Lesson 3 Instructions: Decoder Board

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March 9, 2012

1 Introduction

This is a guide to using the decoder board produced in lesson 3.

There are two versions of the board. Use section 2 to determine which version of the board you are using.
2 Selecting Your Board

There are two versions of the SPLAB lesson 3 board. Refer to figure 1 to determine which board you are using. Both boards have the same functionality but the inputs and outputs are labeled differently.

3 Finding the IO on Version 1

If you are using version 2, the IO lines are labeled on the board. A0 and A1 are the inputs, O[0:3] are the outputs. Note that the inputs are a 2-pin header outputs O[0:1] are the two LEDs and outputs O[2:3] are a 2-pin header. Skip to section 4 to determine logic functionality.

If you are using version 1, the IO are not labeled as well. Use figure 3 to determine where to find A[0:1] and O[0:3].
Note that the inputs are a 2-pin header outputs $O[0:1]$ are the two LEDs and outputs $O[2:3]$ are a 2-pin header.

4 Truth Table

Use the following truth table to map inputs to outputs.

<table>
<thead>
<tr>
<th>A0</th>
<th>A1</th>
<th>O0 (LED)</th>
<th>O1 (LED)</th>
<th>O2 (header)</th>
<th>O3 (header)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>L</td>
<td>L</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>H</td>
<td>L</td>
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<td>H</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>L</td>
</tr>
</tbody>
</table>

Ask you SPLAB instructor if you have any questions.