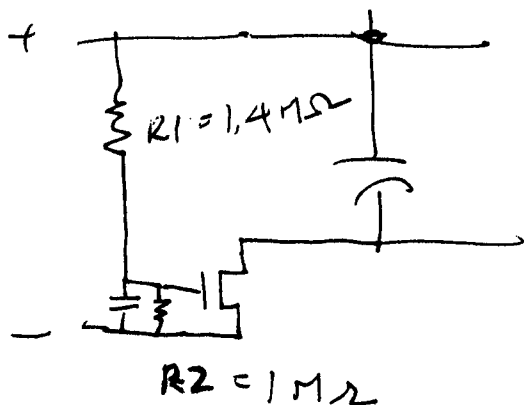
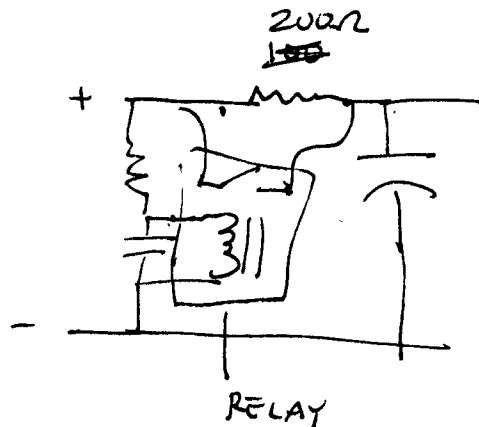
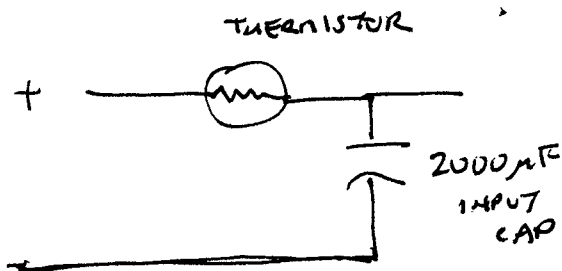


SOFT START TO AVOID INRUSH OF CURRENT ON ~~START~~ FIRST



MAX INPUT VOLTAGE = 40V
 MIN " " = 12V
 R1/R2 DIVIDER TO GIVE
 5V @ 12V ~~V~~ INPUT
 AND NOT EXCEED 20V
 w/ 40V IN.

$$\frac{5}{12} \cdot 40 = \frac{200}{12} = 16.3 \text{ VOLTS.}$$

$$50 \text{ VOLT INPUT} = \frac{250}{12} = 20.8 \text{ VOLTS}$$

$$48 \text{ VOLT INPUT} = \frac{5 \cdot 24 \cdot 2}{12} = 20 \text{ VOLTS}$$

24 V INPUT, LET CONTROL CURRENT BE 10mA

$$2.4 \text{ M}\Omega \text{ TOTAL} \quad \frac{5}{12} \cdot 2.4 \text{ M}\Omega = \frac{5 \times 2}{10} = 1 \text{ M}\Omega$$

$$\frac{7}{12} \cdot 2.4 \text{ M}\Omega = 7 \times .2 = 1.4 \text{ M}\Omega$$

SOFT START CONTINUED

CAP = 2000 μ F

$$i = C \frac{dv}{dt}$$

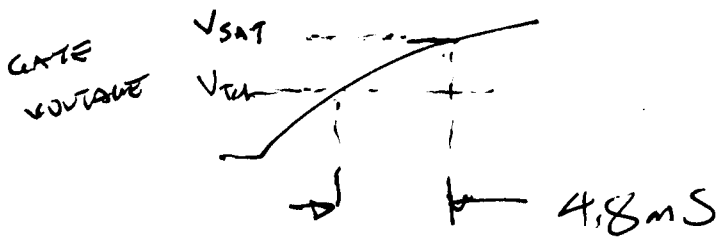
$$i dt = C dv$$

~~id~~

SUPPOSE ACCEPTABLE $i = 10$ A

$$10 dt = 2 \times 10^{-3} F \times 24$$

$$dt = \frac{2 \times 10^{-3} \times 24}{10} = 4.8 \text{ ms}$$

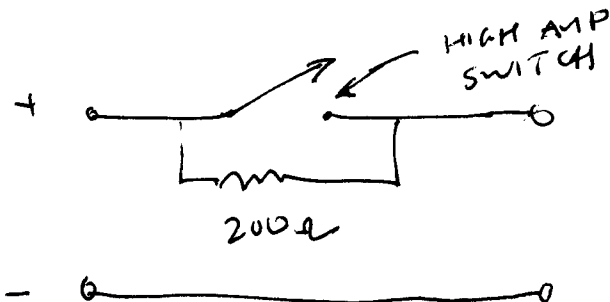


CAN CHOOSE CAPACITOR TO

UNRELATED THOUGHT:

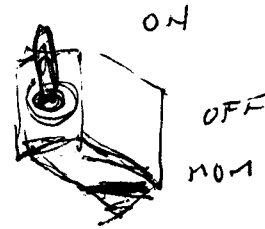
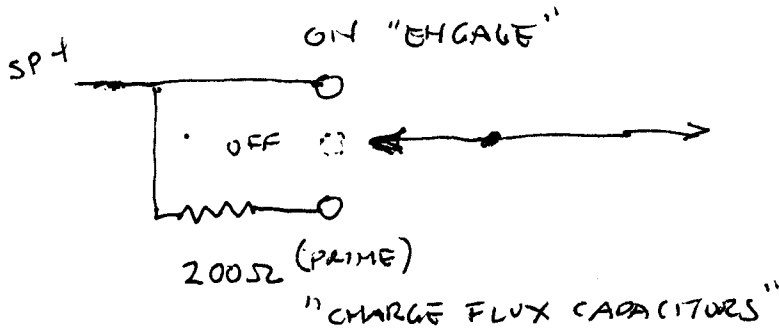
UPON STARTUP, SOFTWARE CAN ISSUE SINGLE PULSE TO DETERMINE WHETHER BATTERY IS CONNECTED, THEN DIFFERENT BEHAVIOR OF PTC.

IF I WANT AN ON/OFF SWITCH ANYWAY, THEN



SOFT START

COULD HAVE ON-OFF-MOMENTARY ~~ROCKER~~ TOGGLE SWITCH.
WOULD HAVE TOGGLE SWITCH ANYWAY AS ON-OFF.



SP- →

FLASHER SW - "WARNING BEACONS"

IN SOFTWARE, DESIGN SO THAT IF INPUT VOLTAGE IS LESS THAN 12V, NO POWER TRANSFER. PICK RESISTOR ON MOMENTARY SWITCH TO ENSURE THAT CONDITION.
→ NO, BAD IDEA. INHIBITS CAPS FROM CHARGING TO FULL POTENTIAL.

GREEN ○ "TURBINES"
- POWER TRANSFER IN PROGRESS (INCLUDING CHARGING?)

GREEN ○ "ATOMIC BATTERY"
- PICAXE INITIALIZATION DONE

WHERE TO FIND ~~SWITCH~~ TOGGLE SWITCH? - HALTED, WEIRD STUFF,
ANCHOR, ZURO TOOLS ... X X

MOUSER HAS ONE

ON-OFF-MOM } SAME, CENTER OFF
ON-OFF-(ON) }
ON-NONE-(ON) } ACTUALLY A 2-POSITION
ON-NONE-MOM } SWITCH, NO CENTER