How to Wind a Nice Pancake Coil in 15 Minutes

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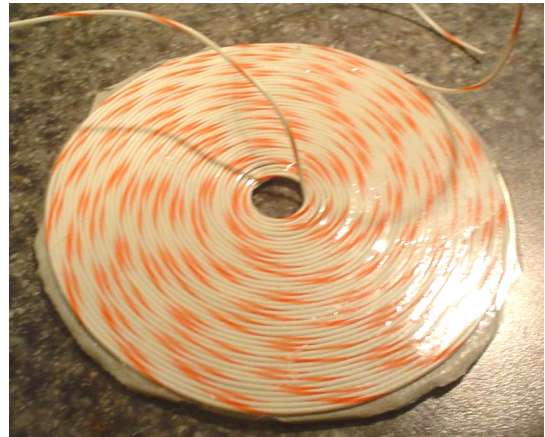Jdo300@sbcglobal.net
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Flat spiral-wound coils have always been a keen interest and fascination to many experimenters; their uses are widespread, from Tesla Magnifying Transmitter experiments to Tesla coils, broadband antennas and pickups. But despite all of these great qualities, the spiral-wound coil can be a royal pain to wind.

In this small How-To, I show, step by step, how to wind a neat and uniform coil in less than 15 minutes using just a CD, holder, and a few varieties of tape.
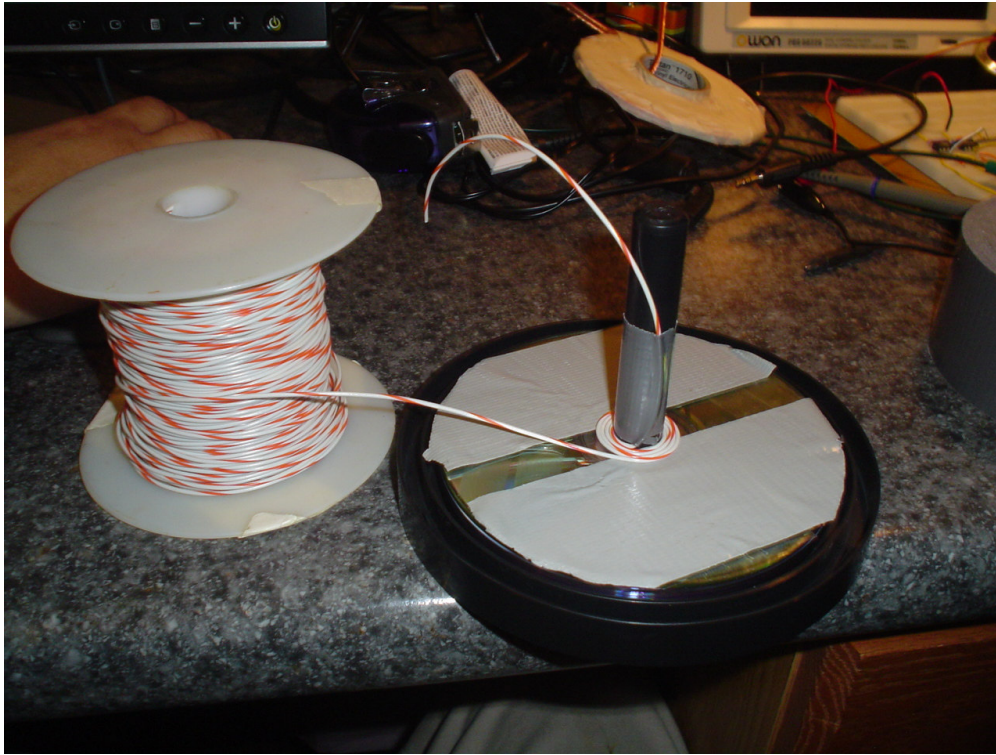

Here is a listing of the parts you will need:

- One CD
- Empty CD pack holder
- Double-sided sticky tape
- Duck Tape
- Clear Box tape
- Scissors (to cut the tape)
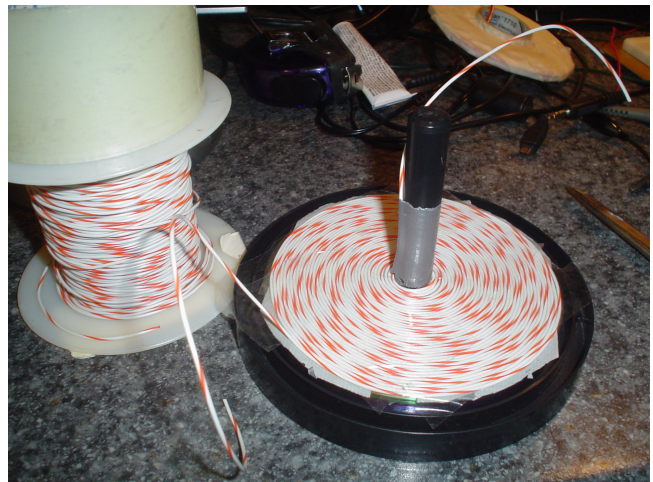- Wire (22 gauge stranded, in my case)

First, take the CD and cover one side of it with strips of double-sided sticky tape. Try to cover as much of the surface as possible without overlapping the strips. Now place strips of duck tape on top of the double-sided sticky tape so that the sticky side of the duck tape is facing upwards. This will be used to adhere the wires to the CD while winding the coil.

For the wire, any type will work as long as it will stick to the duck tape. Place the CD into the empty CD holder. Take about six inches of the end of wire, make a right angle bend in it, and tape it to the hub of the CD holder to secure it while winding. Your setup should look something like the following:

After securing the wire to the center hub, slowly turn the CD with the holder and press the wire gently onto the tape to form the spiral. Try not to put any tension on the wire as the tape will hold it in place. Once finished, the winding should look something like this:

Now simply cut the wire from the spool. You may find that the wires at the center of the coil bunch up a bit on each other from the CD sliding around inside the holder. Simply turn the CD a bit and press the turns in the center of the spool back down onto the tape to get everything level. Next, add strips of clear box tape to secure the windings in place. This gives the coil a finished look and keeps the coils from un-sticking and popping off. Also add a strip of tape to the bottom of the CD to

hold the center wire lead in place. Lastly, trim the excess tape off from around the edges and you now have a ready-to-use pancake coil!