

ELEC3306  
Open & Closed Loop Systems

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2015 7367

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# 1 Results

## 1.1 Open Loop Circuit - No Load

Firstly, by varying the potentiometer to obtain different values for  $V_1$  in ?? we measured the corresponding values of  $V_2$ . This was completed with the gain  $\frac{V_\alpha}{V_1} = 1$ .

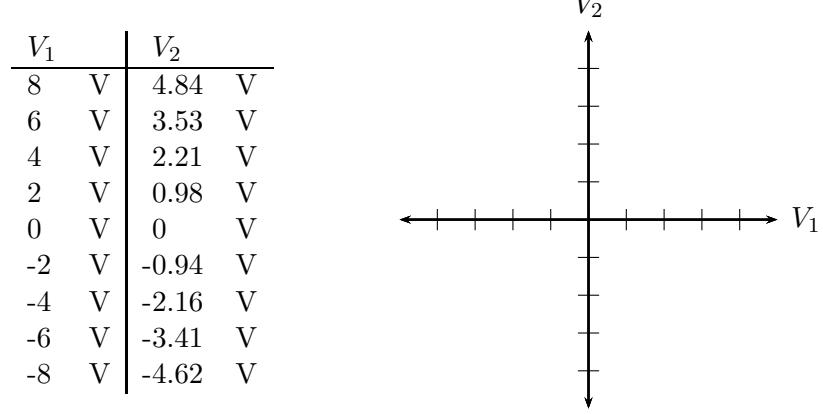


Figure 1: Generator Output  $V_2$ ,  $\frac{V_\alpha}{V_1} = 1$

With the gain  $\frac{V_\alpha}{V_1}$  equal to 1, we found the dead-band to be between  $-0.64V$  and  $0.63V$ .

Next, we set the gain  $\frac{V_\alpha}{V_1}$  to 5. We then re-measured  $V_2$  at the generator output

$V_1$		$V_2$	
8	V	7.8	V
6	V	7.8	V
4	V	7.8	V
3	V	7.8	V
2	V	5.63	V
1	V	2.47	V
0.5	V	1.1	V
0	V	0	V
-0.5	V	-1.08	V
-1	V	-2.48	V
-2	V	-5.33	V
-3	V	-6.75	V
-4	V	-6.75	V
-6	V	-6.75	V
-8	V	-6.75	V

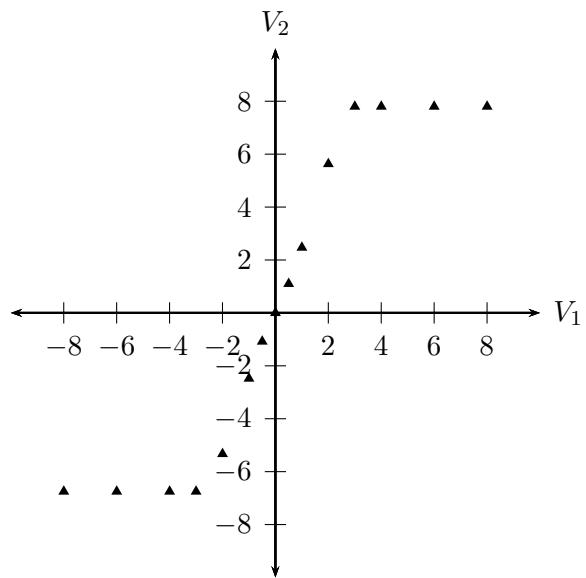


Figure 2: Generator Output  $V_2$ ,  $\frac{V_2}{V_1} = 5$