

Prelab 4

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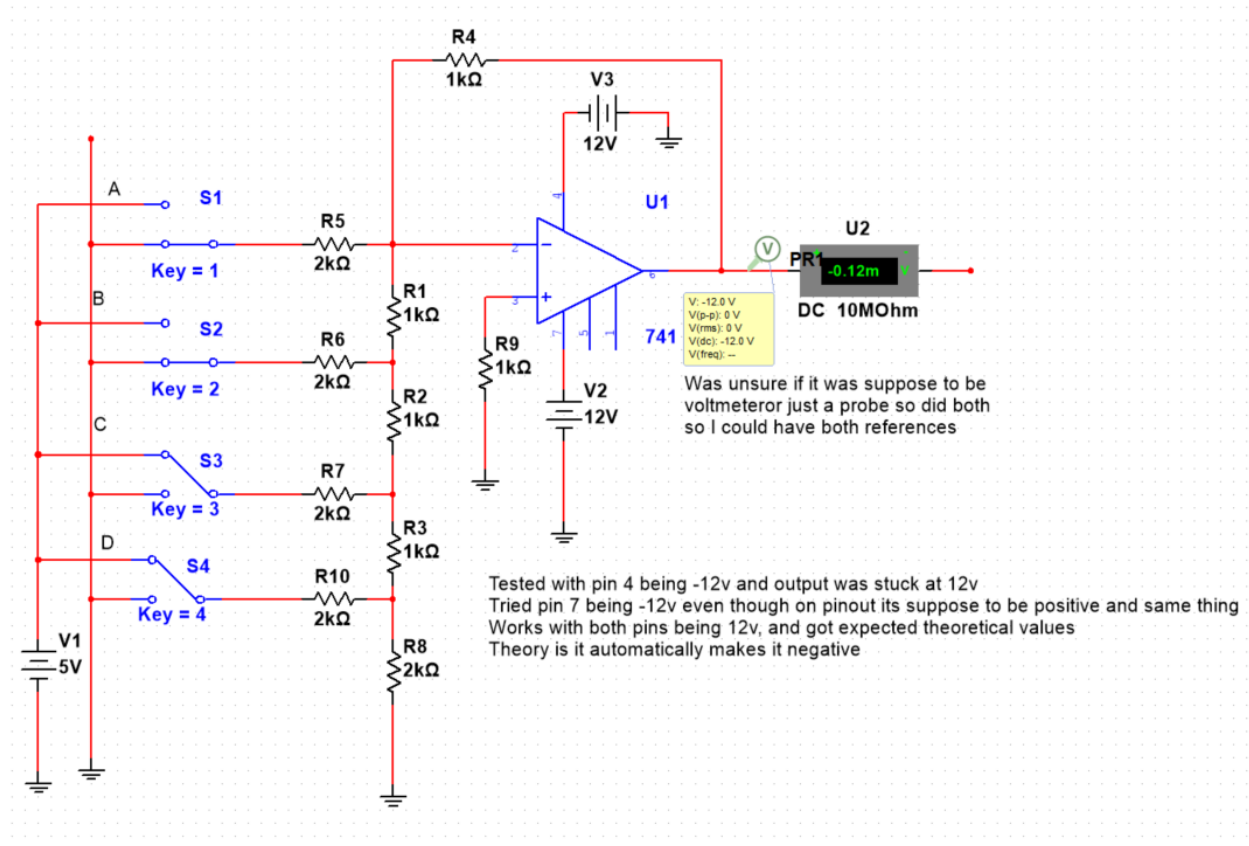


Figure 1. Digital to Analog Converter Using Op-amp

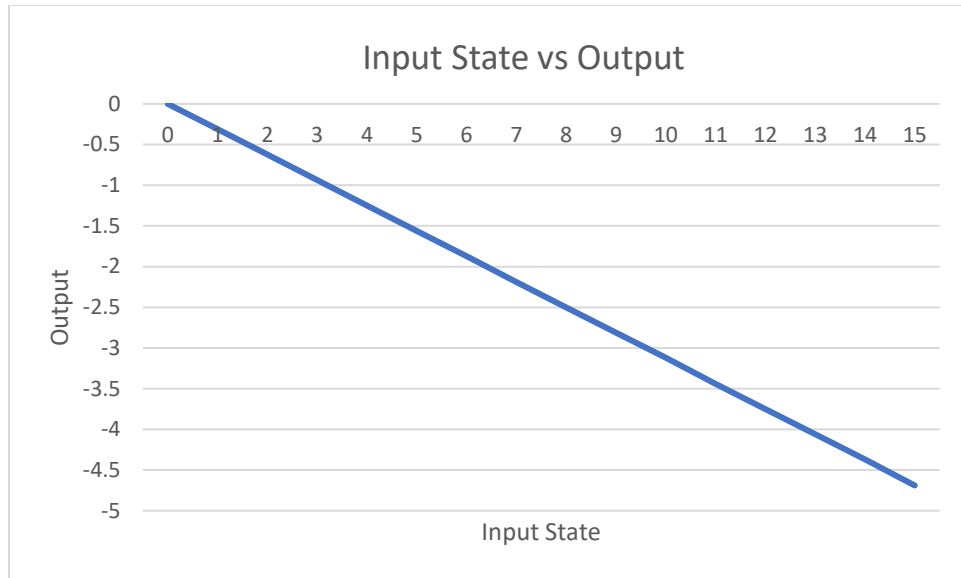


Figure 2. Plot of Switch State vs Output Voltage

Table 1. Results for Simulation and Theoretical

Input Table					Theoretical	Simulation	Experimental
	V_A	V_B	V_C	V_D	$V_o(V)$	$V_o(V)$	$V_o(V)$
0	0	0	0	0	0	0	
1	0	0	0	1	-0.3125	-0.31	
2	0	0	1	0	-0.625	-0.623	
3	0	0	1	1	-0.9375	-0.935	
4	0	1	0	0	-1.25	-1.25	
5	0	1	0	1	-1.5625	-1.56	
6	0	1	1	0	-1.875	-1.87	
7	0	1	1	1	-2.1875	-2.19	
8	1	0	0	0	-2.5	-2.50	
9	1	0	0	1	-2.8125	-2.81	
10	1	0	1	0	-3.125	-3.12	
11	1	0	1	1	-3.4375	-3.44	
12	1	1	0	0	-3.75	-3.75	
13	1	1	0	1	-4.0625	-4.06	
14	1	1	1	0	-4.375	-4.37	
15	1	1	1	1	-4.6875	-4.69	