

# ELC 2137 Lab 02: Transistor Logic Gate

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## Summary

Create circuit logic gate using push buttons and transistors. Specifically, a push button OR gate, a transistor NOT and NOR gate. Finally, recreate an unknown transistor gate. From testing the logic of this unknown transistor gate, it can be concluded that it is an AND gate.

## Q&A

The unknown transistor gate implements an AND logic gate

## Results

| A | B |  | C |
|---|---|--|---|
| 0 | 0 |  | 0 |
| 0 | 1 |  | 0 |
| 1 | 0 |  | 0 |
| 1 | 1 |  | 1 |

Figure 1: Truth table for the Final gate

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Lab 2. Transistor Logic Gates

## Circuit Demonstration Page

Student names: Myn Nguyen \_\_\_\_\_

### Instructor Initials

Pushbutton "Or Gate" AB Transistor Not gate CD

Transistor Nor gate RGB Transistor unknown gate XY

### Diagrams

On each of the circuits below, draw the current paths and note whether each switch, transistor, and LED is ON or OFF.

Inverter:

5V

Figure 2: Circuit Demonstration Page

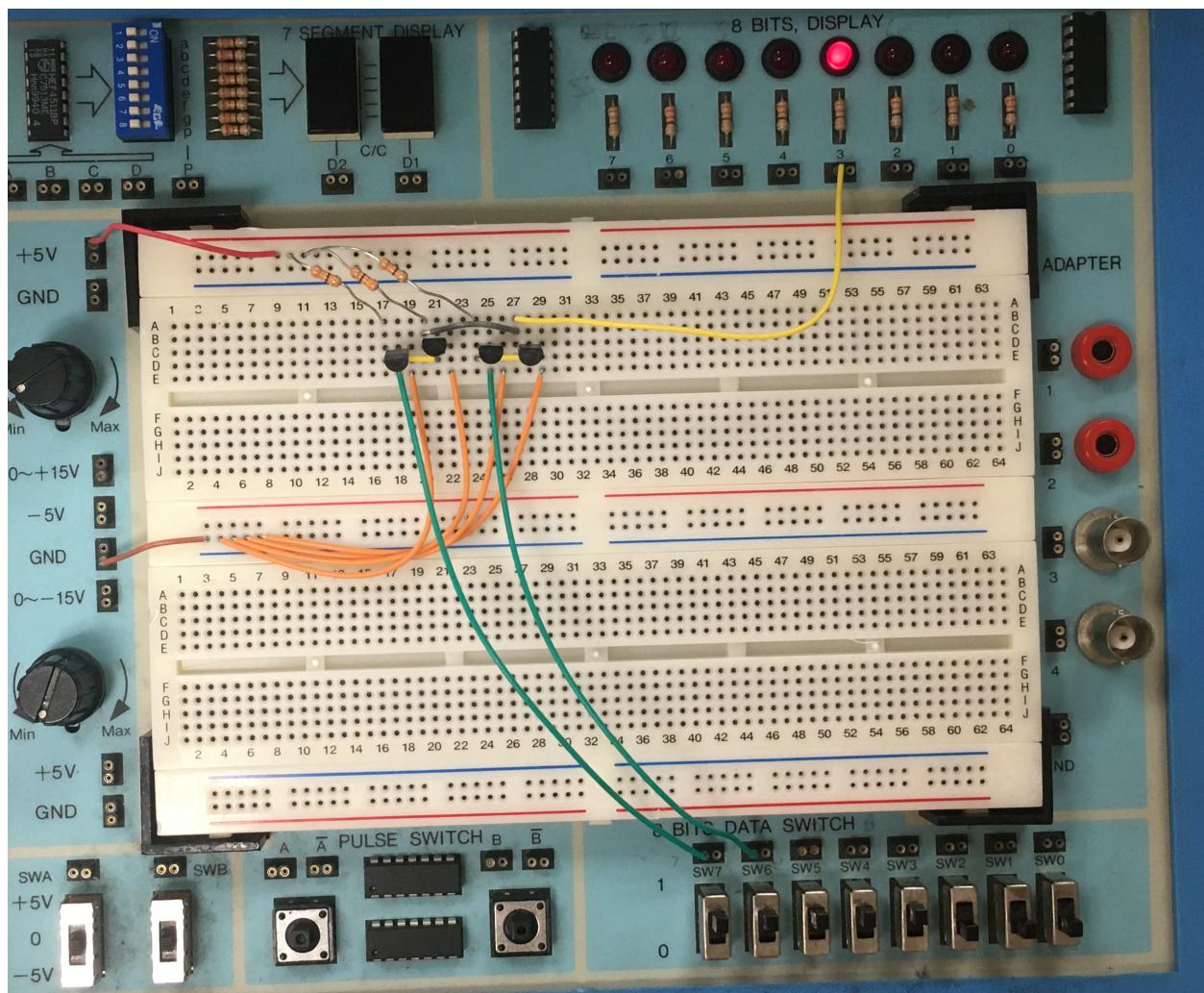


Figure 3: Final Gate