

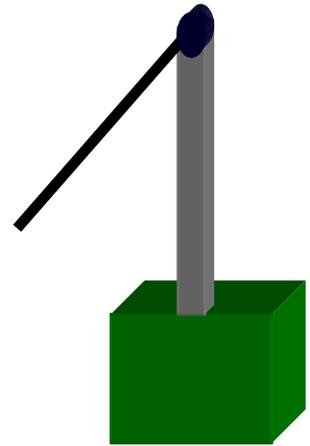
## Tetrode Making:

Preparation: clean hands and close hood to limit cross-breeze.  
Pull out tetrode wire to 50 or 55cm mark.

Try to keep some tension on the wire at all times so it doesn't wrap back up the spool, but turn spindle handle to let out more wire.

Cut at zero mark, swift cut with sharp scissors.

Take one end in each hand, double up the wire and hold the two ends together. Cut the wire at the bottom to make two equal length pieces.



Double up again and wrap over bar. Slide loop into notch in bar to hold in place.

Smooth out wire and gather all four ends together.

Clip the wire all together in the clip. Be sure to clip all four wires, and try to put them vertical in the middle of the clip.

Spin clockwise 90 seconds or ~100 turns.

Spin counterclockwise 45 seconds or 50 turns.

Be sure that the spinning is smooth, without wobble.

After you have stopped the rotation, heat the wire to make it stick together. Use the heat gun on 'high' setting. Run it slowly up and down the wire, ~1cm away, several times up and down from the bottom of the loop to the clip. Heat from three different directions to get an even melt.

Cut the finished tetrode with the sharp scissors near the clip (you can hold the clip gently to prevent the tetrode from popping off), carefully remove the tetrode and place it in the box.

A good tetrode is stiff and straight, with a small oval loop (no more than 1-2cm in diameter) at the top. The tip should look like one solid wire, even under magnification. Any splits at the end or along the way and the tetrode should be discarded.

