## ROTOR ASSEMBLY AND INSTALLATION INSTRUCTIONS

Materials: 1 CD Double stick tape Marker 4 Magnets (with the South pole marked) Compass Glue Gun & Glue 1 Tolerance Card (between coils and Magnets) 1 Hex Nut, Plastic 4 Washers, Plastic

1. Place double-faced tape on CD as shown. This is where the magnets are to be placed.

**WARNING:** The magnets are very strong. It is common for them to move across a table and smash together. This will cause them to break into sharp pieces and are useless. It is recommended that only one magnet is removed from the storage container at a time.



2. Position the magnets on the rotor over each of the taped areas of the CD surface with alternating polarities (important). Peel off the protective layer over each of the pieces of tape and press the magnets firmly onto the tape.



- 3. Slide three plastic washers (to set space) against the Hex Nuts on the rod next to the stator (Copper wire coils from part 3).
- 4. Place the rotor onto the shaft with the magnets facing the wire coils. Place a plastic washer over the shaft, next to the CD. Thread the hex nut up against the washer & CD. This will keep the CD and magnets close to the stator. You will need to make adjustments, sometimes several, to get the rotator as close to the stator as possible without them touching.



## The closer the magnets and wires are, the more current you can produce

## Space between rotor/stator

The above illustration is viewed from the above container to show the spacing of the rotor to the stator, when in the final position.



- 5. Always use a tolerance card between rotor and stator to store the hydro generator model. This will help keep the copper wires from separating and losing efficiency.
- 6. When you have checked carefully that the rotor turns without hitting the coils, your hydro generator is ready to test.
- Using the multimeter connected to the two connector wires extending up from the stator (Wires #7 & 8) and set the multimeter to measure AC in volts. The symbol on the multimeter will either be AC volts or V~

## **LED Installation Instructions**

- 1. Once you are done testing your generator to ensure it is generating a current, you can attach the LED. Hot glue the LED to the container above and the left of the stator, with the terminals extending down, where they can be easily attached to wires #7 & 8.
- 2. Twist the last 2 wires from the coils that have not been used yet to the leads from the LED bulb. Many find it is necessary to solder the wires to the leads to have a good connection.
- 3. The multimeter can be connected at any time using the alligator clamps, to register the output of your hydro generator.