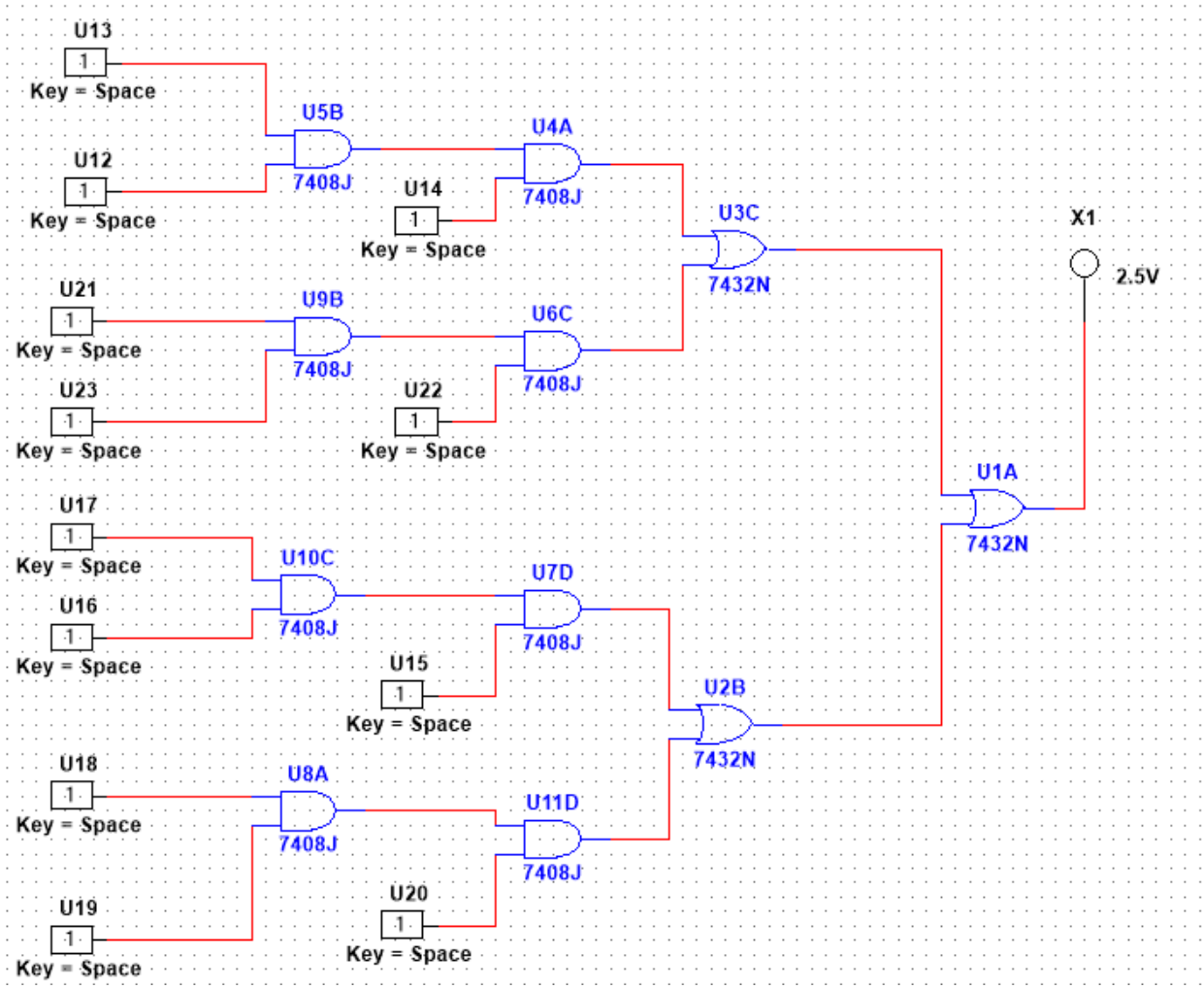


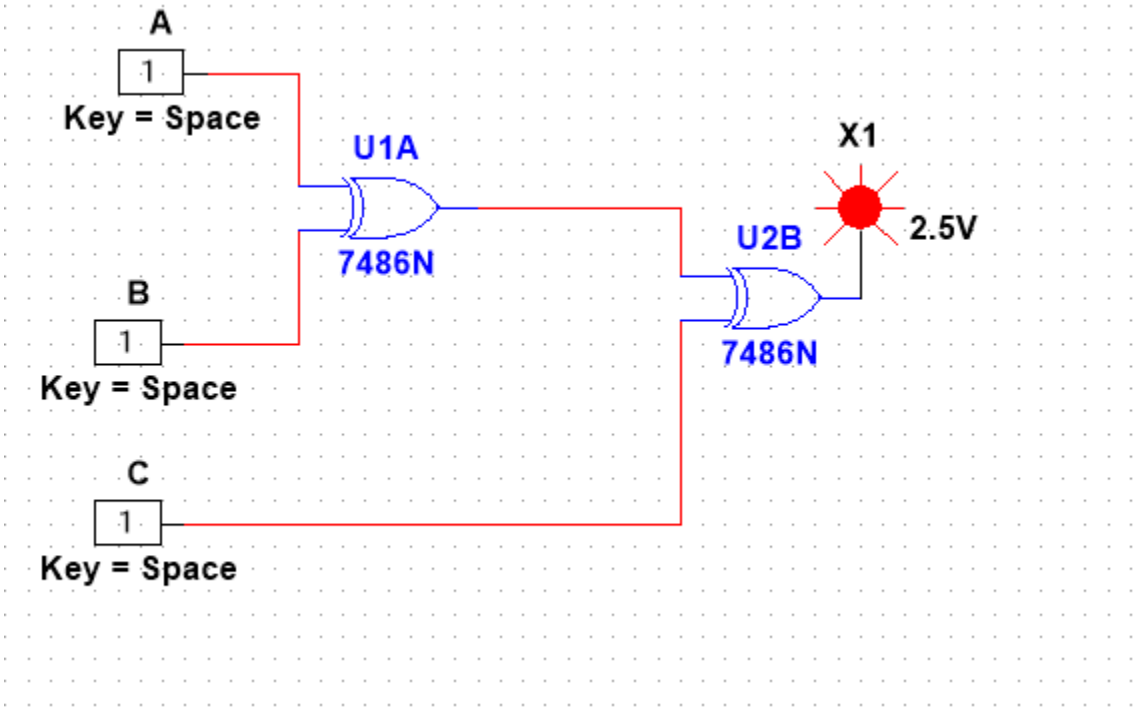
An odd parity: will result with an output of 1/high when it contains an Odd number of 1s.

A	B	C	Parity Output	Y
0	0	0	1	1
0	0	1	0	0

0	1	0	0	0
0	1	1	1	1
1	0	0	0	0
1	0	1	1	1
1	1	0	1	1
1	1	1	0	0

(+) = exlusive OR

Since P= A(+)B(+)C
Therefor the circuit on multisim should appear like this:



Explanation:
Even parity will result with an output of 1/high when it contains an even number of 1s.
We get the circuit by look at the number of 1s in the truth table shown below to create a boolean algebra expression.
An example is shown in the truth table below next to the 1s.

A	B	C	Even Parity Output	Y
0	0	0	0	0
0	0	1	1	1 => A'B'C
0	1	0	1	1 =>A'BC'
0	1	1	0	0
1	0	0	1	1 =>AB'C'
1	0	1	0	0
1	1	0	0	0
1	1	1	1	1 =>ABC