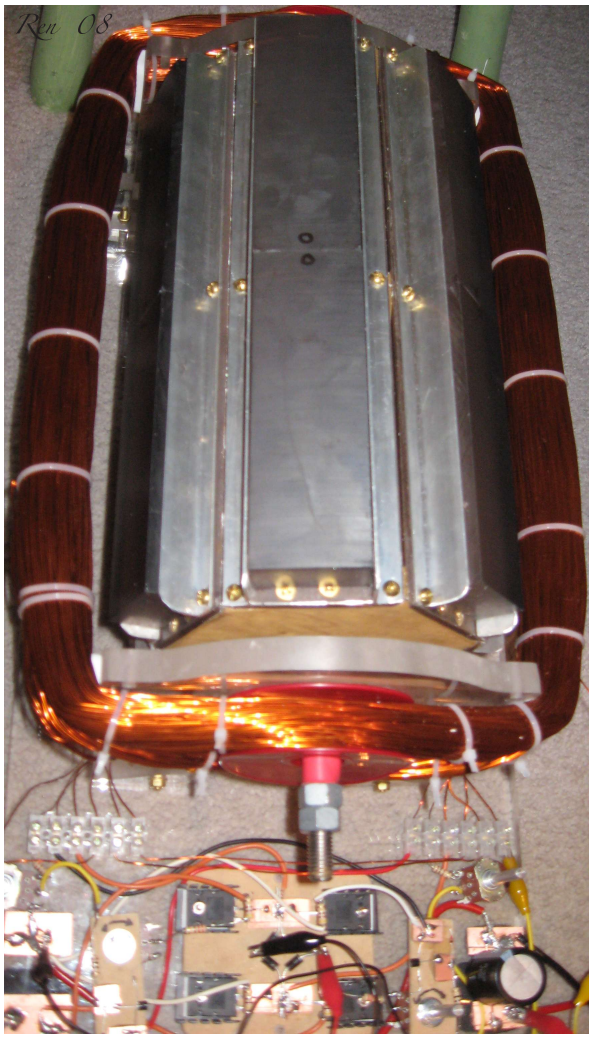
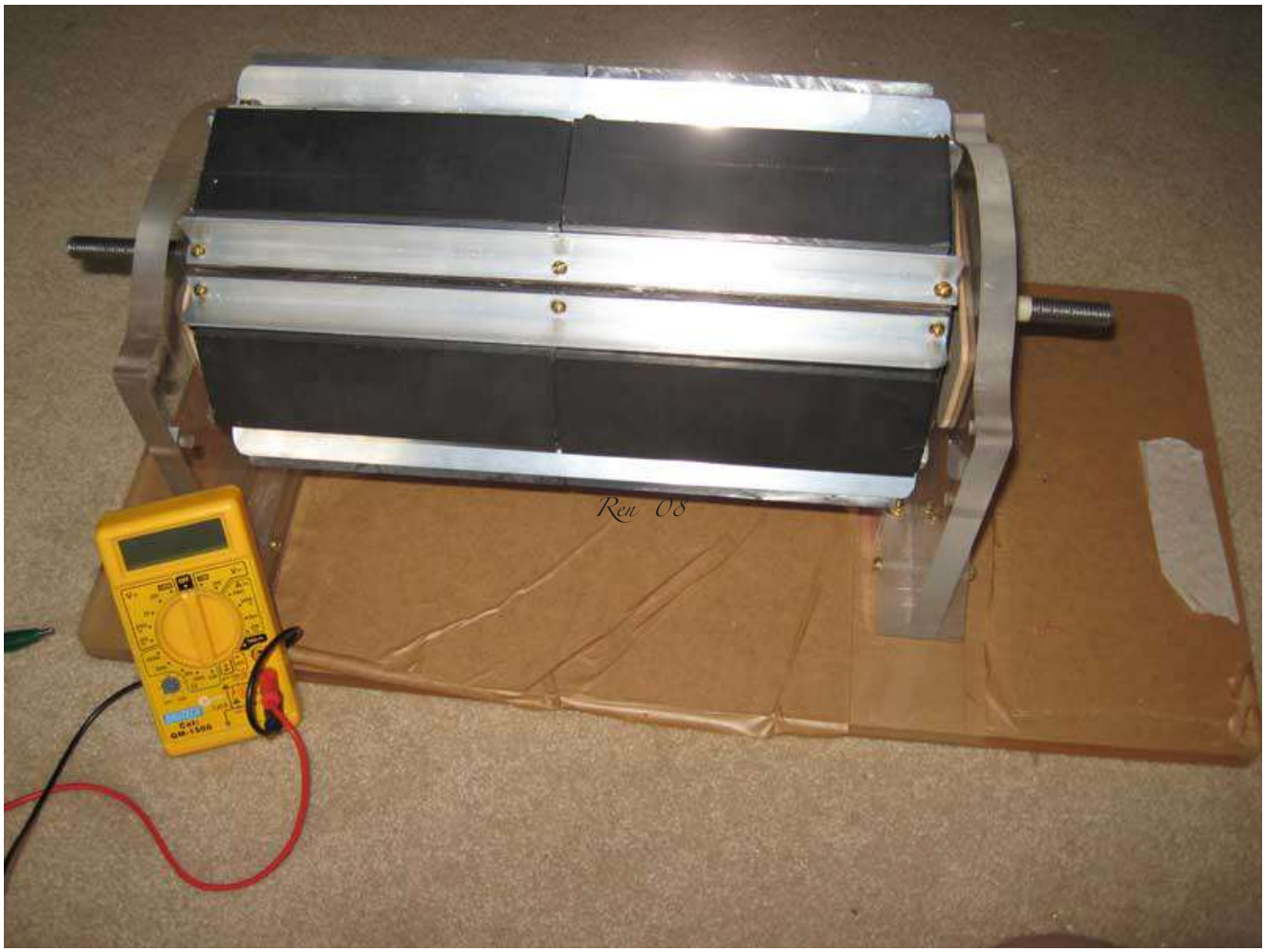
# John Bedini/Ron Cole Window Motor Replication by Ren

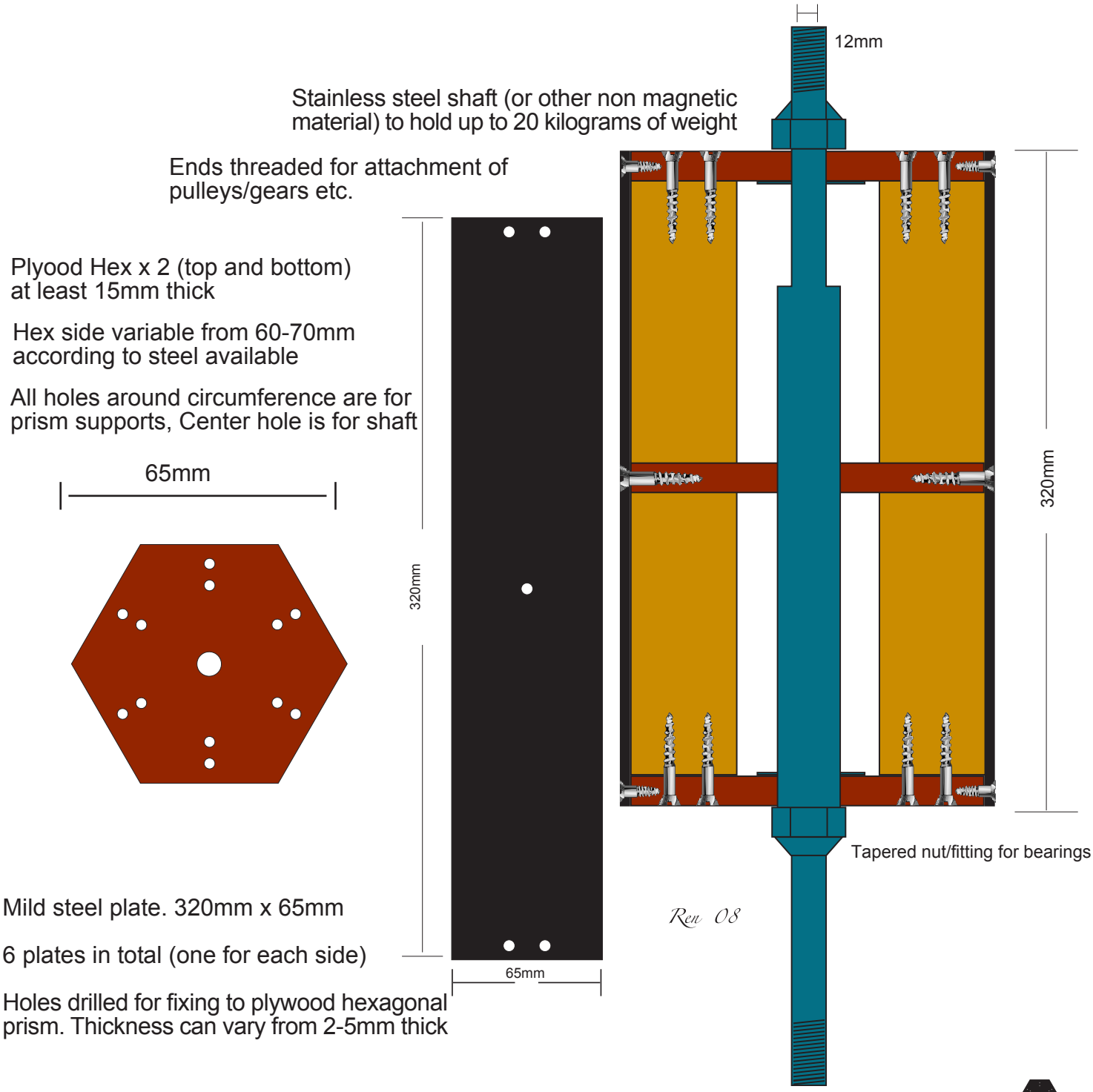


The article following is a brief account of my construction and testing of the Bedini/Cole window motor. It is a work in progress and thus may change over time. I assume that the reader is already familar with Johns schematics and work and understands basic principles of an oscillating circuit. All of the circuits are patented by John Bedini.



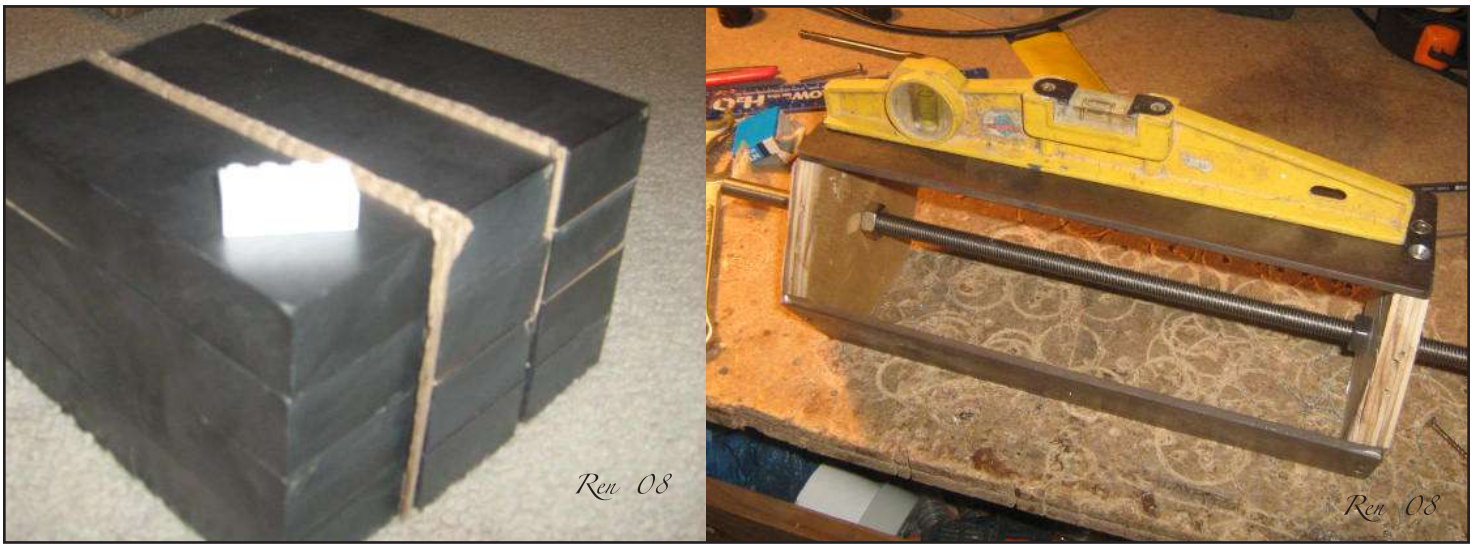
I began construction on the rotor after selecting my magnets. I had opted for 12 magnets of 6inch x 2inch x 1 inch and I decided to try a rotor which took advantage of the surface area when the magnets were stacked side by side.

Thus my rotor was now 12 inches long. It was near impossible to find off the shelf hexagonal prisms of that dimension so I constructed one from scratch. Here are the documents I drew up in reference to its design.

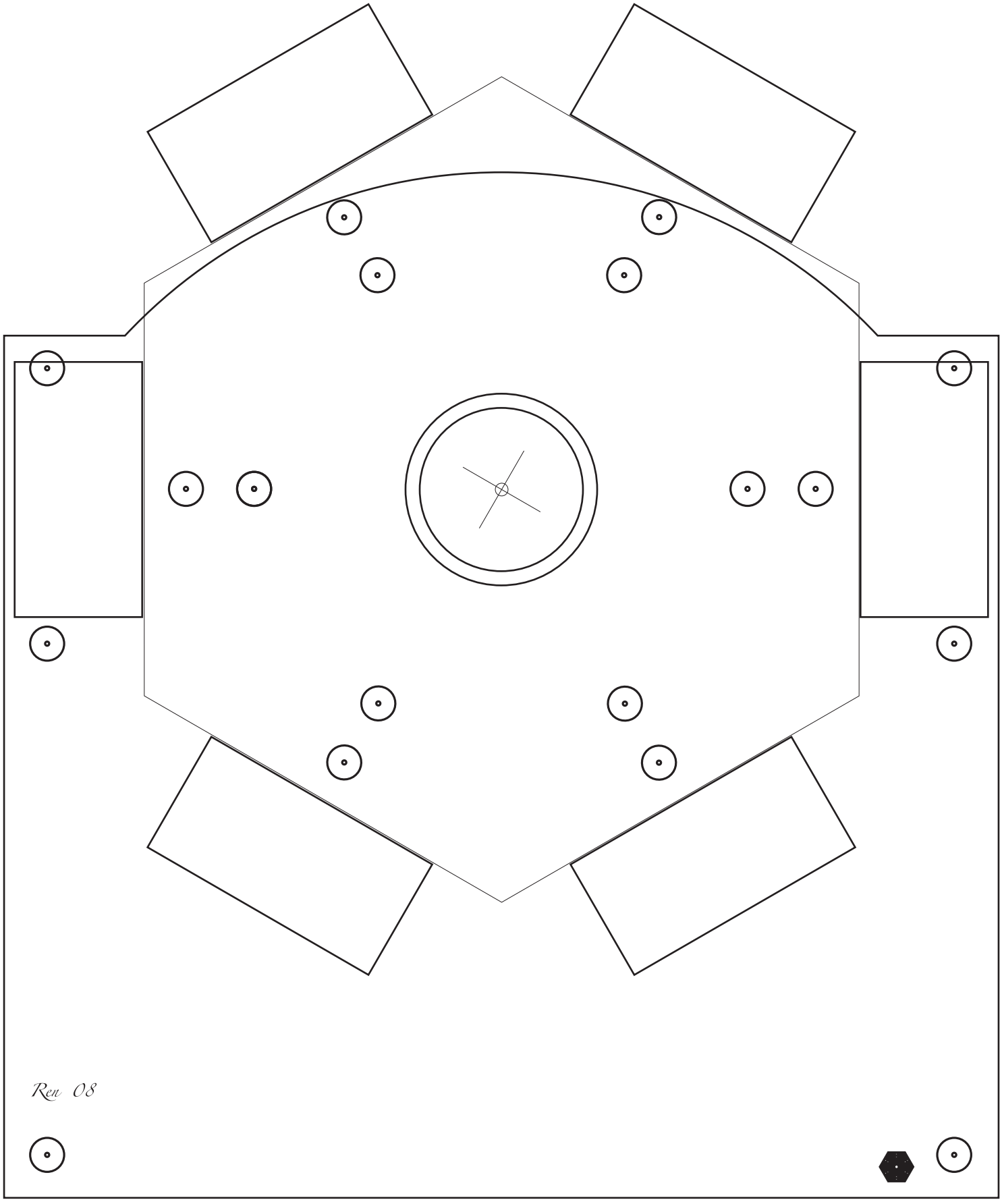


Construction was fairly straight forward once I had all of the pieces. I used a spirit level to ensure accuracy and brass screws to attach all of the steel plates. Little “L” angled aluminum I found also fit nicely on the plates with the magnets sandwitched between.

The hexagons had nuts on either side of them and they were all tightened before plate assembly. The shaft is 12mm threaded stainless.



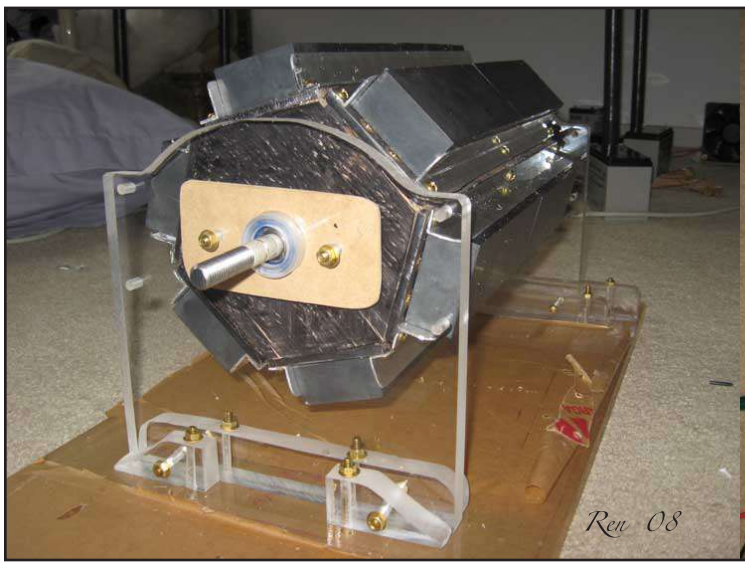

Here is the 1 to 1 template I used to cut out my supports and align the coil. The holes near the magnets are for a temporary frame (wood) in which to wrap the window coil.



Ren 08

The uprights and base are all made of acrylic and bearings are press fit into but not through. Shaft extends out on both ends.

Particular care must be taken in alignment and snugness. I found it necessary to make some spacers and tighten a nut on both sides. Then again this rotor weighs 20 kilos, perhaps smaller ones wont be so bad.



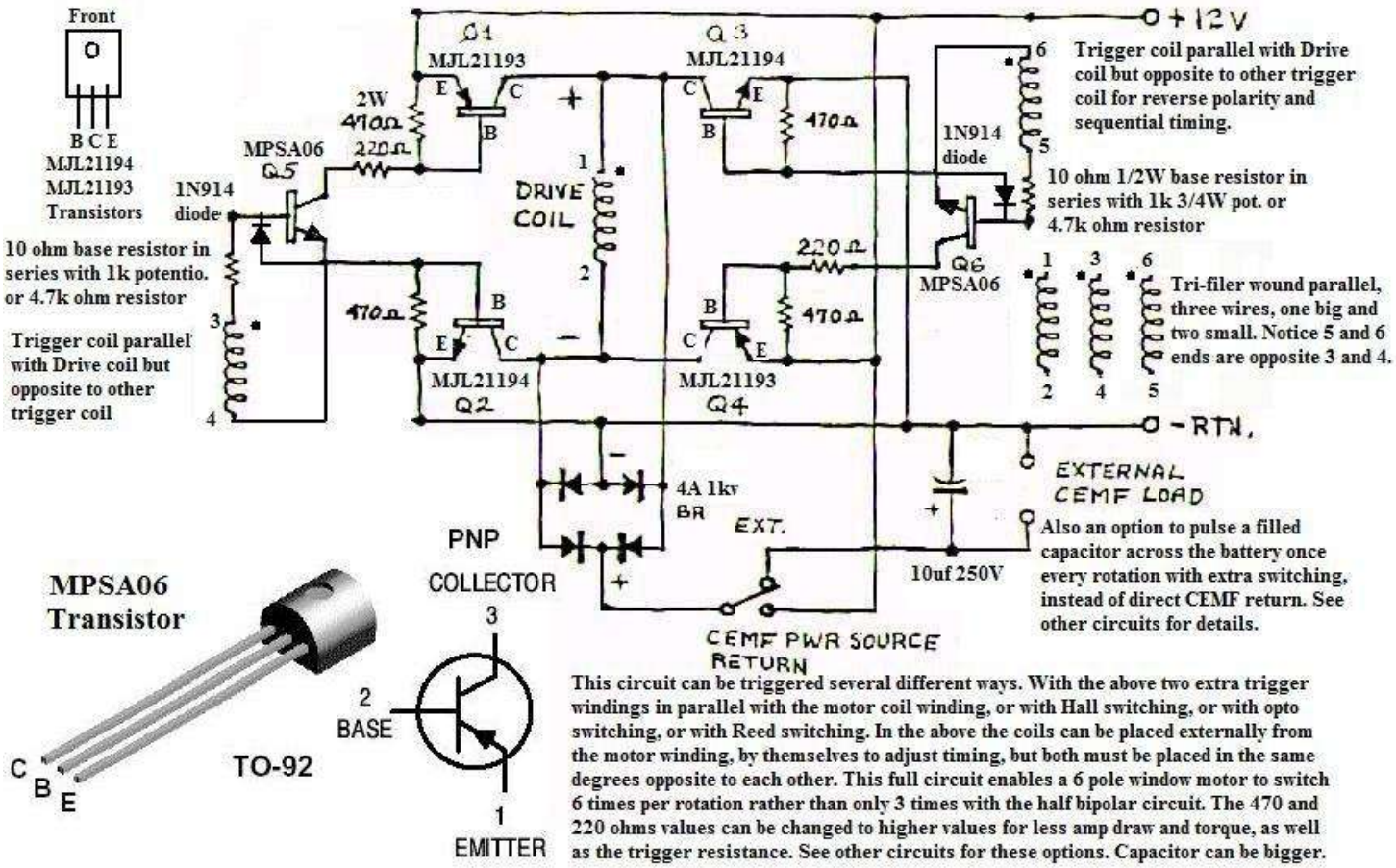


It wasnt perfectly balanced when finally assembled so I went to an Auto/tyre outlet and asked for some lead weights that are commonly used to balance car/bike tyres. They gave me a whole box of seconds (pre used and removed) for free.

Balancing is a little trickey but well worth the effort. Especially if high speed is wanted safely!

## SEQUENTIAL BIPOLAR SWITCH BY JOHN BEDINI AND RON COLE

**Modified with extra trigger coils by Rick Friedrich in accordance with other Bedini versions of bipolar circuits. For use with kits and research on Bedini_Monopole3 Yahoo forum. June 18 2008.**



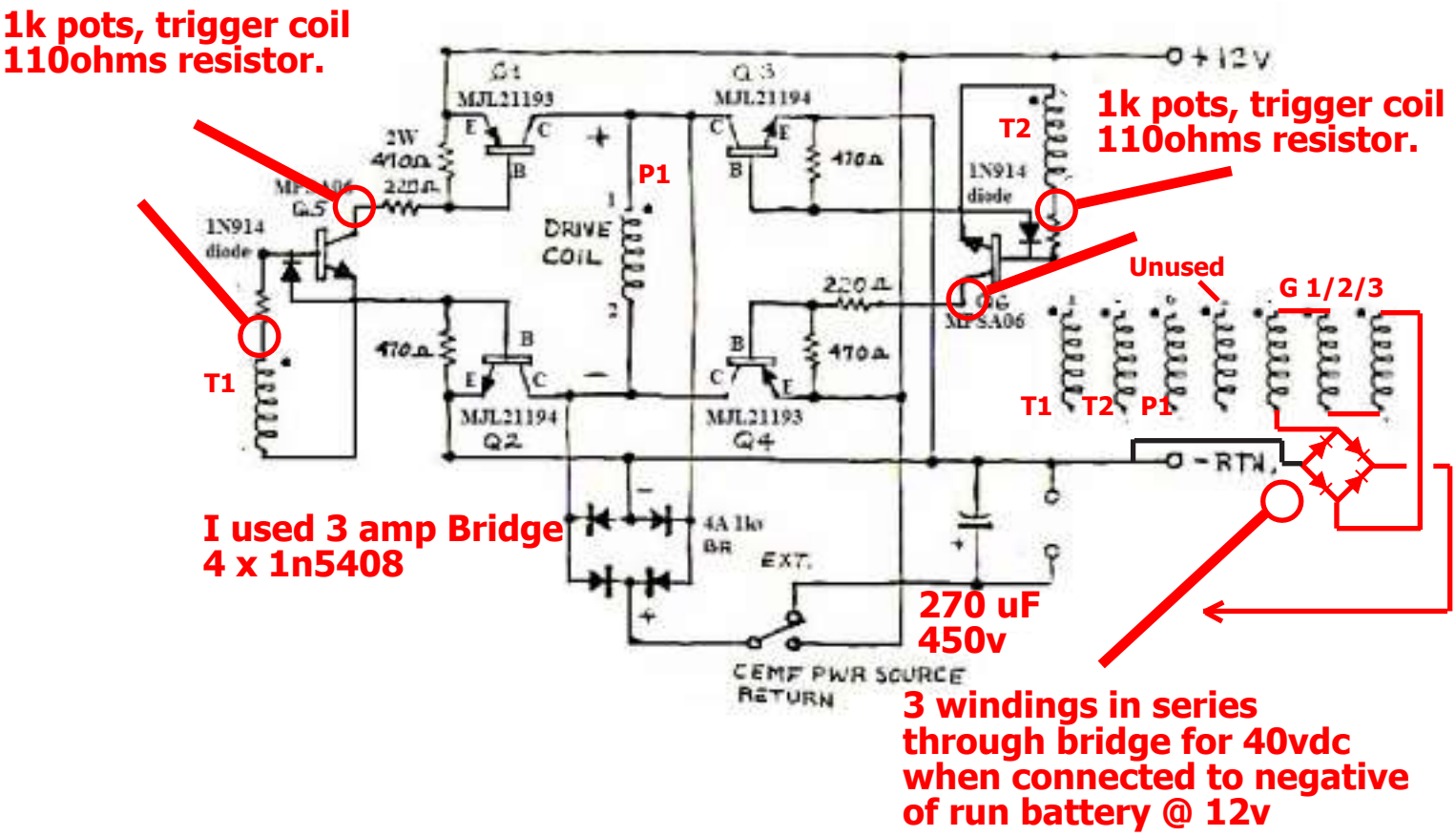

This circuit can be triggered several different ways. With the above two extra trigger windings in parallel with the motor coil winding, or with Hall switching, or with opto switching, or with Reed switching. In the above the coils can be placed externally from the motor winding, by themselves to adjust timing, but both must be placed in the same degrees opposite to each other. This full circuit enables a 6 pole window motor to switch 6 times per rotation rather than only 3 times with the half bipolar circuit. The 470 and 220 ohms values can be changed to higher values for less amp draw and torque, as well as the trigger resistance. See other circuits for these options. Capacitor can be bigger.

Full credit to JB/RC and Rick Friedrich for the above schematic. I basically used this circuit with a few other tweaks for easier tuning, most of which are listed above already.

For those who need a visual reference the changes I made are drawn below.

The potentiometers were chosen over a fixed resistor simply for ease of testing. I will replace them with fixed resistors once the ideal setting has been established.

The circuit will start the rotor alot faster if the resistance is low on the 220ohm off the base of the PNP and the trigger coil if used. Too low resistance on the trigger coil can cause dramas, stick to at least 100 ohms to start with. The rest of the resistance figures above should start almost all configurations, and can be varied to suit your purposes.

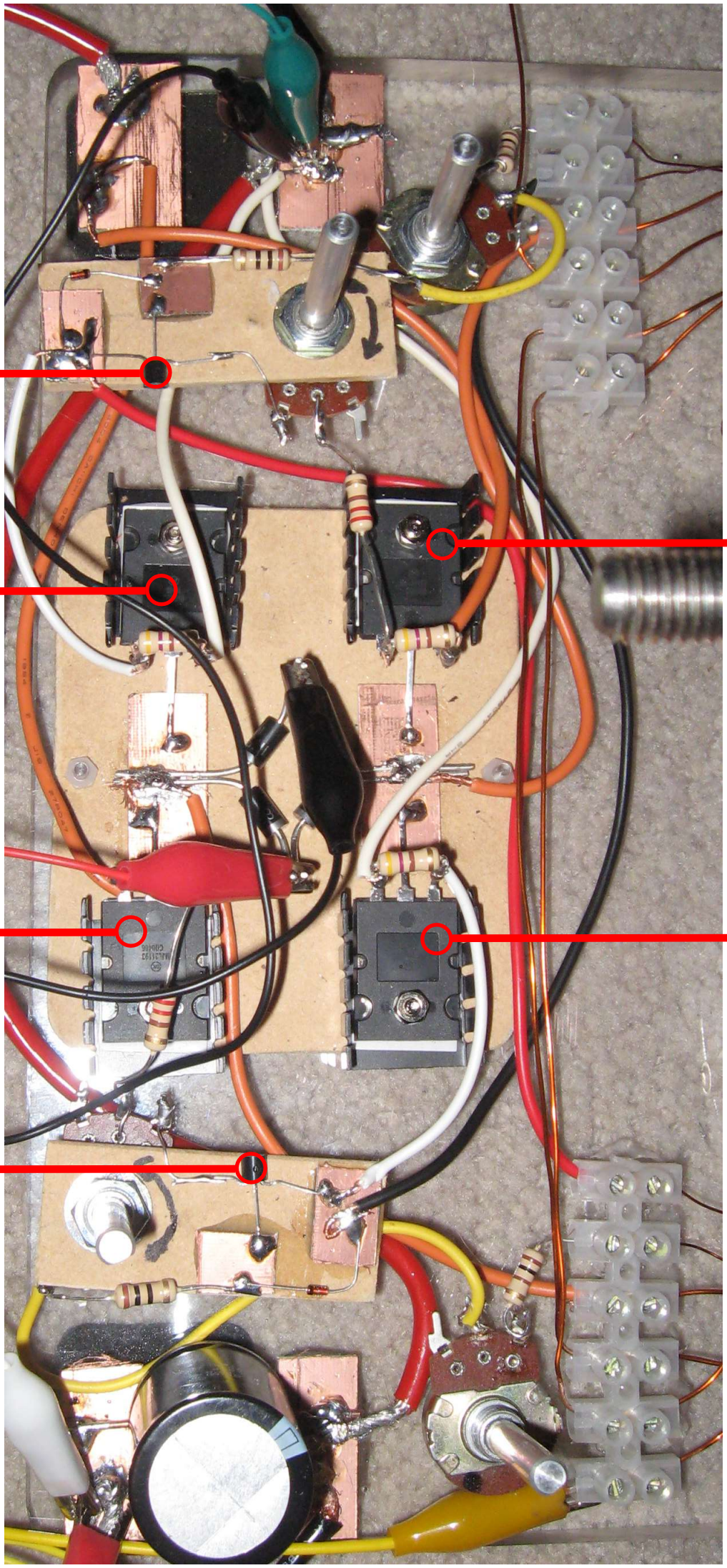



If you are having trouble coming to grips with the circuit firsh build the half circuit. Once you can get it to run it is as simple as building another half circuit and inverting it over the drive coil. Remember the trigger needs to have its polarity flipped for for this second circuit.

I cut up some copper coated epoxy board to make little mounting tabs for everything. Here is a close up of the circuit once completed. Its a little messy at the moment because I am still testing various configurations.

Everything increases (except amp draw) when you wire more power windings in parallel. I now have all five power windings connected together @ the collectors and rpm/torque/charging have all dramatically increased. Amp draw remains the same or even less @ some levels of tune.

Remember, the faster this thing goes, the faster it switches hence the less it draws.


MPSA06
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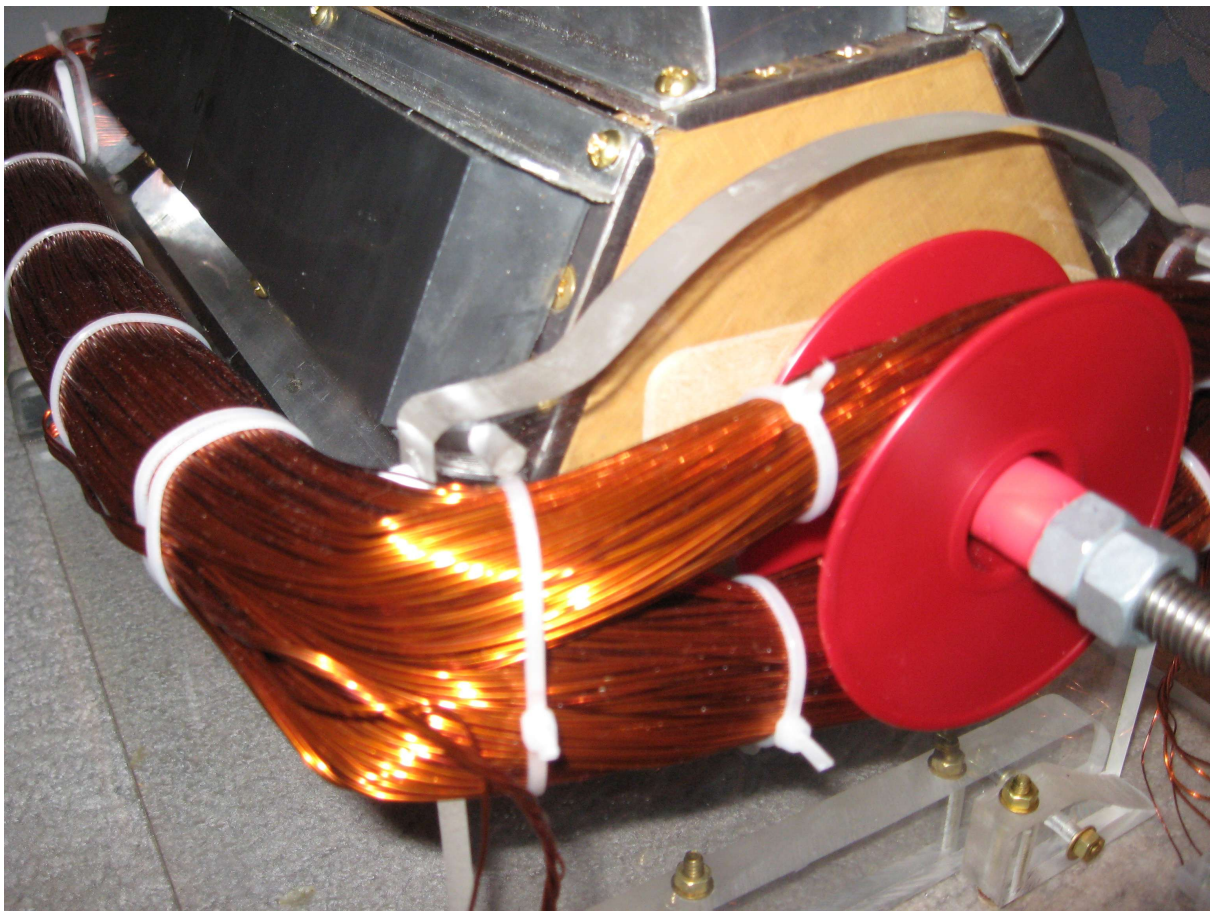
MPSA06

The windings are 7 filar @ approx 200m each. Two windings of 0.53 (SWG 25) and five windings of 0.90 (SWG 20). I measured out all of them separately and spooled them up onto separate spools.

The window motor was then placed on at temporary turntable and all windings were wound at once, splitting around the shaft.



In hindsight this probably wasnt the best choice because it hinders any removal of the rotor. I will have to unwind the coil if that needs to be done.

Recent data shows that it  should be possible to wind the window coils and position them around the circumference of the rotor. This would make things alot easier, especially for multicoils!

Tuning is varible depending on what you want out of it. If it is primarily for torque and is designed as such then a high voltage of medium amp draw should offer some good results.

It should be able to go to 50 volts with the schematic provided, the MPSA06 is rated for 80v. Heat sinks are a good idea for anything over 12 v. Resistors may need to be of higher wattage, depending on amp draw.

In closing Id like to thank various indivduals, Adrian B, Luke M, Steve G, Rick F, John K, Ash P, and all the folks at the Monopole Forums and Energetic Forums for their combined efforts.

And of course a very big thankyou to John Bedini.

Shanan Reynaud



*28/11/2008*
**Part 2 of this build/document is currently under construction pending funds. The whole thing is being reconstructed from the ground up in a slightly different configuration to the one seen here. Advanced circuit configurations to follow**

Relavent Links:

http://www.energeticforum.com/renewable-energy

http://tech.groups.yahoo.com/group/Bedini_Monopole3/

http://tech.groups.yahoo.com/group/Bedini_Monopole/

http://www.icehouse.net/john1

http://www.icehouse.net/john34/

http://www.fight-4-truth.com/Schematics.html

http://au.youtube.com/shannrenn