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>> Name of Mini Project :

Simple Digital Voltmeter Circuit with PCB using ICL7107

>> Block Diagram :

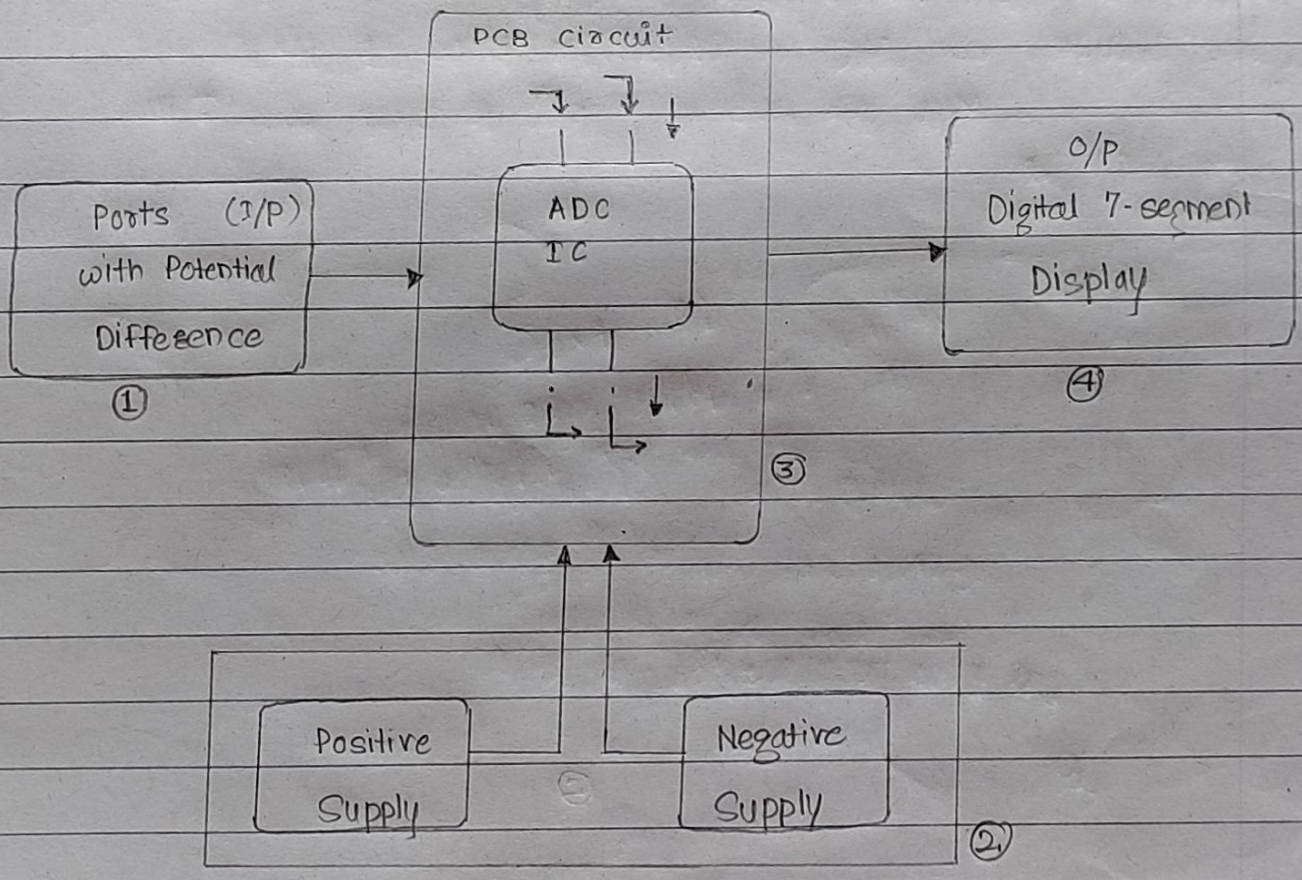

fig: Block Diagram Representation of Simple Digital Voltmeter Circuit with PCB using ICL7107

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Functional Characteristics

Block 1 : [I/p] Ports with Potential Difference

- The block represents the i/p of the circuit testing
- It comprises of two ports having potential difference with respect to each other.

(Note: The maximum value of Potential Difference should not go beyond scope of the circuit capacity.)

Block 2 : Positive and Negative Supply

- Power supply is necessary for the circuit operation.
- Two supplies (one with +'ve terminal & another with -'ve) are given the Digital voltmeter circuit.

Block 3 : PCB Circuit

- The PCB circuit is the main body of the project.
- It comprises of all the circuit elements connected in proper manner
- It follows a series of processes to get the Potential Difference between the i/p ports in the Analog form.

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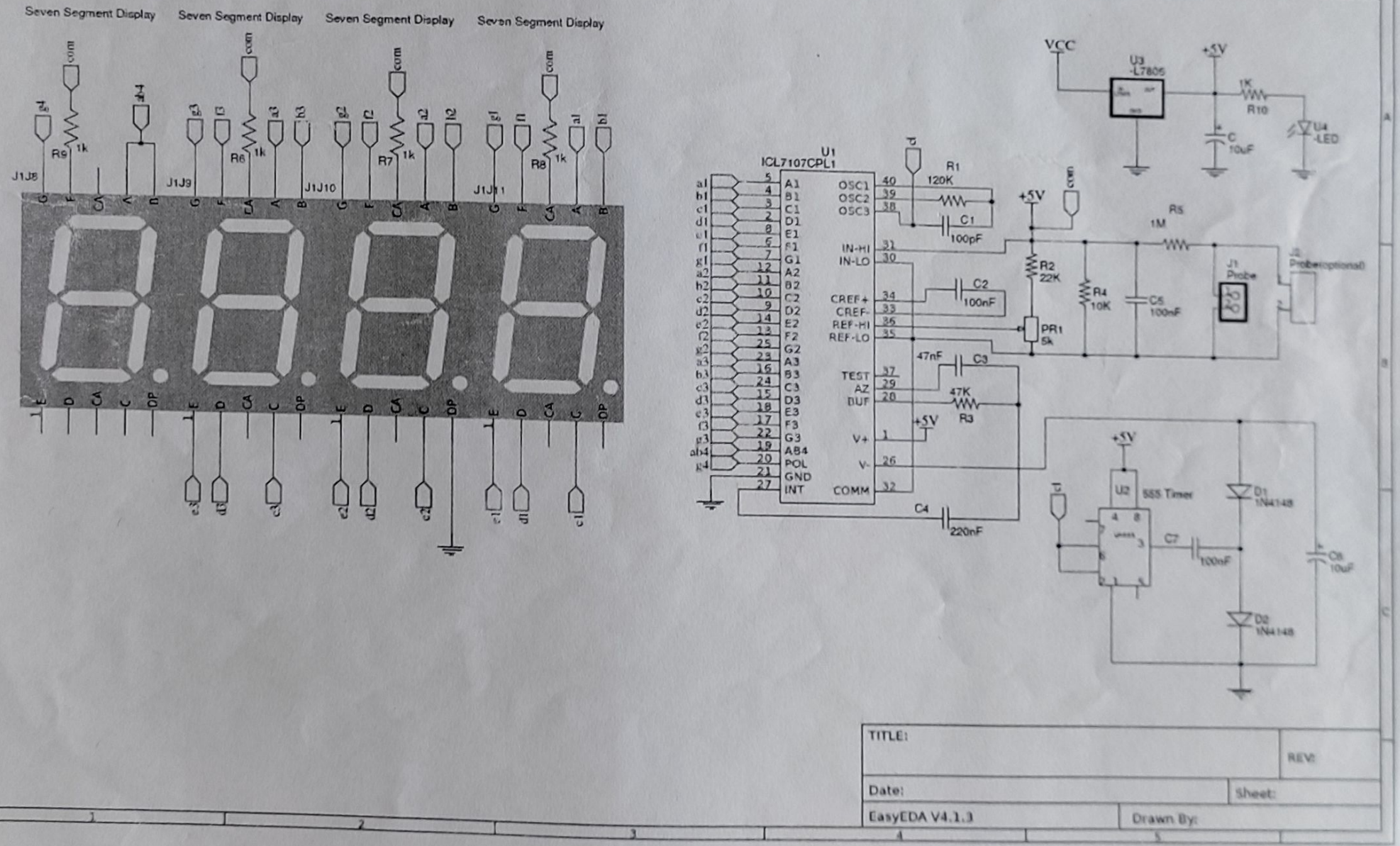
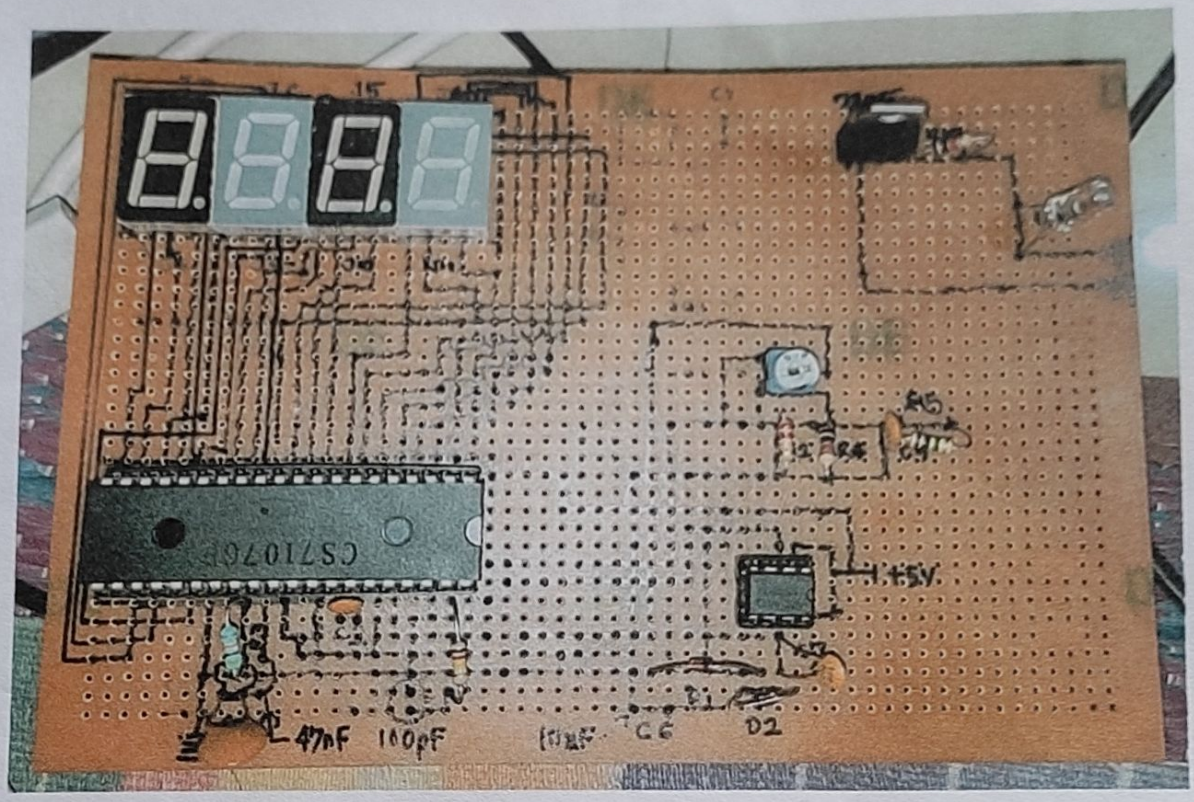
- This analog potential difference ΔV obtained is converted into digital form by using Analog-to-Digital Converter IC
- The Digital value of potential difference ΔV obtained is the required O/P from the PCB circuit.

Block 4 : [O/P] Digital Display

- The digital value of potential difference obtained at the end of Block 3 functionality is sent to the digital display.
- The digital 7-segment display is capable of showing the closest-almost value of potential difference between the two ports taken as input in Block 1

EDW/MP : Simple Digital Voltmeter : Circuit Diagram




47nF
100pF
C6
D2
+5V