## Production of Coils



## Materials

## Gauge no. 14 (1.6mm) TW solid copper wire, insulation removed, made into coils.



# Insert the small diameter coil in the bigger coil 



Coils must be close touching each other and still have room for movement


## Bending the longer end of the inner coil, ready for insertion into itself



## Insert the longer end if inner coil on the other side all the way through the other side



# Pull all the wire that comes out the other end to form a loop 



## Form each loop into a circle



The smaller loop should be placed in the middle of the bigger loop before each individual wires.


For schematics how the coils are connected to each other, please refer to the MG-Energy-Coils-Schematics.pdf file


## Nano Coating Process using Fire from butane torch



Start on the wire junction, temperature should be only be right before copper turns red hot.


# Move the flame towards the center loop and start moving clockwise slowly maintaining the desired temperature while moving along the coil. 



Move the flame up after completing the center loop and start moving counter clockwise around the outer loop.


You'll get consistent bluish black color coating when you maintain a consistent temperature by movement speed. The tip of blue part of the flame should be touching the copper like a paint brush.


Continue along the path. Too cold will result to different colors coating.
Copper surface becomes shiny when the right temperature is reached then you move along.

Ideal surface material is ceramic tile while doing this process. Never use metal surface, it will act as heatsink, resulting to inconsistent coating.


Do a similar process on the other side while still warm but of opposite direction on every loop to have a consistent flow of heat and nano material movement. An optional double flame opposite each other moving together while the coil is hanging on wire on its two terminals can do a single pass process both sides together, saving production time.


After cooled down by itself, one can make corrections on form then repeat the heating process one last time and it will be ready for use after cooling itself. Just leave it on the same tile while cooling.

Before form correction made.


After form correction made.


## Form correction process can be

 done before a complete nano coating process. Simply preheat all at a lower temperature enough to align the copper material structure and let it cool for handling with gloves.Copper becomes softer after the heating process, one can make the desired shape then proceed to nano coating process.

Coils made from copper wire without insulation should be tightly close to each other, no gaps in between. The nano material created after nano coating will serve as the insulator touching each other.

# Coil winding can be done on a coiling setup or machine for faster production. 

Please note that not all number 14 gauge wire that is 1.6 mm are actually 1.6 mm . Every manufacturer output may vary from each other.

## Important note on quality of copper:

Not all copper wire are created equal. However, we will use that copper that is soft and not yellowish and hard to bend. Yellowish dull color and hard to bend kind is an indicator of impurities. Hard to bend will only slow down
your production process.

Never use this ->

Use this ->


## End

