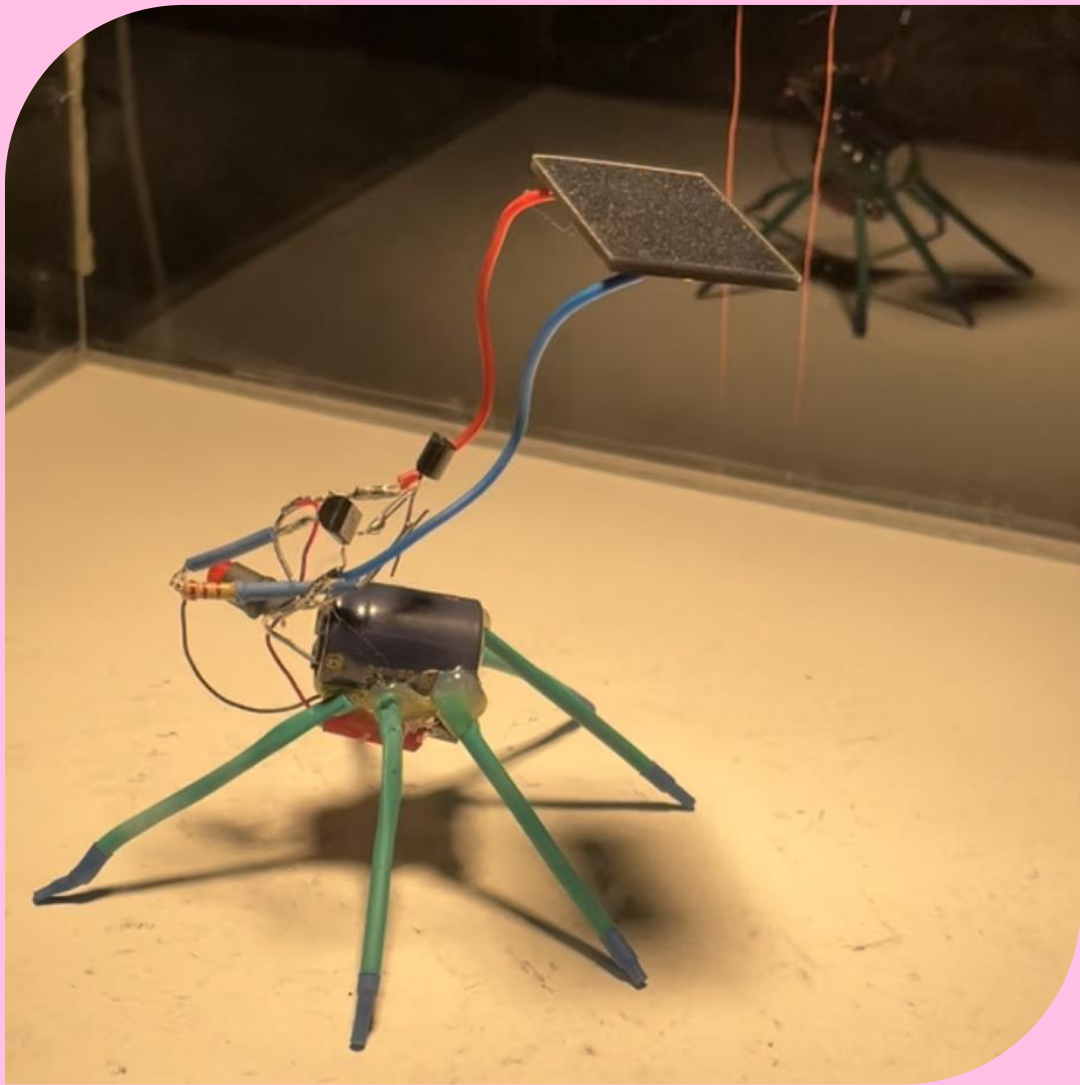


BEAMbot MAKING GUIDE



GUIDE BY LÉA BOUDREAU
DESIGN & BEAMbot BY VANIA RYAN



BEAMbot MATERIALS *IMAGES BELOW

- 3V VIBRATION MOTOR (ERM) X 1
- 4700 μ F CAPACITOR X 1
- LED X 1
- 3V SOLAR CELL
- 3906 TRANSISTOR X 1
- 3904 TRANSISTOR X 1
- 2.2 K OHM RESISTOR X 2
- METAL PAPER CLIPS X 2 (OR MORE!)
- 1MM – 8MM HEAT SHRINK TUBING (VARIABLE SIZES TO FIT AROUND PAPER CLIPS, CAPACITOR, VIBRATION MOTOR, ETC.)

TOOLS *IMAGES BELOW

- WIRE CUTTERS
- WIRE STRIPPERS
- SOLDERING IRON
- 0.8MM TIN-LEAD SOLDER
- COPPER WOOL (TO CLEAN SOLDERING IRON TIP)
- HEAT PROTECTIVE GLOVES
- HEAT GUN OR HAIR DRYER
- HOT GLUE GUN
- BENCHTOP SMOKE ABSORBER (OR WELL-VENTILATED AREA)
- ADJUSTABLE ALIGATOR CLIP STAND



MATERIALS/TOOLS



WIRE STRIPPERS



COPPER WOOL



SOLDERING IRON



HEAT PROTECTIVE GLOVES



SOLDER



WIRE CLIPPERS

MATERIALS/TOOLS CONT.



4700 μ F CAPACITOR



3V VIBRATION MOTOR

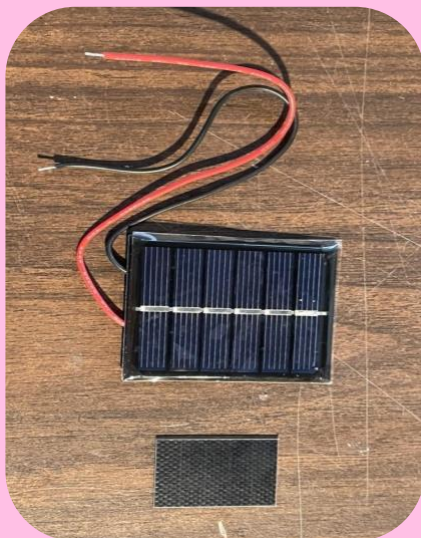
ee



1MM – 8MM HEAT SHRINK TUBING



LED LIGHTS



3V SOLAR CELL.



2.2 K OHM RESISTOR

ee

MATERIALS/TOOLS FINAL.



3906 + 3904 TRANSISTOR



PAPER CLIPS



HOT GLUE GUN



HEAT GUN



ADJUSTABLE ALLIGATOR CLIP STAND



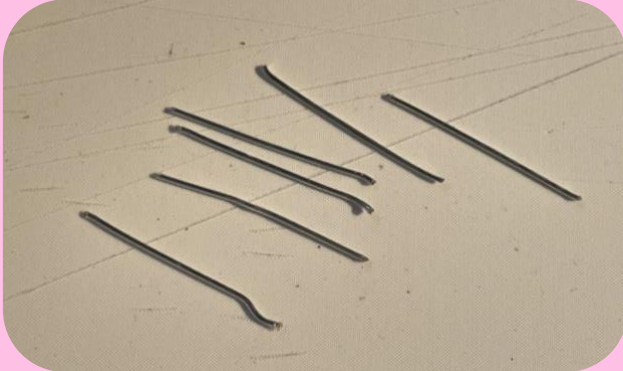
BENCHTOP SMOKE ABSORBER

ele ele

leg

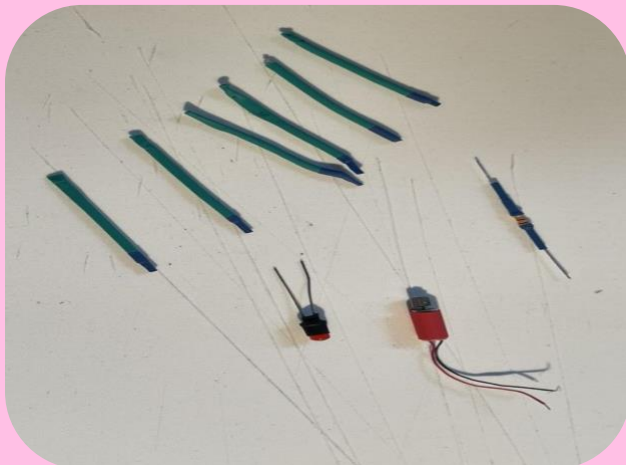
STEP ONE

- GATHER BEAMbot MATERIALS AND TOOLS
- CREATE DESIRED NUMBER OF LEGS BY CUTTING PAPERCLIPS INTO STRAIGHT PIECES OF SIMILAR LENGTH



PAPER CLIPS LEGS (CUT)

- FIT HEAT SHRINK TUBING AROUND LEGS *FOR CLOSER FIT USE SMALLER MM. TUBING AROUND PAPER CLIPS LEGS
- FIT HEAT SHRINK RUBING AROUND BASED OF CAPACITATOR, VIBRATION MOTOR, LEDs, etc. (PLACE WHERE DESIRED) *DO NOT COVER CONNECTIVE WIRES/COMPONENTS
- USE HEAT GUN OR HAIR DRYER TO SHRINK TUBING AROUND EACH DESIRED COMPONENT

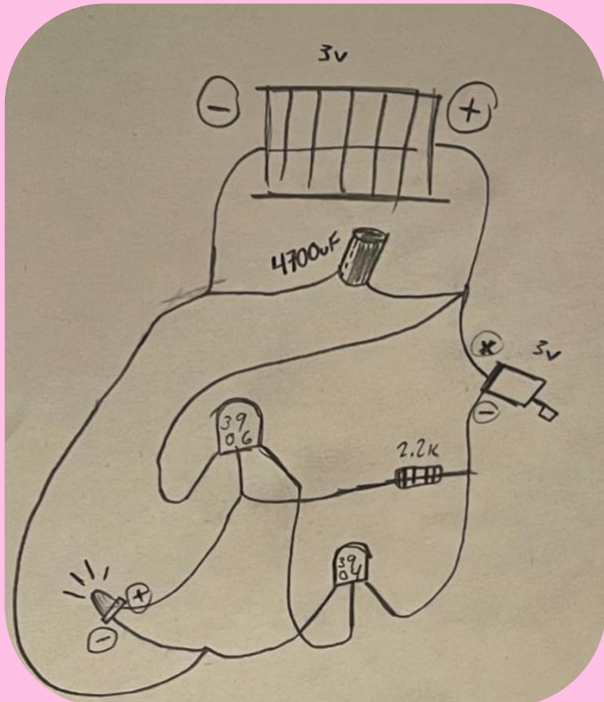


HEAT SHRINK WRAPPED LEGS, LEDs, MOTOR, RESISTORS, etc.

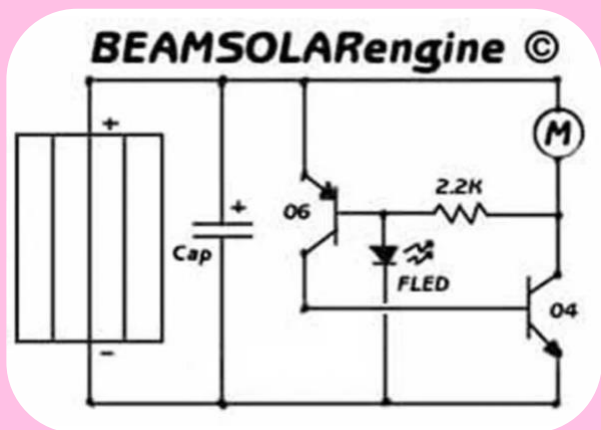
leg

STEP TWO

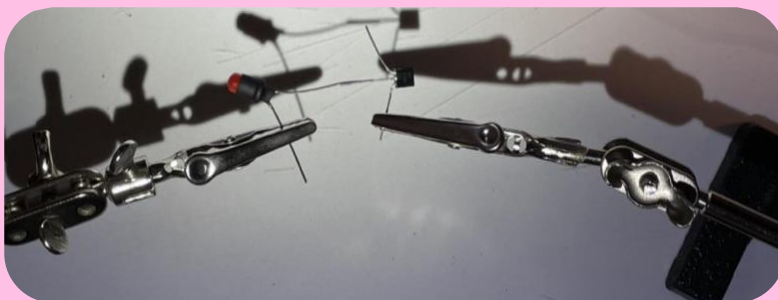
- HOT GLUE VIBRATION MOTOR TO CAPACITOR
- SOLDER TOGETHER THE COMPONENTS ACCORDING TO CIRCUIT DRAWING BELOW:



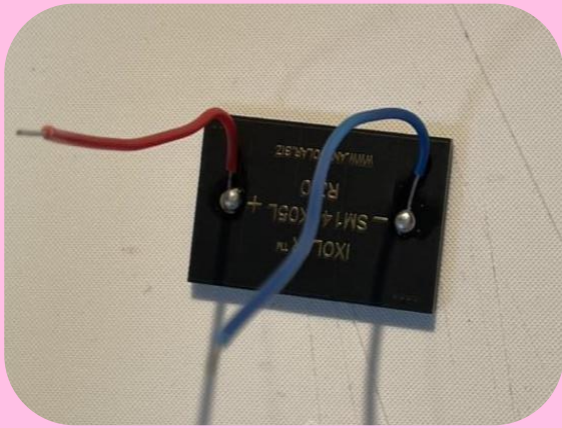
BEAMbot CIRCUIT *DRAWING BY LÉA BOUDREAU



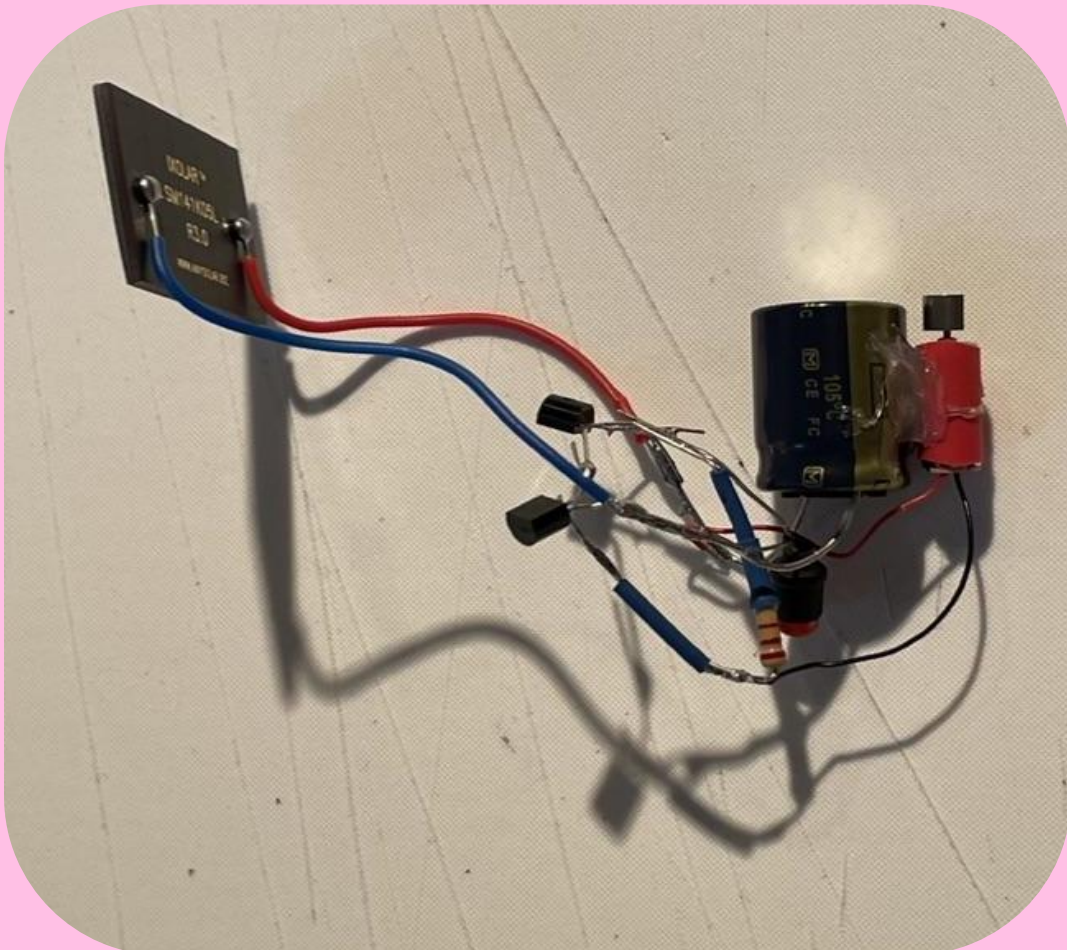
CIRCUIT WAS FOUND ON MAKEZINE.COM



SOLDERING OF LEDs



SOLDERED WIRES TO SOLAR CELL



COMPLETE SOLDERED CIRCUIT COMPONENTS

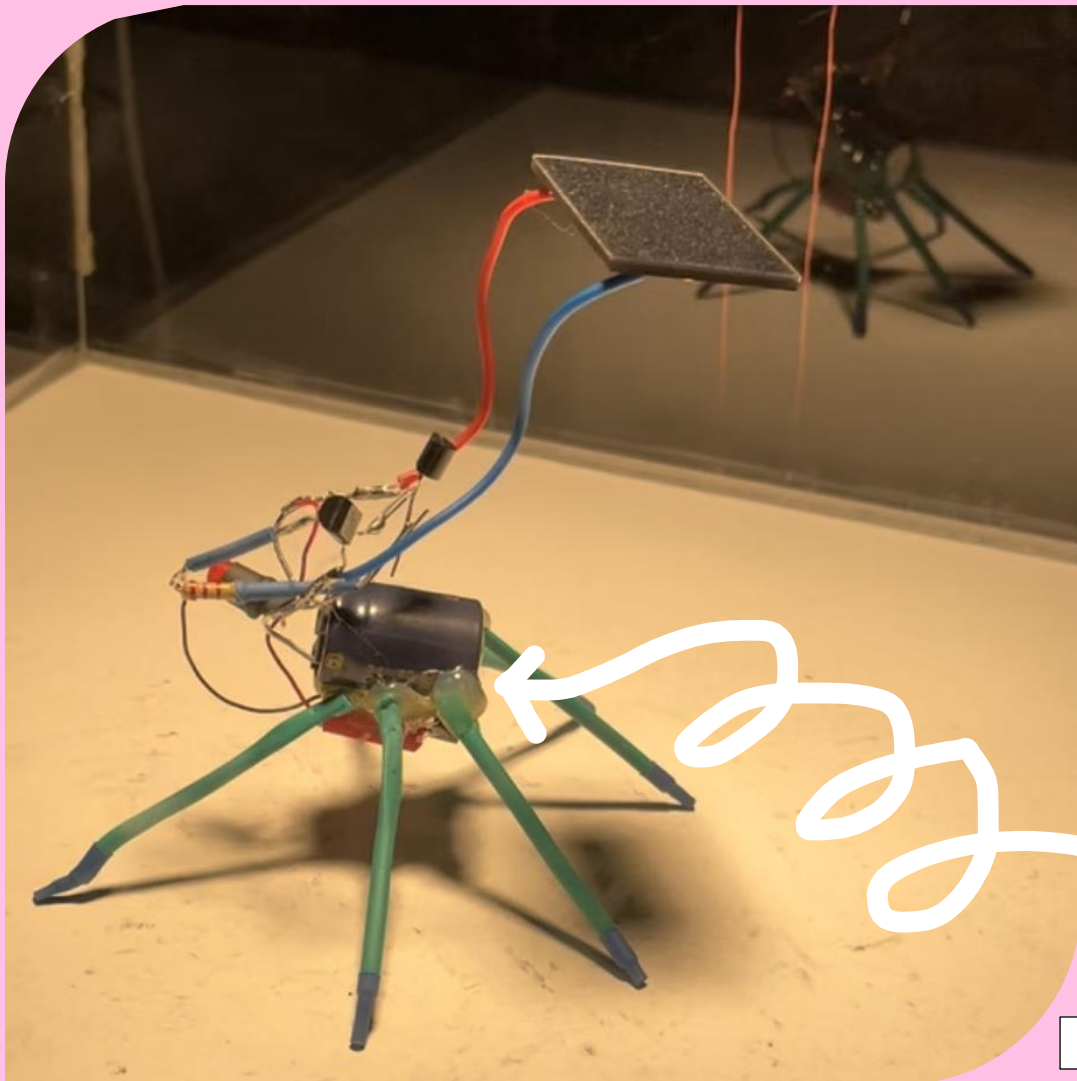
*TO AVOID LEAD EXPOSURE: SOLDER IN VENTILATED SPACE OR USE A BENCHTOP SMOKE ABSORBER. CLEAN IRON USING COPPER WOOL BETWEEN EACH SOLDER



STEP THREE (FINAL)

- TO MAKE THE BEAMbot STAND UPRIGHT – USE HANDS TO MANIPULATE SOLDERED COMPONENTS INTO SHAPE THAT ALLOWS FOR PAPER CLIP LEGS TO BE HOT GLUED ONTO THE CAPACITOR *IMAGED BELOW

LET YOUR IMAGINATION RUN WILD AND MAKE YOUR OWN BEAMBOT DESIGN 😊



COMPLETED BEAMbot (HOT GLUED LEGS)

THIS BEAMBOT WILL WORK UNDER A STRONG HALOGENE LIGHTBULB (120W) OR EVEN BETTER, IN THE SUNLIGHT!

