

It does, but it is hard to get it to.

It Can't Work

Organization

- Groups of two (three only if necessary)
- Worth 10 Points
- 30+ seconds = 10 points
- 16-29 seconds = 9 points
- 1-15 seconds = 8 points
- 0 seconds = 7 points if you turn in a report
- Never more than 3 volts!

Material at your desk

- Copper wire
- Sand paper
- Sanding board
- Thumb tacks
- 2 cut can slips
- Few film canister lids
- Block of wood
- 2 alligator clips
- 1 power supply
- Hole puncher

Directions

1. Take your can slips and bend them to form two posts.
2. Punch a hole in each can slip at the same height above the block of wood.
3. Tack the can slips to the block of wood at least the width of a film canister lid away.

Directions

4. Wrap wire into multiple tight circles on top of each other and have the end of the wire wrap around this tightly wound circle to keep it in place. The end of the wire should point in opposite directions and the same amount of wire should be on top and bottom of where the end of the wire comes out.
5. Sand one end of the wires such that only half of the wire has been sanded. Choose one side of the circle. Sand the other end of the wire completely.

Directions

6. Put tightly wound circle into the holes so that the circle rests between the posts.
7. Put magnets under the circle and adjust height as needed using film canister lids.
8. Hook the posts up to the power supply.
9. Turn on Power Supply.
10. No more than 3V!
11. Turn your circle one way and then the other.
Does it work?

Tips

- Patience, rarely ever get it to work on the first try.
- Sand it well and make sure only half of wire is sanded.
- Make sure your magnet is close to the wire but not close enough that it is hitting the wire.
- Adjust the heights of the posts to make the circle stay in the center as much as possible.

Tips

- Keep trying until you succeed
- Sometimes the magnet is pointed in the “wrong” direction.
- Sometimes the current is in the “wrong” direction.
- Apply some muscle to put the tack in.
- You might have to start over, this is alright.
- Too many or too few wraps of the circle could cause the motor not to work.