



How to make a Bristlebot

Materials Needed

- 1 pager motor with two wires
- 1 button cell battery or 1 AA battery
- 1 toothbrush or hairbrush
- Pliers/wire cutter
- Wire stripper
- Attachment materials
- Decoration materials (anything you can find, from popsicle sticks to straws to googly eyes)



Directions

1. Cut off the toothbrush head

Cut off the head, using pliers or wire cutters.
Cut the handle close to the bristles.

2. Test the battery and motor

Strip the end of the pager motor's wires so about half an inch of the metal wire shows.

Touch one wire to the top of the battery and the other wire to the bottom.
This should make the motor spin.

3. Attach the motor

Fasten the motor firmly to the top of the toothbrush head.

Use a rubber band, twist-tie, zip-tie, or piece of tape or double-stick foam tape.

Add a weight, this can be a piece of eraser, a piece of cork...

Make sure the weight can spin without hitting the toothbrush.

4. Connect one wire

Tape one of the motor's wires to one side of the battery

5. Attach the battery

Fasten the battery firmly to the top of the toothbrush, so the wire is on the bottom.

Use a rubber band, twist-tie, zip-tie, or piece of tape or double-stick foam tape.

6. Connect the second wire

Connect the second wire so it stays in contact with the top side of the battery.

Not moving? Make sure the bristles are angled. The Bot moves in the direction that the bristles lean.

Spinning or not going straight? Shift the weight. The position of the motor and battery affects how the bristles touch the surface. Move the battery and motor to put weight evenly on all the bristles.

7. Personalise your bristlebot!

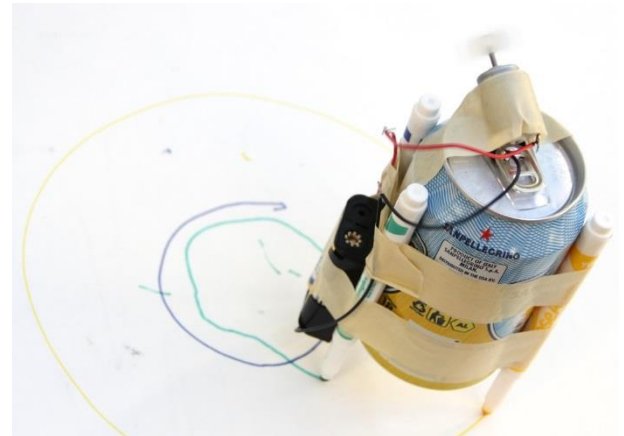
Use whatever decorations you can find to make your bristlebot your own!



How to make a Scribblebot

Materials Needed

- 1 hobby motor with 2 wires
- 1 AA Battery
- Wire stripper
- Glue stick or eraser
- Rubber band
- Washable markers
- Recyclable container, like a strawberry basket or clean yogurt container or a (hard) plastic cup



Directions

1. Make the motor work

Wrap a rubber band around the battery lengthwise and slip the other end of each wire of the motor under the rubber band so that one wire is touching the positive side of the battery and the other wire is touching the negative side. Your motor should start spinning!

To turn off your motor, pull one wire back out from underneath the rubber band.

2. Attach your motor to the container or cup

Tape your motor and battery to the top of the recyclable container. Make sure that your motor is near the edge of the container with the motor arm sticking off the edge.

3. Put some weight on your motor

Push a glue stick onto the part of the arm that spins on the motor. A piece of eraser works as well!

4. Add the scribble to the bot

Give your scribblebot legs by attaching markers to the sides with tape

5. Reattach your wires to make your scribble bot move

6. Personalize your scribblebot!

Use whatever decorations you can find to make your bristlebot your own!