Operational Amplifier Circuits Prelab

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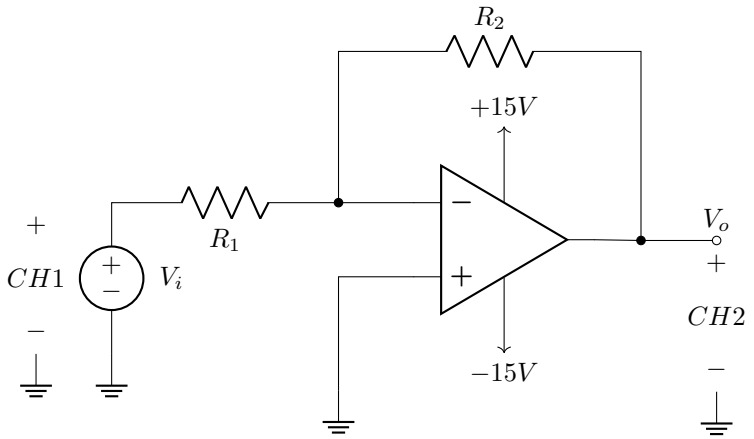
1 Inverting OP-Amp Circuit

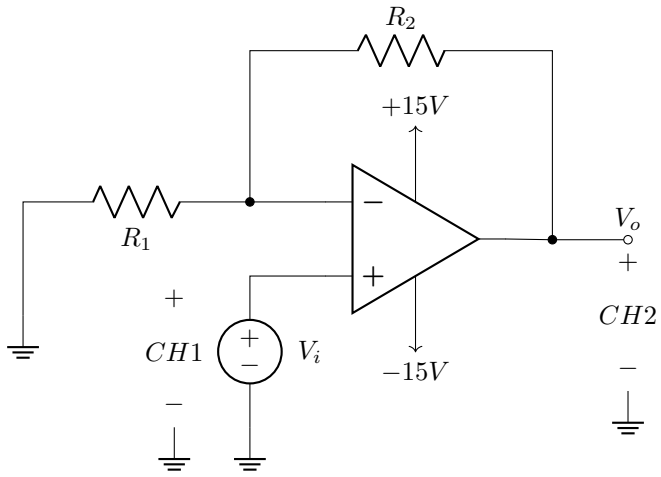
Aim: Measure the output waveforms of Inverting OP-Amp circuits in different frequencies with sinusoidal inputs.
$v_i = 2\sin(2\pi ft)$, $f = 1$ kHz, $R_1 = 1$ kΩ, $R_2 = 2$ kΩ



Procedure:
1. For $f = 1$ kHz, measure the input (CH 1) and output (CH 2) waveforms.
2. Repeat the measurement again in $f = 500 \sim 500$ kHz and make the magnitude Bode plot.
3. From the result, observe whether a phase shift occur in the circuit.

2 Non-Inverting OP-Amp Circuit

Aim: Measure the output waveforms of Non-inverting OP-Amp circuits in different frequencies with sinusoidal inputs.
$v_i = 2\sin(2\pi ft)$, $f = 1$ kHz, $R_1 = 1$ kΩ, $R_2 = 2$ kΩ



Procedure:
1. For $f = 1$ kHz, measure the input (CH 1) and output (CH 2) waveforms.
2. Repeat the measurement again in $f = 500 \sim 500$ kHz and make the magnitude Bode plot.
3. From the result, observe whether a phase shift occur in the circuit.