4. Black box ***(10 points)*** Equipment: a black box with three terminals, voltmeter, timer. Inside the black box, there are two capacitors and a battery, connected as shown in Figure. The capacitance $C_1 = (3400 \pm 400)\ \mu\text{F}$; you are asked to determine the capacitance C_2 and estimate the ucertainty. *Remark:* the terminal "+" is a wire, long enough to be conected to either terminal "A" or terminal "B".

