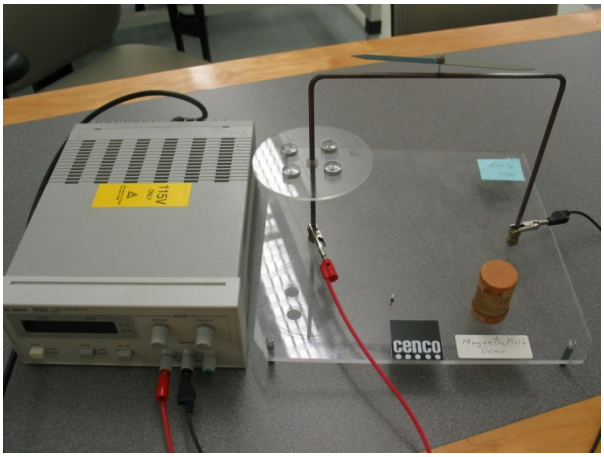
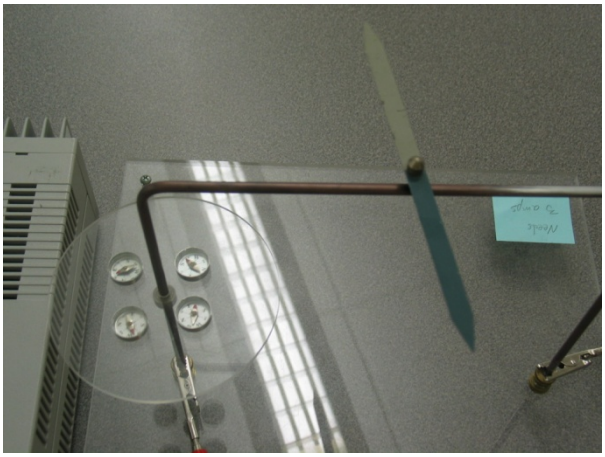
Magnetic Field Due to Current





Purpose: To demonstrate that a current-carrying wire produces a concentric magnetic field.

Location: Room 146; shelf M5, HP power supplies on C3

Using banana-to-alligator leads; connect the terminals of the power supply to each end of the "wire" on the apparatus. Place a few small compasses on the plastic platform around the wire. Notice the direction of needles as well as the compass needle on the top of the wire. Turn the power supply on and turn the current up to about 3 amps. Observe as the needle on the top is deflected. Tap the plastic platform and notice the compass needles make a ring around the wire. If you have trouble seeing the deflection on top, use the smaller compass needle taped to the base of the apparatus.