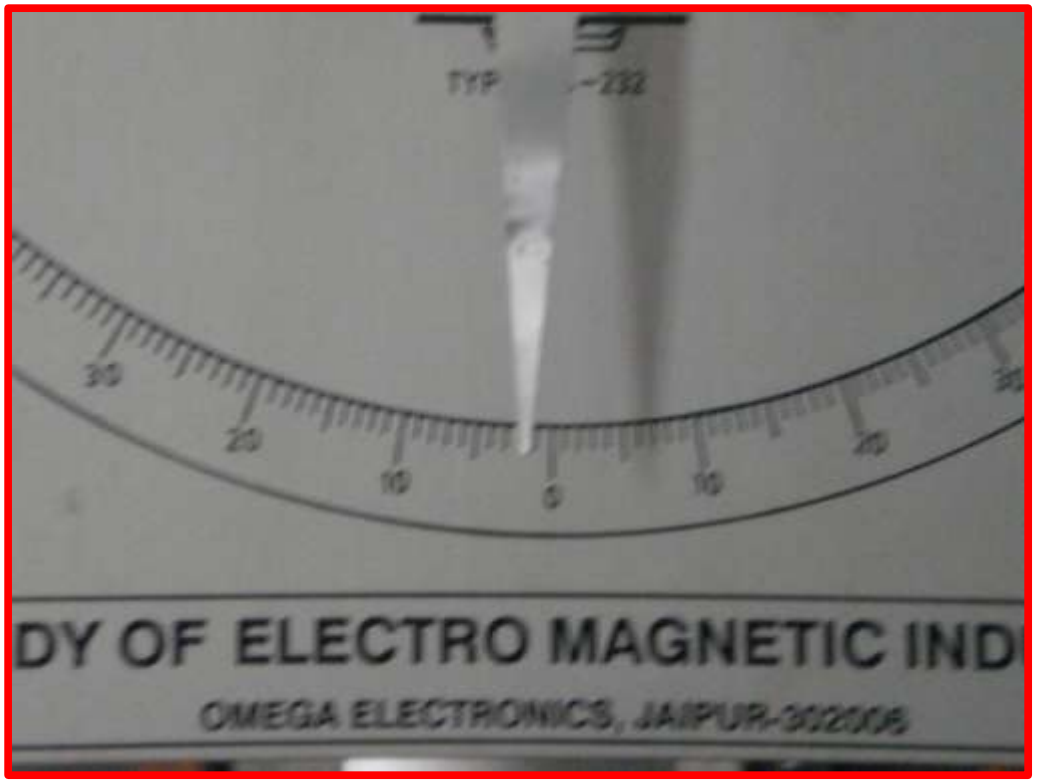
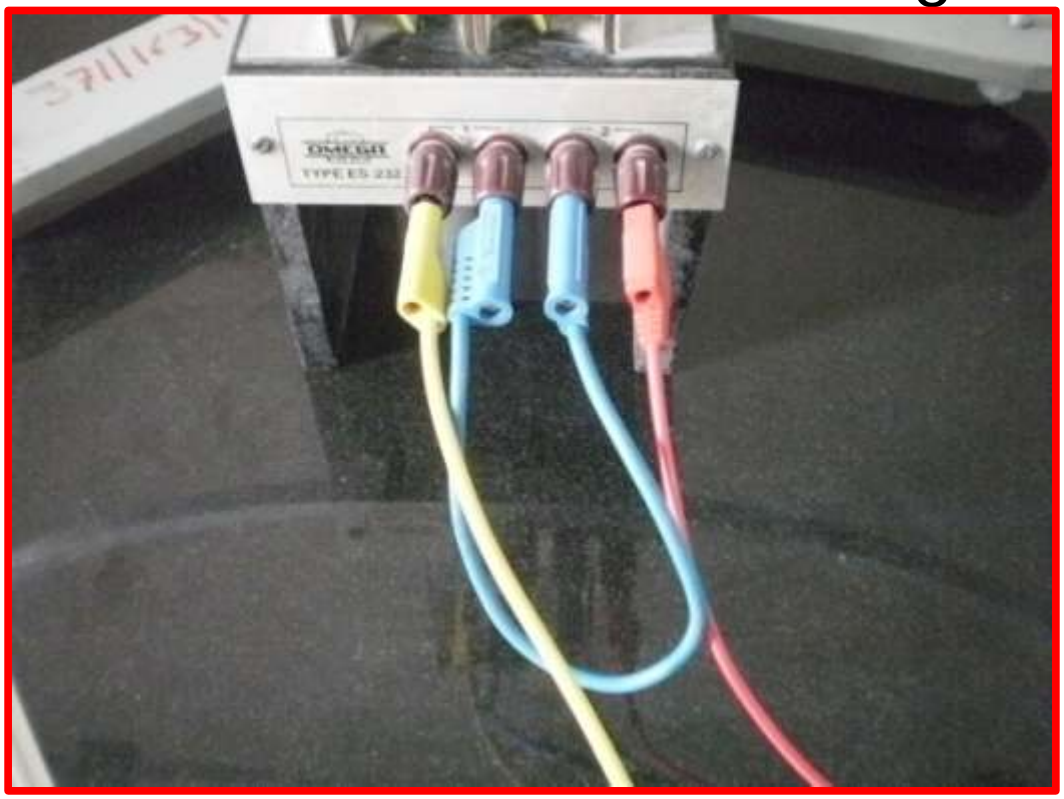
Electromagnetic Induction

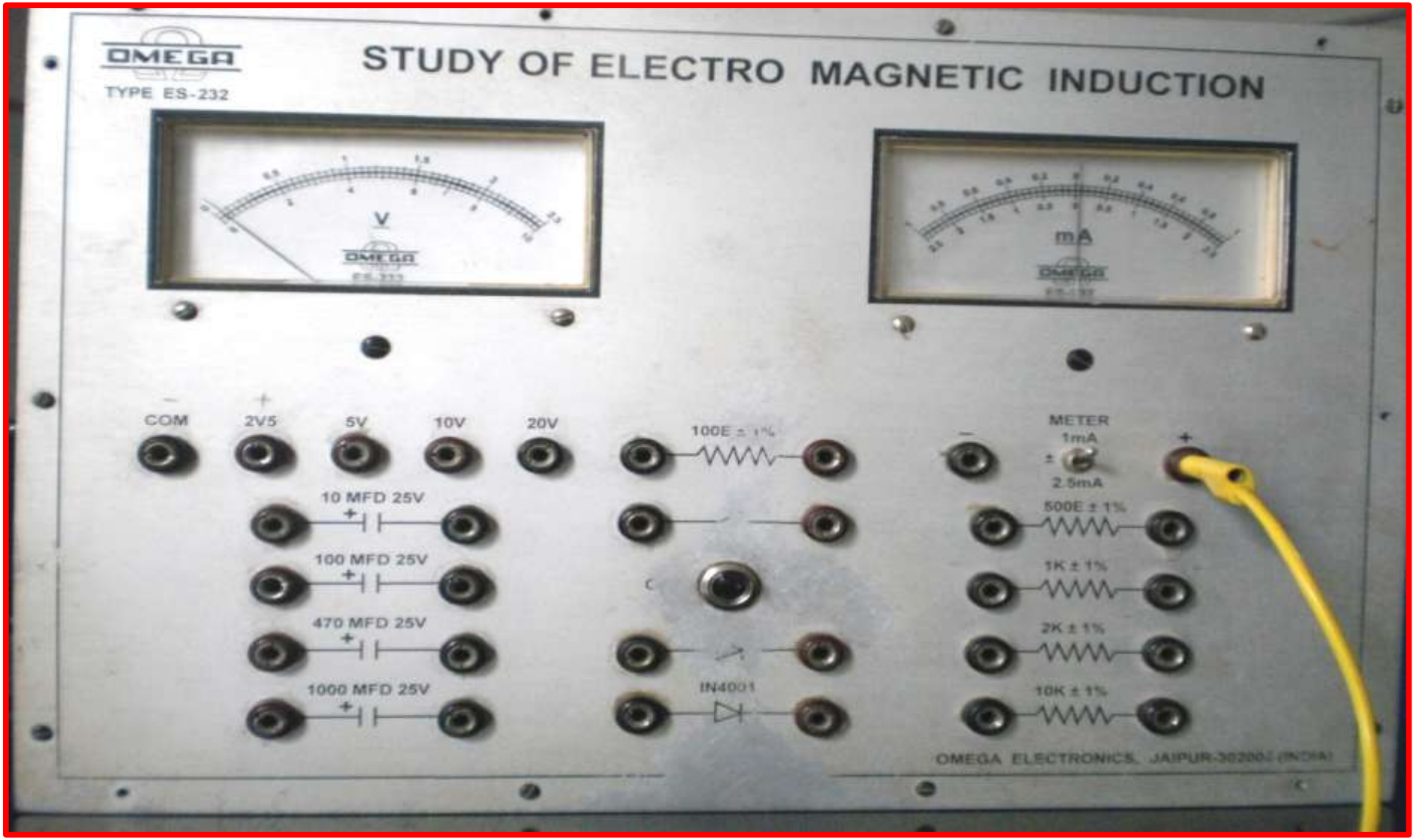


PartA:
Measure the time-period of small oscillations

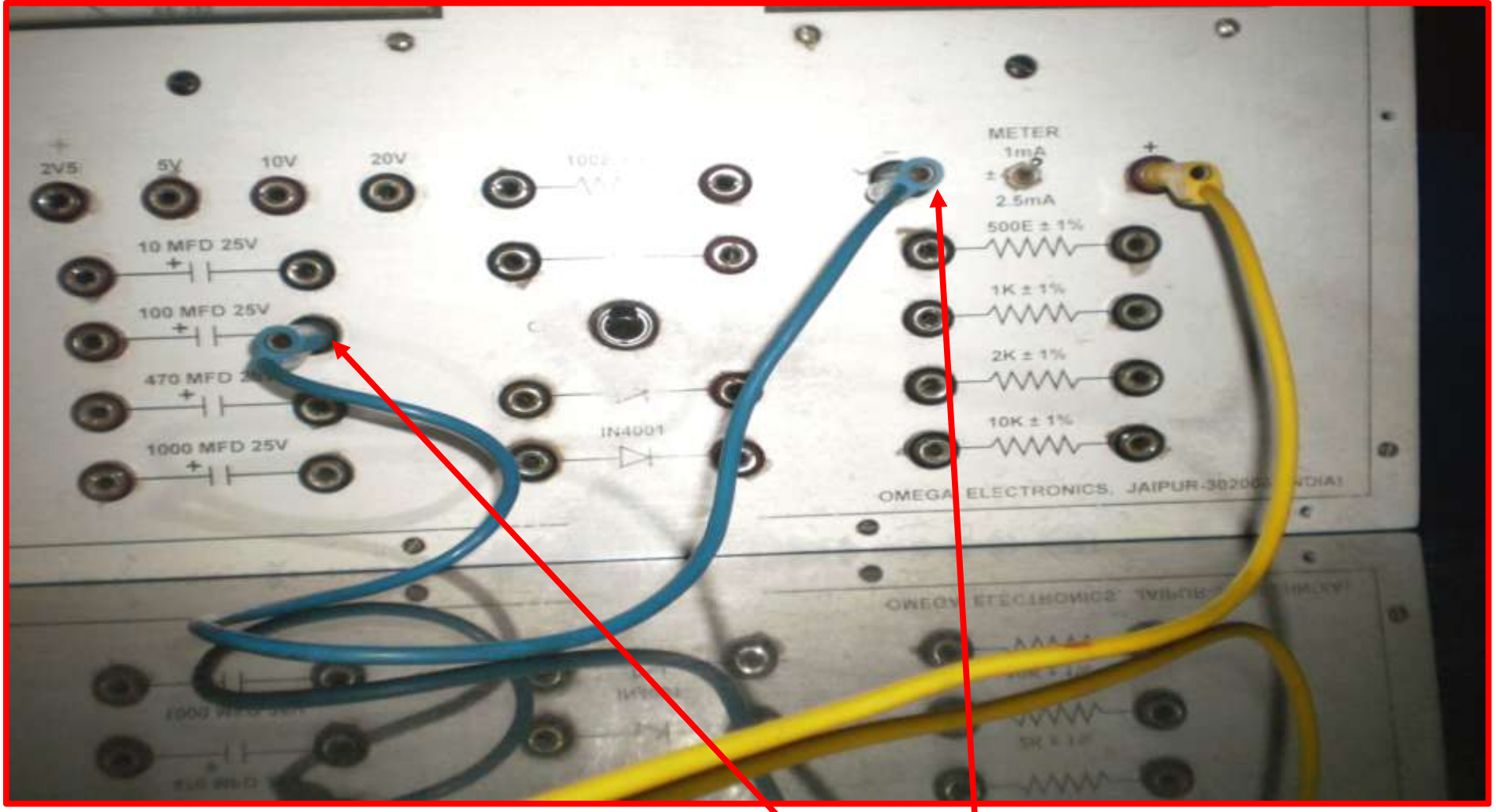
Part B
Connect the Circuit for the Measurement of ε_o



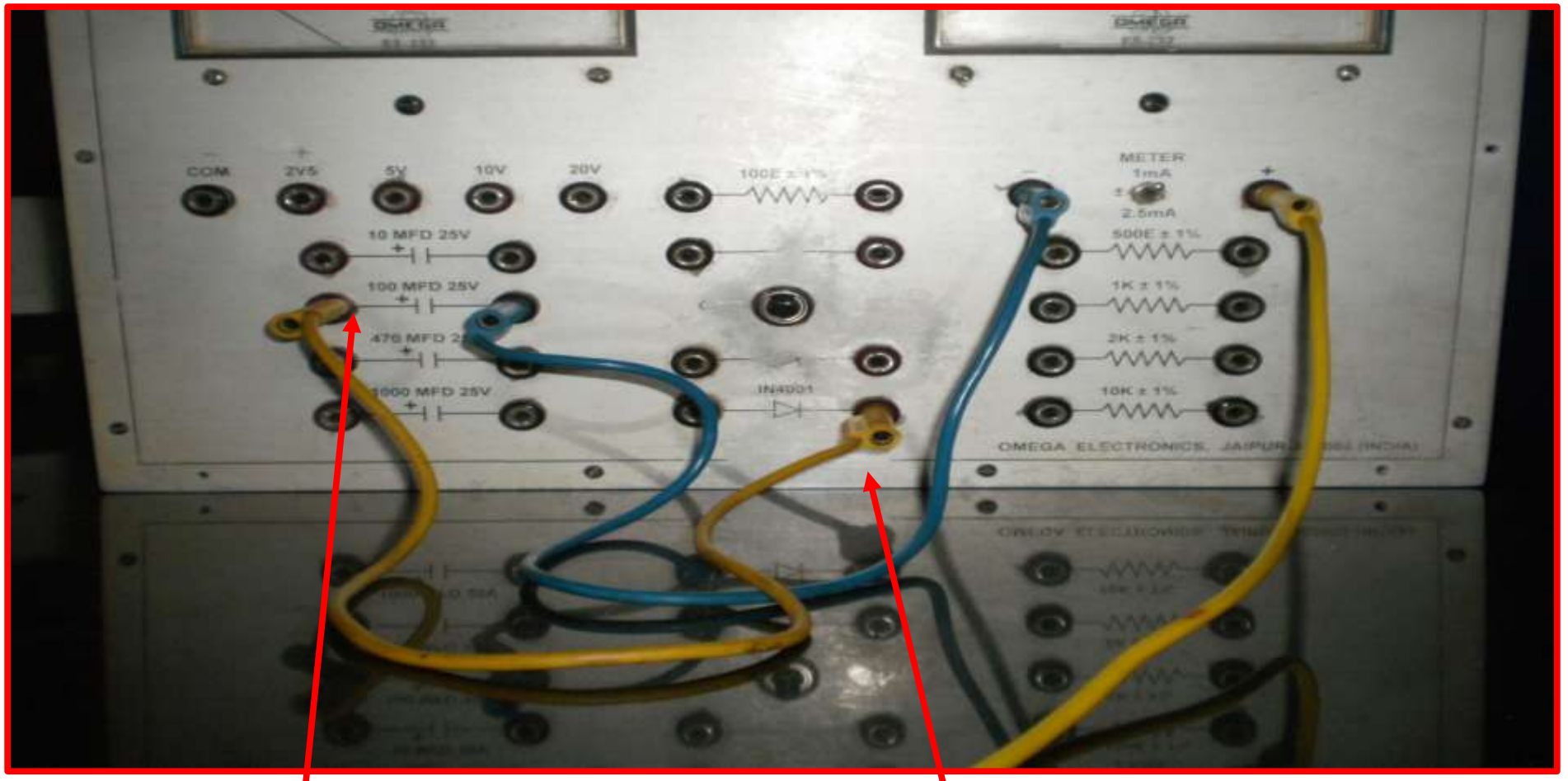
Two Copper Coils Connected in Series



Connection of one end of the copper coil to the positive terminal of the milli-ammeter(Yellow Wire)

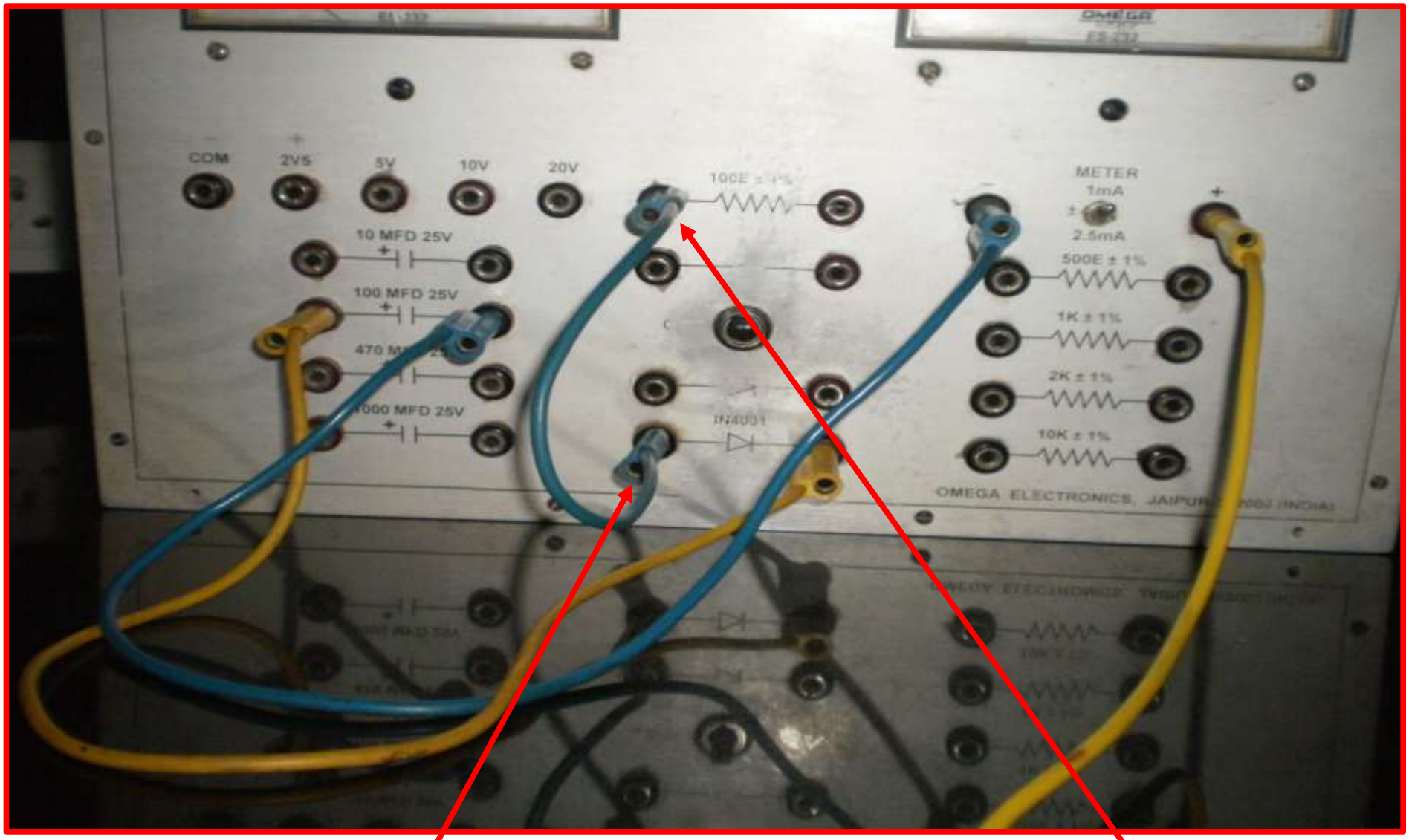


Connect the negative terminal of the ammeter to the negative terminal of the capacitor of 100μF.



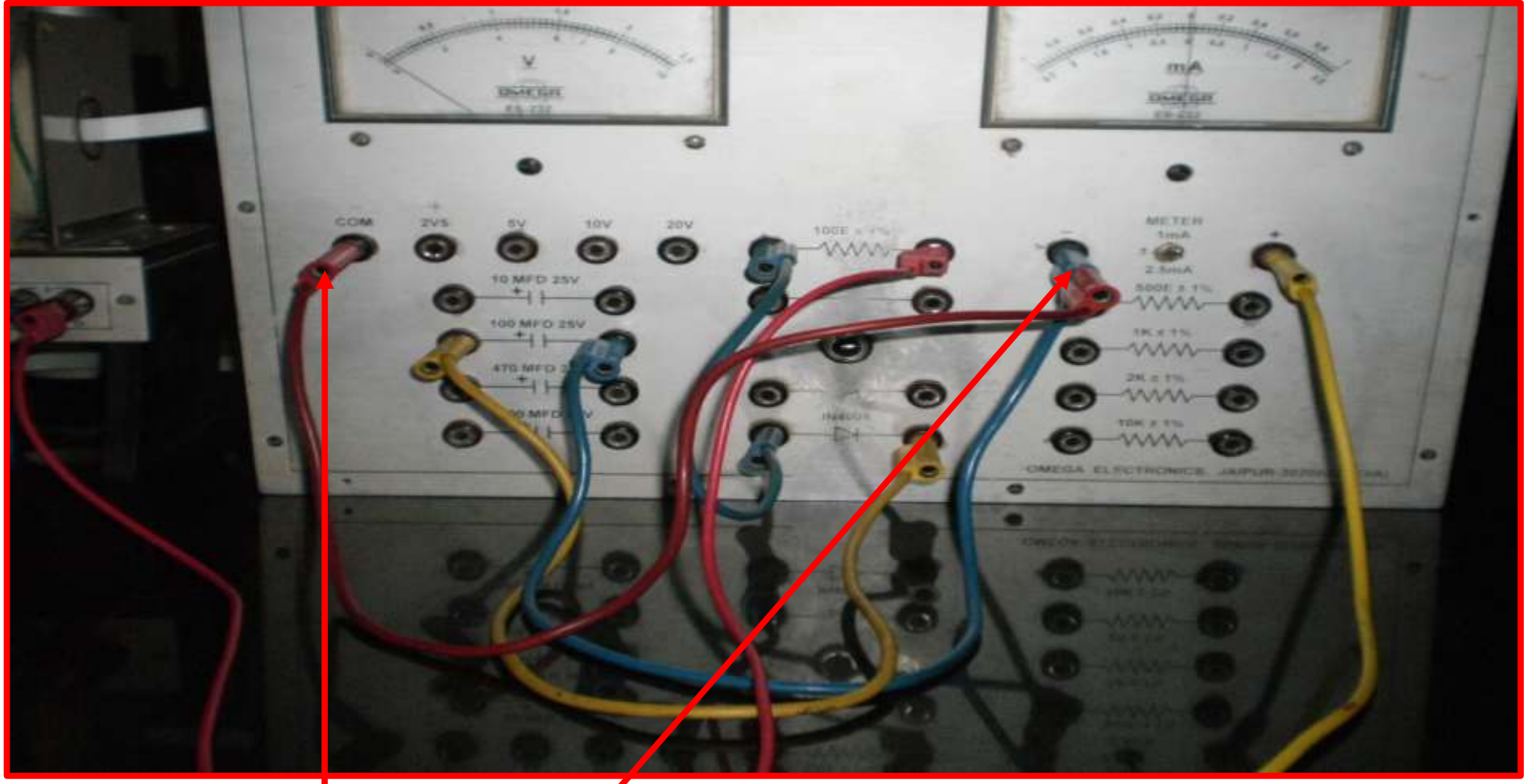
Positive terminal of the diode.

Positive terminal of capacitor

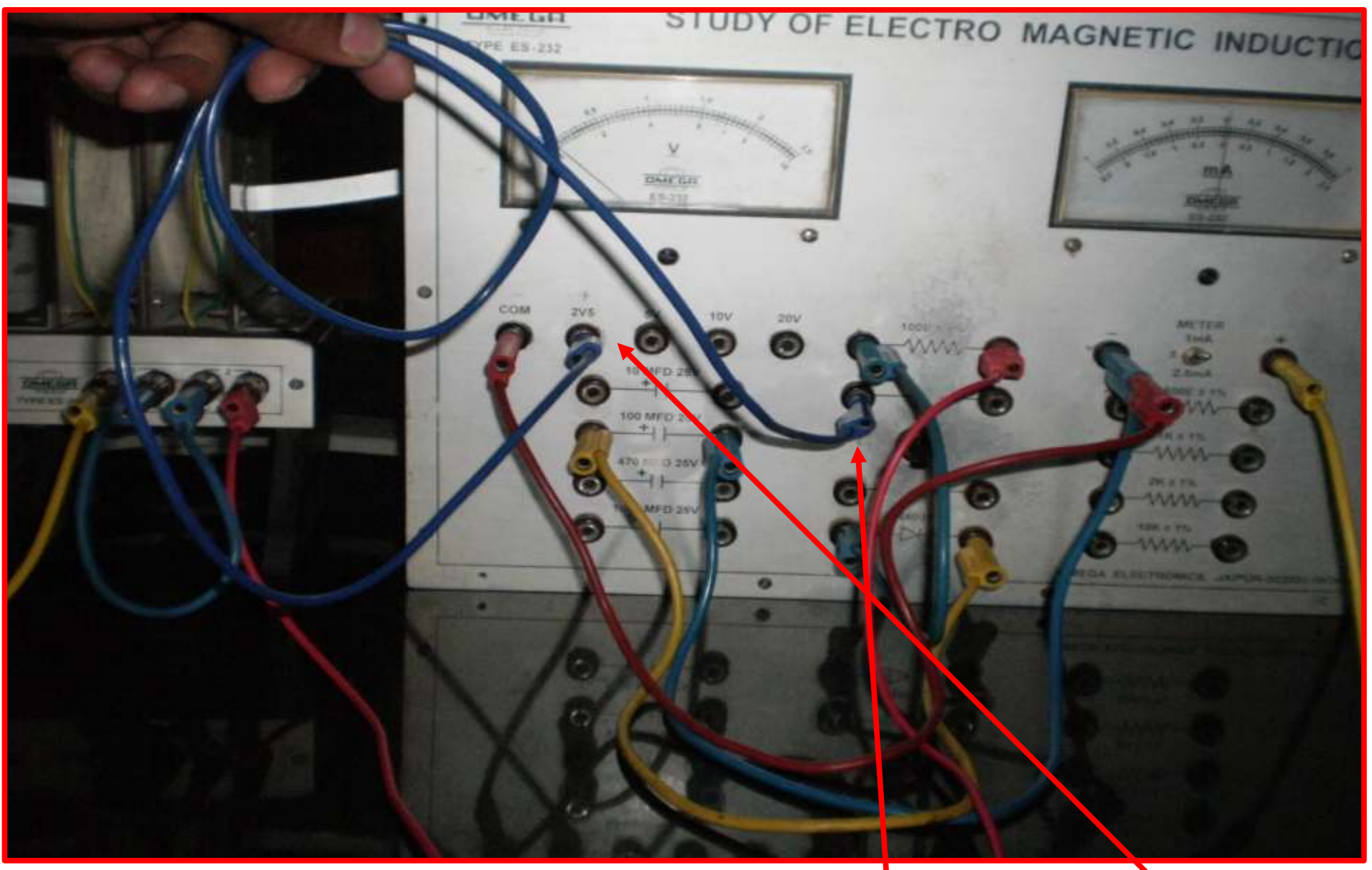


Negative terminal of the diode to the one of the terminals of R = 100 W

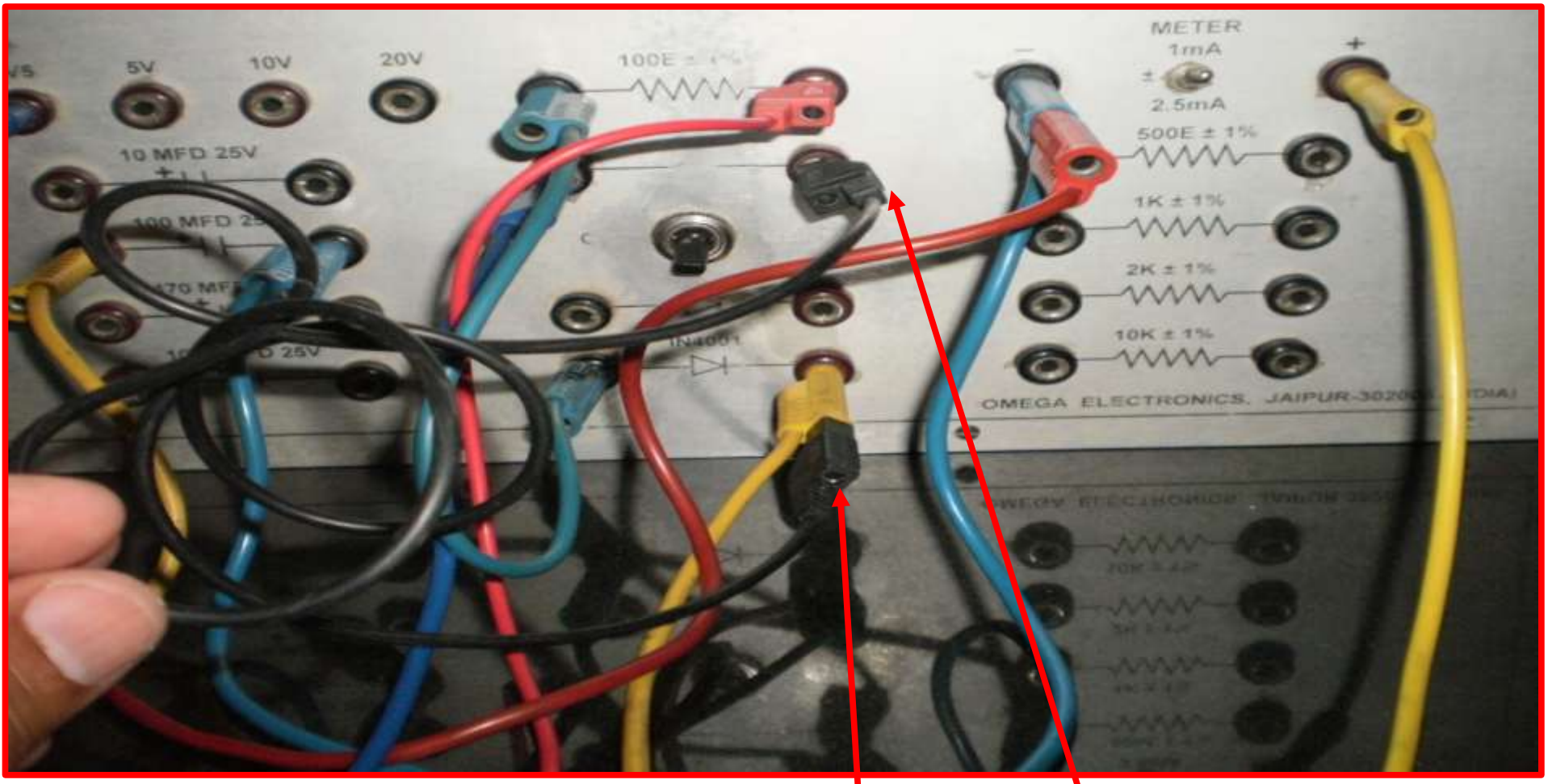
- Connect the other terminal of R to the other end of the copper coil.(Red Wire).
- The connection for the left loop of the figure 3 is complete.



Negative terminal of the ammeter with the common terminal (COM)



Positive terminal of the voltage source (2V5) to one of the terminals of the switch.



- Connect the other end of the switch to the positive terminal of the diode.
- The right loop of the circuit (fig. 3) is complete.

Perform the experiment to measure

$\mathcal{E}_o$ vs. v_{max}

End of Part B

Part C

To measure the charge delivered to the capacitor, choose a large value of **R = 1 kΩ & 2 kΩ**.

Follow the procedure given in the manual

End of Part C

Part D

Follow the procedure given in the manual.