The Golden Ratio is an Ideal Proportional Coupling among Self-Inductances to Achieve Maximum Gain

Three substances are assigned the task of constructing three self-inductances...

1. Iron is used as the ferromagnetic material of choice for toroidal armatures (in motors and generators) for providing a magnetic field in which other inductive materials may participate.
2. Copper is used as the diamagnetic material of choice for constructing a field coil that will receive the magnetic charge transferred to it from the ferrous armature.
3. Aluminum is used as the paramagnetic material of choice (at the center of this arrangement) for receiving the magnetic charge transferred to it from the field coil.

There are two variations of mutual inductances among these three substances – an ideal case of the Golden Ratio and everything else – which requires <u>three</u> simultaneous relations (for each of these two cases) serving as a set of constraints for maximum power gain...

1. The mutual inductance between the toroidal ferromagnetic armature and the diamagnetic mass of a copper "squirrel cage" field coil (embedded into the toroid's inner surface) produces a maximum gain of power if this magnetic coupling is in a proportion between a maximum of unity and a minimum of the Golden Ratio of 0.618...

   a) At least: $0.618 = \frac{2}{1+\sqrt{5}}$ §1a

   b) Everything else greater than this is: $\left(0.618 = \frac{2}{1+\sqrt{5}}\right) \le \textit{First Mutual Inductance} \le 1$ §1b

2. The mutual inductance between the toroidal ferromagnetic armature and the paramagnetic mass of aluminum (at the center of this toroid) produces a maximum gain of power if this magnetic coupling is in a proportion of...

   a) At most, no more than: $0.618 = 1 - 0.618^2$ §2a

   b) Everything else is: $\textit{Second Mutual Inductance} = \sqrt{1 - \textit{First Mutual Inductance}}$ §2b

3. The mutual inductance between the diamagnetic copper "squirrel cage" field coil and the paramagnetic aluminum mass (positioned at the center of the toroidal hole) produces a maximum gain of power if this magnetic coupling is...

a) At most, no more than: $0.236 = \left(\frac{2}{1+\sqrt{5}} \right)^3 = \sqrt{5} - 2$ §3a

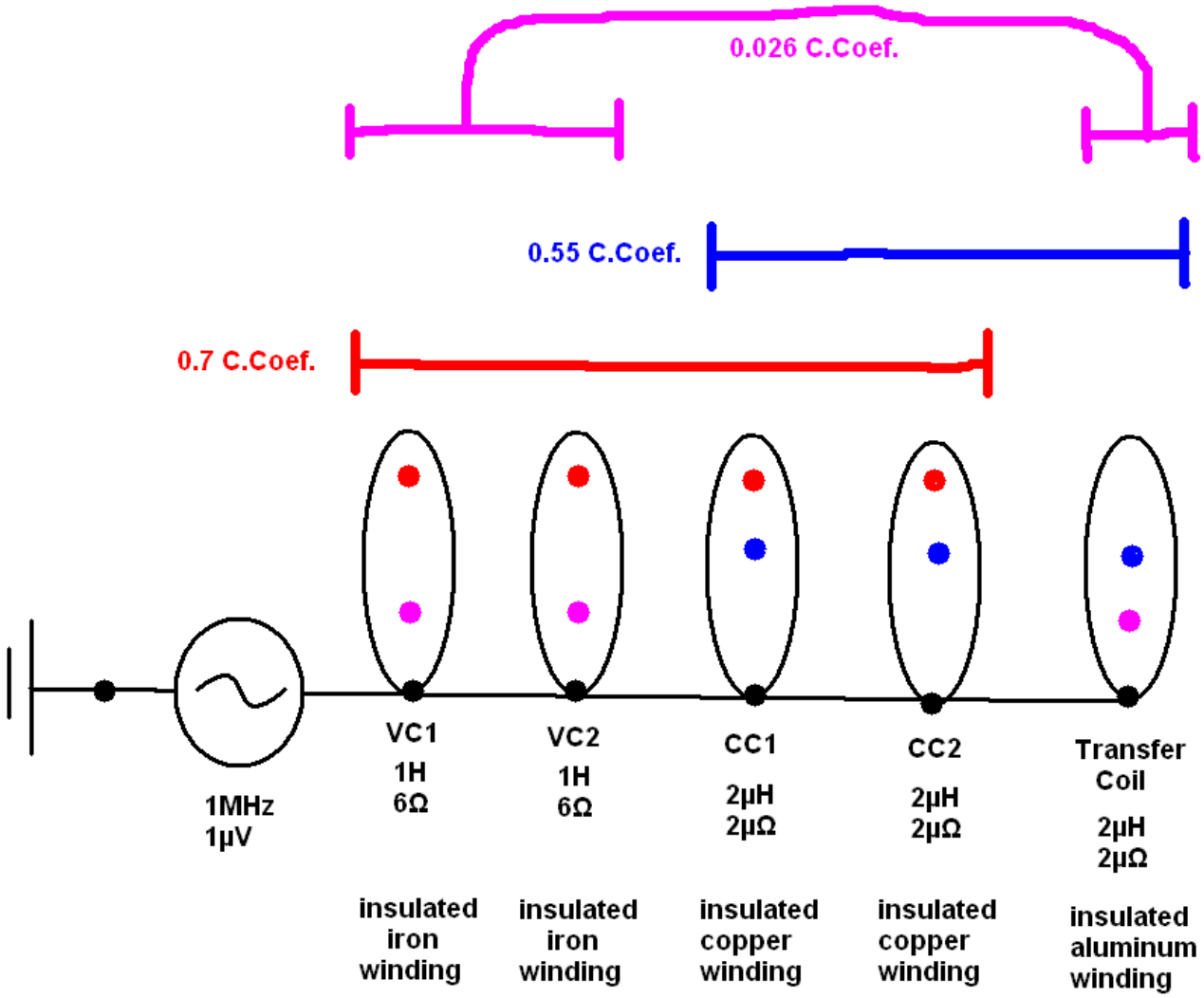
b) Everything else is: $\textit{Third Mutual Inductance} = \left(1 - \textit{First Mutual Inductance}\right)^3$ §3b

4. So, two different styles of computation are utilized for each of two cases: the Golden Ratio which serves as the minimum for the First Mutual Inductance between Ferromagnetic Iron and Diamagnetic Copper, and less than the derivatives of the Golden Ratio serving as the maximums for the Second and Third Mutual Inductances.

Is this the foundation for Nikola Tesla's elusive Tri-Metal Generator said to possess no moving parts and no prime mover capable of lasting 5,000 years and furnishing the power supply for his “ideal flying machine” as claimed by William Lyne in his book, “Occult Ether Physics” serving as the original UFO? I have reason to think so courtesy of Micro-Cap analog circuit simulations displayed, below...

As an aside, it just so happens that the electronic symbol for inductance (measured in Henrys) is an upper case Greek letter Phi, Φ (pronounced, “fee”), while the mathematical value for the Golden Ratio is symbolized by a lower case Greek letter phi, φ ...! What a coincidence!

We'll begin this odyssey with a variation of Nathan Stubblefield's Earth Generator, mislabeled by the U.S. Patent Office as his Earth Battery. All of the terminals of each of its inductors are self-shorted and mutually shorted with each other. It is fed a sine wave (through a single wire) of one mega Hertz carried upon a potential of one millionth part of a volt. Here is a primitive, hand-drawn schematic...

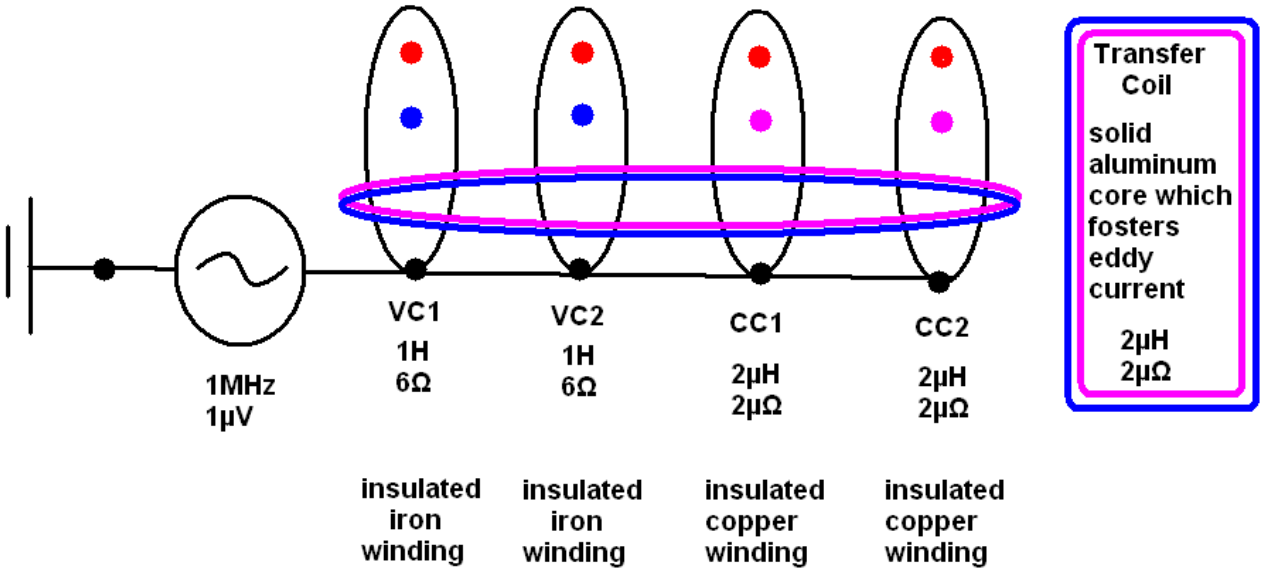


Another way of depicting this is...

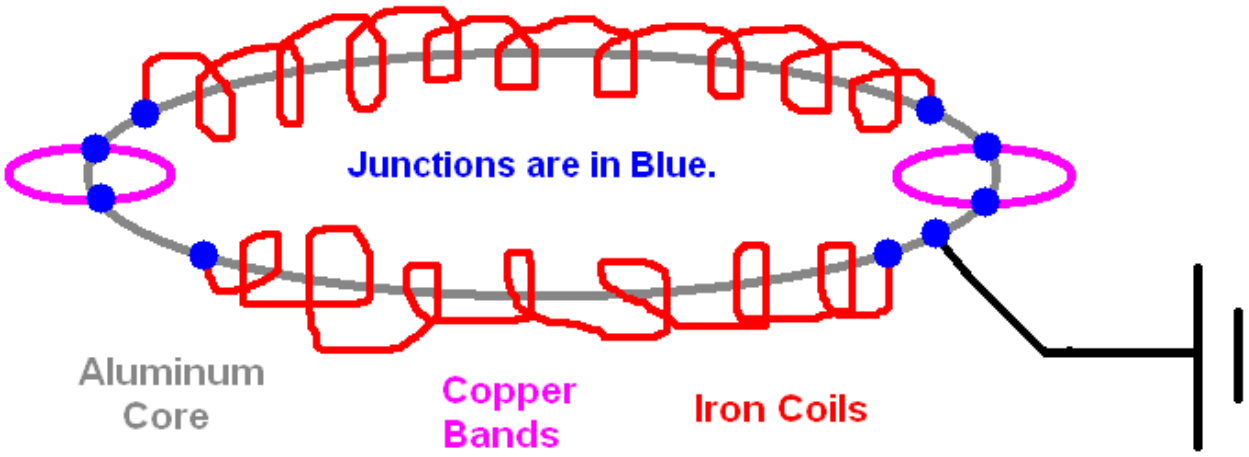
A. First Coupling Coefficient
Magnetic Relationship Among the Four Coils (VC & CC) is from a Maximum of 100% down to the Golden Ratio of 61.8%

B. Second Coupling Coefficient
Magnetic Relationship Between the Two VC coils and the Aluminum Core is the Square Root of (100% – A)

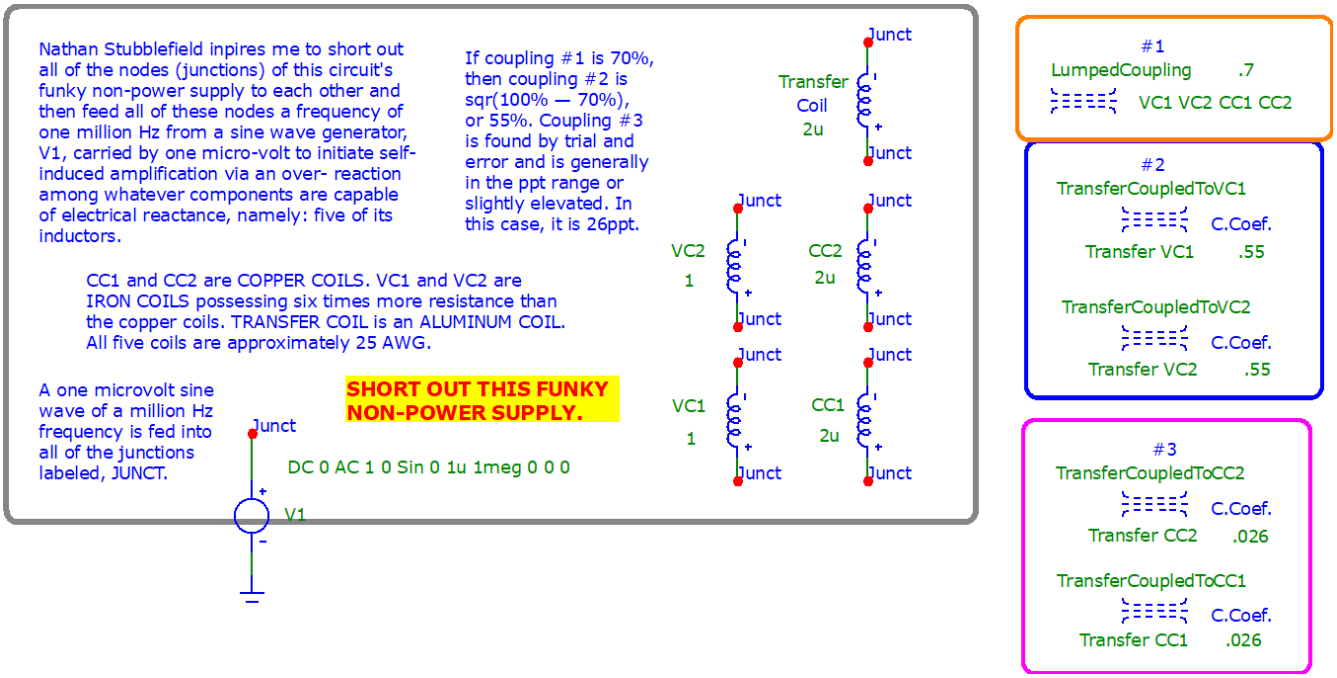
C. Third Coupling Coefficient
Magnetic Relationship Between the Two CC coils and the Aluminum Core is the Cube of (100% – A)



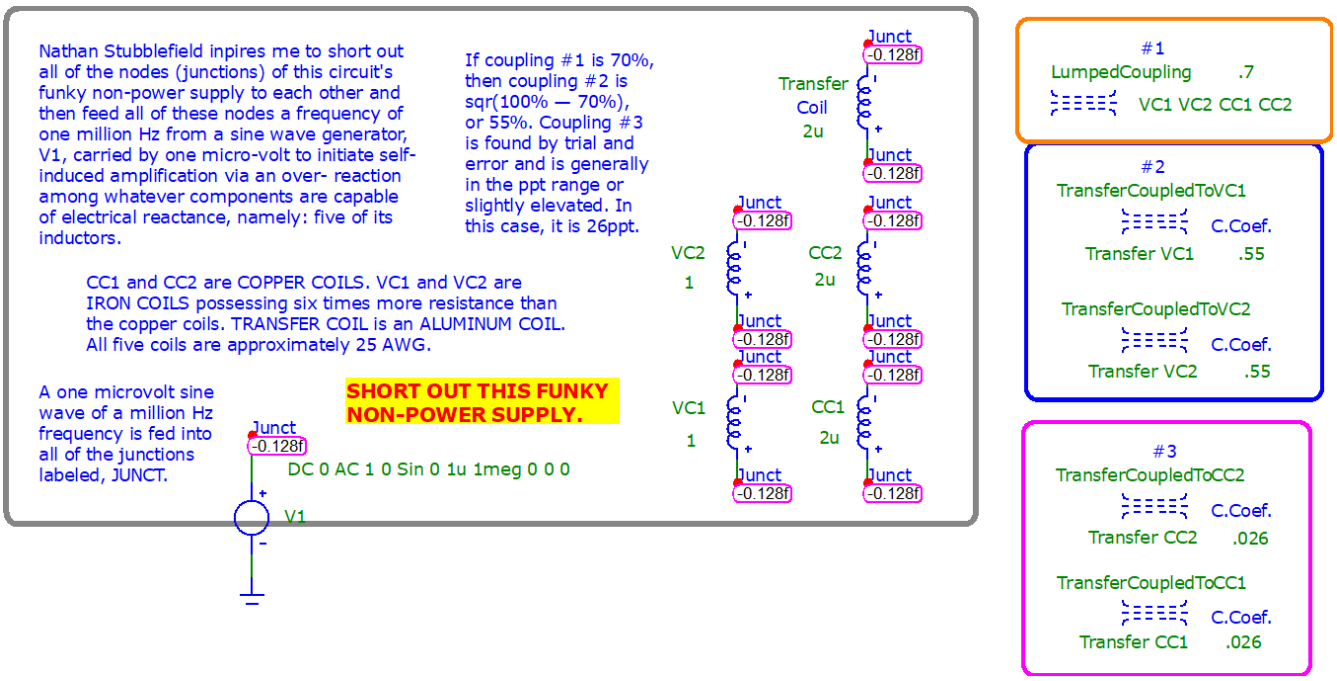
A third way of depicting this...



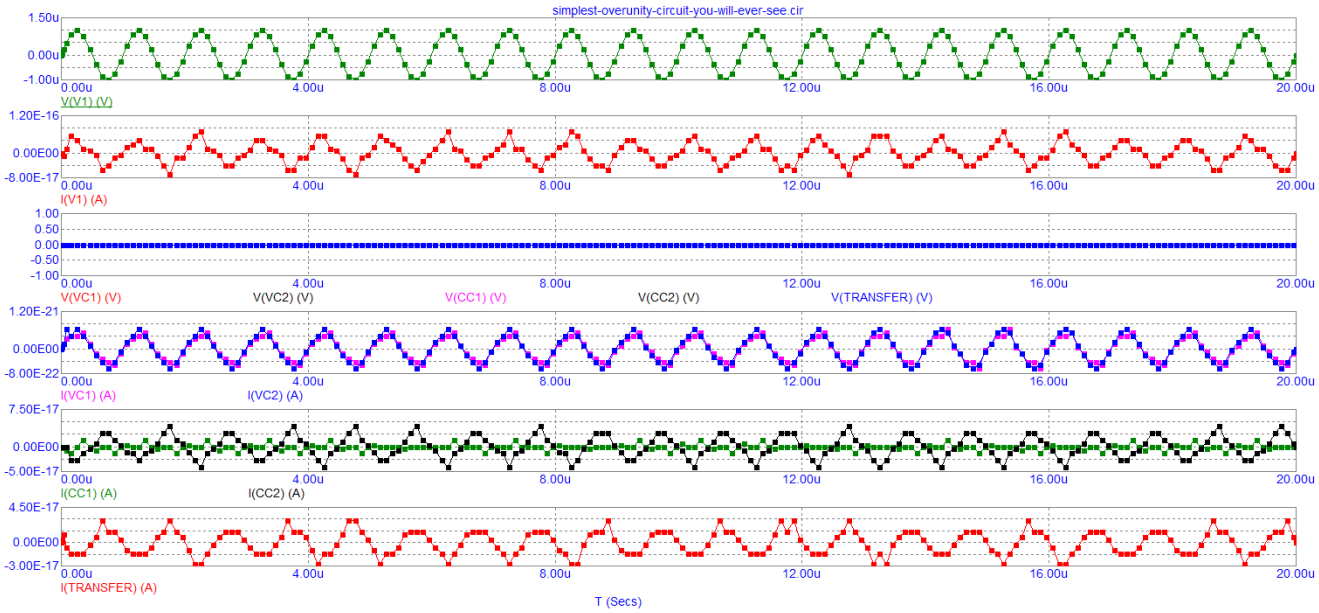
Here is a circuit simulation and its virtual oscilloscope tracings in Micro-Cap...



And its nodal voltages...

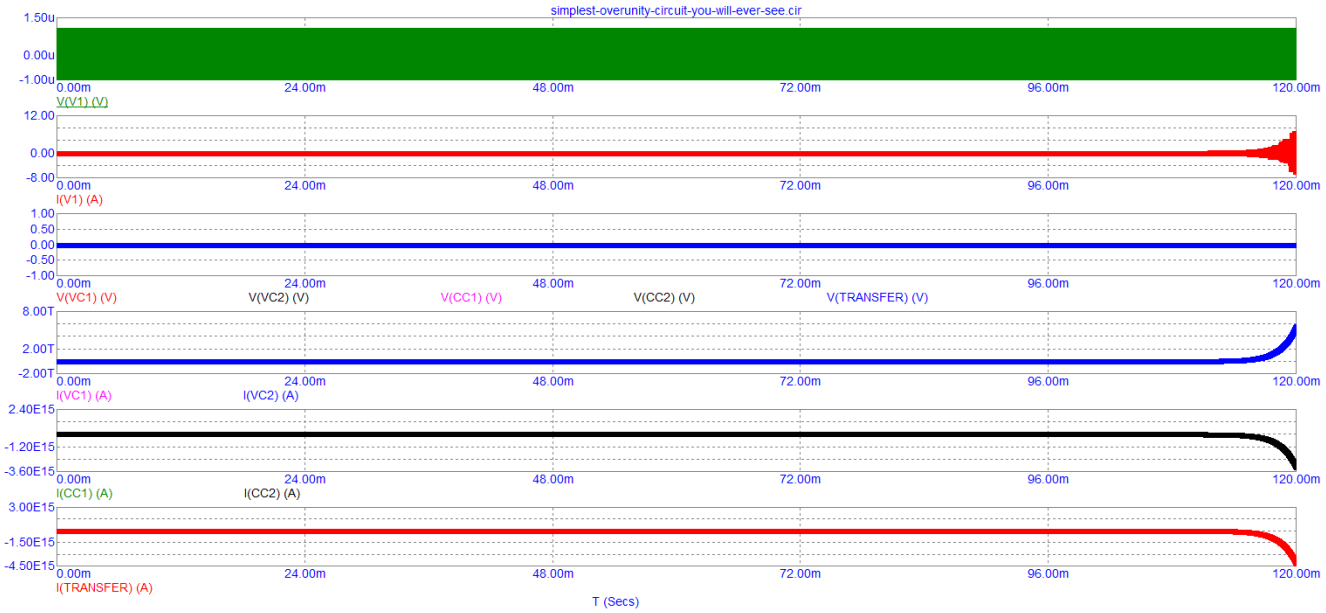


It's initial 20 micro-seconds of input voltage plus a few of its outputs...



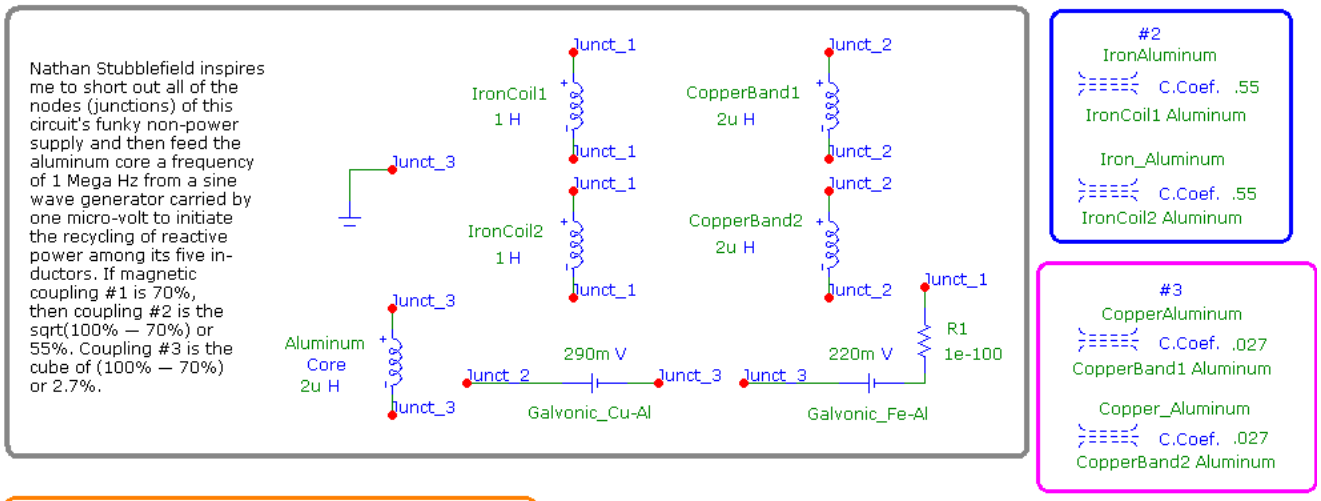
At ten milli-seconds, it is just beginning to take off (escalate its amplitudes at an exponential rate)...

And lastly, at 120 milli-seconds, it is *really* taking off...

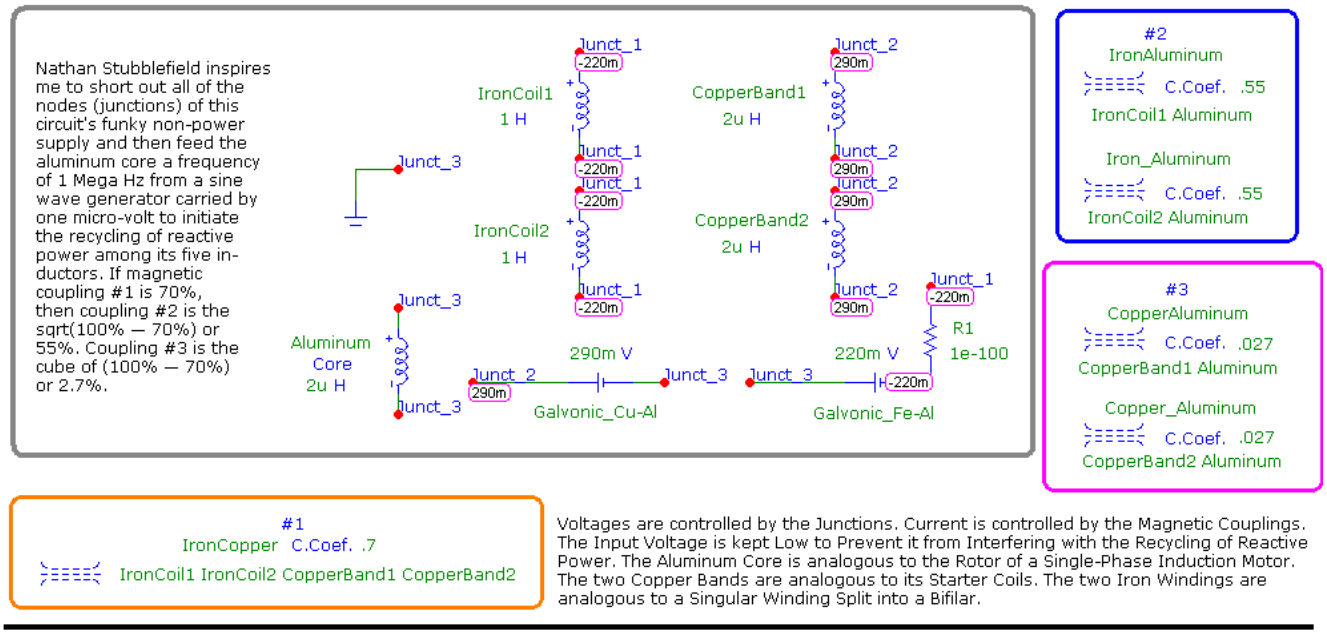


Here is a more accurate version of the same circuit located here...

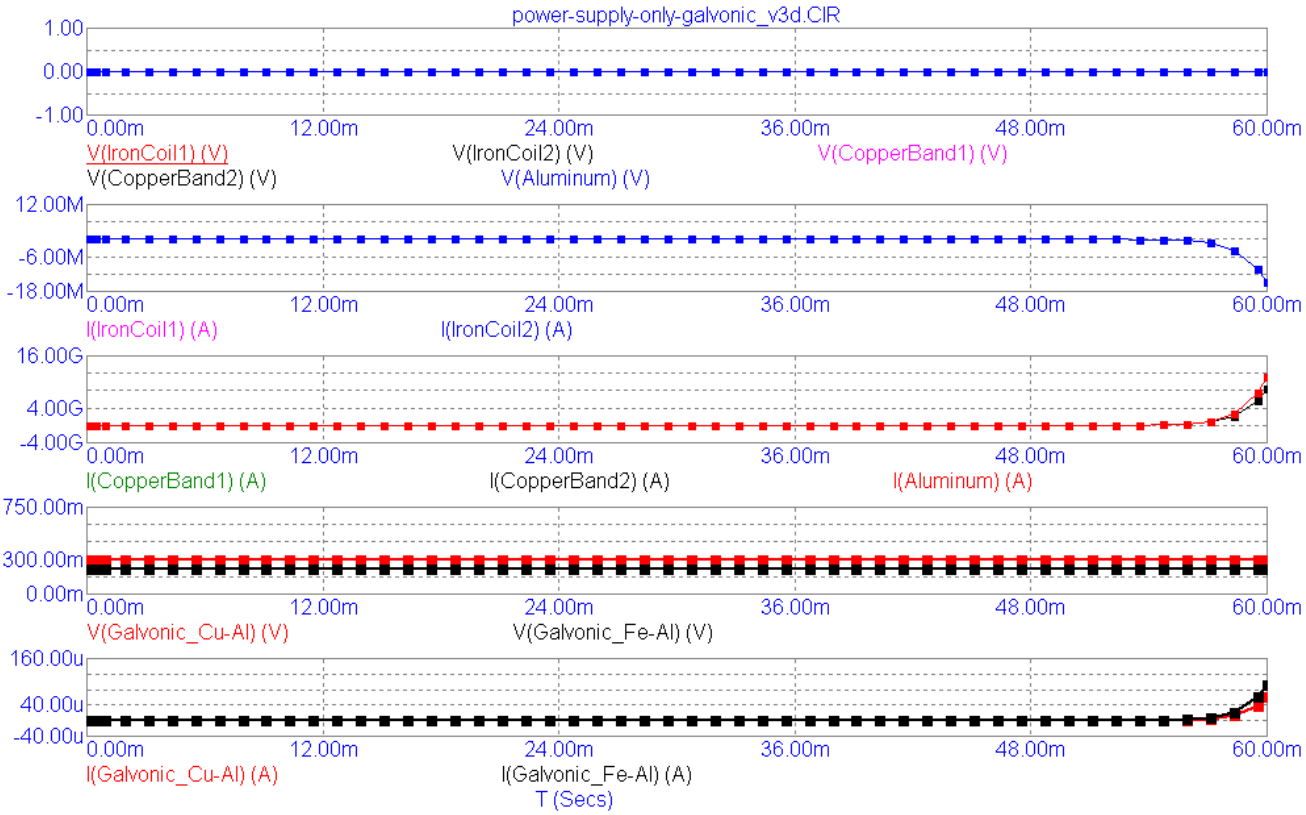
http://vinyasi.info/patent/pri-vate/power-supply/



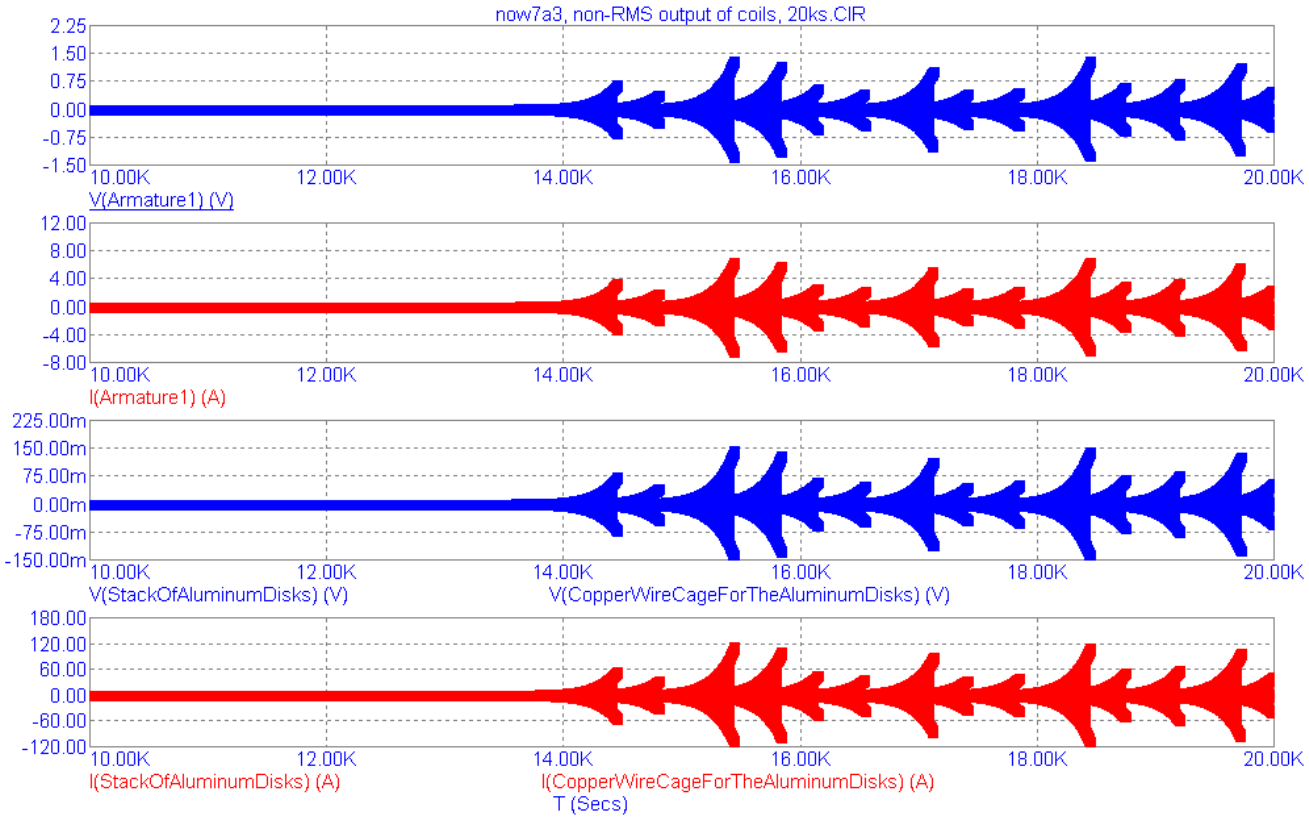
Its nodal voltages after running this simulation for 60 milli-seconds are...



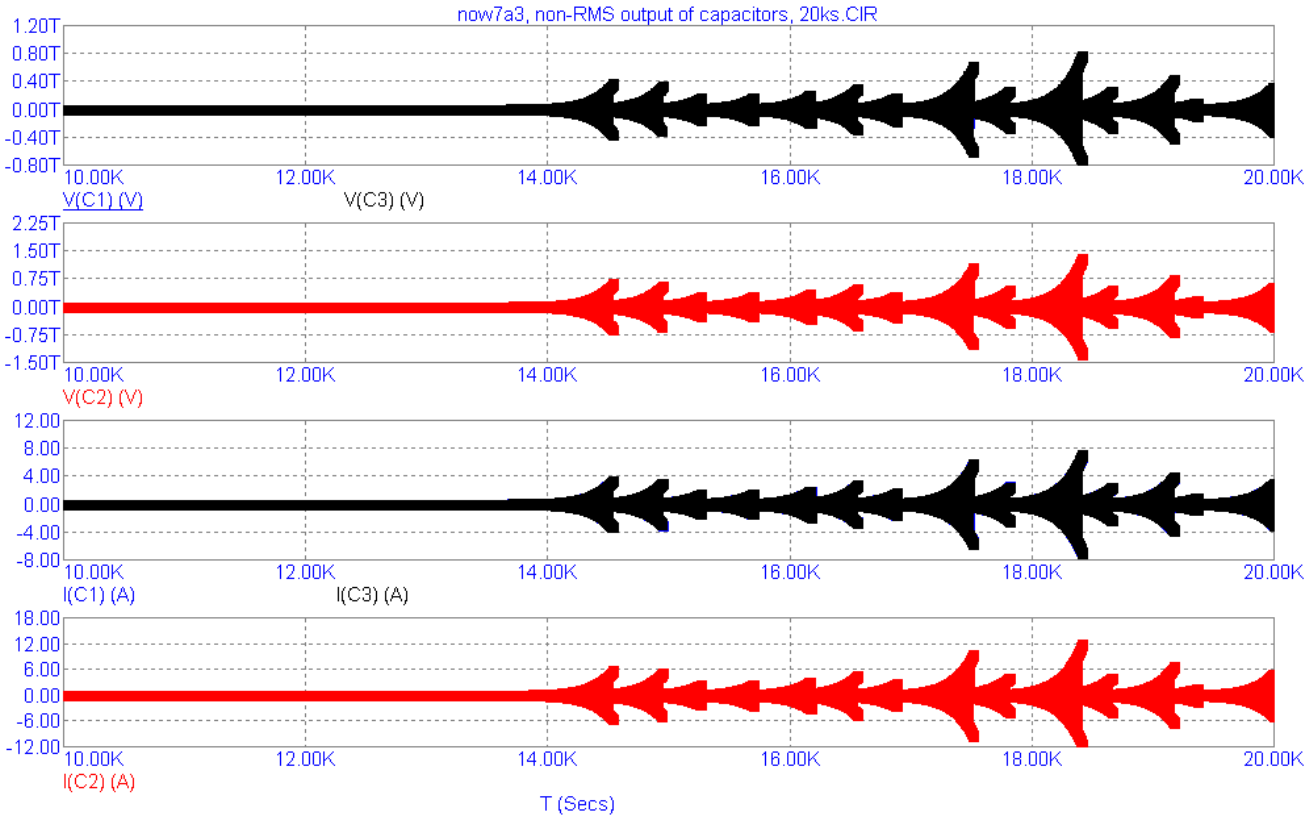
And its output and galvanic inputs are...



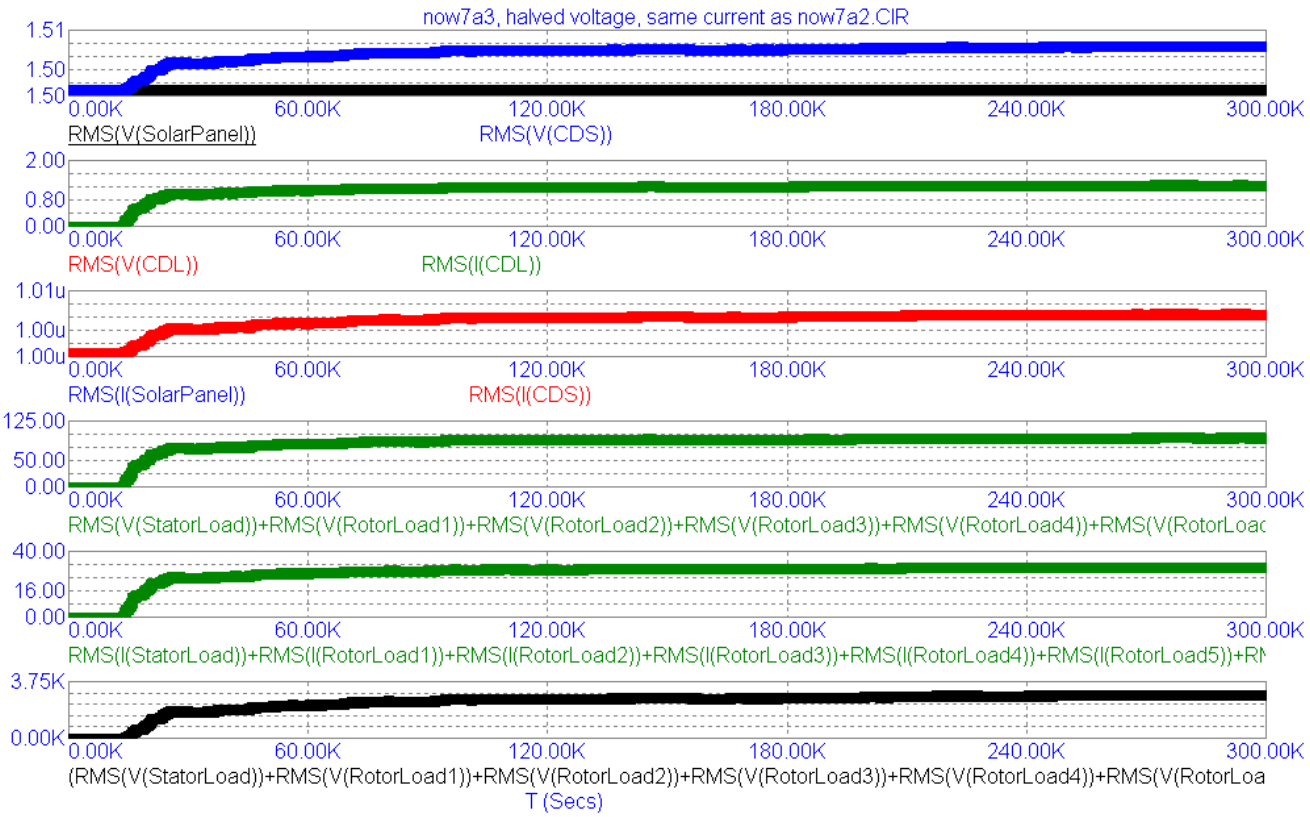
With the addition of a load, plus a suitable arrangement of its assisting components, it is possible to foster a condition of self-regulation via periodic pulses of surges which continuously collapse after an initial warmup period has passed...



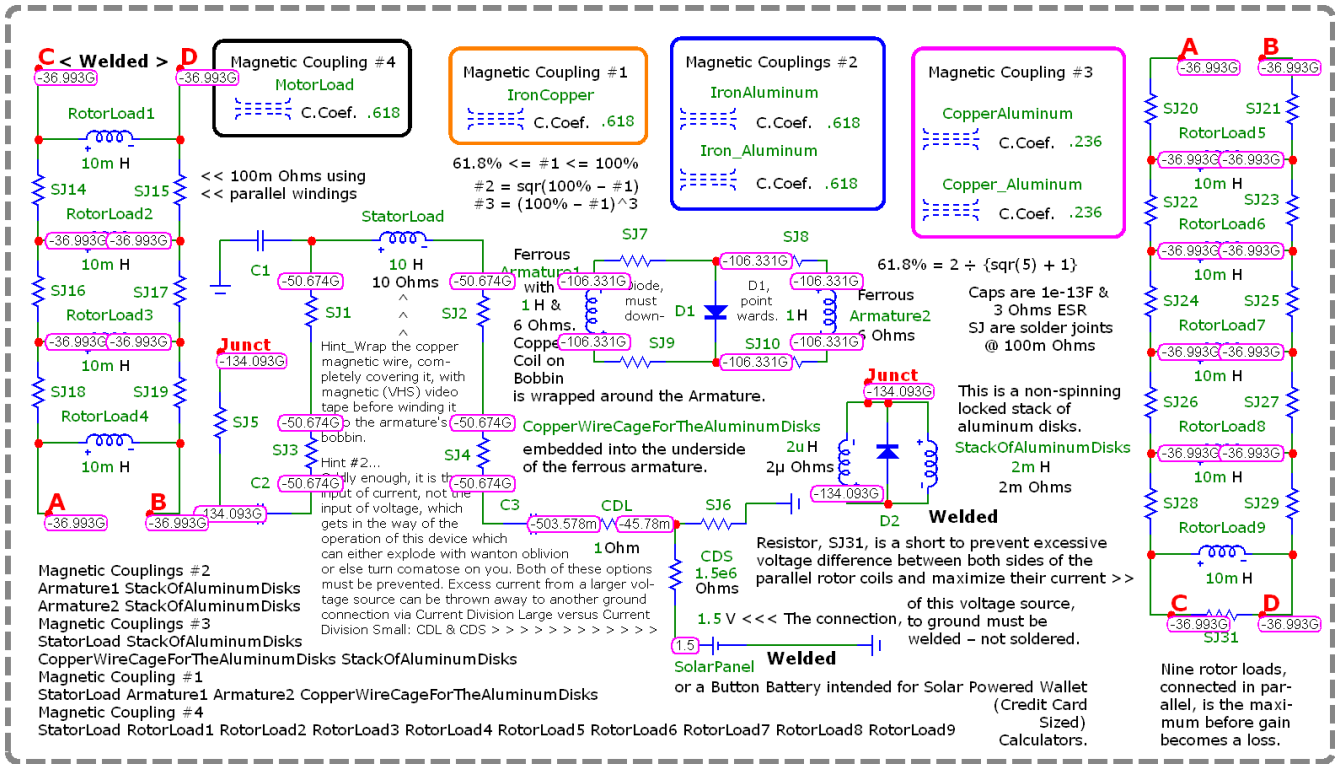
Here are the pulsating surges of this circuit's capacitors...



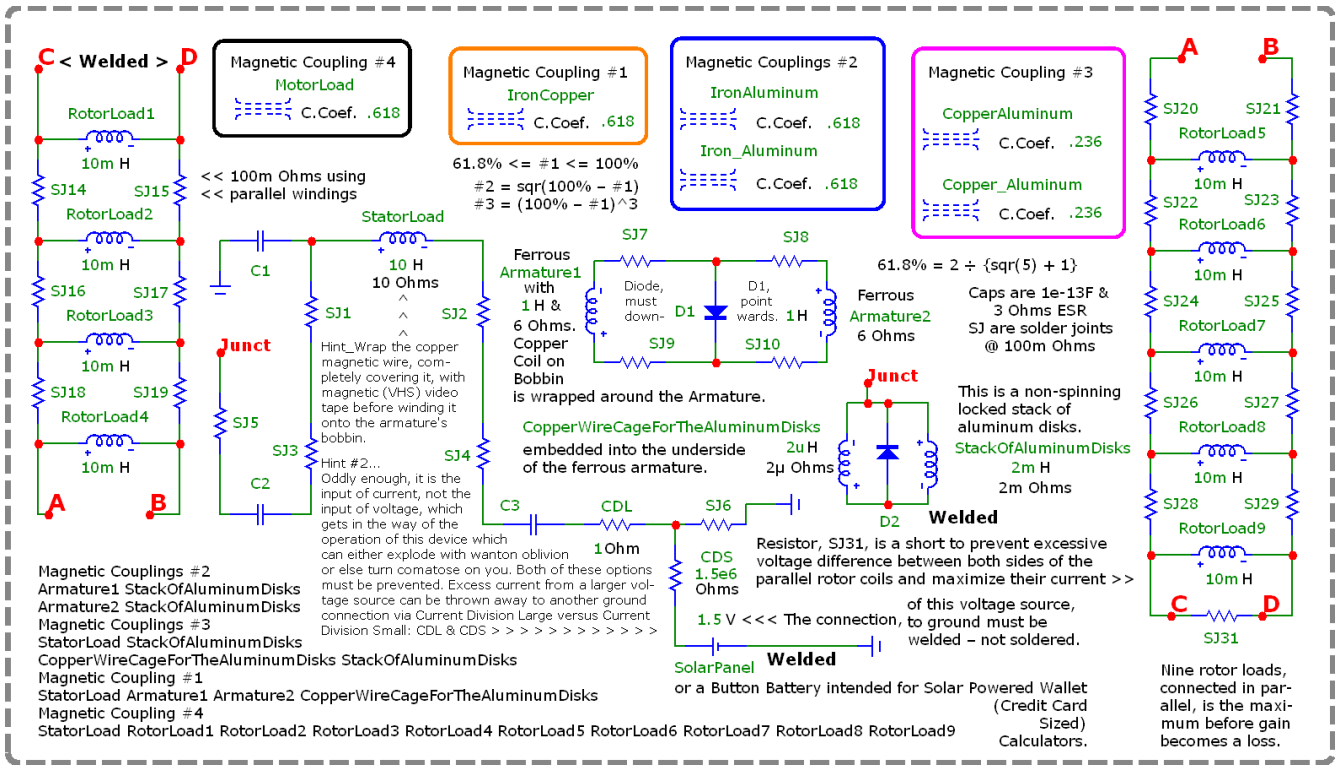
Here is the RMS input and output of its source voltage and its motor load...



Here are its nodal voltages...



Here [is its schematic](#)... [mirrored copy]



These screenshot images and the Micro-Cap simulation files which spawned them are located here...

http://vinyasi.info/patent/pri-vate/

For a more theoretical treatment of this topic, and how it was developed, please see this file...

"Burying our Overunity Circuits to Eliminate their Electrostatic Buildup" in PDF format...

http://vinyasi.info/patent/pri-vate/Burying%20our%20Overunity%20Circuits%20to%20Eliminate%20their%20Electrostatic%20Buildup.pdf

Its shortcut URL is... https://is.gd/idacan

And is mirrored here... https://ufile.io/nhrgryar

The cosine and sine functions of trigonometry can explain why energy can be free and not violate any law of physics...

http://vinyasi.info/patent/pri-vate/The%20Mathematics%20of%20Electrical%20Engineering%20has%20Already%20Spelled%20Out%20the%20Theory%20of%20Free%20Energy.pdf