

Experiment 6

Op-Amp
Circuits I

In-Lab Report

Inverting Amplifier

Question 1:

Why is a low input impedance considered a disadvantage?

| R_1 (K Ω)/ measured | R_2 (K Ω)/ measured | v_o (In V) (peak-to-peak) | v_o (in degrees) (phase) | Bandwidth |
|----------------------------------|----------------------------------|--------------------------------|-------------------------------|-----------|
| 1 / | 10 / | | | |
| 2.2 / | 10 / | | | |
| 4.7 / | 10 / | | | |
| 2.2 / | 22 / | | | |
| 4.7 / | 22 / | | | |
| 10 / | 22 / | | | |

Table A-1

Question 4:

Can you find a relationship between low-frequency gain and bandwidth?

Non-Inverting Amplifier

Questions 1&2:


| R_1 (K Ω)/ measured | R_2 (K Ω)/ measured | v_o (In V) (peak-to-peak) | v_o (in degrees) (phase) | Bandwidth |
|----------------------------------|----------------------------------|--------------------------------|-------------------------------|---|
| 1 / | 2.2 / | | |  |
| 1 / | 4.7 / | | | |
| 4.7 / | 10 / | | | |
| 2.2 / | 10 / | | | |
| 10 / | 22 / | | | |

Table B-1

Unity Gain Non-Inverting Amplifier

Question

1&2:

| | |
|-----------------|--|
| frequency f_o | |
| Bandwidth | |

Question 3:

How does this bandwidth compare with that of the non-inverting amplifier?