

ROYAL SIGNALS MUSEUM

ROYAL SIGNALS CRYPTO CLUB ELECTRIC MOTOR 1

You have:

1. one iron or steel screw,
 2. one 1.5 V battery,
 3. six inches of plain copper wire,
 4. one small neodymium magnet,
-and no tools or material.



Can you make an electric motor, which can run at over five thousand RPM.

Think you can ?

Lets Try !

Set the screw on the magnet and bend the wire.



The weak, single-point contact that you are making serves as an low-friction bearing. Attach the battery to the button end, but the other end will work as well. (If you do so, the motor will spin the opposite direction. You can also reverse the direction by flipping the magnet up side down.)

Press and hold the top end of the wire to the top end of the battery, making an electrical connection from the top battery end to the wire.

Now to start the motor...

Lightly touch the free end of the wire to the side of the magnet. The magnet and screw start to spin immediately.



NOTE:

- ▶ Watch out: The screw and magnet can easily fly out of control, and you do not want the screw ending up in your eye. **Wear safety glasses and use common sense!**
- ▶ Also note that some of the components, like the wire, can get very hot while you're doing this.