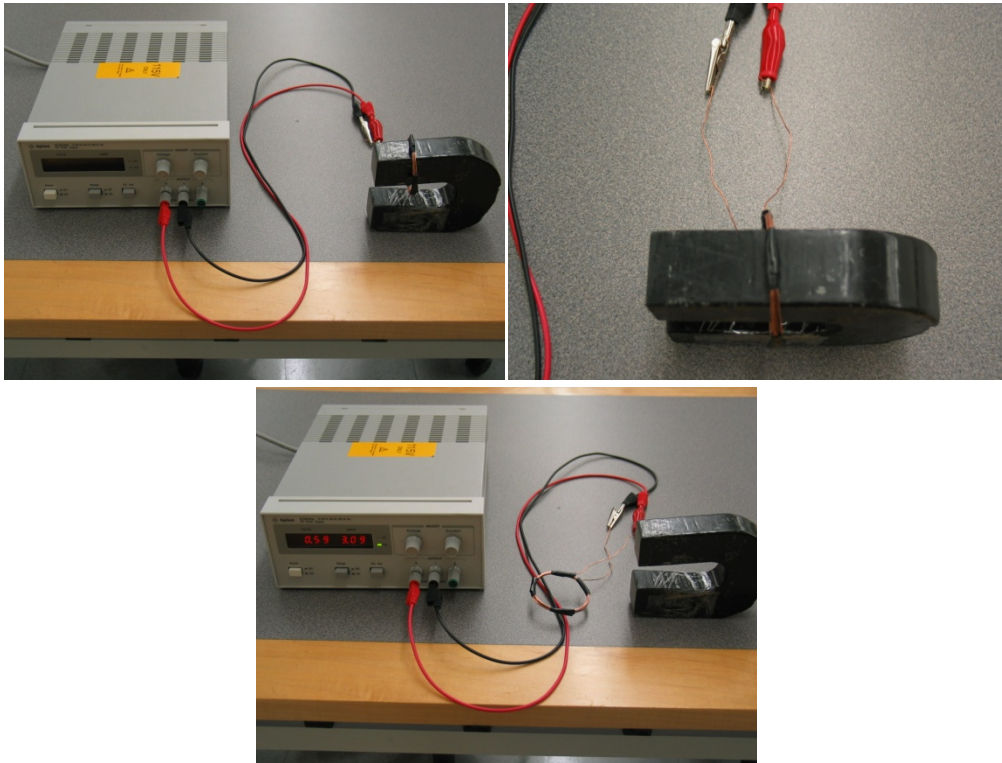


Jumping Coil



Purpose: To show that a wire coil wrapped around one pole of a horseshoe magnet will jump off of the magnet when current is applied.

Location: Room 146; shelf M6, HP power supply on C3

Using banana to alligator leads, connect the power supply terminals to each end of the copper wire loop (top left picture). Place the horseshoe magnet on its side and slide the wire loop over the top pole (top right picture). Make sure the loop is not tight on the magnet or it won't "jump" off. With the power off, push the button to set the power supply to 3 amps and turn the current dial all the way up. Turn the power supply on and the wire coil will jump off of the magnet (bottom picture). (If the wire pulls further onto the magnet, then switch the direction of current through the loop and repeat the procedure. Switching the terminals, using the magnet's other pole or flipping the loop over will all successfully change the direction of the force.