THE UNIVERSITY OF TEXAS AT ARLINGTON

COMPUTER SCIENCE AND ENGINEERIG

LABORATORY 2 REPORT

ELECTRONICS LABORATORY

Submitted toward the partial completion of the requirements for CSE 3323-002

Submitted by,

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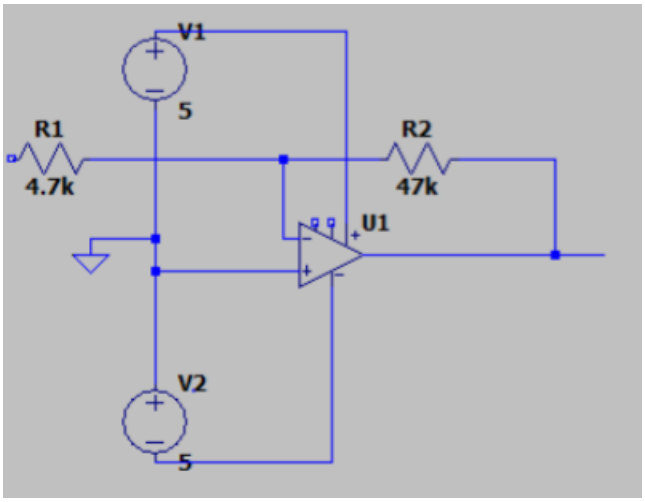
Lab 2: Op Amp

Part 1:

Inverting Amp

Circuit Diagram:



Findings:

F (kHz)	Vin (V)	Vout (V)	Gain (dB)
1	0.098	1	20.17548
2	0.098	1	20.17548
5	0.099	1	20.0873
10	0.1	1	20
15	0.1	1	20
17	0.1	0.984	19.8599
18	0.1	0.984	19.8599
19	0.1	0.984	19.8599
20	0.1	0.983	19.85107
40	0.1	0.8	18.0618
50	0.1	0.823	18.308
100	0.1	0.552	14.83878
200	0.1	0.3	9.542425
500	0.1	0.12	1.583625

At what input does the output distort?

The output distorts at around 17-20 kHz input frequency.

Use the FFT mode on scope to observe the spectrum when this distortion happens.

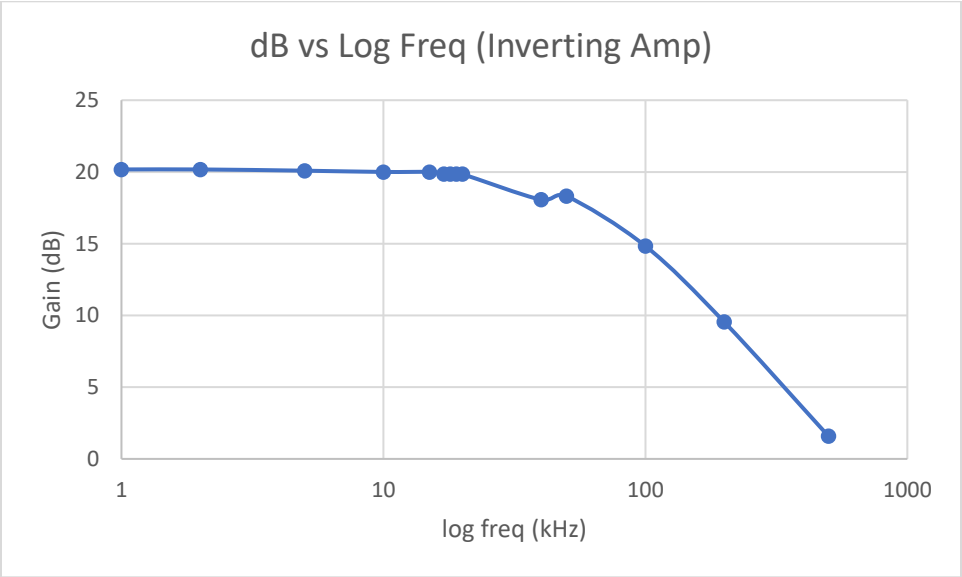
	dBV RMS
H1	4.6
H3	-30
H5	-37
H7	-57

H3 relative to H1 = -34.6 dBV RMS

H5 relative to H1 = -41.6 dBV RMS

H7 relative to H1 = -61.6 dBV RMS

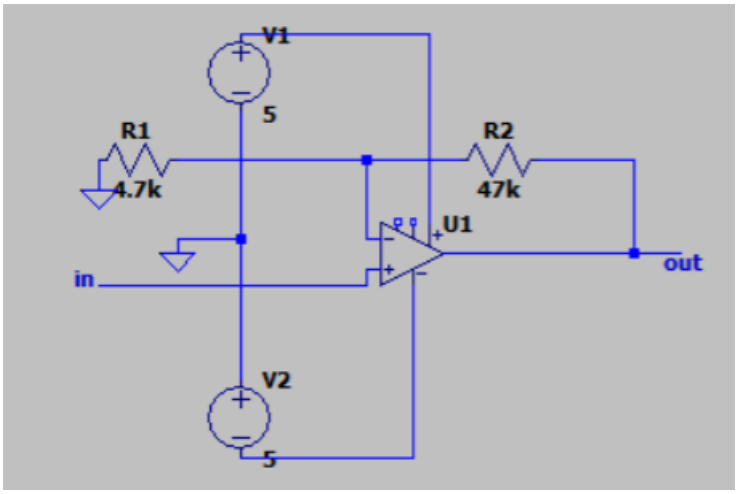
Graph Sketch:



Part 2:

Non-Inverting Amp

Circuit Diagram:



Findings:

F (kHz)	Vin (V)	Vout (V)	Gain (dB)
1	0.12	1.16	19.70553
2	0.12	1.16	19.70553
5	0.11	1.16	20.46131
10	0.11	1.15	20.3861
15	0.11	1.14	20.31024
20	0.11	1.12	20.15651
30	0.11	1.08	19.84062
40	0.11	1	19.17215
45	0.11	0.99	19.08485
47	0.11	0.97	18.90758
49	0.11	0.96	18.81757
50	0.11	0.95	18.72662
100	0.11	0.61	14.87874
200	0.11	0.34	9.801725
500	0.11	0.13	1.451013

Graph Sketch: