

ELEC-311
Project 1
Combinational Circuit Analysis

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1 Objective

First Objective

Analyze a combinational logic circuit and determine its behavior.

Second Objective

Objective 2 text

2 Discussion

The circuit being studied is shown in Figure 1. Working from right to left, the Boolean equation for the circuit can be written: $(\bar{S} \cdot I_0 + I_1) \cdot E \cdot (I_0 + S \cdot I_1)$. A truth table for this equation is shown in Table 2.

Figure 1: Circuit to be analyzed.

I_0	E	I_1	S	Z
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
0	1	0	1	0
0	1	1	0	0
0	1	1	1	1
1	0	0	0	0
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	1
1	1	0	1	0
1	1	1	0	1
1	1	1	1	1

Table 1: Truth table for circuit in Figure 1

3 Results

4 Conclusions

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