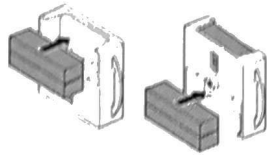


Step 1: Assemble the Magnet Holder

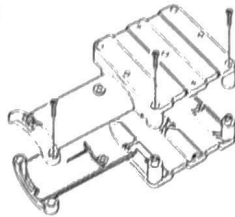
Connect two ceramic magnets together and insert them into the top of the magnet holder. Take the other two and insert them into the bottom of the holder.

In order for the generator to work properly, opposite fields need to be facing outwards: north on one side, south on the other. As you assemble them, you will feel the fields of the magnets pulling them into proper alignment.



Step 2: Assemble the simpleGEN Housing

Fit the posts of one half of the simpleGEN housing into the holes on the other half. Secure the halves together with screws.

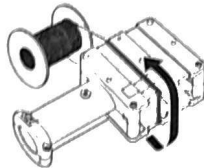


Step 3: Wrap the simpleGEN Housing with Wire

Determine how many turns of wire you will wrap around the box. Each turn will use approximately 25 cm of wire. The spool of wire included in the simpleGEN kit has about 130 meters of wire, which is enough for at least 500 turns around the housing.

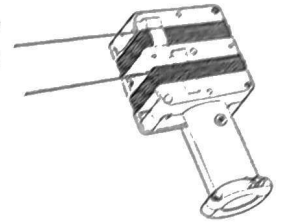
As you begin, keep in mind that all the wire must be wrapped in the same direction around the housing. Also keep in mind that you will need to leave at least 15 cm of wire free when you start and finish wrapping the wire around the housing, for connecting to the LED or multimeter. Sticky tape such as electrical tape, "duct" tape, or painter's tape can be used to secure the wire while you get started.

Wrap the wire neatly around the simpleGEN housing, evenly distributing it in the two grooves. For example, if you plan to wrap 300 turns of wire, make 150 loops in one groove and 150 loops in the other. Always wrap the wire in the same direction.



Be sure that you have wound your coils neatly. The wires should be straight, fit entirely within the grooves on the housing, and fit the housing snugly. Do not cut the wire connecting the top and bottom coils!

When you have finished wrapping the wire, use another piece of tape to ensure that the last loops of wire remain securely in place.



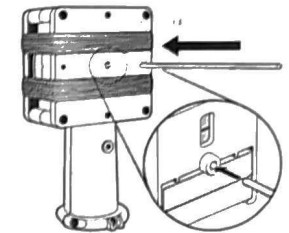
Make sure to leave the two ends of the wire (about 15 cm each) free and extended from the box.

Step 4: Assemble the Generator

Insert the magnet holder with magnets into the simpleGEN housing.



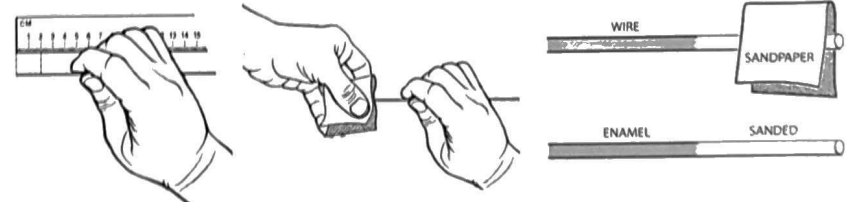
Align the hex driveshaft with the magnet holder's center hole and insert.



Make sure that the magnet holder is centered in the housing so it can spin freely.

Step 5: Prepare the Wire Ends

Magnet wire is covered with a thin coat of enamel. To reach the conductive wire beneath, you will need to scrape off the enamel coating. Fold the sandpaper around the wire and pull it gently along the wire toward the ends, starting from about 2 cm from the ends of the leads.



Now you are ready to perform experiments with your simpleGEN!