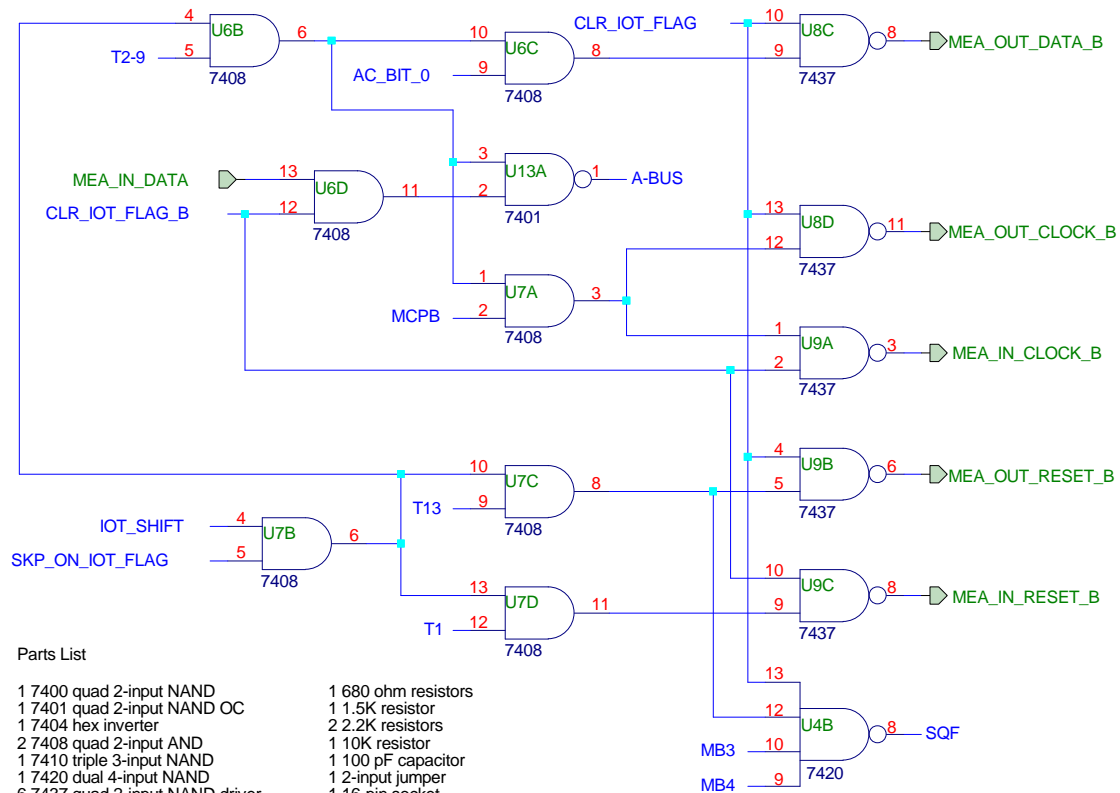


For 74LS use

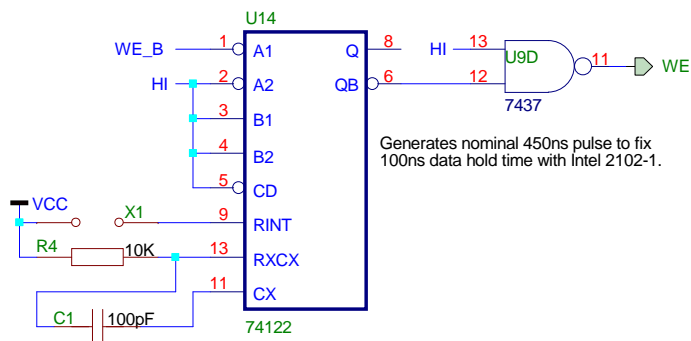
R2 = 8.2K  
R3 = 8.2K  
R5 = 1.5K

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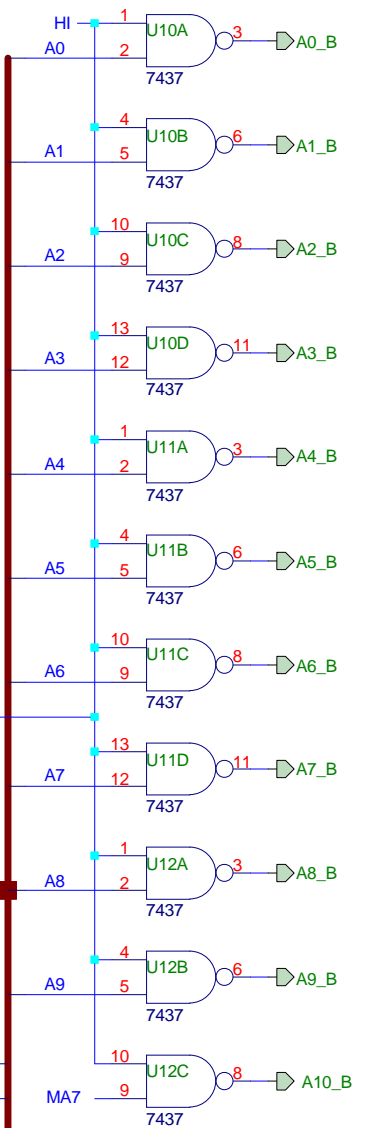
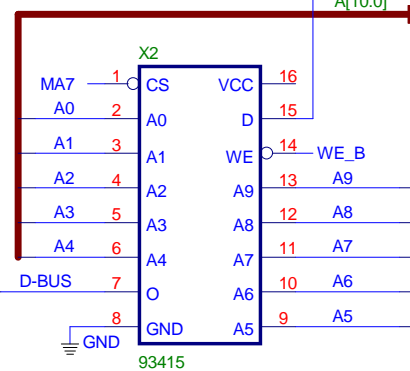
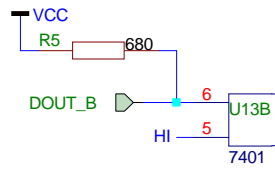
#### Parts List

- |                                 |                     |
|---------------------------------|---------------------|
| 1 7400 quad 2-input NAND        | 1 680 ohm resistors |
| 1 7401 quad 2-input NAND OC     | 1 1.5K resistor     |
| 1 7404 hex inverter             | 2 2.2K resistors    |
| 2 7408 quad 2-input AND         | 1 10K resistor      |
| 1 7410 triple 3-input NAND      | 1 100 pF capacitor  |
| 1 7420 dual 4-input NAND        | 1 2-input jumper    |
| 6 7437 quad 2-input NAND driver | 1 16-pin socket     |
| 1 74122 multivibrator           |                     |



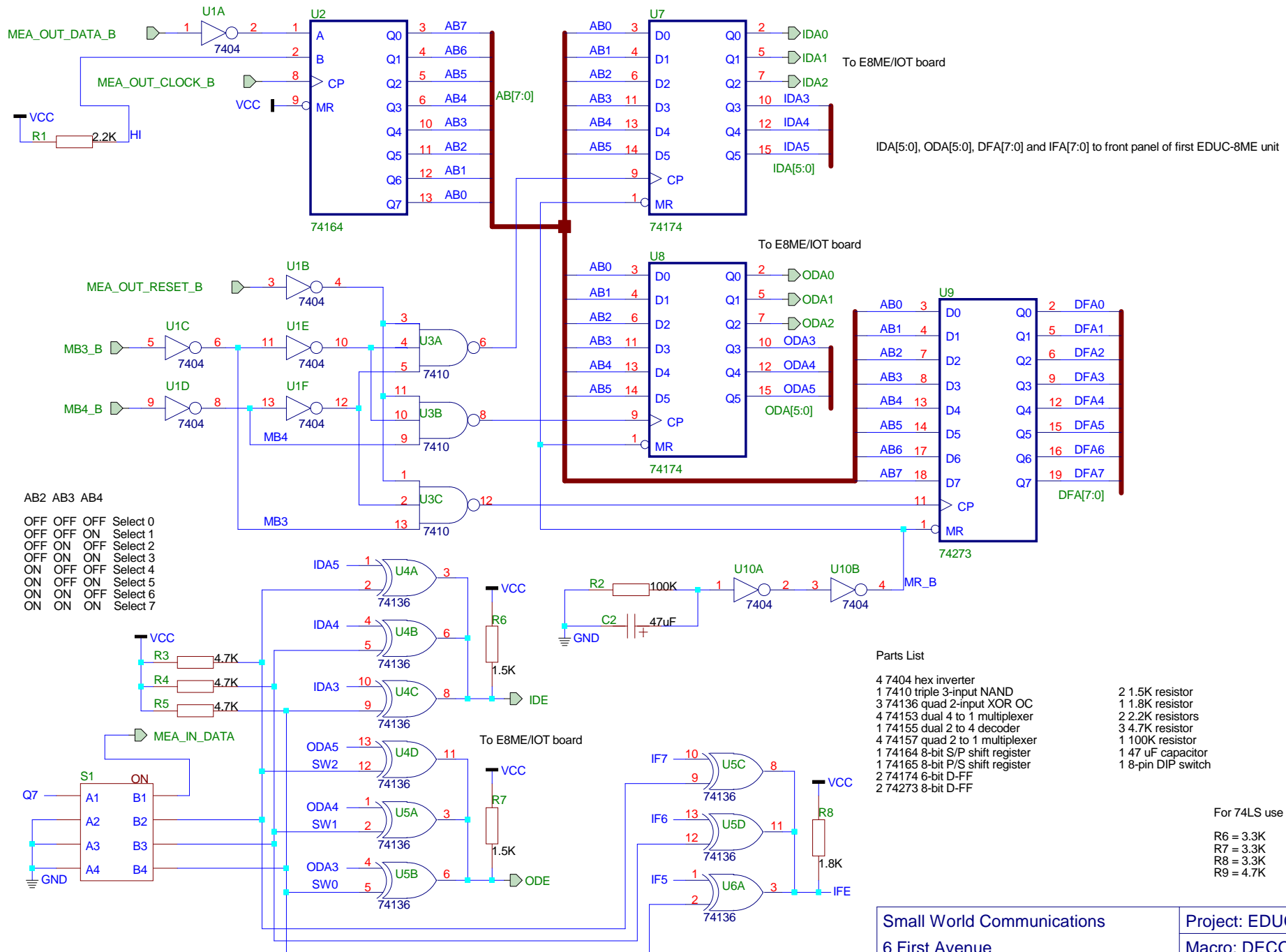
Short X1 jumper to use 74122 internal 10K resistor instead of R4.

CS\_B of X2 is connected to MA7 of E8/M board  
MA7 from 7496 pin 15 next to edge connector



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# Parts List

4 7404 hex inverter  
 1 7410 triple 3-input NAND  
 3 74136 quad 2-input XOR OC  
 4 74153 dual 4 to 1 multiplexer  
 1 74155 dual 2 to 4 decoder  
 4 74157 quad 2 to 1 multiplexer  
 1 74164 8-bit S/P shift register  
 1 74165 8-bit P/S shift register  
 2 74174 6-bit D-FF  
 2 74273 8-bit D-FF

2 1.5K resistor  
 1 1.8K resistor  
 2 2.2K resistors  
 3 4.7K resistor  
 1 100K resistor  
 1 47 uF capacitor  
 1 8-pin DIP switch

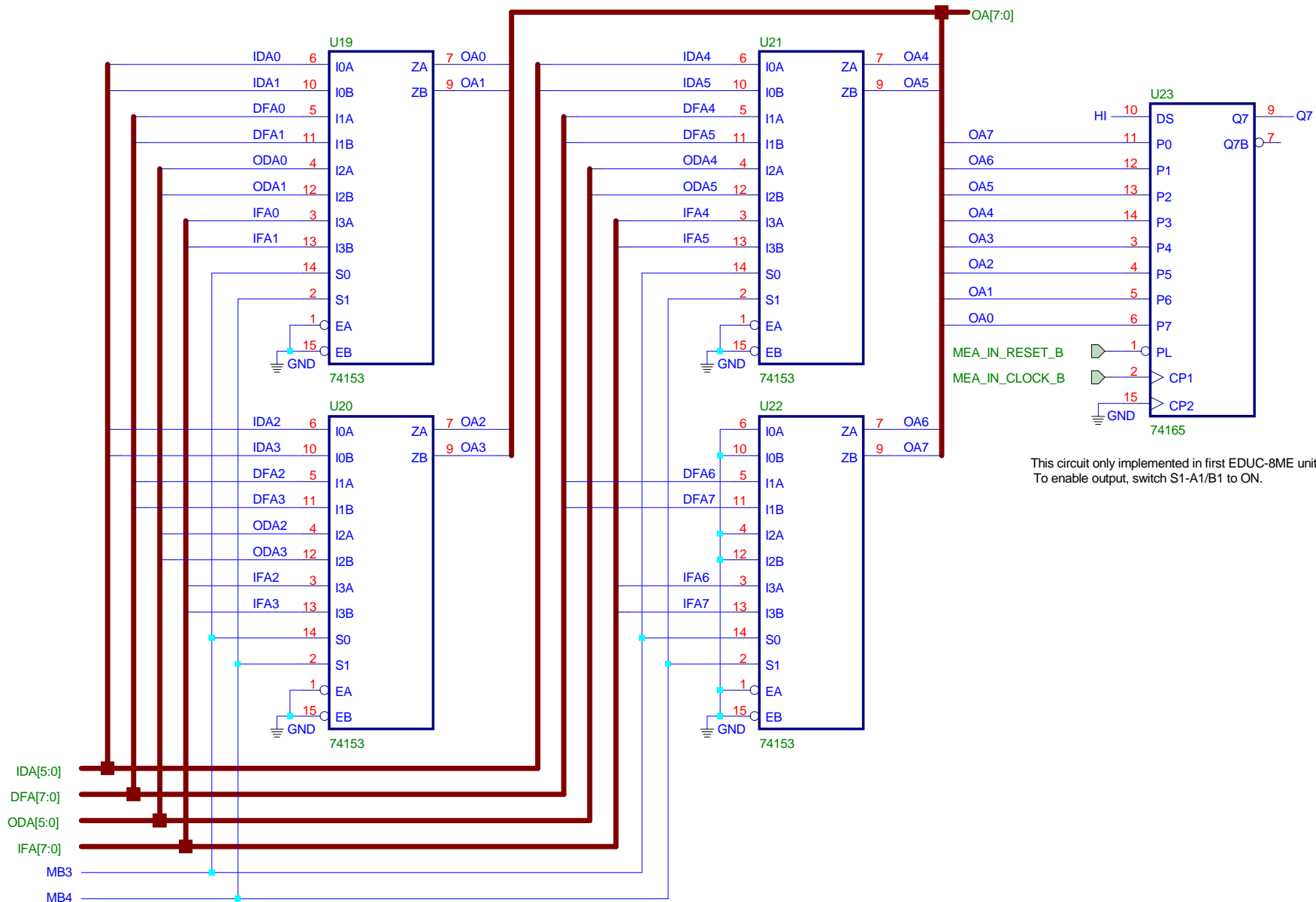
For 74LS use

R6 = 3.3K  
 R7 = 3.3K  
 R8 = 3.3K  
 R9 = 4.7K

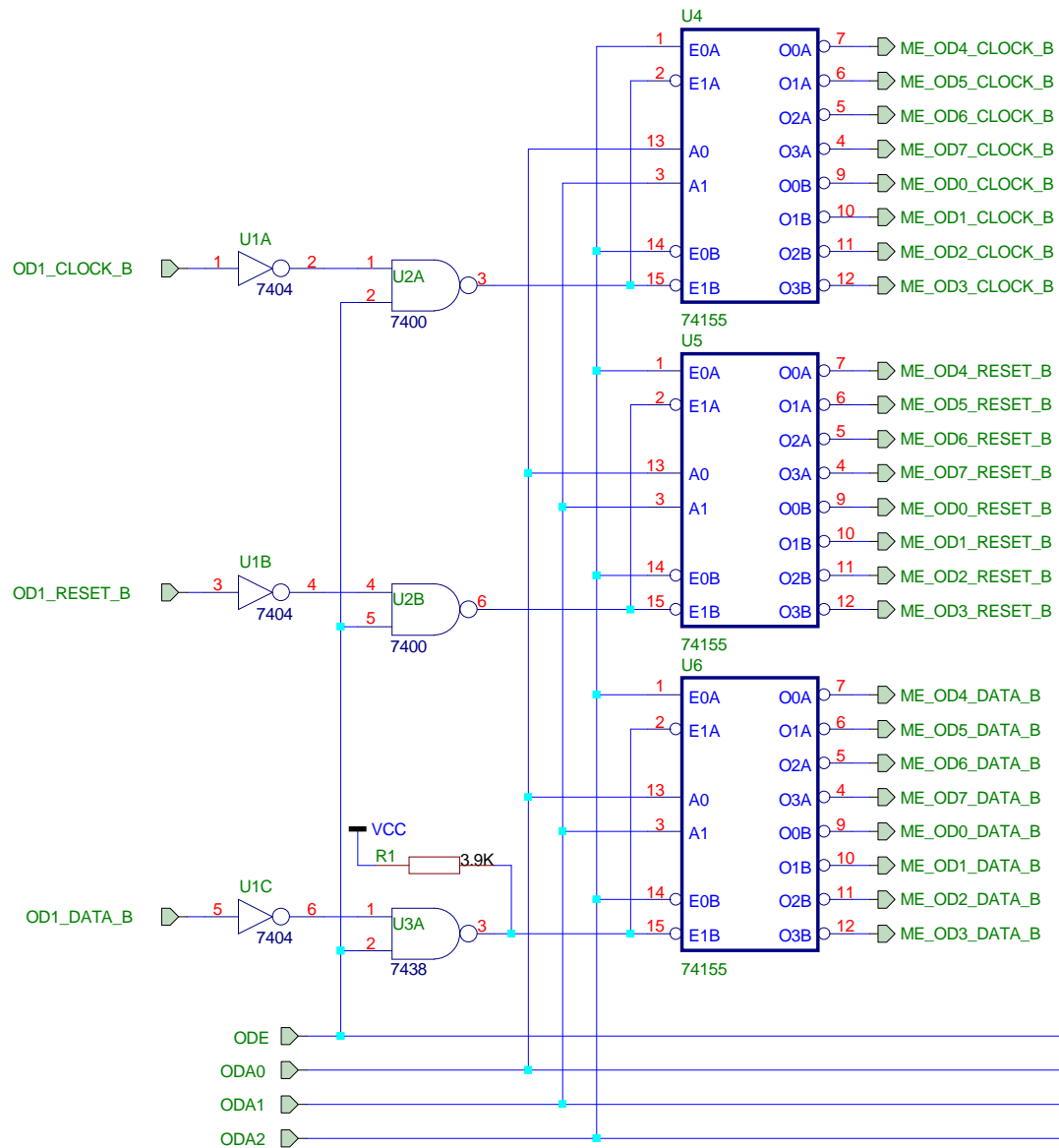
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 Date: 1/22/22





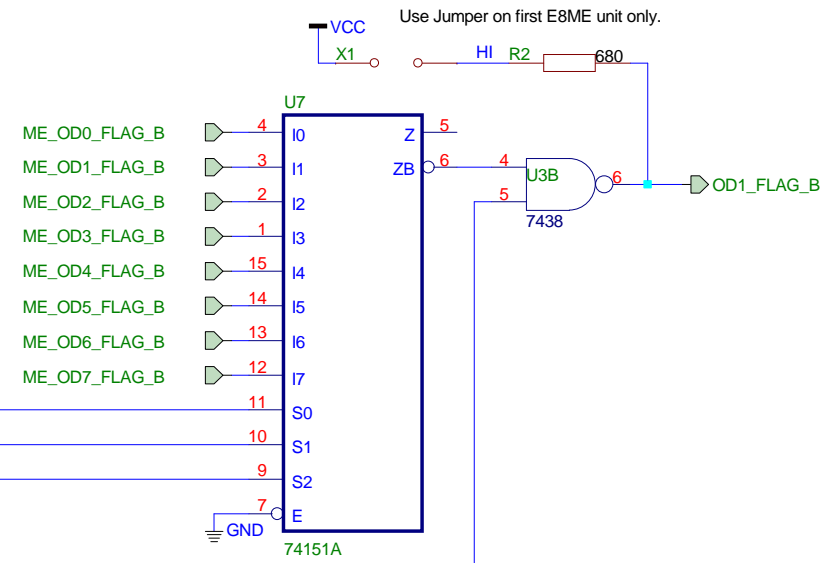
Small World Communications	Project: EDUC8ME
6 First Avenue	Macro: DECODER3
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Date Last Modified: 2/27/22	



#### Parts List

1 7400 quad 2-input NAND  
 1 7404 hex inverter  
 1 7438 quad 2-input NAND buffer OC  
 3 74151A 8-input multiplexer  
 5 74155 dual 1-of-4 decoder

3 680 ohm resistors  
 1 3.9K resistor  
 1 2-input jumper



For 74LS use

R1 = 6.8K  
 R2 = 1.2K  
 R3 = 1.2K  
 R4 = 1.2K

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Project: EDUC8ME  
 Macro: MULTIPLEXER1  
 Date: 1/22/22

