

**Lab #2 – A 4-bit Adder**

In this lab you will explore a 4-bit adder circuit and verify its operation. The 4-bit adder circuit uses the 74LS83A IC (4-bit adder IC). This IC has two separate 4-bit inputs for feeding the two operands to be added. There are 4 output pins for the sum output. There is one carry input pin and one carry output pin. Implement the design on breadboard and verify its functionality.

Have TA or instructor verify your circuit.

In preparation for this lab, first draw a base diagram of the IC in your notebook, and mark the pin numbers for each input and output. Also, draw a schematic for the circuit. The schematics must clearly indicate pin numbers for ALL components being used as well as pin names where appropriate (we normally don't provide pin names for standard gate components).