

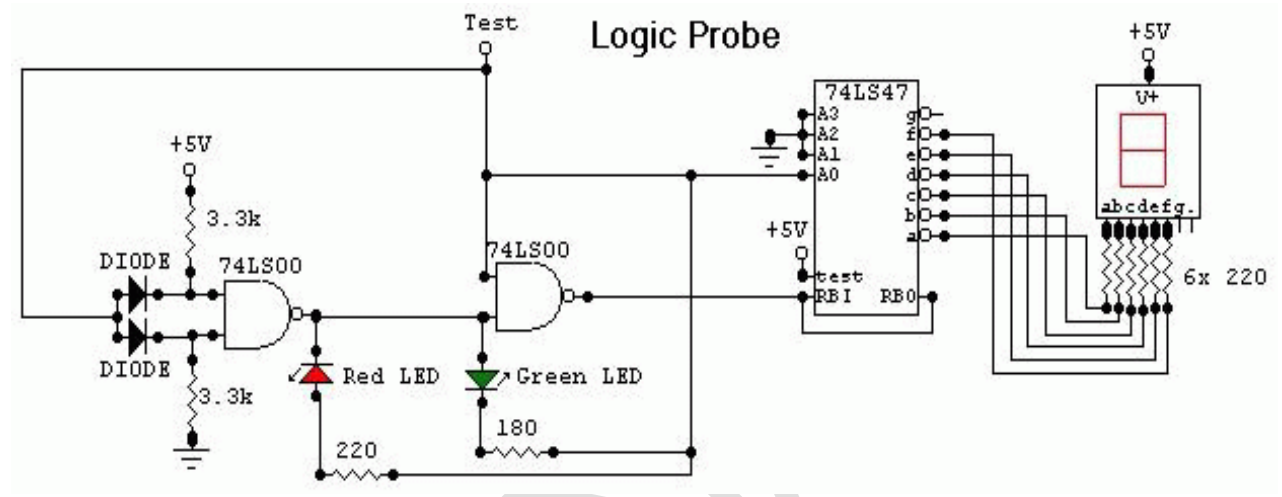


**Name: Ahmad Bazzi ( 12100563)**

**Digital Systems Lab Project: Logic Probe**

**Spring 2012 Semester**

## Logic Probe circuit used:



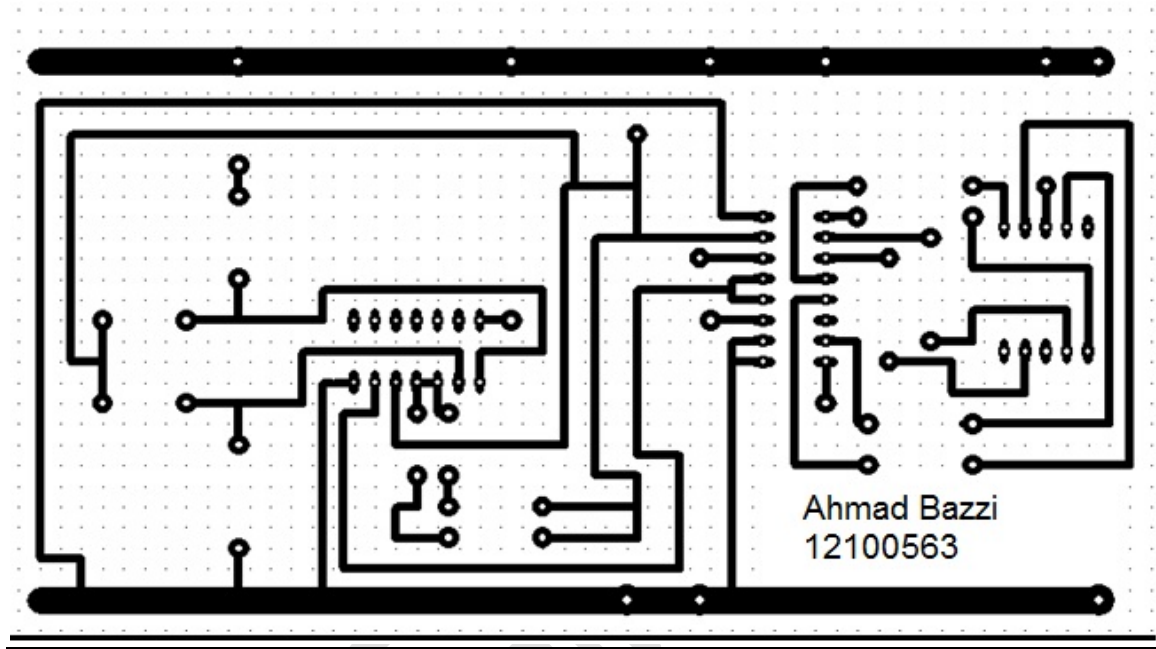
This circuit Logic Probe it indicates the logic state of the node of any TTL logic circuit. To do that, we have to supply the probe with the same power of the circuit that we want to analyze: same Vcc and same GND. To check the logic level, we must connect the “Test” wire of the probe to the desired node of the circuit that we want to check.

If the level is Low, the probe will display a “zero” (0) and only the green LED will be lighted. If the level is High, the probe will display a “one” (1) and only the red LED will be lighted. If the level is Impedance, the probe will display a nothing and no LED will be lighted.

## Material used:

- 1) 7 segment display
- 2) 74LS47 IC
- 3) 74LS00 NAND gate
- 4) Red led
- 5) Green led
- 6) Seven 220 ohm resistors
- 7) One 180 ohm resistor
- 8) Two 3300 ohm resistors
- 9) Two diodes
- 10) Connecting wires

## Logic Probe PCB Making :



## Procedure and problems faced:

First of all, It is a very easy since I had a rich background about PCB making, also for the soldering part, nothing new just a quite few burns of my finger tips and it's done. Very interesting project to make and very useful for futuristic circuit testing.

## Conclusion:

As for a conclusion, this project is useful in future and specially for testing circuits. As for me , it added more experience to me in the field of such projects , PCB's ... etching and development ... and many more.