

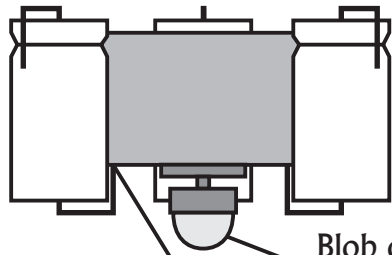


## Popular Mechanics for Kids (PMK) TRIMET by Solarbotics Ltd.

The PMK TRIMET is a BEAM robot with trilateral symmetry. It travels through it's environment skidding on two of the capacitor edges and the motor drive wheel until it meets an obstacle. Pushing on the ring results with the TRIMET kicking onto one of the other two sides and going off in a new direction

### Parts List:

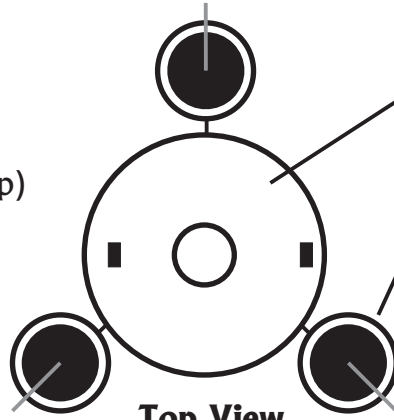
- Reasonable efficiency motor
- 3 axial (1 end per side) capacitors, ~ 1000 to 3300uF
- Length of stiff wire (jumbo paper clip)
- Solarengine circuit



Side View

Blob of solidified hot-glue on output shaft

Solder (-) connections to motor itself



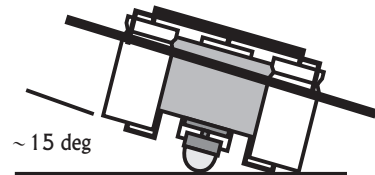
Top View

Top of motor (output shaft facing downwards)

Axial capacitor with (+) lead bent over to side, and (-) lead soldered to bottom of motor

### Notes:

- Physical size of capacitors isn't critical, so long as they are positioned so there is about a 5 ~ 15 degree angle from the output shaft blob to the edge of the TRIMET.
- Radial Caps may be used with a minor change in layout (connect to the motor on the topside).



~ 15 deg

Right leg of 3904 connects to motor pad

Circular wire soldered to ends of (+) of each cap

Left leg of 3906 connects to ring

One motor pad connects to ring

Solarcell (+) connects to ring then cell is glued on top

OPTIONAL:  
Tape all the way around the TRIMET to keep it from getting hooked

Left leg of 3904 connects to motor body

Solarcell (-) connects to motor body

Top View

