

# Bristlebot: A tiny directional vibrobot

By [Windell Oskay](#) on [December 19, 2007](#)



The BristleBot is a simple and tiny robot. One toothbrush, a battery, and a pager motor.



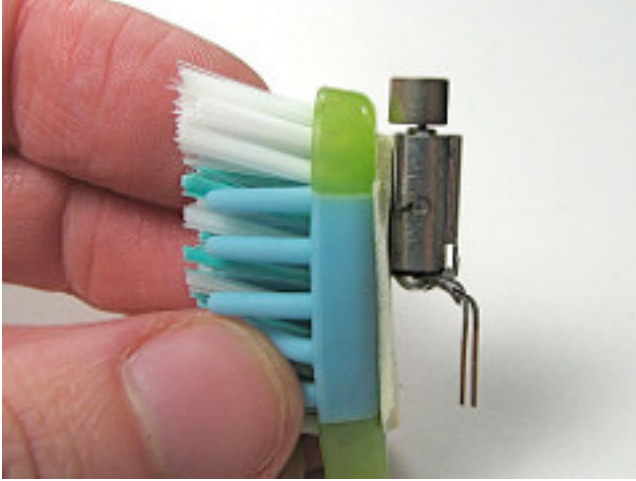
If the bristle length is not uniform, scissors can make the bristles all the same.



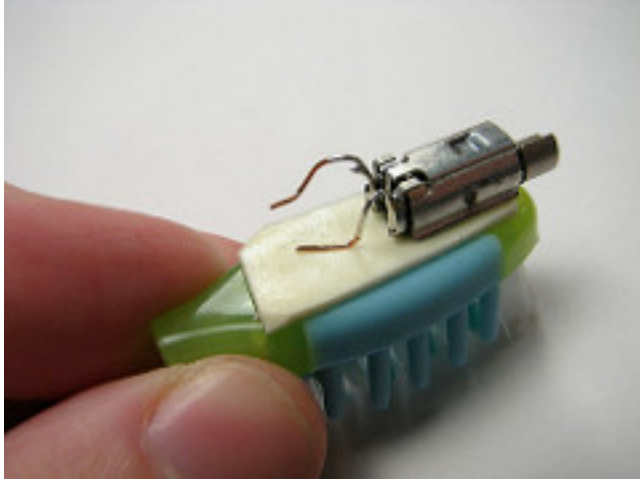
Cut off the handle of the toothbrush, leaving only a neat little robotics platform.



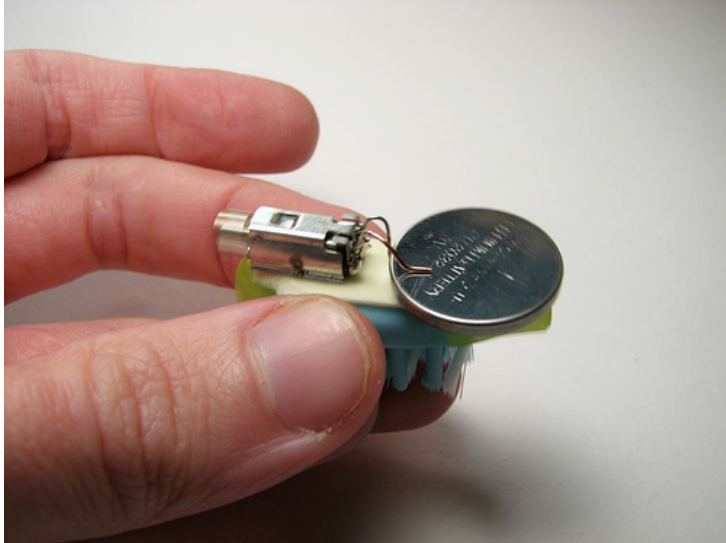
The last substantial ingredient is some foam tape. Apply a small piece to the top of the toothbrush robotic platform, which will be used to hold the motor in place.



Attach the motor to the foam tape. The tape provides a spacer so that the rotating weight does not hit the toothbrush head. It also provides a strong, flexible connection to the base that is able to handle the severe vibration that this robot experience



A better method is to bend one of the leads down flush with the foam tape, so that you can \*stick\* the battery to the foam tape as well and still make an electrical connection. The other lead contacts the other side of the battery, and the motor can run,



The completed BristleBot, running and ready for action. When you set one down, you may notice that it tends to steer left or right. Battery and motor placement, bristle shape (one stray long bristle can interfere with the motion, and motor rotation direction all influence the behavior- so be sure to try flipping the battery upside down if you have trouble getting yours to go straight.