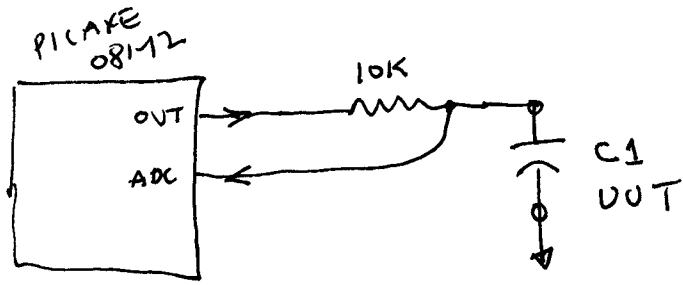


MEASURING LARGE CAPACITANCE W/ PICAXE



ADC HAS SCALE FROM 0-1023, THE SUPPLY VOLTAGE.

1. CHARGE CAPACITOR TO 1000 ADC UNITS, BY BRINGING OUTPUT HIGH. ^{OVER}
2. BRING OUTPUT LOW. MEASURE TIME FOR CAPACITOR VOLTAGE TO DECAY TO ^{FROM 1000} 368 (ONE TIME CONSTANT) ~~632~~

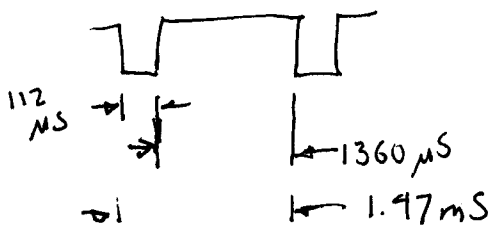
$$\tau = RC = 10^4 C \text{ IN FARADS } \& \text{ SECONDS}$$

$$= 10^7 C \text{ IN FARADS } \& \text{ MILLISECONDS}$$

$$= 10 C \text{ IN } \mu\text{F AND MS.}$$

$$\text{SO } C = \tau / 10$$

DESIGN THERE IS NO HARDWARE TIMER ON 08M12, SO MUST INSERT DELAY IN LOOP THAT SAMPLES VOLTAGE. CAN CALIBRATE LOOP BY GENERATING AN OUTPUT & MEASURING W/ SCOPE



470 μS TOO LONG, REMOVE DELAY
 FROM 1000 μS TO 1000 - 470 = 530 μS.
 = 424 COUNTS @ 32 MHz
 → YES, IT WORKED. NOW 1.00 ms