Potentiometer Size	Turning Clockwise gives _____ gain	Turning Counterclockwise gives _____ gain	Least Possible Resistance	Most Possible Resistance	Cutoff Resistance	Ideal Resistances Tested - #1	Ideal Resistances Tested - #2	Clipping Resistance	Notes
0.5 MΩ	Minimum	Maximum	0.3 Ω	0.49 MΩ	15.8 Ω	4.67 KΩ	9.5 KΩ	24.3 KΩ	
1 MΩ	Maximum	Minimum	0.8 Ω	1.059 MΩ	11.4 Ω	N/A			Clipping seems to occur very close to the Cutoff Resistance value, thus an ideal range could not be obtained
200 KΩ	Minimum	Maximum	0.9 Ω	191.1 KΩ	N/A	4 KΩ	10.26 KΩ	15.17 KΩ	It was physically impossible to get any value in between the Least Possible Resistance and the Ideal Resistance tested, thus the Cutoff Resistance is (theoretically) in between these two values but unmeasurable
10 KΩ	Minimum	Maximum	1.0 Ω	10.65 KΩ	0.427 KΩ	5.01 KΩ	2.0 KΩ	9.12 KΩ	
200 Ω	Maximum	Minimum	0.8 Ω	227.9 Ω	N/A				This potentiometer is so small that it failed to give any significant gain boost at any resistance level
50 KΩ	Minimum	Maximum	0.9 Ω	48.8 KΩ	1.155 KΩ	5.05 KΩ	14.76 KΩ	29.3 KΩ	
25 KΩ	Minimum	Maximum	0.8 Ω	23.59 KΩ	1.885 KΩ	5.02 KΩ	9.94 KΩ	14.06 KΩ	
1 KΩ	Minimum	Maximum	0.9 Ω	1.0 KΩ	N/A				This potentiometer was also too small to give a significant gain boost
0.5 KΩ	Minimum	Maximum	0.9 Ω	0.513 KΩ	N/A				As expected, this potentiometer was too small to give a significant gain boost

Resistance was measured from Pin A to Pin S, which connects the negative feedback loop of the second differential op-amp in the circuit. All resistance calculations were done with the breadboard circuit, and individual, regulated power supply lines of 6V (to the impedance matcher) and 3V (to the preamp). The output resistance was equal to ~0 Ω, and further tests must check that this resistor does not negatively affect the system

C (in F)	R (in ohm)	
0.1	0.1	
0.0000001	100000	15.9154943092

	Error in Potentiometer Size	Percentage of Resistance to Turn On	Percentage of Resistance That is Clipped	Percentage of Tested Resistance #1 is of Clipping Resistance	Percentage of Tested Resistance #2 is of Clipping Resistance
0.5 MΩ	-2.00%	3.22E-05	95.04%	19.17%	39.06%
1 MΩ	5.90%	1.08E-05	N/A	N/A	N/A
200 KΩ	-4.45%	N/A	92.06%	N/A	N/A
10 KΩ	**6.50%**	**4.01%**	**14.37%**	**18.10%**	**52.72%**
200 Ω	13.95%	N/A	N/A	N/A	N/A
50 KΩ	-2.40%	2.37%	39.96%	13.84%	48.34%
25 KΩ	-5.64%	7.99%	40.40%	25.75%	66.16%
1 KΩ	0.00%	N/A	N/A	N/A	N/A
0.5 KΩ	2.60%	N/A	N/A	N/A	N/A