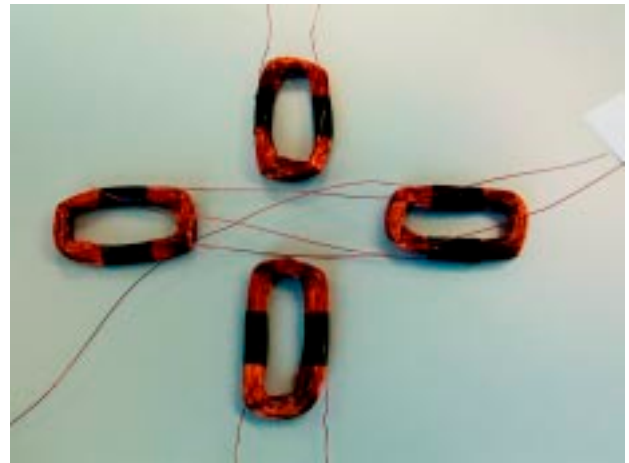


# STATOR ASSEMBLY AND INSTALLATION INSTRUCTIONS

**Materials:** Template for Stator  
 4 Wire Coils (pre-wound)  
 1 Foam Core Board (pre-cut & drilled)  
 Glue Stick  
 1 Piece Sand Paper  
 Needle-Nosed Pliers  
 Scissors  
 4 Brass Paper Fasteners  
 Multimeter (check connections for continuity of current & ohms)

- Place the 4 coils of wire in position carefully matching the arrows and directions on the template, illustrating the direction of the coil windings. **Note: two coils opposite each other have their wires extended to the center, and the other two coils opposite each other have their wires extended away from the center. (This is of major importance in the construction of your generator).** Do not alter the coils thickness as the coils have been pressed to help maintain a close tolerance between the stator and rotor. DO NOT COVER THE CENTER HOLE OF FOAM CORE BOARD WITH THE COILS.
- When you have carefully positioned the coils **correctly** on the template, glue them in position on the template with the glue gun. **Carefully check if the direction of the coils is correct. As the diagram shows, their placement causes the current to move clockwise over one coil and counterclockwise over the next.** Trim 6 of the 8 wires (as shown on templates) to about 6 cm (60mm) in length, with the cutter on the pliers. **DO NOT TRIM THE SET OF WIRES THAT COME OFF OF THE STATOR (arrows on template indicate), THESE LONG WIRES WILL CONNECT TO THE LED.**
- Using the sandpaper, carefully clean about 20 mm (2 cm) at each end of each wire, until the coating is removed and wire end is bare. **Note: the fine 29 gauge wire is very brittle, if sanded too much.** The illustration below shows how to bare the wire by pulling wire across the sandpaper.



Cleaning coil wires



Wire twist of bare ends

4. As shown on template, **twist wires together to create a continuous connection** (except two serving as connectors, as indicated in template). Tape wires together firmly with electrical tape. **Make sure no wires or loose ends are exposed above the coils.** After taping the wires together, you can then carefully tape or hot glue the paired wires flat against the container, keeping them out of the way and also for easy access, in case you need to repair connections.
5. **A critical test can now be made with the multimeter to check for continuity of flow and resistance.** Read instructions on multimeter for setting. Set multimeter for sound/continuity of current. **The turbine will not produce current if there is not continuity of current.**



**PROCEDURE FOR CHECKING STATOR CONNECTIONS WITH MULTIMETER**



Note connection with green & white alligator clips. Note Multimeter settings readout with sound, indicating good connection.



Note white alligator clip next to twisted pair. Note Multimeter readout with no sound indicating bad connection.



Note White Alligator Clip moved to next twisted pair.



Note final Alligator Clip to the final test for connection and continuity.

*If indication of any of these checks proves negative, you know which twisted pair has lost connection and requires repair.*

6. Place the stator on the shaft and slide stator against the outside wall of the container. Rotate the stator to expose the two (connector) wires extending from the coil in an upward position toward the top of container where they may connect with the LED.
7. Using a sharp pair of scissors, carefully push one point of the scissors through the four slots marked on the template. Continue pushing the point of the scissors until you pierce the wall of the container (careful not to puncture your hand).
8. When the slots for the brass paper fasteners are lined up, glue the stator to the container. Push brass paper fasteners through each slot. Reaching inside the container, while holding stator firmly from the outside, spread each of the brass fasteners to help secure the stator to the wall. Finish product should resemble the following pictures.



9. Using the clear plastic cover, slide it over the shaft through the center hole in the plastic. Carefully place it down to cover all of the coils and wire connections. Hot glue the plastic cover to the plastic container. Make sure the plastic is smooth and wrinkle free over the coils and the center hole is large enough to allow shaft to turn free.



**Slide cover over shaft, hot glue to container**