Experiment Name: Implementation of Carry Look Ahead Adder.

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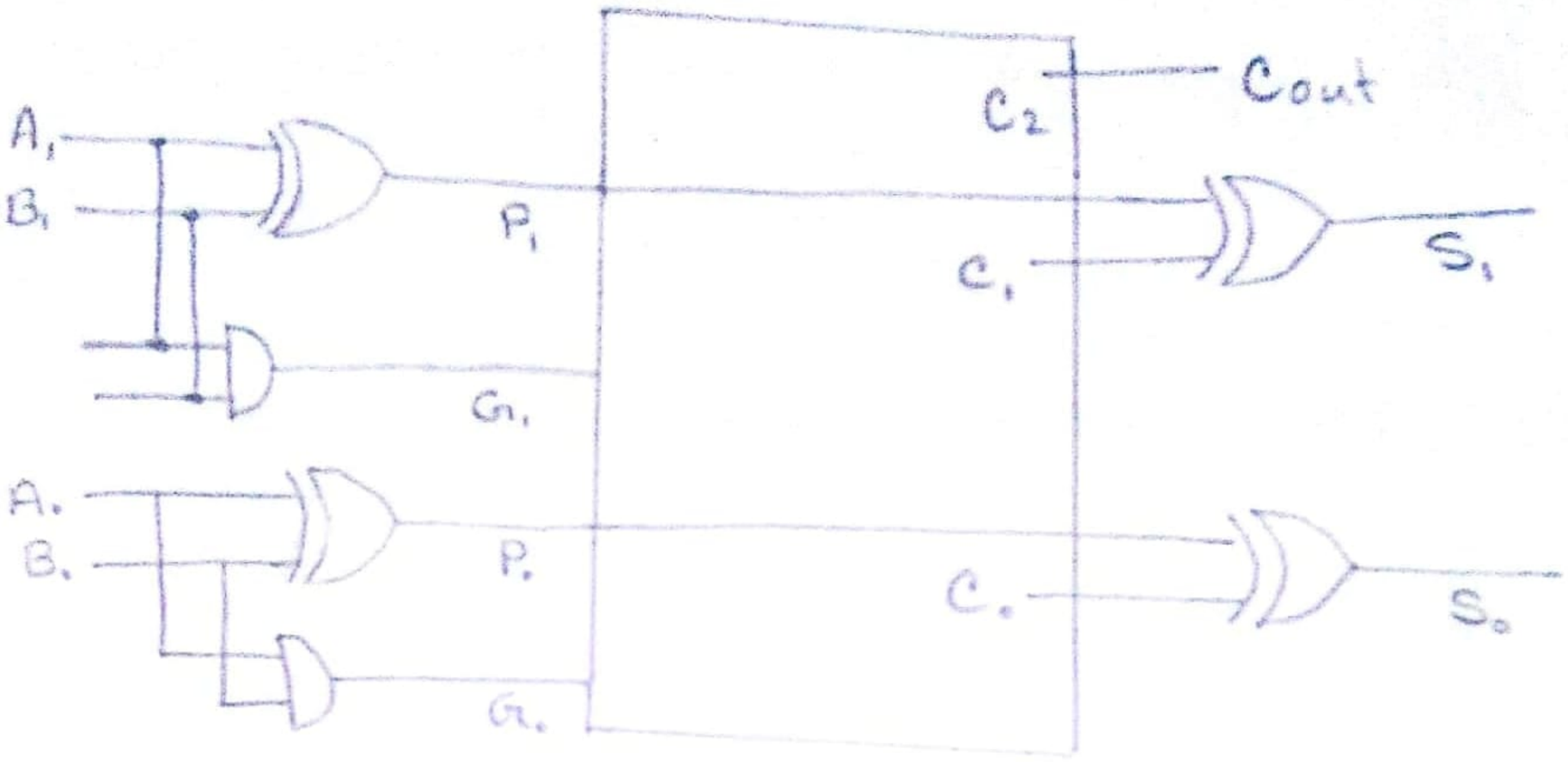
Experiment: Implementation of Carry Look Ahead Adder.

Theory: Carry Look Ahead Adder is another type of adder. In normal adder when we we want to add two numbers of many digits we face there a problem that the carry is not proper Because there is a large gate delay in the carry. To reduce this problem we use carry look ahead adder. In this adder all carry from individual full adder is counted at a time. So it reduce the gate delay.

Instruments: wire, breadboard, power source and adder IC.

Circuit:



$$P_i = A_i \oplus B_i$$
$$G_i = A_i \cdot B_i$$
} where $i = 0, 1$ etc.

$$S_0 = P_0 \oplus C_0$$

$$S_1 = P_1 \oplus C_1$$

Truth Table:

A_1	B_1	A_0	B_0	C_{out}	S_1	S_0
0	0	0	0	0	0	0
0	0	0	1	0	0	1
0	0	1	0	0	1	0
0	0	1	1	0	1	1
0	1	0	0	0	0	1
0	1	0	1	0	1	0
0	1	1	0	0	1	1
0	1	1	1	1	0	0
1	0	0	0	0	1	0
1	0	0	1	0	1	1
1	0	1	0	1	0	0
1	0	1	1	1	0	1
1	1	0	0	0	1	1
1	1	0	1	1	0	0
1	1	1	0	1	0	1
1	1	1	1	1	1	0

Result and Discussion: From circuit drawn we have designed the circuit. The result we get is similar to equivalent addition result for each value of A and B. So the circuit and equations are right.

Pre-caustion:

1. Connect the circuit when design is complete.
2. Please cheack the circuit before connecting.
3. Ware shoes in the lab.
4. After finishing experiment switch off the power source.