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WLAN antenna workshop
build your own biquad antenna

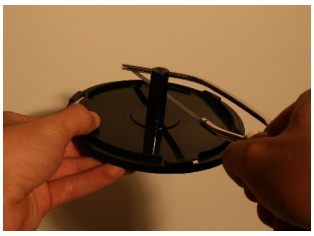
Parts list:

- 1x spindle
- 1x blank CD
- 25cm 2,5mm² copper cable
- 50 cm RG58 cable
- 1x SMA reverse connector
- 3 cm heat shrink tube

Required tools:

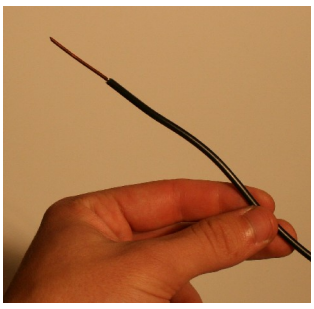
- hacksaw
- folding rule
- round file
- flat round pliers
- soldering rod
- cable stripper/wire cutter/cutter knife
- hot-melt gun
- crimping tool

Cut the spindle to a height of 18mm. (Use the cutting aid, if required)

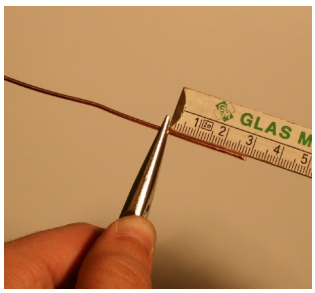


Make a 2mm deep cross using the round file. Here should fit the antenna. (use the template, if required)

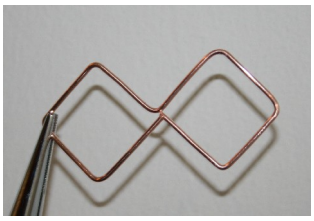
Strip 25cm of copper cable.



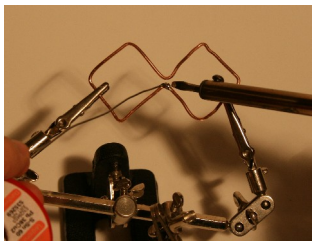
Bend the cable at a length of exactly 29mm.
Use round pliers or the special bending pliers.



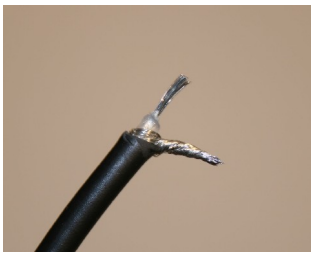
When finished, the wire shold look like this. The mid-to-mid measure should be 31mm, the inside-to-inside measure 29mm. These measures have to be very exact.



Solder the open ends of the wire together.



Strip <1cm from one side of the RG58 cable and twist it like shown.



Solder the inner and outer conductor to the antenna as shown.

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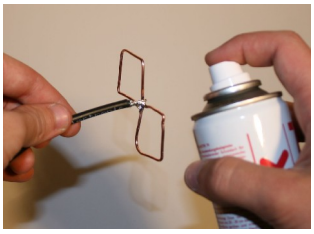
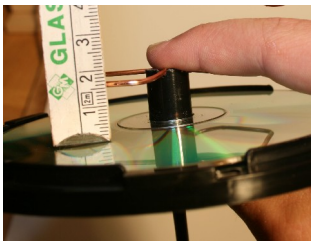
To avoid oxidation of the copper wire, apply some plastic spray.



Use melt-glue to glue the CD on the spindle.

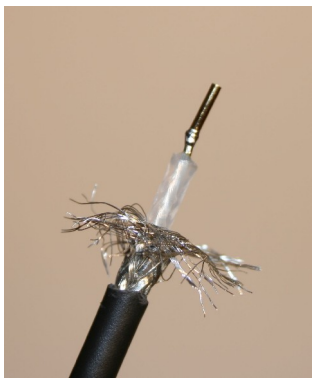
Place the copper wire in the dent you made earlier. The distance between the copper wire and the disc has to be exactly 16mm.



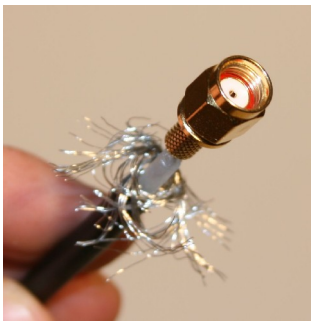
When all is right, secure the antenna by applying melt glue.

Slide the heat shrink tube and the large connector bushing over the coaxial cable.
Then strip the cable as shown an fold the outer conductor back.

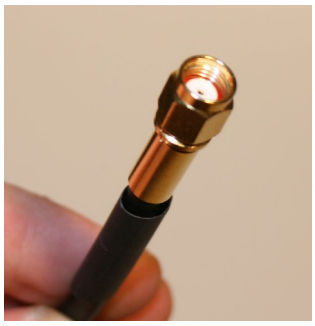
Solder the connector bushing to the inner conductor.



Place the SMA connector on the cable an fold the outer conductor back up.



Push the connector bushing over the outer conductor and SMA connector.



Fasten the connector bushing with the crimping tool.

Your final result shold look like this.