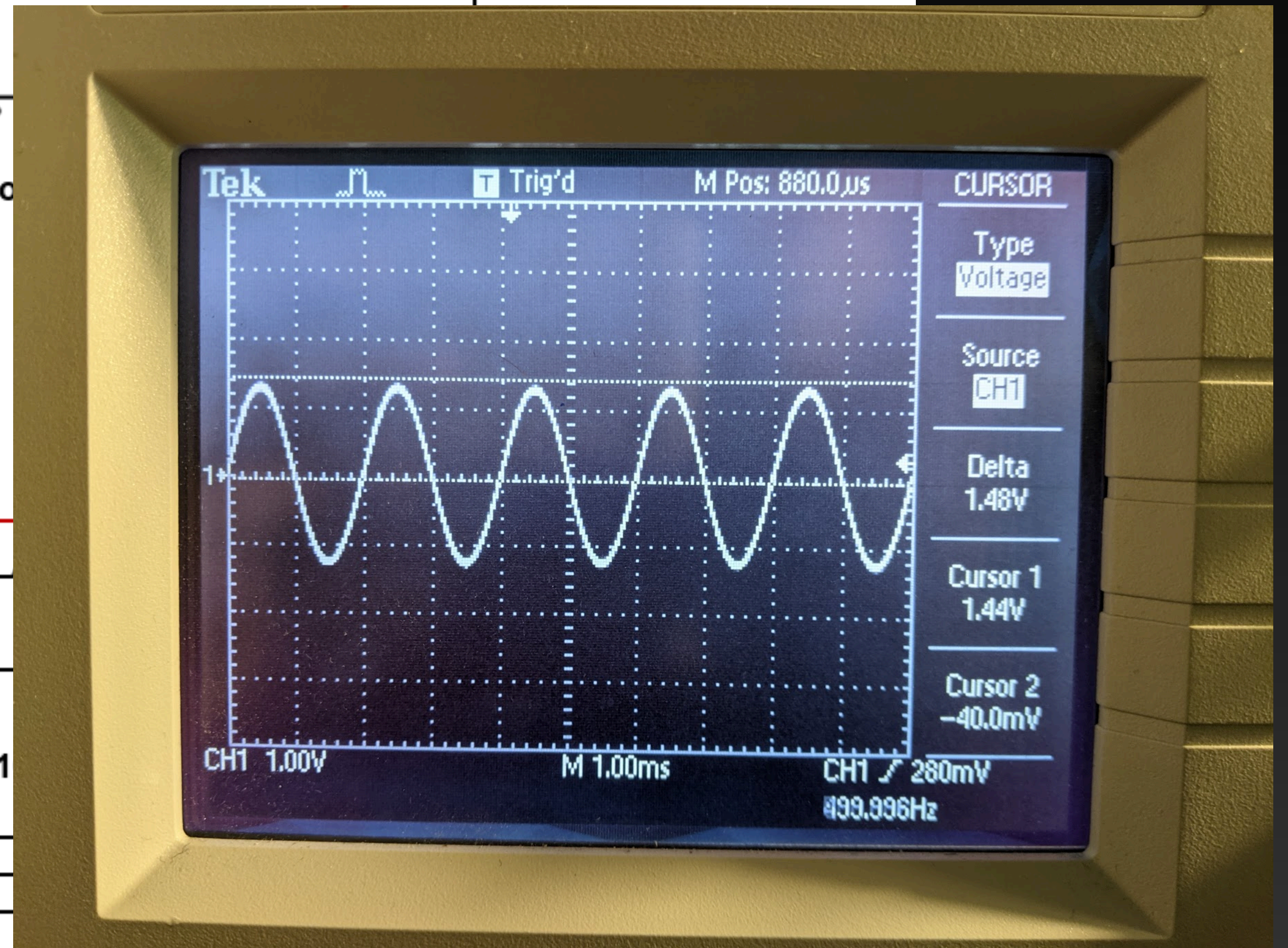
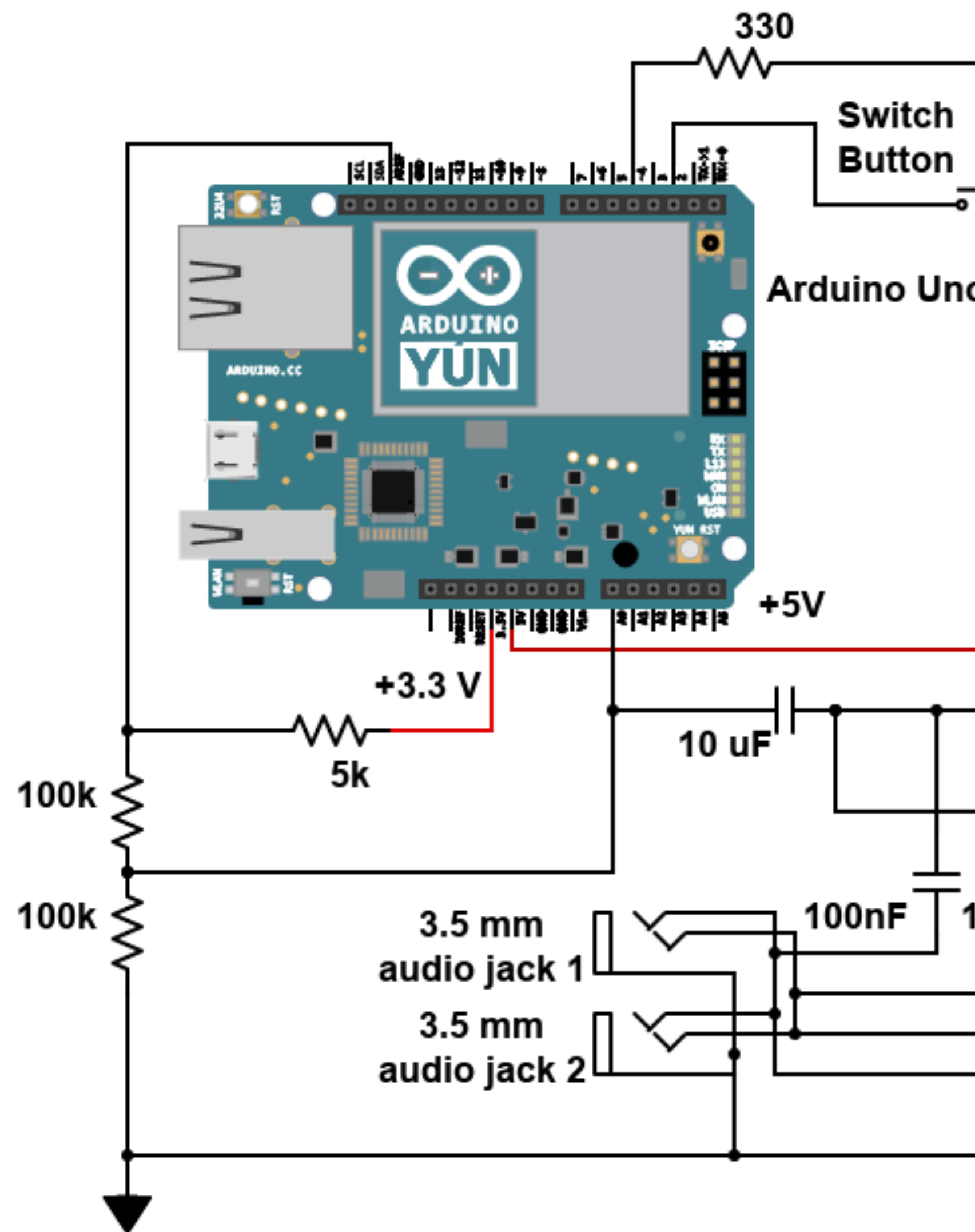
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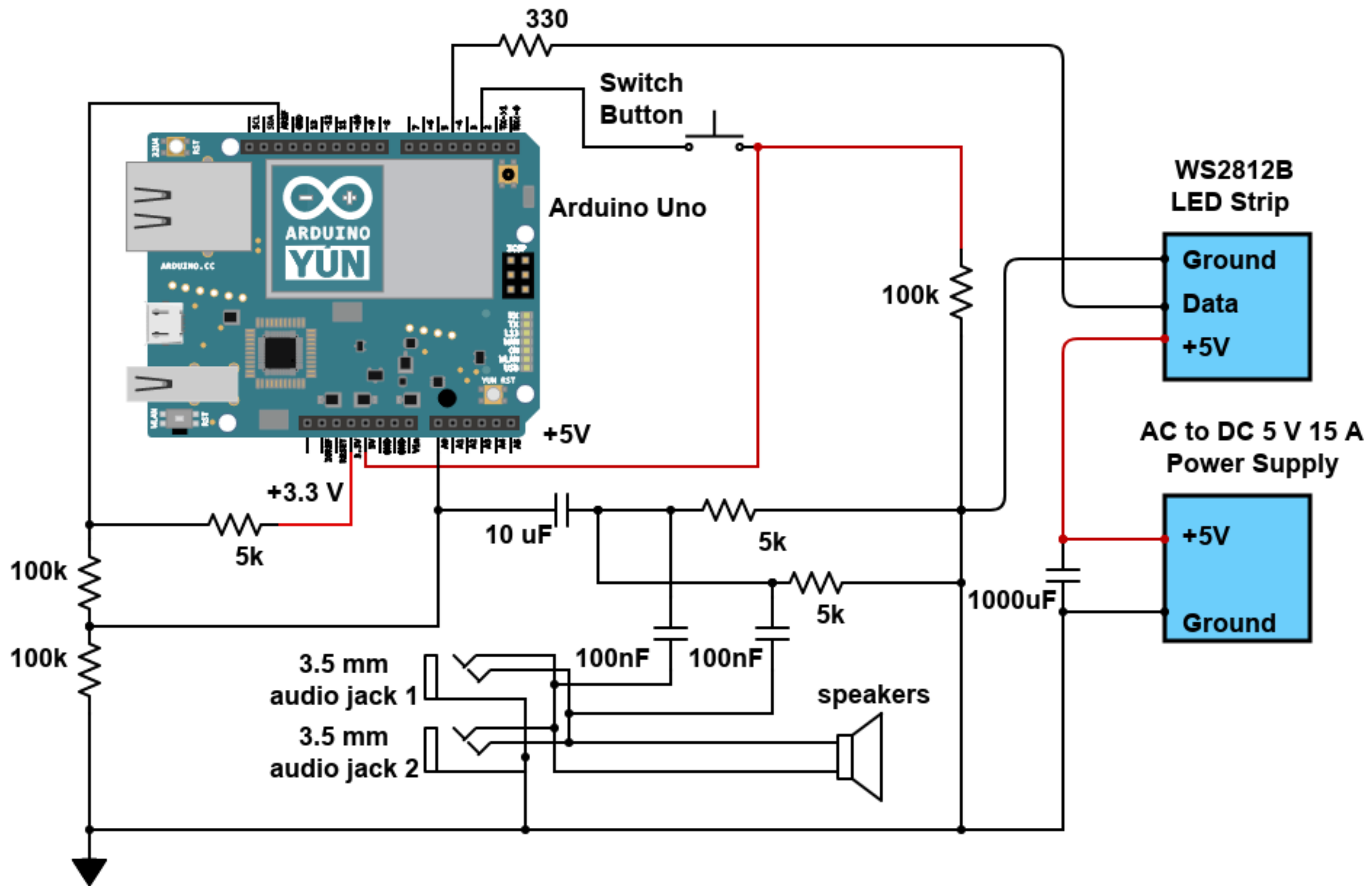
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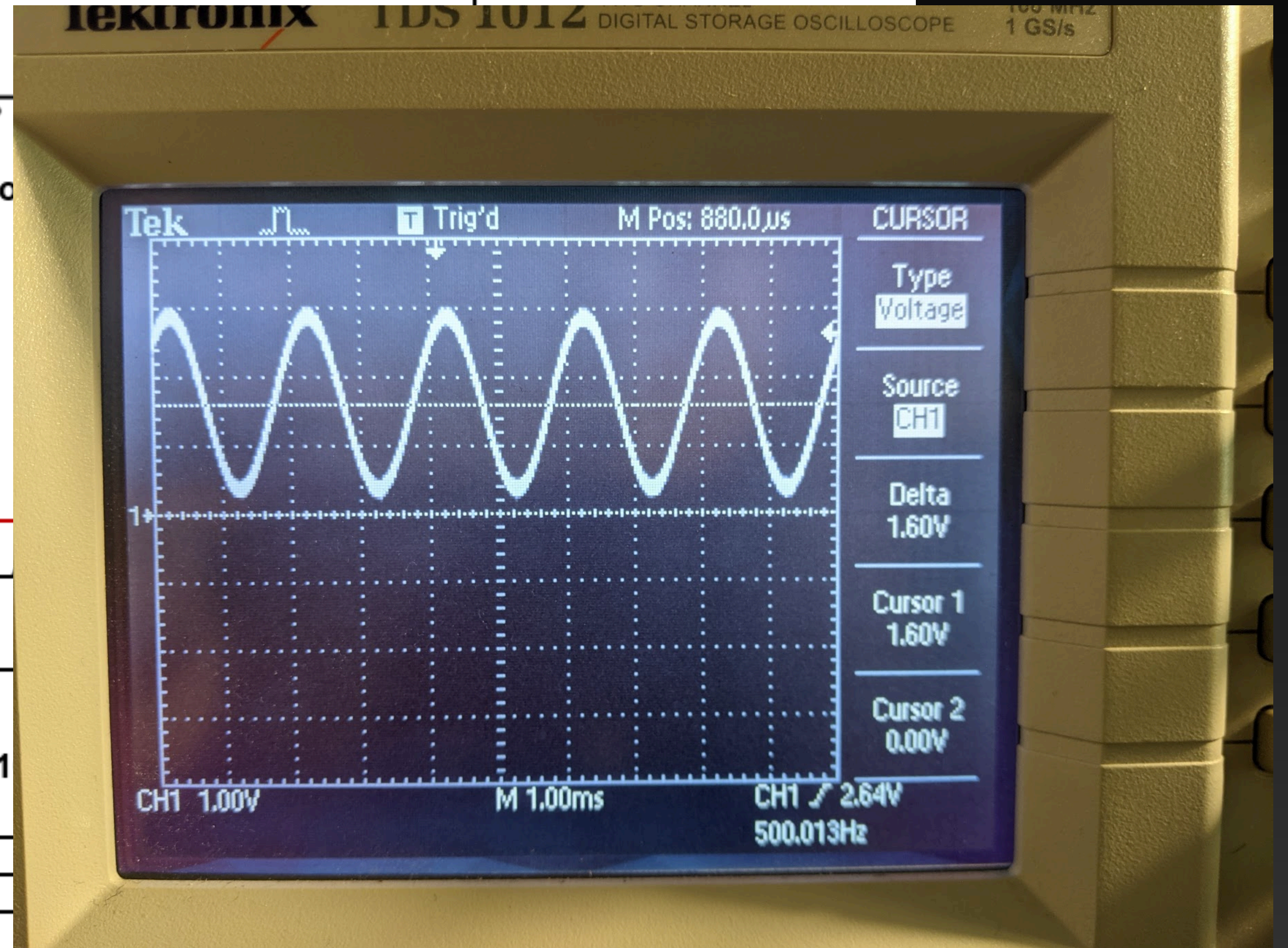
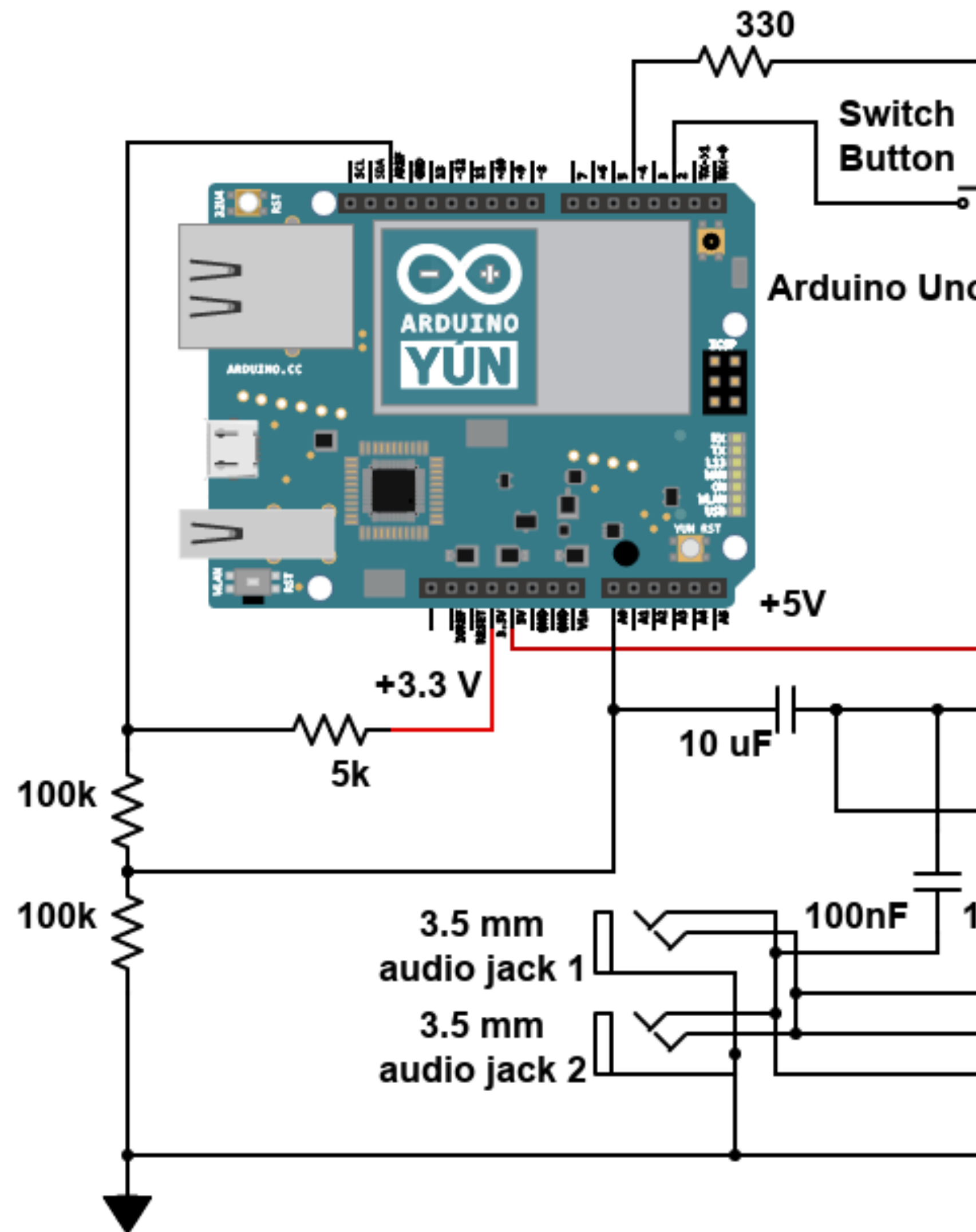
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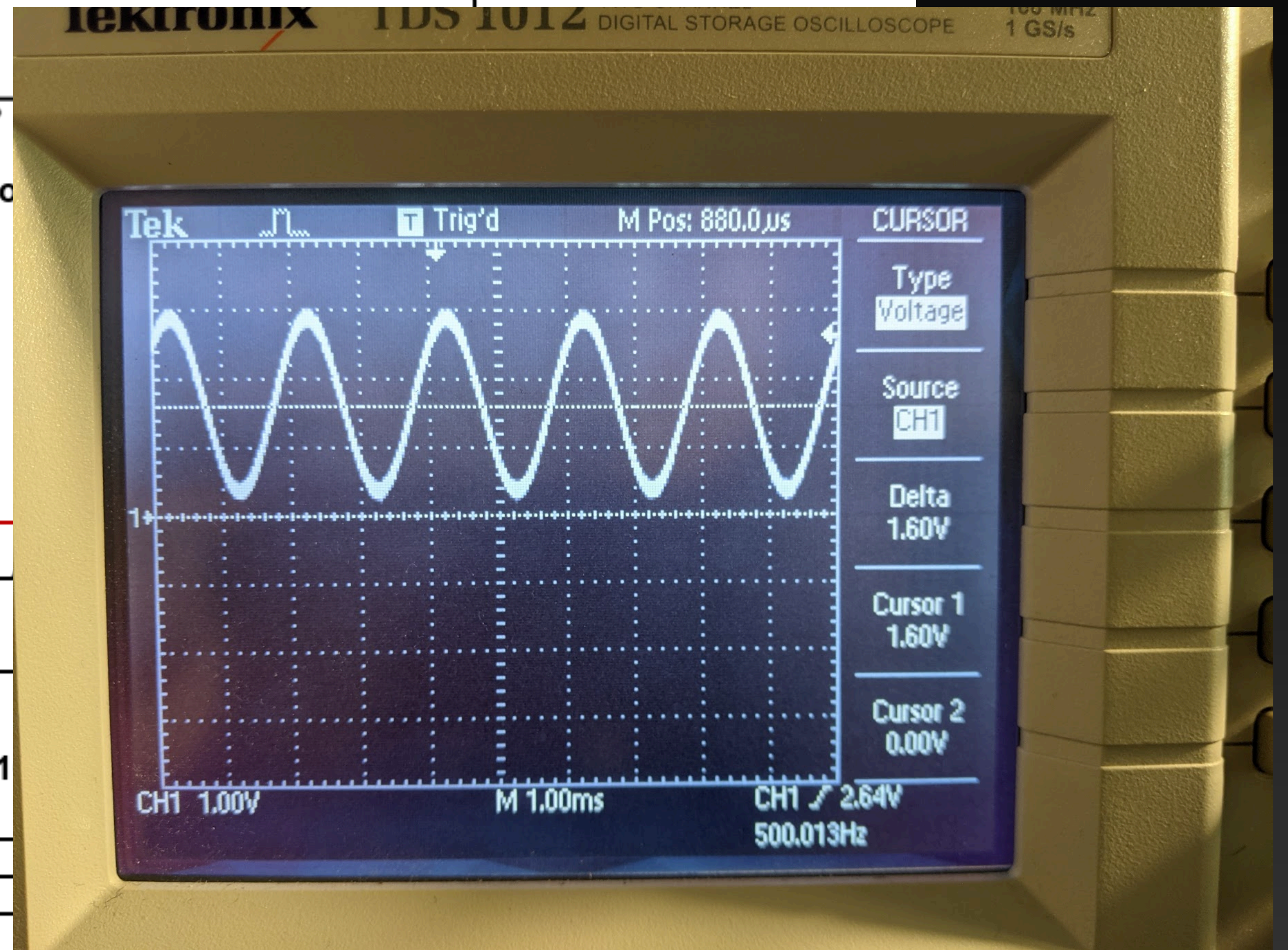
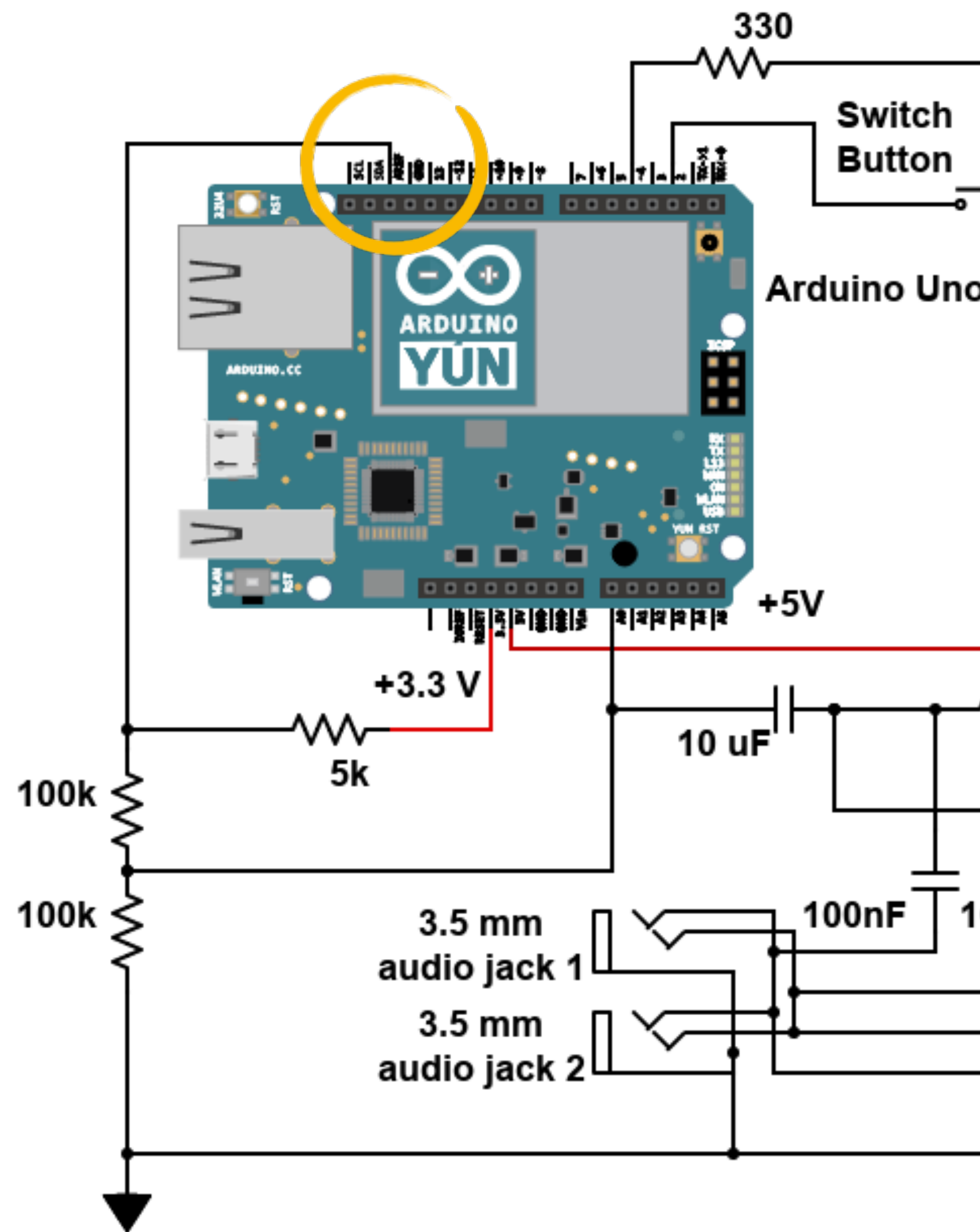
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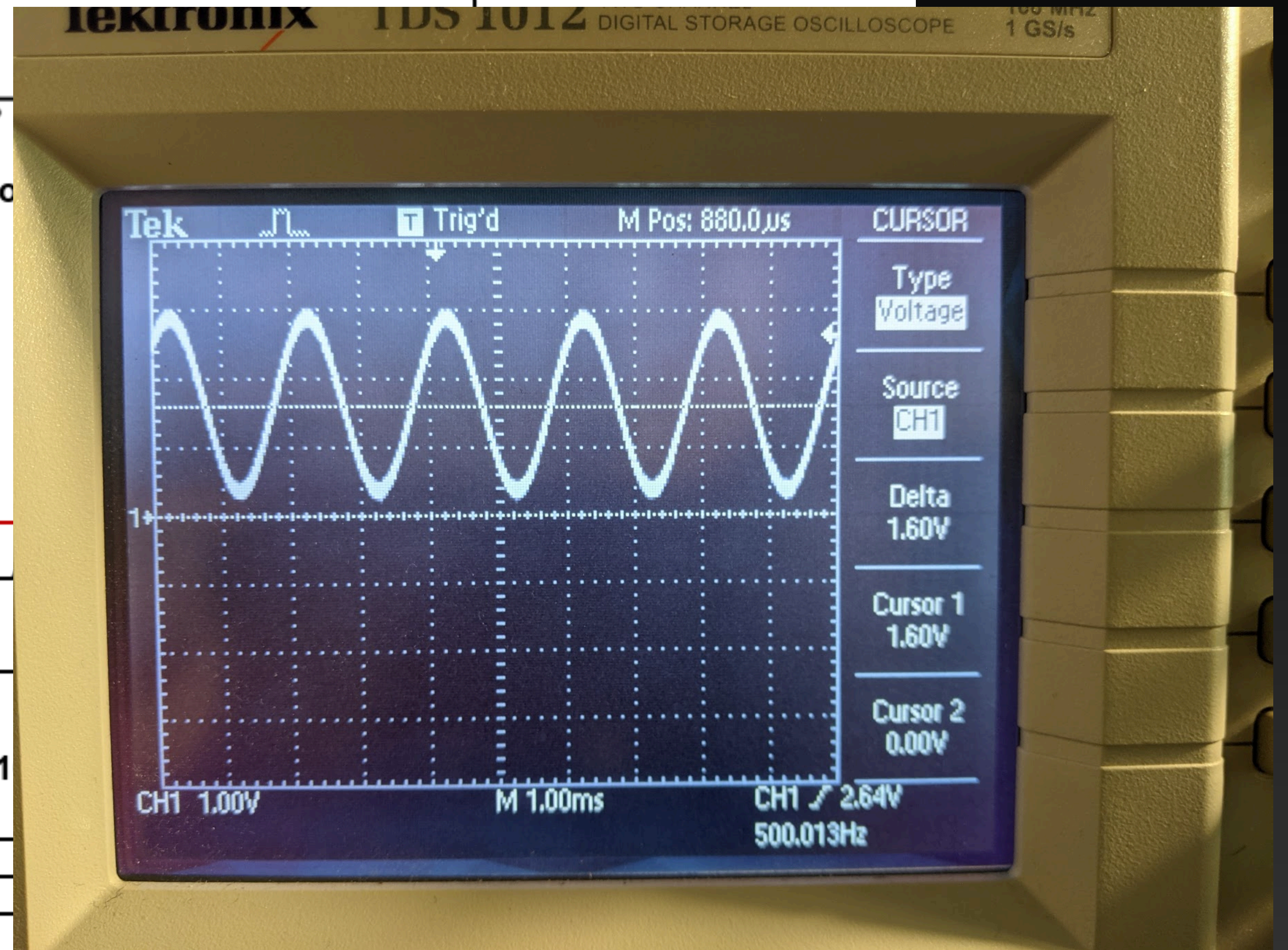
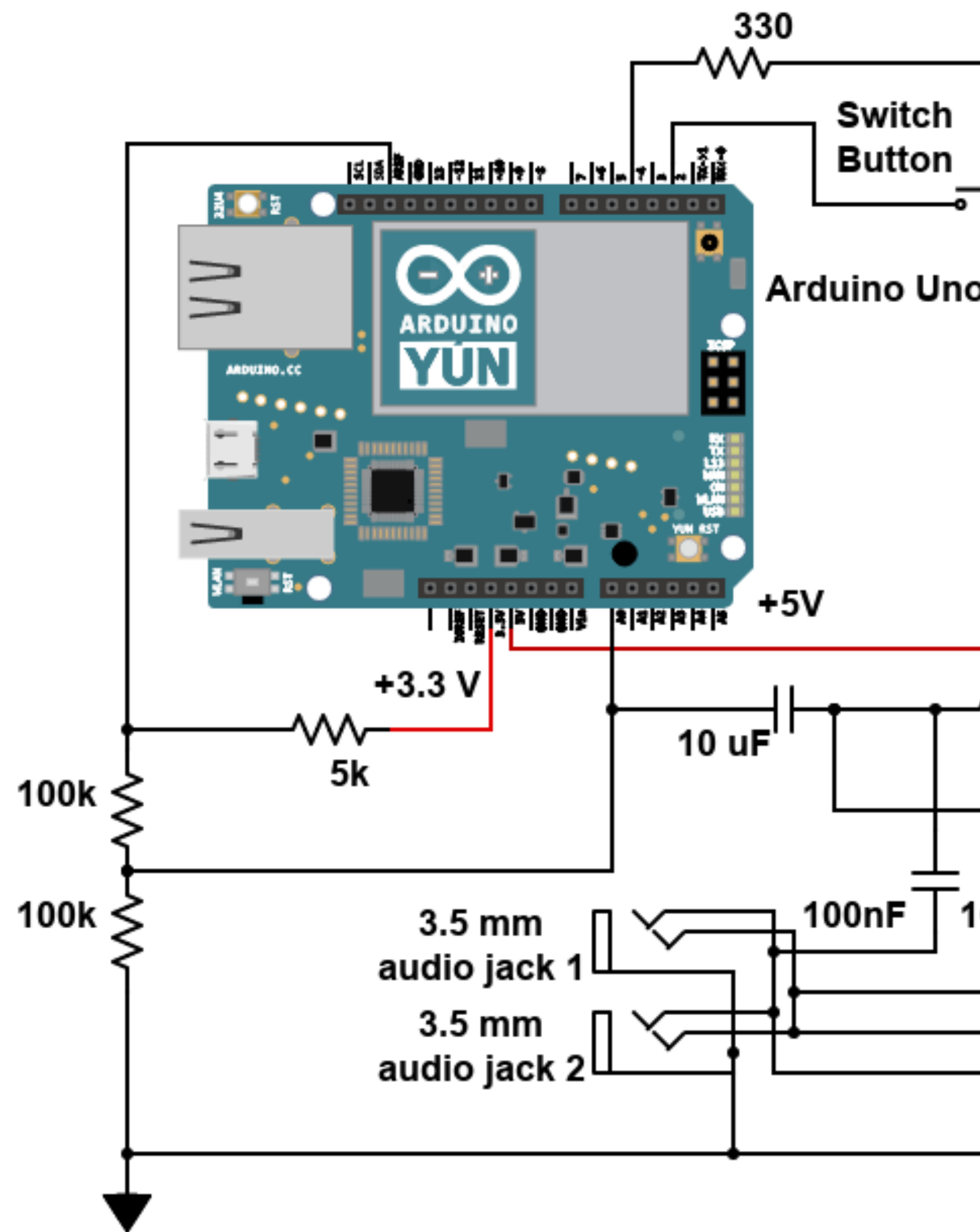
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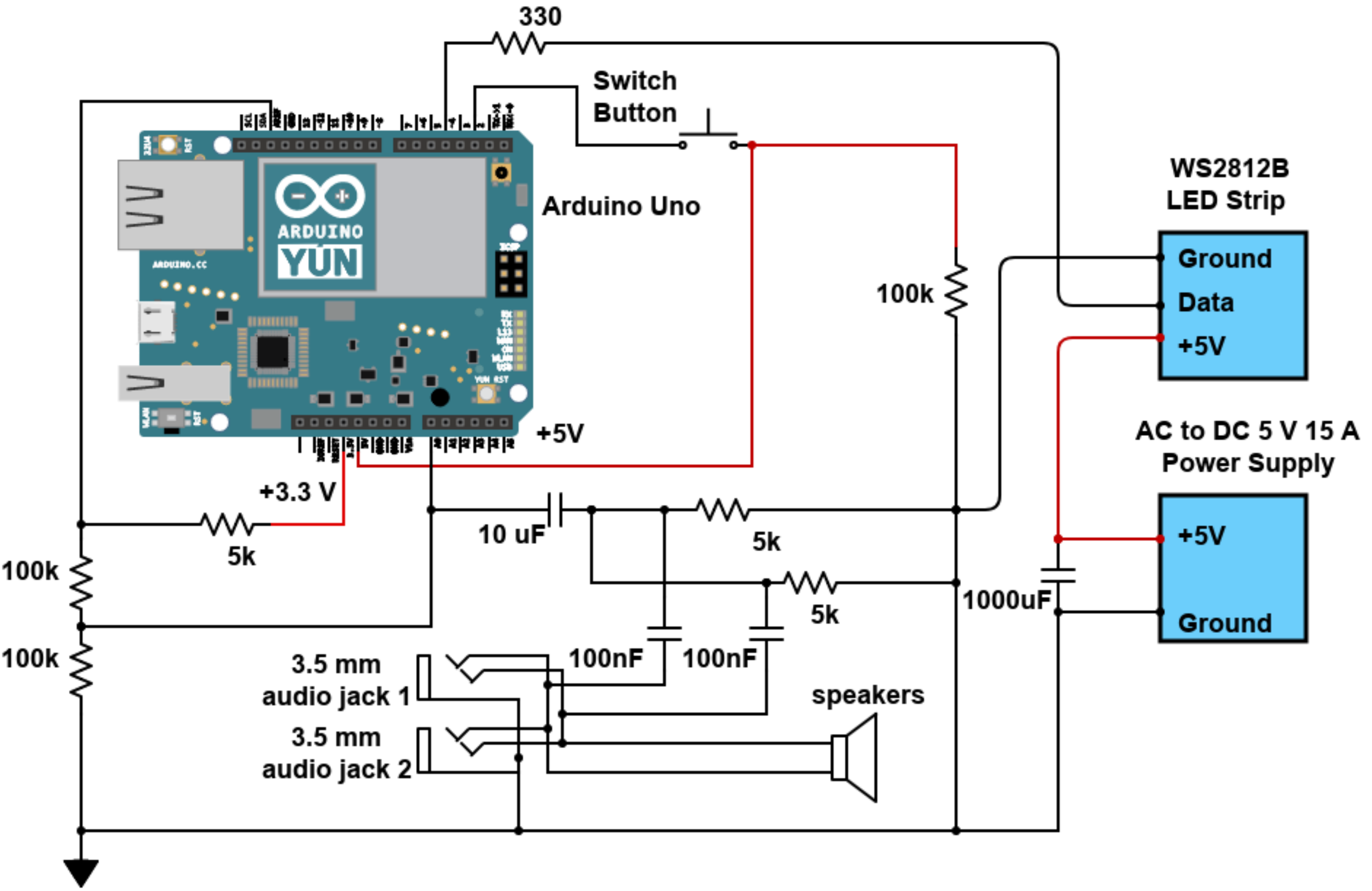
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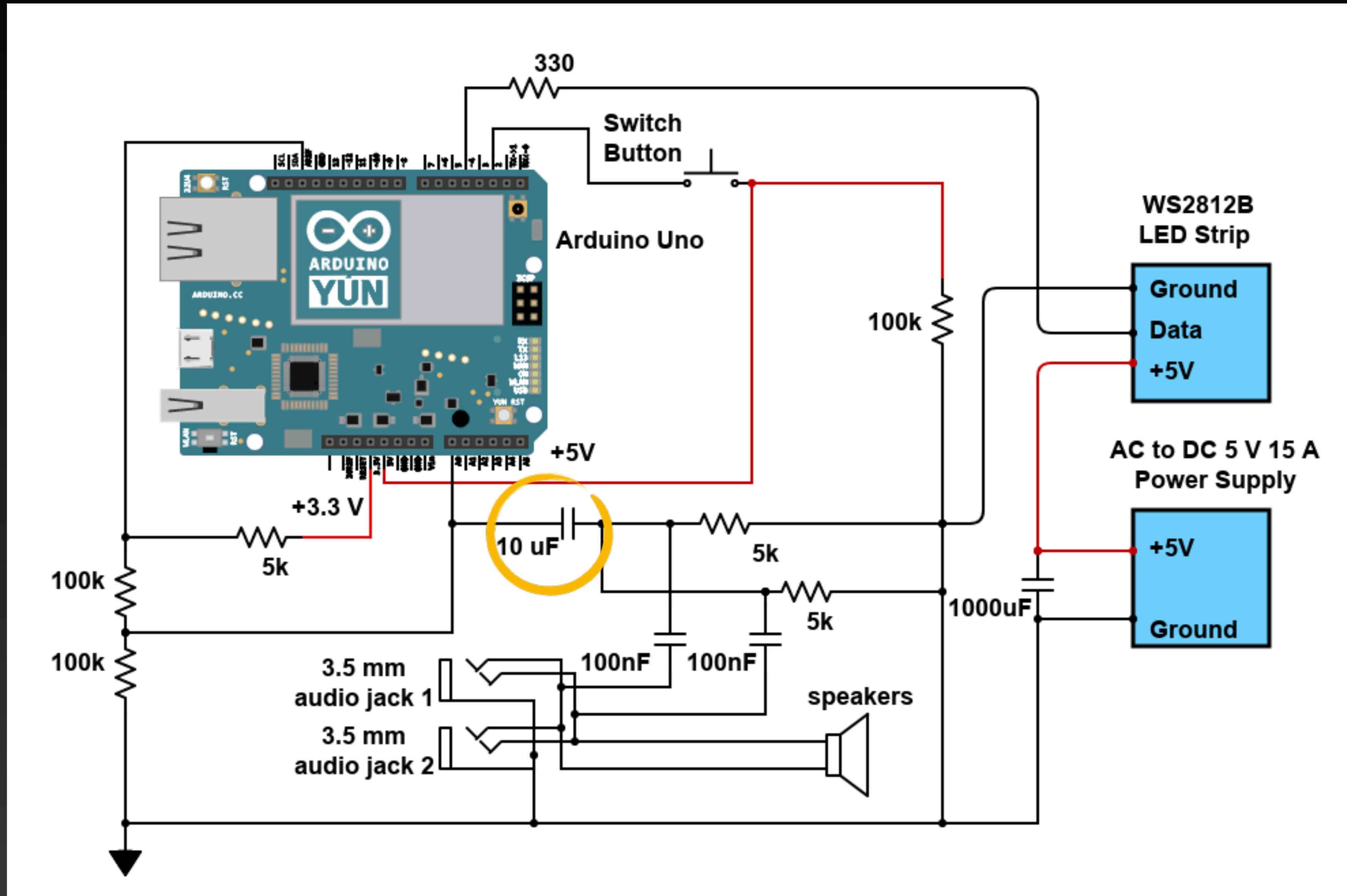
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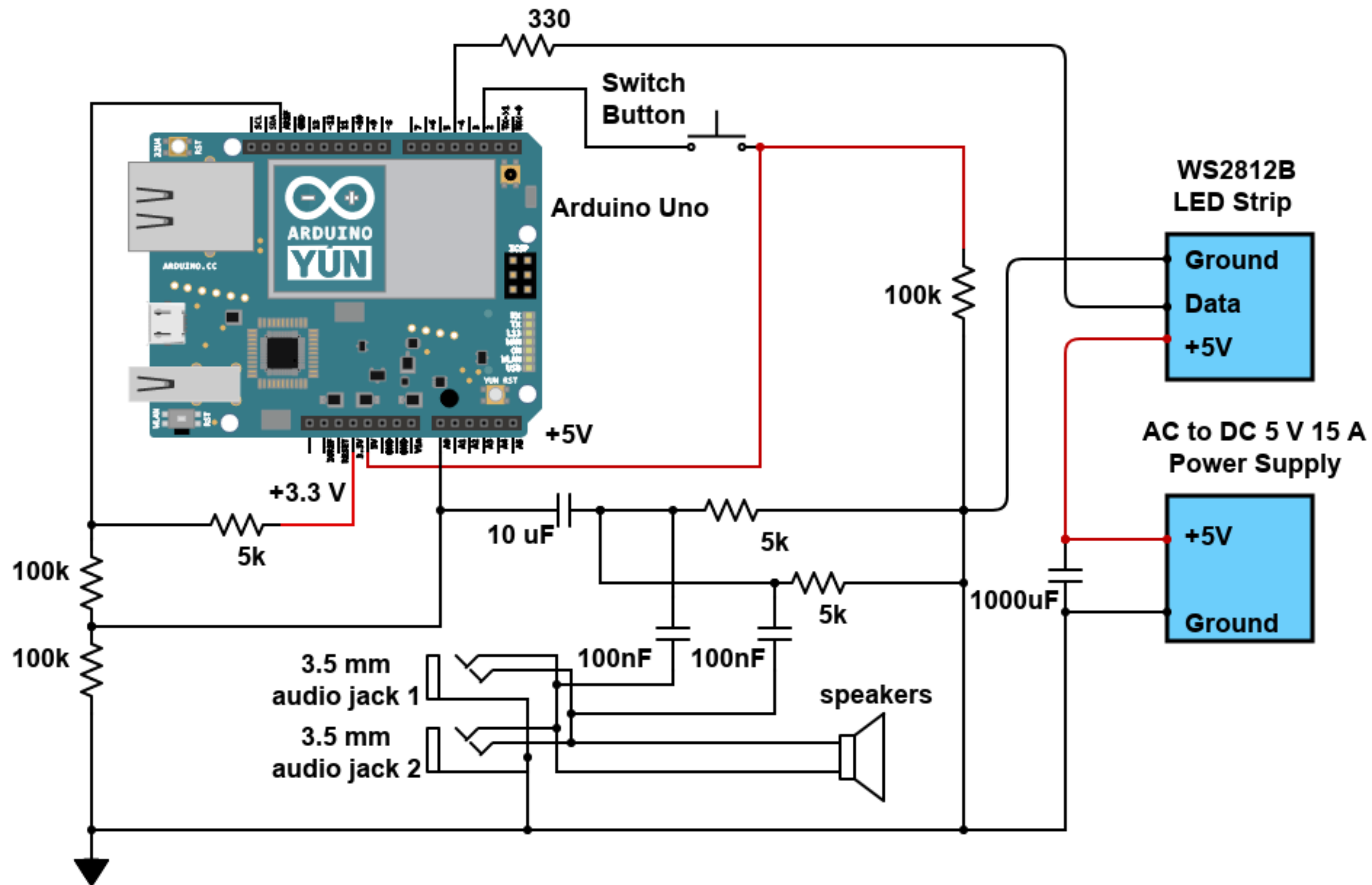
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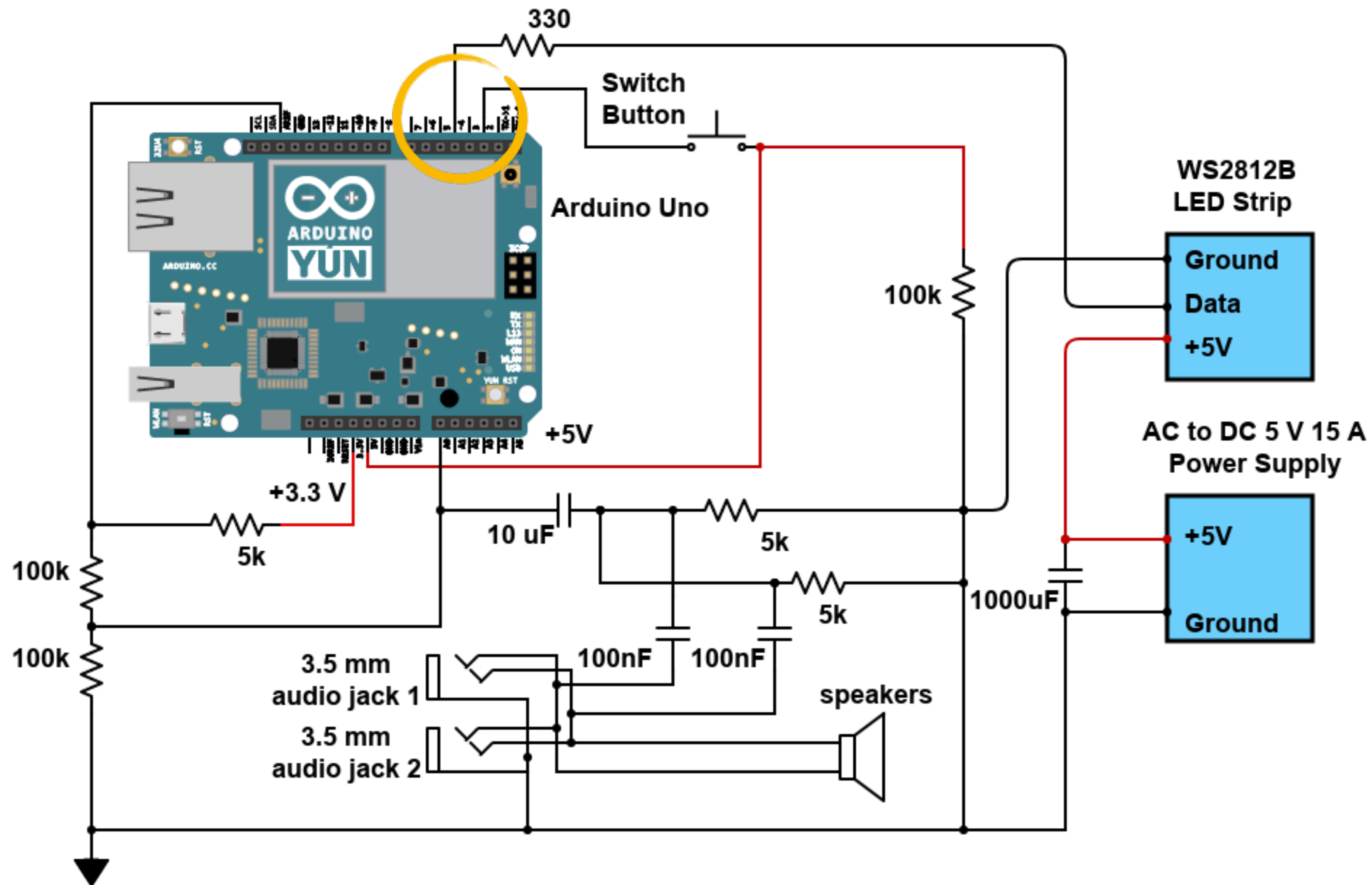
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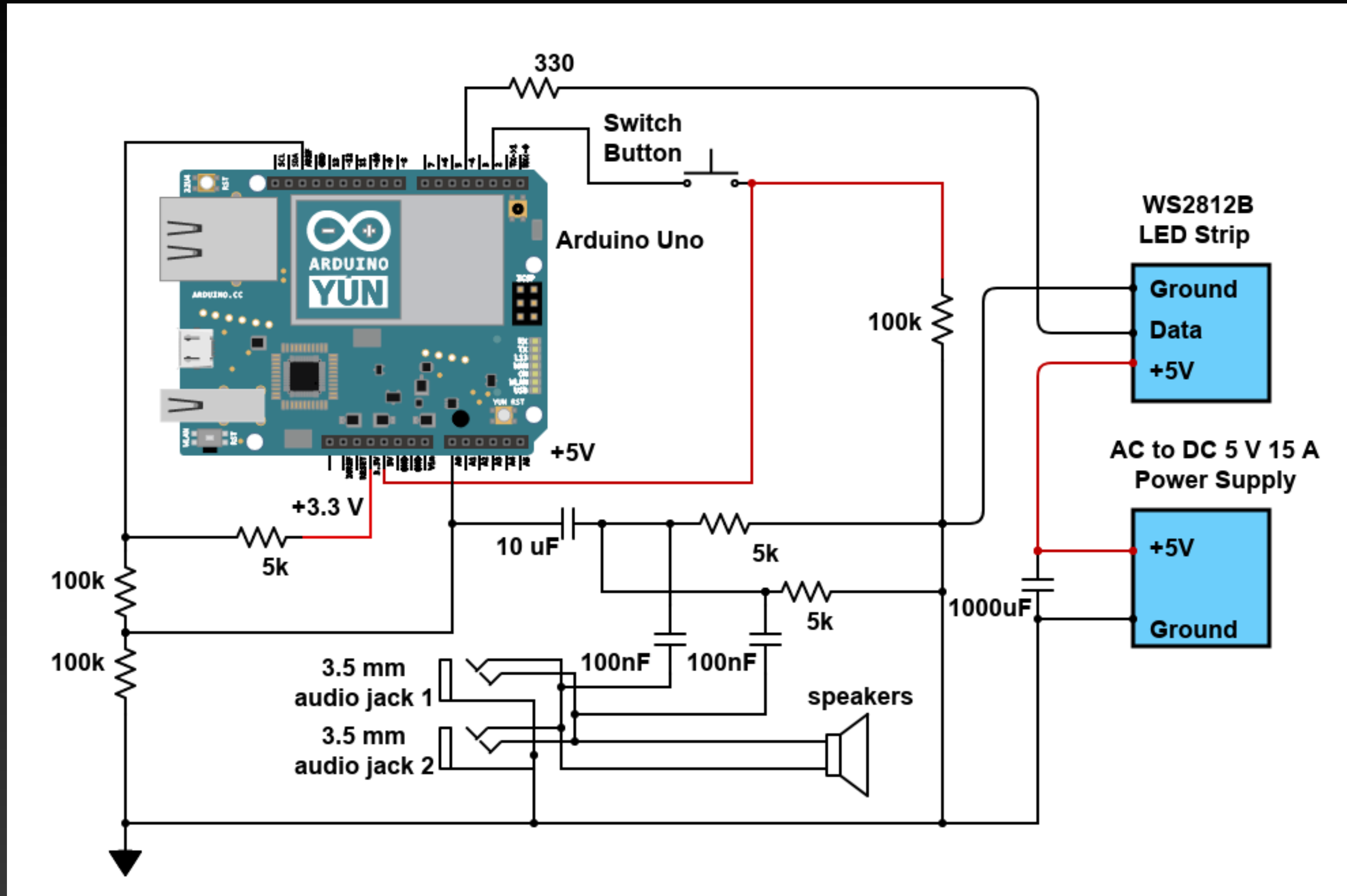
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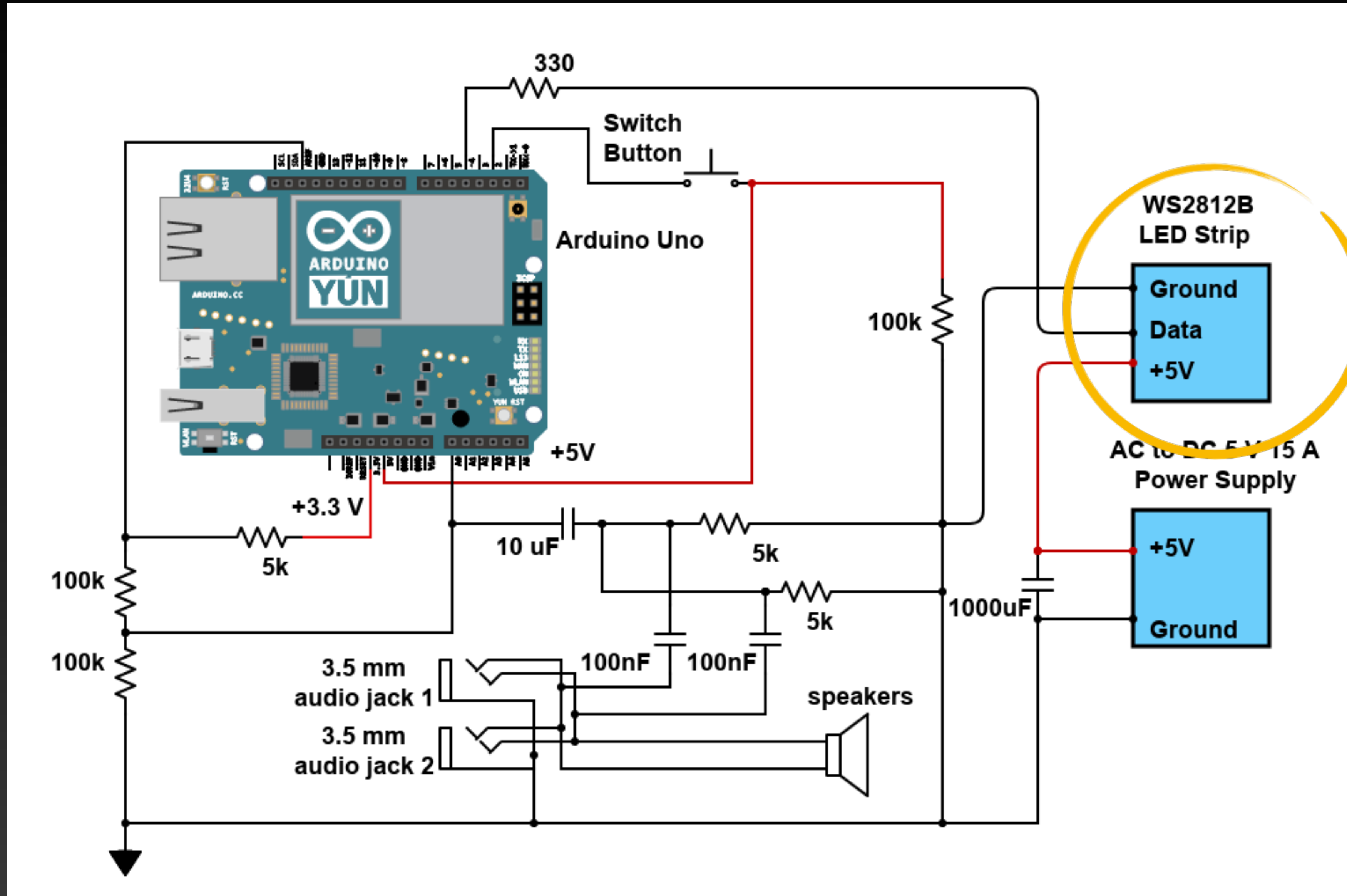
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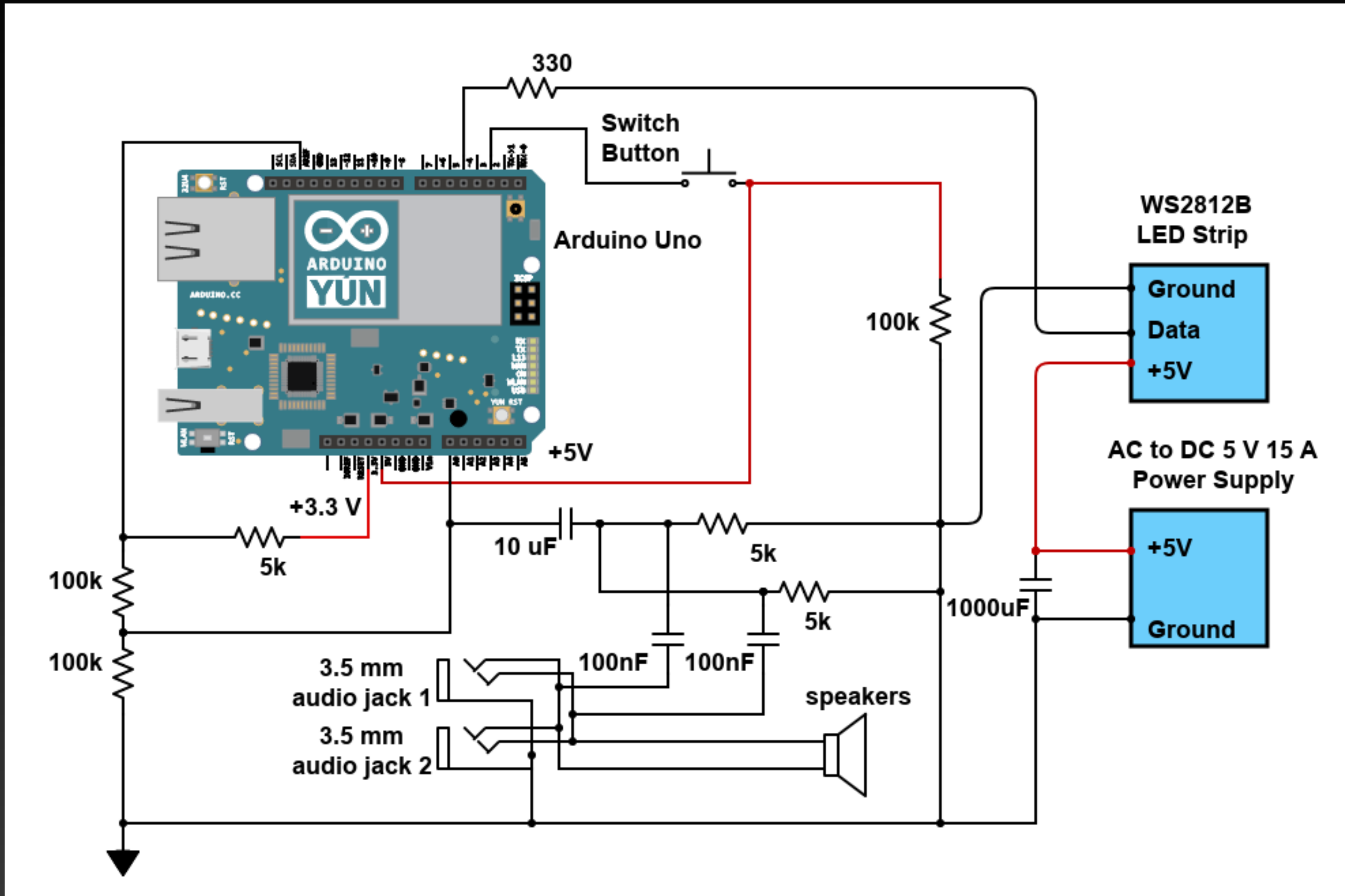
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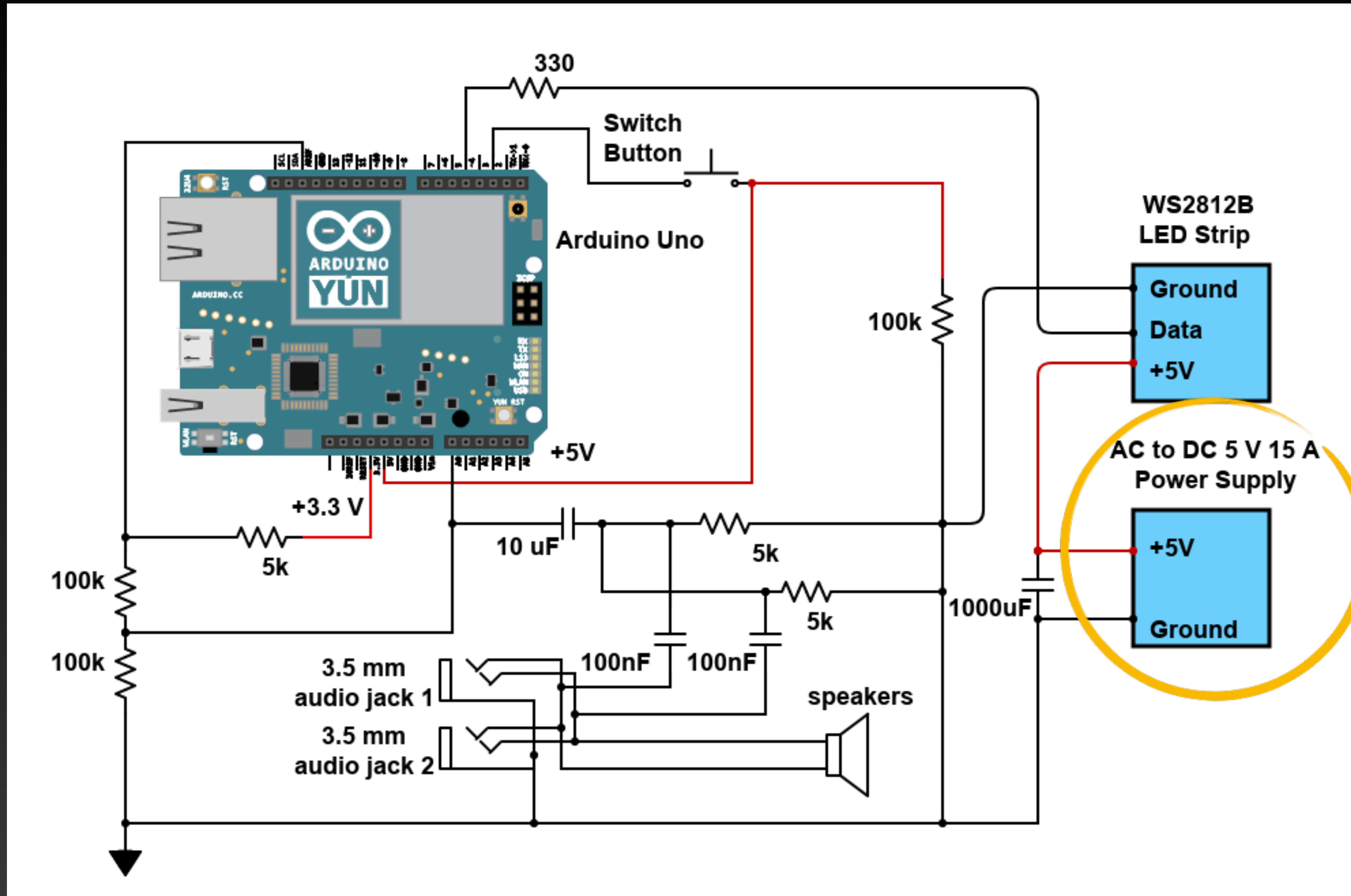
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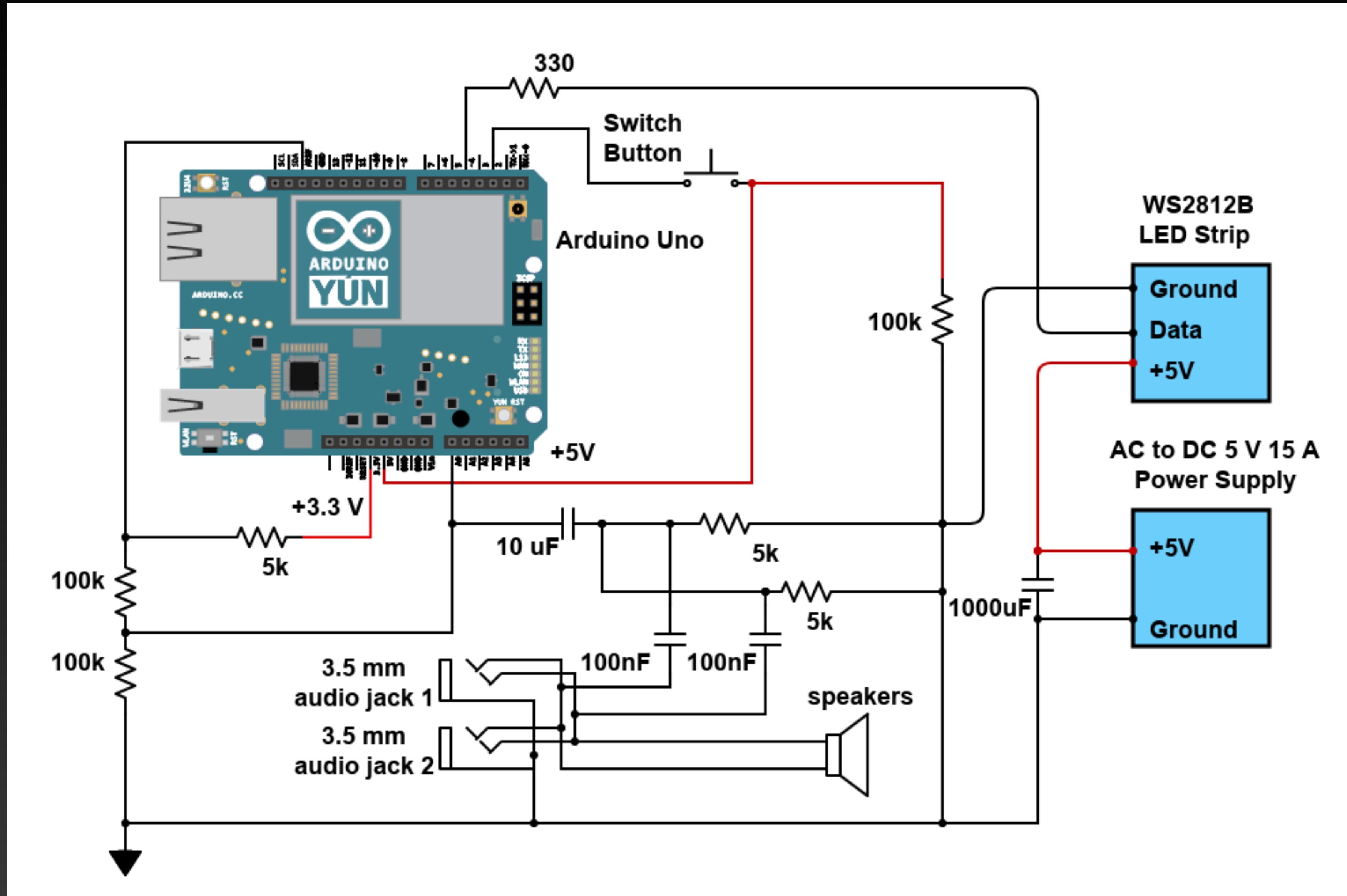
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Frequency Responses

500 Hz



5000 Hz



1000 Hz



10000 Hz



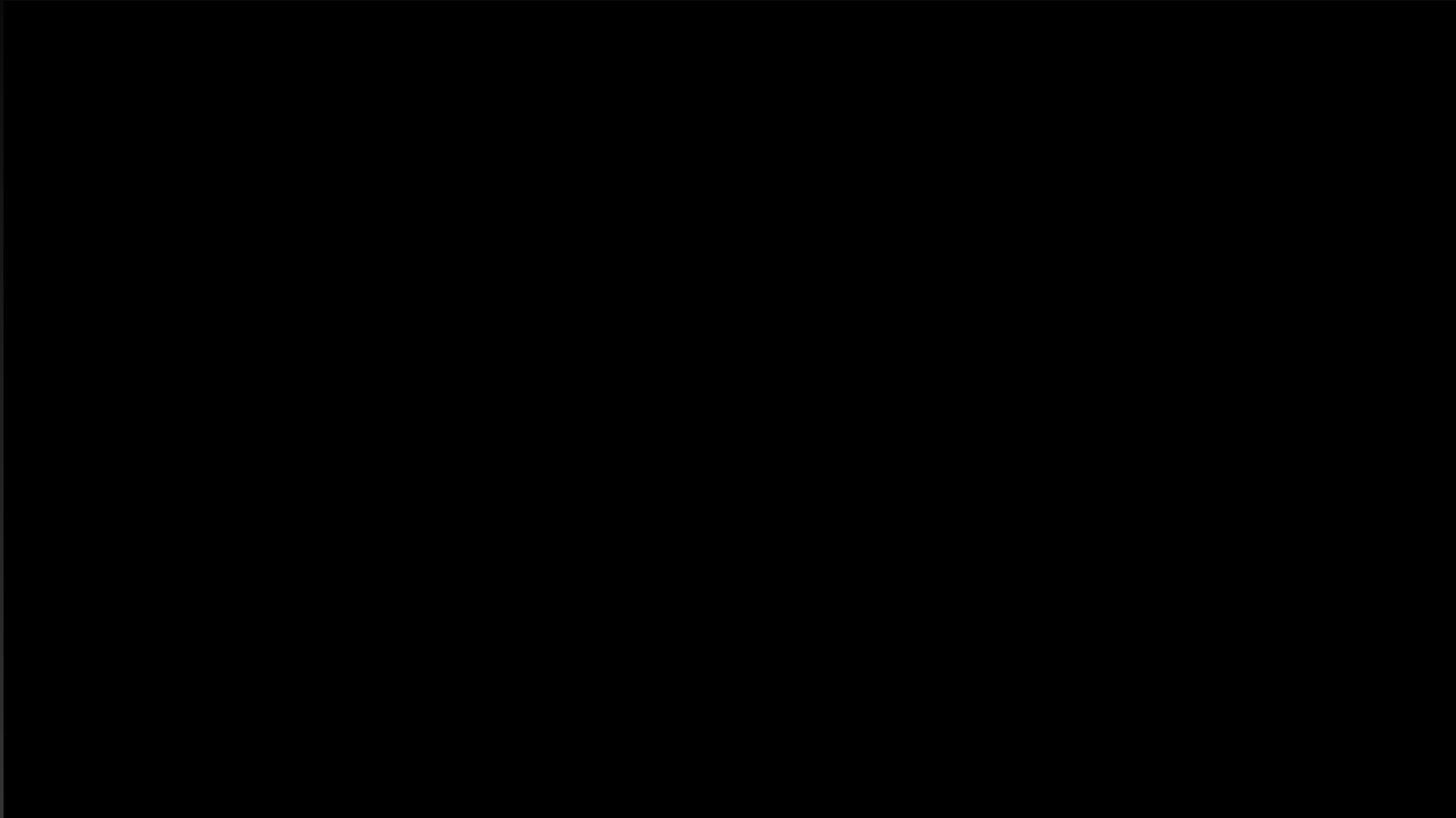
2000 Hz



19000 Hz



Playing Songs



**Thank you
for listening!**

