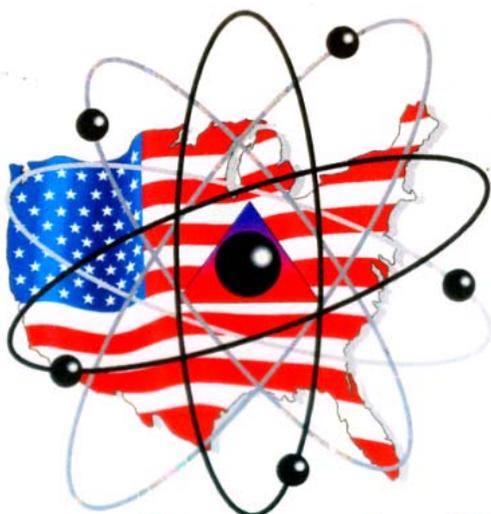


# Panacea-BOCAF On-Line University

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*Magnetic Resonance Amplifier*

- Overview.....
- Description.....
- Replication.....
- Panacea-BOCAF Replication and Validation.....
- Faculty information.....
- Patents, Papers and Related Information.....
- Supplies.....
- Technical discussion.....
- Links.....

Credits.....

## Over View



Various MRA's wound for different power out puts -Photos provided by Norm

The Magnetic Resonant Amplifier (MRA) is originally the intellectual property of [Joel Mclain](#) and [Norman Wootan](#). The MRA has been given open source to the world by Norm and Joel. Norman Wootan has been helping the public access the suppressed and alternative energy field for a number of years now. Norm's efforts include experience and insights into resurrecting the suppressed EVGRAY energy technology and with his associate Joel's contribution of the Magnetic Resonance Amplifier. Both these accomplishments are unique, and of considerable value to aid the task of bringing education about free energy technology into public hands.

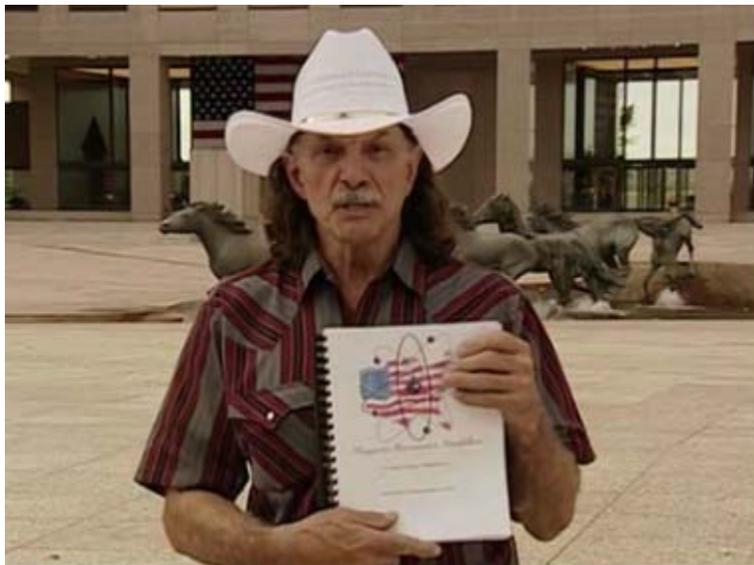
*Quote-It was felt that this information should be released to the public as rapidly as possible, rather than risk loss of the information or the demo by 'circumstances' beyond our control. There have been too many discoveries which have disappeared by not being openly shared. We would rather risk being 'flamed' by other experimenters who actually BUILD THE CIRCUIT than take the chance of the information being lost by keeping it within a select group.*

*Our two primary fears are that someone will attempt to patent **what is intended to be a gift to humanity**, possibly with an intent to profit from others work or to lock it away, the other that it might be suppressed in some other fashion. Therefore, the widest possible*

*distribution is requested, and duplication attempted wherever possible. At the time of this correction to the original file, we have confirmation as to the numbers and others are working on the circuit on their own. Please take this information in the spirit of how it is given, as a gift to humanity. -Joel McClain & Norman Wootan -End quote*

Sadly like so many inventors through history who are ahead of their time and would threaten the status quo, Norm and Joel encountered interference (misrepresentation) plus political and economic conditions (suppression). This first appeared when Norm and his associate Joel had received a signed affidavit from Dr. Bass which was submitted to the Patent Office for their patent application. This statement confirmed by DR Bass showed a 256:1 energy gain. This is quite a significant Over Unity, to put it mildly.

*Quote - The Patent Office rejected the patent with no explanation (which is illegal) .When challenged by Dr. Bass the Patent Office simply said "sue us". The final MRA documented for the patent office was 256:1 COP. I had a complete 12V battery powered MRA so that I could compare DC input tp DC output. This included 12V battery, 12V sig gen, 12V power amp,MRA, rectifier bridge and DC resistive load. I got very close to achieving a loop situation. The only drawback was the idle current draw of the driving amp. I was trying to build a MOSFET power amp, low wattage that had very little idle current draw. Norman Wootan -End quote*



Norm giving testimony of the patent office refusal featured on the documentary "a machine to die for"

Another quote relating to the suppression of the MRA from [Tom Beardon](#) Quote- *McLain and Wooten patented a great little MRA (Magnetic Resonance Amplifier) system, based on that application. Dr. Robert Bass, a very fine electrodynamicist of*

*exceptional knowledge, experience, and ability wrote the patent for them, and assisted in their work.*

*For that he was persecuted, unjustly attacked, and suffered financial difficulties. The "system" does not forgive highly qualified scientists who take a serious interest in "perpetual motion machines" -- as permissible Maxwellian open dissipative systems are erroneously and derogatorily labeled by the orthodox scientific community. Any scientist violating that inquisition suffers the consequences. -End quote.*

Further suppression details of the MRA are profiled further in the [Panacea energy suppression section](#). Norm's and Joel's work cannot progress in the current cartel revenue dominated environment.

Further, despite the Magnetic Resonant Amplifier originally being the intellectual property of Joel and Norm, an alleged THEFT of their discovery has occurred. A device which operates by a similar process based or 'taken' form the MRA was patented. Patent number 5,568,005 Davidson October 22, 1996 Acoustic-magnetic power generator. This patent will only be included here for research reference.

It is reasoned that this patent was approved due to Davidson claiming and "increased efficiency" on his patent as opposed to "over unity" or "excess energy" which was proven and shown in the MRA patent application. Out of respect to Norm, Joel and all involved in this field, Panacea must stress that since doing a number of years of research into the alternative and suppressed energy field, the organization has seen these systems subjected to scurrilous UN necessary ridicule or misrepresentation.

Over the years various researches and developers have attempted to understand the MRA and replicate Norm and Joel findings. However some may have reported results deliberately for a smoke and mirrors. Further due to the operation of the MRA so far being not being conventionally understood, certain individuals have measured the MRA energy output wrong.

*Quote- The MRA operates exactly like a well tuned Tesla coil. The voltage and energy multiplication is accomplished by Q ratio and not turns ratio. They do not comply with conventional transformer theory. These are extremely non-linear devices therefore display unusual performance. -Norm End quote [Reference](#)*

Norm states that the MRA was tested O/U by six independent agencies which were documented to the U.S. Patent Office. If you know anything about "ultra high Q" resonant circuits you will know what happens when you inject lump resistance into the circuit. You flatten the resonant peak and drive the circuit out of the "lossless region" of the resonant curve rendering it non O/U. This circuit was given to the world back in Dec 1994 for all to experiment with it. No one believed in the circuit back then because one highly respected researcher declared it 50% unity. People need to study this case very

closely and read the entire dialog that is available in this document. Norman and Joel need not to post any new information on this project as it is already been done. **All that is needed is in this document.**

Consequently the biggest problem with resonant systems like the [Roto - Verter](#) technology and MRA is that they are based on the resonant effect. If everyone would take the time to go back to Electronics 101 and carefully study the resonant phenomenon and the effects you get with a finely tuned L-C circuit, then and only then will you appreciate what is happening in the RV and MRA circuit. There is an Engineering firm in Garland, Texas that has done a study of the "Ferroresonant phenomenon" and the problems it causes in the power industry. Ferroresonance self targets a new frequency based on the conditions in the circuit when  $X_c = X_l$  with very low resistance. This effect causes transformers to explode at great cost and liability.

Engineers spend all their time trying to prevent the ferroresonant effect from happening where over unity engineering on the other hand are trying to make it happen in a controllable set of circumstance or environment. All through the Electronics Industry, when an anomalous condition occurs, the solution is always to "shunt it to ground" to prevent circuit destruction. If Engineers would spend a little research time, maybe they could find a way to "enhance" the circuit by taking advantage of an otherwise destructive effect. **Think about it.**

In [the proposed granted Panacea research and development centre](#) the MRA and [OTHERS](#) technology can further be perfected and understood via needed grant support, plus technical support from microwave and RF engineers.

*Another quote from Norm- A good microwave engineer would possibly come up with a tuned cavity resonator which would drive the transducer at the optimum phase to extract the energy needed to drive the ferro-resonant coil in the primary. Joel is using 150 turns in the primary and secondary of his ferro-magnetic transformer. Experimentation will provide the ideal ratios and impedance matching. Get with the program and provide free exchange of findings so all may benefit. - Norm*

So far this research has no due faculty study for environmental and social reform which should be achieved with the disclosure of these device(s). The MRA is another suppressed alternative energy device which we can learn allot from via more awareness and study. The public granting a center to harbor its security and study will create the critically needed social reform and quell the conditions presently keeping the MRA and devices of this nature from surfacing.

The Nonprofit organization Panacea-BOCAF intends to support open source engineers working with the MRA and other suppressed clean energy technologies. These engineers require grants, resources, faculty recognition and security. All this can be

created in [Panacea's proposed granted research and development center](#). For those able to help this effort, please [Contact us](#).

Since the patent controversy, dis-Info, improper understanding and measurement of the MRA (and patent theft) Norm and Joel were forced into the background with no one to support and help. **However their research is very much alive now and needs to be replicated and understood by YOU!** Norm and Joel are a perfect example of how open sourcing their device broke down the political and economic conditions. **Without this open sourcing the device would be left to stagnate as has happened to every past researcher into free energy and over unity devices.**

Norm and Joel may have had a hard time, but their altruism leaves the doors open to help support them and to prove together as a collective and collaborative community we can do it! If you have found this document of any use, and or replicate the MRA **please consider supporting Norm and Joel in any way**. If you wish to support Norms and Joels R and D efforts, please help and [refer to this page](#).

## Description

*Quote-The photos were produced with a MRA made from a Radio Shack barium ferrite magnet and the Branson Lead Zirconate Titanate piezo transducer. Please note the rich harmonics in the scope shots of the resonant wave forms. Precise tuning is critical with the MRA since you are looking for maximum "Q" in the circuit. It is understood that Hector is on of the few individuals out there who really understands the "Q" factor. The key to all of the O/U electrical circuits is in resonance and how we tap the space background source of the energy and convert it to common current electricity. This is done by the magnetic component of the circuit.*

*The following "grain of wheat" test of the MRA input was the most difficult evidence for Hal Puthoff to explain. In Joel's own words.- Now that they have it running, tell them to put one tiny grain-of-wheat bulb in the input, and some larger bulbs on the output load. That is what we showed to Tom Bearden, and he made that famous comment, "There's no doubt in my military mind that this is an over unity device".-Joel and Norman Wootan*  
End quote



Norm's Large MRA wound on 4" ID ferrite magnets to light 8 foot fluorescent tubes with an audio amp input

### **Back Round**

During the summer of 1994 Norm met Joel and soon recognized a similar desire on his part to get involved in some serious research on the subject of free energy and anti-gravity. Since Norm had more than two of everything needed to equip a research effort Norm took several truck loads of "goodies" to Joel for he had no test equipment to work with.

Norm and Joel compared notes and found that they had been reading and researching in the same areas. Joel was very much into pyramid energy and "sacred geometry" whilst Norm had been looking into hyper dimensional physics and tetrahedral geometry. Norm's interest in the tetrahedron and nested tetrahedron geometry was spurred on by his contact with a woman who claimed to have ridden on an alien craft. Her description of the flight physics was based on the "virtual rotation" of energy within the crystalline lattice structure of the craft to overcome the quadrapole effect of gravity and provide the time severing jump to the hyper dimension.

This terminology was not foreign to me for Tom Bearden had exposed this theory in his Excaliber Briefing which was based at the time on scalar waves or now known as longitudinal waves which are timeless and travel at infinite velocity or in the hyper dimension ala Whittaker and Maxwell.

In 1994 Norm became vice president of the American Gravity Field Energy Association founded by Hans Neiper of West Germany. Tom Bearden had been a former President of this organization. In Han's book, *Revolutions in Medicine and Technology* was the plans and description of the famous Neiper Ring, which displays anti-gravity traits when powered up. Joel and Norm decided to build the device for it was being talked about in the *New Energy News* published by Hal Fox up in Salt Lake City, UT. Thus began our research into the hyper dimensional energy and anti-gravity.

The results of our effort are shown below in the faculty section as the MRA documents and subsequent testing. The MRA is a finely tuned resonant device incorporating two highly non-linear components which when operated at ultra high "Q" provide more output than input into the circuit. Please refer to comments by Professor Terman, Dean of Electrical Engineering, Stanford University, at page 51 regarding the circulating currents versus input current in a highly tuned circuit operating at ultra high "Q".

The principle behind the MRA is the same found in the Star Wars research done at USC with lasers and barium titanate crystals. They found that when laser light is phase cancelled or folded back on itself (phase conjugate mirror or PCM) the resulting longitudinal waves or scalar potentials cause an energy amplification effect thus could be used as a satellite killing weapon. This research was published in June of 1994 in *Scientific American*. With this information and understanding the crystalline structure of basic elements in the periodic table, most of which are cubic or face center cubic in shape (nested tetrahedrons), we proceeded to put together our first MRA. Our objective was to create "virtual rotation" of energy within the "nested tetrahedral lattice" structure of the elements within our circuit. Barium ferrite magnets and barium titanate crystals were selected. All of the elements involved are of the cubic or face center cubic structure that we needed.

Norm and Joel have various articles and letters that were written during the testing and verification of the MRA. Robert Taylor, their business partner in Atlanta provided the capital to employ Dr. Bass as their Patent Attorney and the necessary testing for verification of the MRA. The successful test conducted by Scientific Atlanta, Concordant Technologies and Georgia Tech University was not documented in writing for they did not want their organizations named in another "cold fusion" debate. The Teledyne Ryan test was officially documented and signed by the testing physicist.

This produced a final affidavit filed by Dr. Bass prior to the Patent Office granting of the Patent. In the final days before this last affidavit the NSA requested a copy of all the information regarding the MRA. Robert Taylor provided the requested information so we just put "two and two together" when the Patent Office rejected our patent and came to the conclusion that it was futile to fight the Federal Government in a protracted law suit.

**The MRA is an over-unity device that needs the necessary research and development funding to flesh it out and put it into a usable product for the market place.** We have done all we can do to prove the concept and theory behind the device. Since we placed all of the technology on the internet complete with all the technical updates as we proceeded with our project it should be expected that others would pick up the ball and run with this promising device. Who knows, someday you may walk into Wal-Mart and find a MRA that will power your house or be in the form of a perpetual battery for your bass boat or your lap top computer.

In February 1995, Joel and I did a MRA prototype demonstration in Atlanta, Georgia for the head procurement officer and two staff electrical engineers from IBM Corporation. They were, in their words, "blown away" by the demonstration of over-unity by the circuit. IBM wanted the MRA for the lap top computer battery application plus rights to all other applications upon successful patent of the device. If the MRA was adequately funded in the research and development area it would create a very significant change in the entire energy industry from rechargeable power tools, computers, automotive use, decentralized power generation and central power generation systems.

The Magnetic Resonance Amplifier (MRA) is understood to be a hyper Dimensional Aetheric Energy Tapping Device. The Magnetic Resonance Amplifier was a joint development project between Joel McClain, Palmer Texas and Norman Wootan, Dallas Texas during the period of fall 1994 to present date. Below in the faculty section you will find a chronological history of messages taken from the Keely-Net BBS, which outline the developmental dialog that was posted for the record.

The complete documentation for this project is several thousand pages in extent therefore only selected information is here in presented. Most of the hard core experimental effort was in person, one on one with Joel either at Norm's lab bench or at Joel's house, on his kitchen table workshop.

### **Other applications**

A note from Joel - I think that the singular weakness of the MRA is that, however high the COP, is that it is still in the mW range. That may make it useful as a battery charger for cell phones, or even for computers, but it is still limited for practical applications. The strength is that it is very sensitive, and can entrain harmonics easily. As a series resonant circuit, the voltage and current are approximately in-phase, which is necessary for scalar interferometry. \*(note below) In that regard, it works beautifully.

If the output were to be monitored and recorded 24/7 over a period of time, its incremental increases and decreases, as well as the spikes and surges, then compared with events in the world over that same period of time, a picture would begin to emerge. Most major events seem to begin hours, or even days, before reaching full

effect. I think that the only way to pursue a patent for the device, would be an application patent, using it to detect high energy events in real-time. I remember hearing about a random number generator, I think that it was on the Discovery Channel, which would predictably have an equal output of odd and even numbers, unless "something" disturbed it. Hours prior to any major earth event, it would go out of sequence, and remain that way, until the event passed.

By recording the waveform activity of the MRA, I believe that it would be possible to determine the type and magnitude of the event, prior to its actual release of energy. Using magnetometers, it could even be made directional. If any lives were saved by this, it would be more than worth the effort.

What I suggest is using the presumed weakness of the device, its weakness and sensitivity, as its strength, and set up a global monitoring facility. I don't think that this is impractical, and should you receive a grant to develop it, I hope that you pursue it actively. I would not even mention the overunity aspect of the device. I would, however, gather hard data over time, and present it as justification for the grant approval. Focus in on one universally beneficial aspect, and seek the means to fully develop it. You and your fellow engineers will undoubtedly discover more, and do not hesitate to take credit for your pioneering efforts. \*note - the reason for this, is that when  $XI=Xc$ ,  $Z=0$ , and the device acts as a "ground rod" to harmonics.

## Replication

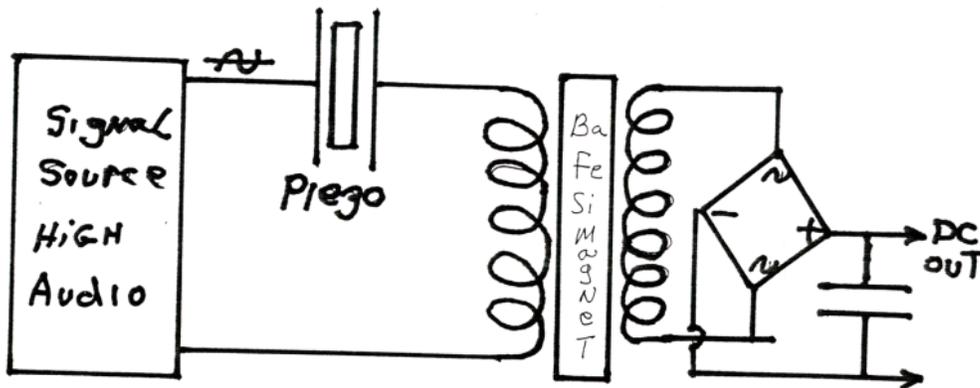
*Quote-On MRA, remember the OU energy is contained within a mixture of damping signals within the piezo cascading hyper signal signature In piezo oscillations the mechanical energy deformation of the crystal matrix behaves like a domino effect were this signal needs to be captured broadband from the mayor narrowband main hyper signal like capturing the ripple waves atop a mayor tsunami taking place within the circuit (same applies to ferro-resonance in IRON cores) It is recommended to use HI resolution scopes to see this reference. Once this is looked at, work can begin in filtering and power extraction & feedback circuit of the system (not so difficult having the proper tools) Hector End quote.*



Norm's Multi tap MRA with 8 windings

Norm has recommended that the easiest MRA duplication would be the one that Greg Hodawanak did in the New Energy News articles. This information is included below. It used a ferrite core transformer and planar capacitors in the form of silver mica. Norm states it proved O/U real easy. This information is archived here. This version was used at the Teledyne Ryan O/U demo and resulting published report. The piezo elements that Joel and Norm used were from Branson Ultrasonic Welders. The transformer was a barium ferrite magnet from an old IBM main frame hard drive. These parts are hard to find these days. That is why Norm suggests Greg's version for the components which are readily available from any good electronics supply house.

## MRA



JOEL McCLAIN / NORMAN WOOTAN

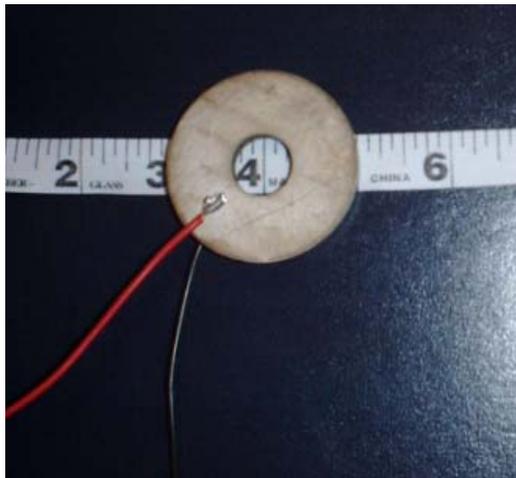
Circuit diagram (series resonant MRA circuit)

Norm states "The cap value is not important" 150-200 mFD is OK at about 50V dc. **This is just smoothes out ripple.** It may well be worth the while to fast Schottkey diodes and not a normal rectifier because of the high frequencies. Note the wire length and size affects the resonance. More details below in winding the magnet.

### Piezo preparation

Joel and Norm originally used a Branson welder Piezo element which they were told was a lead zirconate piezo crystal. This had a specific operating freq of 32KHZ which matched their magnet resonant frequency of 8KHZ. They had to have a physical resonant magnet at 8KHZ and drive it 3 octaves up at 32KHZ. Their piezo's had an upper voltage limit of 150VAC.

The piezo which Norm and Panacea used has a natural freq of 32khz, and a power handling capability of 150 watts with up to 90V input. Norm reports that he and Joel had no problem driving the piezo with a power amp that has a 70V output. (Paging amp). When trying to drive this piezo in a series resonant circuit at high power you will know when you have a miss match of L and C for the piezo will go into a high pitch squeal that will pierce your ears.



3" diameter 3/8" thick with a 1" hole in the middle

They attached 18 ga. flexible leads to the piezo's by carefully soldering without raising the temperature of the piezo very much. **You have to be careful for these piezo's are polled devices with a positive and negative side to them.**



Polling is very hard to determine or measure. What Norm and Joel did was to clean the silver oxide from a small spot on each side of the piezo. Take your soldering iron and pre tin your leads leaving a bead of solder on the end of them. Carefully place the lead with the solder bead directly over the cleaned spot to where you are going to attach lead.

With the lead not touching the piezo surface, melt the solder till it is very hot then quickly place the boiling hot solder bead onto the piezo surface. It will adhere to the piezo without very much destructive heating taking place. **DO NOT PLACE A HOT SOLDERING IRON ONTO PIEZO.** If the spot is cleaned and bright silver with a little resin flux in place you can attach the solder bead to the piezo.

### **Magnet winding**

Norm and Joel originally used IBM Linear motor barium ferrite magnets. The IBM linear motor magnets have a resonant freq of around 8Khz which was found by winding a coil around them and driving them with a sig gen which make them audible sing, at resonance. This is easy to do since everything has a resonant freq. The flux particle freq is a determination which Joel and Norm did and there is no one to Norm's knowledge who has delved into this area of research.

Remember; (read all the documentation and dialog in this course) that we were applying Sacred Geometry principles to the understanding of the workings of the MRA at the atomic level of the piezo and magnet material. It is vital that all understand the vibration or virtual rotation at the molecular lattice level which makes the MRA work.

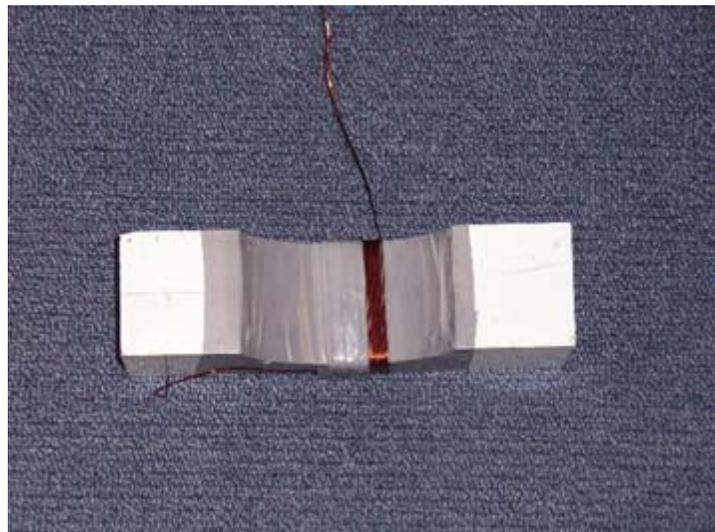
Floyd Sweet understood this and developed the VTA along these lines of investigation. Other than our research I don't think you will find any info on this natural phenomenon. Someone may do some very advanced research and arrive at a different freq or conclusion but it works for us. The small ferrite core used in Greg's MRA resonated up at about 70Khz.

You can wind your magnets by directly winding the insulated wire onto the magnet using the PHI ration which you may experiment with bigger/smaller windings. **Just make sure this ratio is maintained.**



A Barium ferrite magnet taken from an old IBM main frame hard drive

Norm's first attempt was 150 turns on the primary and 150 turns on the secondary. It has since been found that **this will give LOW power. Norm, Joel and Panacea went onto to experiment with larger winding ratio's, it is suggested that you do so also. This original winding will be low power, it is suggested you wind 7 times this.**



Panacea's 150 tuned first prototype

Later they tried using different ga. wires on the primary and secondary, then settled on the PHI ratio between the two windings. Example: If they had 200 turns of 18 ga. magnet wires on the primary, then they would wind,  $200 \times 1.618$  or 324 turns on the secondary using 22 ga. on the longer winding. Greg's mini MRA replication used planar capacitors of silver mica which worked very well with a barium ferrite core transformer.



Norm's original MRA -Phi ratio MRA on IBM magnets

The MRA was constructed using two ea. of the Radio Shack barium ferrite magnets #64-1877 that Greg Hodawanak referenced on page 4 of 18 in the article written from "New Energy News" as found on the Rex Research site. Norm wound 100 turns of #26 stranded wires on the primary then wound (overlaid) 162 turns of #30 stranded for a secondary which gave me a PHI (1:1.618) Ratio.

**For those that do not know about the "Golden Mean" or Phi ratios you need to do some serious research before proceeding any further. Everything related to this project refers directly back to this ratio. This ratio is paramount to the study of the resonant phenomenon as employed in this device.**

#### High power MRA windings

Caution if going onto high power windings -"weird effects" included such things as building a very powerful standing wave, probably columnar that would suddenly collapse is you unloaded the MRA while under power at resonance. Many times Joel had all the light bulbs blow out the filaments although they were turned off at the time. The filaments would break away at one post in the bulb and spin violently around in the bulb scraping away the phosphor coating.



A high power Transformer core sent to Panacea for testing from Norm

Norm's first big "soccer ball" MRA core was being driven with audio paging amps at 70V output. The line input was being monitored all the time and it was found that the line input current to the amp would fall below idle current draw when the MRA was fine tuned to peak power output (resonance).

The high powered MRA (audio amp driven) has to be brought up to fine tuned resonance over a period of time to condition everything. The destructive spike that took out the light bulbs manifests in the neutral side of the house wiring circuit. It is really weird to see the effect. The MRA output follows the position of the sun and moon so there is some sort of gravity effect which Greg Hodowanec describes in his work with earth gravity fields.

As far as gravity effects, we did measure changes in piezo weight after running at resonance with a gain back to normal after turning off the MRA, the same effect as the famous Nieper Ring circuit.

**The MRA will not work if the magnet is cold.** Ambient temp of about 70 degrees F. and a warm up run for an hour below resonant conditions proved to be most effective. Norm believes that the MRA has to have time to build an "aetheric field" around itself in the form of a standing wave. The very low powered MRA is running will work as soon as you start it up.

You have to back off your power and condition the circuit (warm up) for about 30 minutes to an hour before going to high power. The MRA is really weird for it seems to self tune if allowed to settle in and achieve ambient room temperature of around 70 degrees. Please do not forget and observe the fact that a finely tuned MRA circuit

when operating under high power will build a "standing wave" or as Joel describes it as a "columar wave" that if caused to suddenly collapse will manifest a huge pulse out of the ground side of the electrical circuit. This pulse has many times destroyed light bulbs that were not even turned on at the time. The collapse of this wave can occur if you unload the secondary side of the circuit while under high power input.

**There is a huge amount of reflected energy that has no place to go except back into the primary and causes the piezo element to react with this spike energy. Under the right conditions Joel and Norm have measured over 1000V oscillation between the piezo and the primary magnet winding while being driven with about 80VAC at the driving freq, 23.75khz as in the case of the "Soccer Ball" MRA.** Remember that the spike will be from the ground side of the circuit into the neutral buss that you have your test equipment and driving amp and signal generator plugged into. Joel and Norm have destroyed lots of good equipment and amps because of this phenomenon, so be careful.

Please refer to Norm's article titled "Neutral Spike" in the faculty section below to get and understanding as to the power of this "negative electricity" that causes huge current over very small conductors and is described as "cold current" or radiant energy.

The large MRA core Norm sent to us will be able to do some amplifier inputs at considerable power. Just be careful with your test equipment and driving amp for Joel and Norm have been there and seen the results of miss steps and un-loading effects from the MRA. Solid state circuits are like candy and donuts to the MRA's appetite. Norm considered going to vacuum tube driving outputs in the driving amp final stages for they can handle the MHO's which you understand as the opposite of OHM's. Old Navy terms from basic sonar knowledge. This phenomenon explains the current draw of the AC powered equipment dropping below idle current draw measured at the wall plug.

### Signal Generator

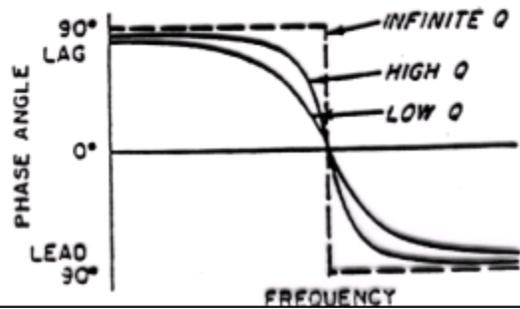
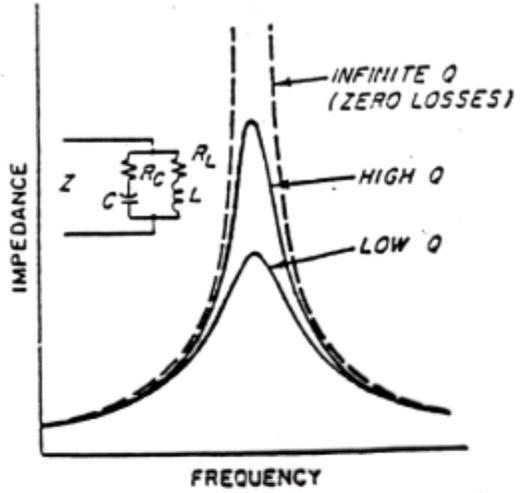
*For those who plan to build their own MRA, you will have to use sine wave signal wave input. I've tried square wave, and although the magnet will "sing", the output DC power will be below unity. I believe this is because the circuit can't "breathe" evenly with square wave input.- Joel McClain*

As you will find, the hook up leads from your signal gen. and all hook up lead lengths will have to be experimented with for they all affect the resonant effect. MRA was driven with a HP200 vacuum tube signal generator with a 48V lamp on the DC output from the full wave bridge. If your signal generator can manage sine wave 40 kHz, then it should be ok.

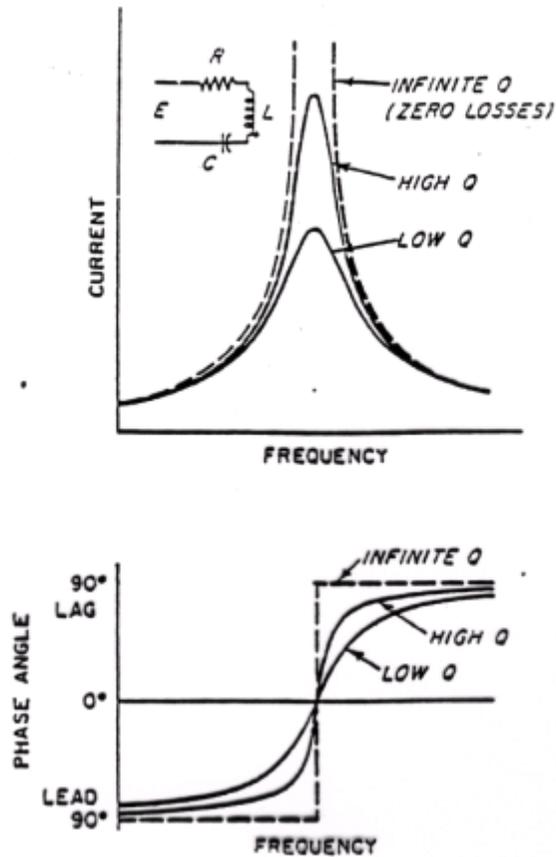


Panacea's Signal Generator

Tuning requires finding the various resonant points and zeroing in on the most powerful, finding that very sharp resonant peak. Below are three oscilloscope photographs and a resonant curve for a series resonant circuit, which depicts the region of operation that we seek to find.



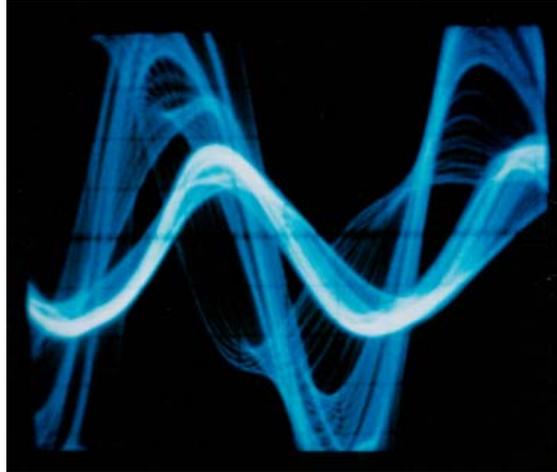
Resonant curve 1



Resonant curve 2

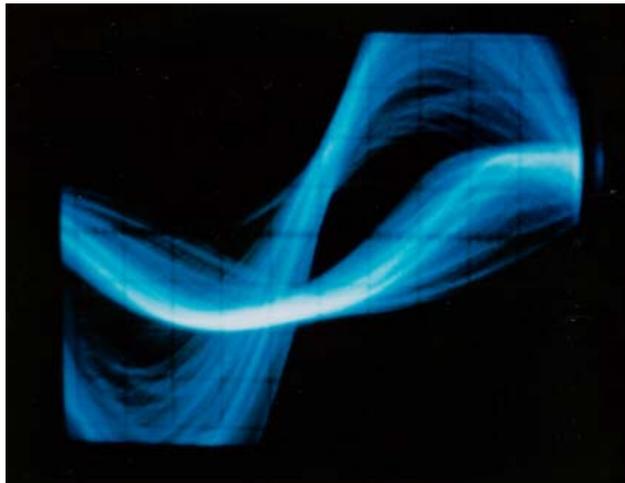
Next we will describe the tuning procedures used to bring the resonating circuit into that loss less ultra high "Q" region slightly on the right side of the resonant peak. Keep in mind that we are tuning a series resonant circuit, which produces a slight reactive component (current lagging) when tuned to the immediate right side of the resonant curve. This tuned position provides us almost infinite impedance in the input side of our circuit.

To reach this finely tuned, ideal resonant condition it is first necessary to find that resonant condition shown in oscilloscope photo #1.



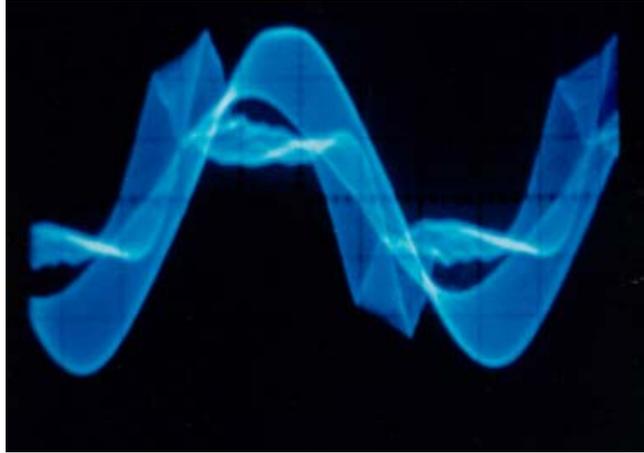
Resonant Wave form 1

This photo depicts a net capacitive condition with the current clearly leading the voltage traces. The next step is to tune through the resonant peak to find a condition of net reactive which shows a current lagging scope trace as shown in photo #3.



Resonant Wave form 3

Now we tune ever so slightly down in frequency to approach that infinite "Q" sweet spot which lies just to the right of the resonant peak which provides almost infinite impedance in our primary which also brings the current and voltage into a very favorable power factor which yields the maximum gain possible as depicted in photo #2.

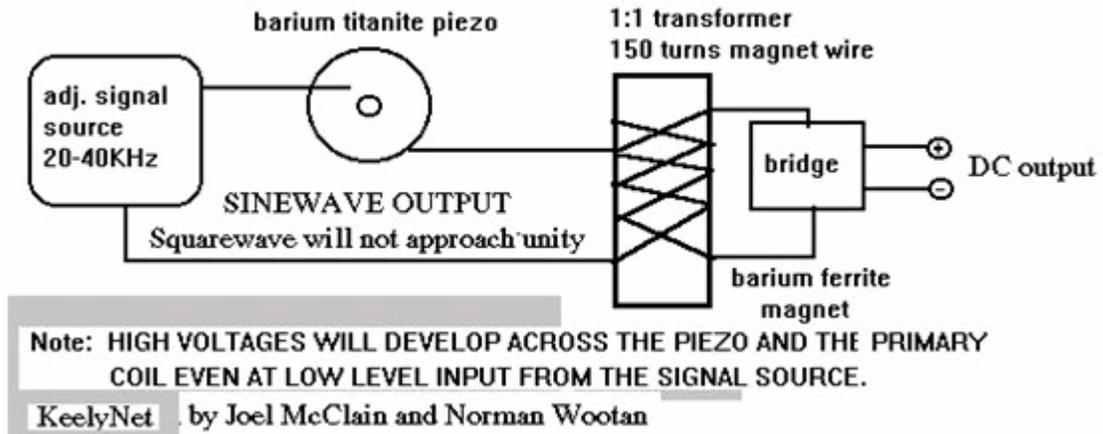


Resonant form 2

When working with the MRA you have to understand the conditioning that has to be observed. Tune your MRA to a resonant condition and leave it running for several hours in a room temperature of about 75 degrees. A cold magnet will not work in the MRA. There is a strange columnar field that slowly builds around the device. You have to experiment with the length of the clip leads that you use to connect the signal generator to the MRA. Norm has one small MRA that will light a 15 watt florescent tube via signal generator input using 12 inch #18ga. leads but will not work with 18 inch leads. Remember that you are working with a resonant device so all factors relate and must be observed. **This is the reason so many researchers have totally failed to make the MRA function. It is due to lack of understanding of the basic principals involved.**

If you examine the scope photos you clearly see the huge number of harmonics involved in a properly tuned and functioning MRA. These higher order harmonics are the key to achieving O/U. Without a sharp resonant curve to begin with you will not get the results desired. The taller sine waves are the potential (voltage) and the packed (bright) wave forms are the current wave form from the current probe. Potential (voltage) in these photos are approximately 50VAC peak to peak with a signal generator input of less than 5 VAC. End

**Keely net Schematic**



Greg Hodowanec's Mini-MRA replication document is included in the patents and papers section below.

### Ideas for a DC input

You could try using a C MOS chip for an oscillator circuit. They will run at less than 2ma with no load on the output, as part of a looped MRA. Norm was trying to use a DC in amplifier. The only drawback was the idle current draw of the driving amp. He was trying to build a MOSFET power amp, low wattage that had very little idle current draw.

[Check this one](#) - The bottom schematic, having both R1/R2 replaced with pots allows for variable duty control as well as variable frequency control with the cap size giving you the range of frequency that can be attained... not to mention it does the math for you and gives you on/off timing in seconds as well as the duty ratio.

### Simple Cheap Low Power Oscillator



Panacea's Oscillator replication- This is pictured in the middle in the black box, MRA is to the right

The following circuit has been done by [poynt 99](#). This circuit was inspired off the Panacea video production and was specifically designed to operate at the frequency driving the MRA in the video. This circuit is also intended to help close the loop. When building the circuit, it might be a good idea to use a socket for the IC, just in case it meets its demise from Norm's spike or whatever. The chip should be cheap, so buy a few.

### [Simple Cheap Low Power Oscillators v2](#)

The reason why the pulse output option is given is so you can decrease the pulse width, you will use less input power. It's all about "ringing that resonant bell" as one would imagine, so doing it with the least amount of energy is the goal. Indeed, it may be more difficult to measure the input and output powers, but not impossible.

With a single 9V supply with the CD40106B, you will get only about 4.5Vrms from the circuit. With two 9V batteries (+/- 9V), you will get almost 9Vrms from the circuit. To simplify things, it would be good to be able to drive the MRA with just 4.5Vrms and still gets your same apparent COP. Try decreasing your gen. output down to 4.5Vrms square wave and see if it works as well.

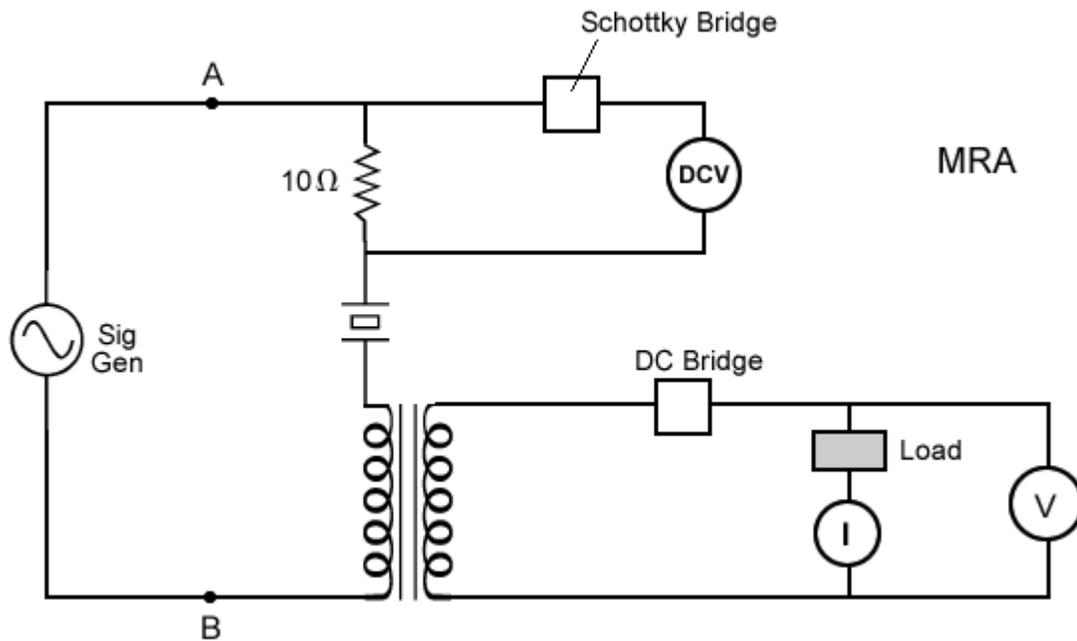
Testing has been done and the LM358 current usage does not appear to change much with frequency of operation, but the output square wave is quite bad in form. The LM358 has a poor slew rate which is quite evident when looking at the square wave outputs. With 3 of these LM358 chips, you are looking at minimum of 1.8mA of current required.

Taking a measurement of the current used by all 6 gates in this design without driving a load, is about 800uA, which is less than half for the 3 LM358's. Therefore it is reasoned that you're far better off with the CD40106B design. **The new document also includes looping and measuring ideas.**

### **Ideas for Measuring the MRA**

A one (1) ohm resistor in series on the input and output of the MRA with oscilloscope showing the results is a visual that cannot be out done; the wave forms and amplitude speak for themselves. The resistors would have some but very little impact. If using LEDS for a load the same as Panacea did, one problem with only stating the current requirements for lighting x number of LED's is frequency can come into play and supply pulsating dc output that the eye cannot detect. Scope shots of what is being fed help to clarify the power consumption without question.

### **A Faster More Accurate Way to Measure Power Gain in the MRA**



(a) Insert something like a 10 ohm resistor in series with the MRA as per above diagram.

(b) Attach a Schottky diode bridge across the 10 ohm resistor and connect the output of the bridge to a DC Volt meter.

**Note: You can use an oscilloscope here if you prefer. But if you use the multimeter - Do not use the AC input range! It will give you the wrong answers.**

(c) Adjust the frequency to resonance as normal. By seeing the output and input values simultaneously it is much quicker and easier to gauge the maximum power gain point. From the voltage drop across the 10 ohm resistor you'll know the current flowing into the MRA from the signal generator.

(d) Once (c) is done - to get a more accurate value of the gain you need to use the bridge/DC meter unit (or scope) to measure the exact voltage across the MRA (i.e. voltage from point A to point B in the above diagram). This voltage can then be used to calculate an accurate value of the power coming from the signal generator to the MRA at max gain condition, and therefore an accurate COP value.

## Panacea-BOCAF Replication and Validation

*Great work, we used step down ratios to create more current in the sec. as you have suggested. Keep the Phi ratio in mind when winding the magnet. The final MRA documented for the patent office was 256:1 COP. I had a complete 12V battery powered MRA so that I could compare DC input tp DC output. This included 12V*

battery, 12V sig gen, 12V power amp, MRA, Rectifier Bridge and DC resistive load. I got very close to achieving a loop situation. The only drawback was the idle current draw of the driving amp. I was trying to build a MOSFET power amp, low wattage that had very little idle current draw. I guess this is a class D amp? Thanks a million for your efforts. Congratulations on your success. Norm

I'm happy to see that you have built a successful model of the MRA. Yes, it is a warm blooded beast, as I discovered one winter, after storing it overnight in a cold garage. Until it reached room temperature again, it would not ring. Also, the output power would peak at about two hours before sunrise, and then begin to drop off incrementally, although it remained at 5-8 times over unity. I suspect that this might be useful for detecting the presence of earthbound solar CME's, or any other large energy release which affects the magnetosphere.

Monitoring the output of a tuned magnet at resonance may yield other benefits, when you consider that magnetic energy is one of the primary components of the quadrapole effect which we call gravity. If you align the poles of the magnet to the magnetic poles of the earth, you have a microcosm of earth's aggregate of energetic activity, whether it is the result of exterior fields (sun, moon, etc.), or natural activity such as perhaps earthquakes and tsunamis, or large man-made energetic releases. Because the E field is instantaneous throughout all of space-time, you are watching in real-time.

It's a fascinating experiment. It is literally a crude radio to higher dimensions, sort of like the crystal radio kits that we built as kids. Like the crystal radio, the key is knowing how to tune it, and what to "listen" for. If I were doing it again, I'd build a box of acoustic tiles to put over it when it begins to resonate. The noise tended to drive my family nuts after a while, and yes, my wife got tired of having light bulbs go off like strobe lights. But, all in all, those things are the nature of the experiment.

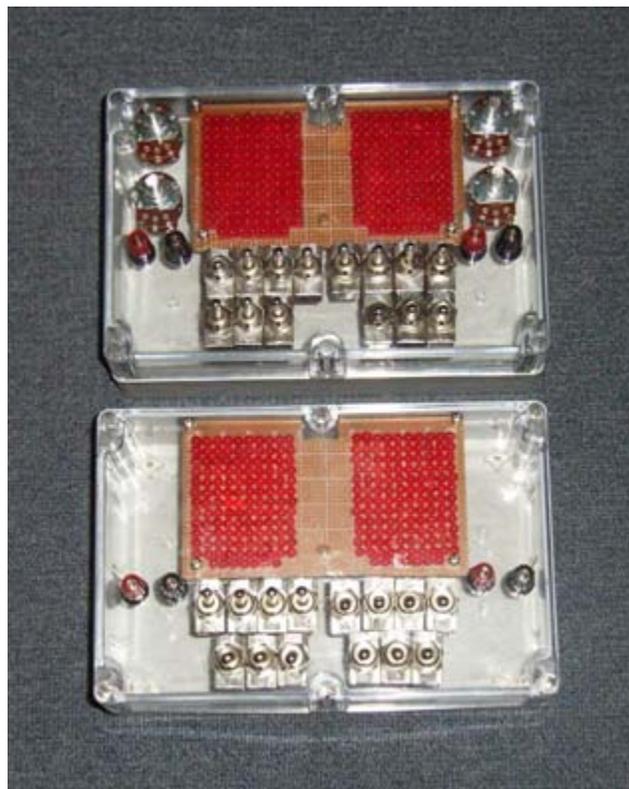
The key to all things, including life itself, is found in nonlinear constants, such as phi. Because they are indeterminate, which is to say that they cannot be resolved in just three physical dimensions, they extend and are the link between us and the higher dimensions. This is why, for example, the Great Pyramid was built on these constants. Yes, they knew. It is the indeterminate nonlinear constants which allow the eternal essence of mind to coalesce into physical matter, or as the old saying goes, as above, so below.

Seeing this for myself, I understood once and for all, that we have a Creator, and since all of the elements are composed at the molecular level of these same constants, that we are truly made in His image. That, to me personally, was the greatest benefit of the experiment. Music, which resonates us into higher or lower states of consciousness, uses notes whose frequencies are dependent upon root derivatives of phi. The more

*harmonious the music, the more it "uplifts" us. It's all interconnected. Well, I guess I'll end here. I'm glad that others are discovering the MRA, and may be able to unlock even more of its secrets. Best always, -Joel*



MRA



Switchable LED Tuning banks



#### LED 5mm Red 15mcd

Emitted colour: red  
Lens colour: diffused  
Wave length: 697  
nm: 90  
Pd W: 45nW  
If mA: 15  
If mA (peak): 50  
Min: 1.7  
Vf (V) Typ: 2.1  
Max: 2.8  
IV Min: 2.5  
MCD Typ: 10  
Viewing Angle: 36

LEDS used - [Source](#)

[Panacea-BOCAF 2nd MRA replication](#)

### Faculty information

The following is an advanced theoretical assessment done By Hector the inventor of the Roto-Verter and Trans-verter technology.

You must calculate the time decay of your circuit let's say exiting the core to saturation with a single ping (pulse to the core and looking at the waveform in time to see how much it takes for the signal to die down. Once this is done you find the minimal energy to sustain hyper-resonance lets say at Q 56 its 2.6 % you can tensor as a potential (negative resistor) 3% of which 2.6 % is used for feedback. The .4 is OU free energy and is gained in the core region from stochastic & magnetic amplification of signal. First the idea is to get itself sustain. Second is the extraction of useful energy. One must keep in mind that an AC signal is composed of a sine wave so with one cycle on 60CPS as a sample:

Output energy = 1Cycle = 2x 30/60 of a second half waves split into 2 capacitors were total joules =  $2X .5(CV^2)$  joules Output Power =  $P_{out} = 2 x .5(CV^2)f$  watts. This completes the OU equation by book law a bit better.

PF increase as stated in resonance is 1.618 x Q factor. You have to address the way of broadband recovery of the myriad of cascading damping signals that occur within the single narrow band signal (hyper signal). let's say you have a peak at 128KC in a very sharp spike (narrow band ) but within that signal you have a very broad banded set of Hi power RF microwave signals at 1.6 GHZ from the electron spin regions of the Iron atoms within the core of ferroxplana ,with a myriad of sub-harmonics at 1.3 to 4.5 mhz (Way OU ). Its Fact a resonant band pass filter and capture network is needed and it

must be impedance matched as not to kill main reactor resonance and not reflective to same effect. Further reading on information on transformers & ferro resonance is recommended.

On MRA capturing the secondary Hi frequency waves within the self shunting dynamics is key to extract energy, not usually in the basic resonance fundamental but within the secondary harmonics produced at higher octaves. Piezo cascades in a myriad of linear co-phased signals that tend to self shunt at hi Q many are harmonics co-phased within fundamental spikes (seen in hi definition scopes as spikes within sine wave components. The signal tends to be seen blurred due to this sine wave modulation spike components.

In an analog scope the signal appears as if it were out of focus. Looking at this signal the values can be found to FILTER as a diode plug and trap them in higher octave above the fundamentals of the basic MRA tank circuit. This can be 10X fundamental depending on crystal piezo matrix used. Waves within waves can be seen in a scope picture. The idea is capturing these waves and returning the power needed to maintain the resonance in the tank. All with the extra power extracted non reflective from source to isolated power output circuit, (pulse charger).

In a HI Q, .06 of the resonant power is needed to maintain the tank at resonance. if .233 of the .618 OU component is extracted self sustaining can be attained easy. If a magnet is used, the distance of the magnet is a tuning parameter needed to be observed as this changes the internal shunting impedance & capacitance at the molecular lever crystal matrix.

Using a ring to shunt the stray field concentrates the power in the piezo; an acoustic resonant cavity can also increase power tenfold. There is a lot to it , the luck is finding the proper Piezo crystals with the amplification characteristics needed to sustain the created OU transformation. Phone ringer piezos, reverse alarms, beepers, ultrasonic machines, depth phantom meter piezos, surplus sonar transponders (big pucks ) 4MJ capable are a few usable items to start with.

It must be noted that when using HI power to avoid contact or exposure to Ultrasonic sound waves. They melt skin like butter and toast technical unprepared people to a crisp. Read the Hutchinson papers on ultrasonic's for reference, it gives an idea of a hacked HI power MRA system.

End

### **Hal Puthoff - MRA Grain of wheat bulb experiment**

*As for Hal, at this point and considering his age, I really just pity him. I'm not sure that he ever really understood how the MRA works, despite all of the information available from us at no cost. Until one has a firm grasp of sacred geometry, one really does not know*

*how anything works, least of all a device which uses the nonlinear indeterminate but universal constants to entrain harmonic energy. I've found that people either understand it immediately and intuitively, or never. -Joel*

This MRA and experiment was very difficult for Hal Puthoff to explain. He claimed that we were "slipping potential" past the tiny grain of wheat bulb while driving the MRA.

**The whole premise of the MRA is that it is a "potential" driven device, requiring practically no current when in "ultra high Q" resonance region of the "Universal Resonance Curve".** This was the most dramatic demo that was made with the MRA.

Tom Bearden was over whelmed when he saw it. Joel and Norm personally visited Tom Bearden at his home in Huntsville, AL and gave him a working MRA long before he built the MEG Device.

TEST PROCEDURES MRA # 17 (Soccer Ball MRA)  
Norman Wootan 27 March 1995

MRA # 17 known as the "soccer ball" and has the following specifications:  
Primary: 485 turns of 26 Ga. AWG stranded poly covered wire.

Secondary: 300 turns of 18 Ga. AWG stranded poly covered wire. (Note:  $300 \times \Phi (1.618) = 485$ )

Magnet type: BaFeSi 4 pieces 1/4 cylindrical configuration to form a right cylinder tubular magnet 4 inches tall with the "North" pole inside. This configuration results in a "toroid" shaped magnetic flux field.

Piezo Transducer: Barium Titanate crystal with silver coating on each side for electrical connection.

Bridge Rectifier: full wave modular bridge 400VAC @ 30 AMPS.

Filter Capacitor: 2 MFD @ 2000 VAC

Load: 48 V panel lamps rated: 48VDC @ 1.5 WATTS

Signal Generator: BK Precision Solid State Model E310B

Sine/Square Wave Generator

Amplifier: Radio Shack MPA-45 35 Watt P.A. Amplifier 70

Volt tap used for this test.

Hook up according to the Block diagram provided and turn on all equipment including scope and current probe if used. Please allow the MRA and the piezo element to go through a 30 minute warm up period at about 30 VAC from the signal source amplifier. This period of time is required to establish the "etheric field vortex" before going for a higher power setting. During this phase the piezo will be singing and will quieten down when it and the magnet have come up to operating temperature. (23.75 KHZ)

The following data should be matched in your test after the warm up is accomplished:

Input: 81.3 VAC @ 23.75 KHZ will yield a DC output of 55.6 VDC across the 48 volt panel lamp at a current of 31.5 Ma. for an output power of 1.75 Watts.

Next reduce the gain to zero on the amplifier and insert the grain of wheat bulb in series with the input to the piezo transducer then build the gain on the amplifier back to the original 81.3 VAC figure and you will observe that the "grain of wheat" bulb will barely be glowing. a slight adjustment of the frequency will "extinguish" the grain of wheat bulb completely which will give an indication as to how little current is really flowing into the resonant circuit.

Next reduce the amplifier gain and insert into the load another 48 volt panel lamp so now we will have a 3.5 watt load. Increase the gain on the amp back to the 35 VAC level and re-tune upward to accommodate the added load to a new frequency of 27.38 KHZ. Increase the gain on the amplifier to achieve the original 55.6 VDC output and note that the input signal voltage is now 70.5 VAC and the

! grain of wheat! bulb will be glowing at a mid intensity level. These grain of wheat bulbs burn very brightly at a 100 milliwatt level therefore we use this as a good indicator as to the relative power being fed into the input of the MRA circuit. Now we have a known load of 3.5 watts. (measured)

### **Anti-gravity, MRA development and a time line to Dan Davidson's Patent filing**

There is a lot of good anti-gravity stuff in addition to the MRA development. The following four docs give a time line to Dan Davidsons Patent filing. The last dialog is from Decker showing how and when Davidson ripped off the MRA. The old KeelyNet was organized with various levels of access. Private message channel which allowed totally private messages with only SYSOPS being able to read. Public A which all could read. D & E Associates who were trusted to openly share info. You had to be invited to participate in Area E. Davidson was a long time friend of Jerry Decker and had access to all KeelyNet info. Joel and Norm were not aware that Dan had filed for a Patent when he described our efforts as "BAD SCIENCE" for he was frustrated that his patent was not being validated. You can see by the dialog the tie in to the Floyd Sweet VTA and the Hutchinson Effect (anti-gravity).

[File Down load](#)

## **Patents, Papers and Related Information**

### **Papers**

#### **Neutral Spike by Norman Wootan**

The following is a background document which guided Norm in the direction of driving iron core transformers into resonant "saturation" to harvest the huge voltage and current transients. The MRA was also involved to a great extent in this quest. Norm has seen evidence in his lab of interactions between this "negative electricity" colliding with normal AC line power which cause what he describe as an "ANILATION EVENT". Sort of a "Mater/Anti-mater" cancellation event, being very violent and destructive. All of this info placed in public domain back in Jan. 1994 so there is no fear of anyone running to the Patent office.

OK folks let's start some real controversy for I have a theory that has been bothering me for a long time and is based on real world experience and not just idle thinking. In my day-to-day work I deal with rather large electric motors of the type that utilizes large start and run capacitors such as is found in air conditioning equipment etc. On many occasions I have witnessed these motors release extremely high voltage and high amperage pulses or spikes whenever we try to start this type of motor in a locked or semi-locked rotor condition. What I am going to describe is the controversial point and that is the fact that the observed high voltage spike that is very destructive to all electronic equipment is actually coming from the neutral side of the line or the earth ground bonding. I have seen motors nearby that are turned off actually run backwards. Since these motors were of shaded pole design this suggest that a very unusual form of electricity is responsible for this phenomenon that is "negative electricity". The shaded pole motor can only run one direction based on it's design unless you provide extra shading windings to provide for reversal or some other phenomenon such as negative current could run it backwards.

Another clue as to the presence of negative electricity is the fact that large switches and contactors have their contacts either completely destroyed or welded together by large currents at high voltage carried over relatively small wires. What is going on here has been eluded to by many researchers in the past such as Tesla when he said that the key to free energy was in IRON for it was a unique element that has 2 free electrons in the M shell of the atom that can be bounced free for use only to be replenished from the ether. He stated that a free energy device would be based on a fine grade of steel to take advantage of this unique feature of iron. Dr. Tewari, in his book "Beyond Mater" brings out the same fact and is the heart of the famed "N Machine".

The best source of an insight as to how this works is found in Dr. Harold Aspden's presentation to the IANS Conference of 1993 titled "The World's Energy Future". In this paper Aspden outlines what occurs when you bring an iron mass to magnetic saturation and allow it to relax. A release of ZPE or ZERO POINT ENERGY comes out of the iron. Yule Brown says it best, "We should think everything backwards in this field of free energy". The backwards thinking comes into play in the fact that when the free electrons in the M shell of the iron atoms are freed they flow out of the iron itself therefore are present in the neutral or earth bond side of the circuit and not in the hot or supply side of the conventional circuit. When you excite atoms to a high electron state and allow them to return to ground state they release photons of energy but retain their original energy levels with no degradation therefore the energy that was lost by photon emission has been replaced from space vacuum or ZPE.

The key to releasing the 2 free electrons in each iron atom is in the degree of magnetic saturation that occurs in our device design. I have read several papers in the Keely files that incorporate magnetic saturation of iron in the basic design of the device such as

the Gray Motor that used bucking opposing magnetic fields to pop the iron electrons free. The error most researchers are making is that they are looking for the energy manifestation to occur in the conductors associated with the design but should be looking at the ground or earth bond side of the circuit. All electric motors have a bonding or ground wire attached to the iron stator which in most cases is the neutral side of the input line. I hope that this input to the free energy puzzle will prompt some massage of gray matter and maybe we can build the future machine we have all been looking for.

Now for some additional notes on the subject of neutral spikes or ZPE occurrences let's look at the all too familiar Tesla coil that is so popular because of the splendid fireworks display they produce. Tesla said that in order to do effective work a large coil should not produce sparking or a corona discharge about the elevated capacitance.  
?????????

Your immediate response is, have is the work taped and where is it occurring? Well Mr. Tesla clearly stated that the whole purpose of designing a device that would operate at full free resonance at the earth natural frequency of 7.83 HZ (he used 8 HZ in his day) was to produce a power wave that would pump electrons directly in and out of the earth via a deep grounding system that was firmly attached to the earth. I have talked to many Tesla coil builders and have found not one who was interested in exploring the ZPE pumping of electrons directly in and out of a deep earth ground such as Tesla had planned to use at Wardencliff, Long Island. If you read carefully such documents as D.C. Cox "Modern Resonance Transformer Design" you will find clearly stated that a deep or good earth ground is necessary and this conductor must be a cable of substantial size for a considerable current of earth pumped electrons does occur when the coil is operating at full free resonance.

He states that if an attempt is made to earth ground a coil with zip cord it will result in a burned up ground wire. Well I might be dense or otherwise afflicted but this sure sound like ZPE tapping to me. Why can't Tesla coil builders out there explore this phenomenon to determine the over-unity aspects of a Tesla coil that is operated at full resonance and better yet modulate one to get an earth resonant power wave of approximately 7.83 HZ. I say approximately for I don't think anyone has successfully nailed down the exact earth resonant frequency as of yet. This figure is close enough for government work at this time or until someone comes up with a more precise figure. I belabor the point for out there lies those who will say, "You missed the freq by .01 HZ", You know them as pain in the ass nit-pickers.

Keep the focus on the over-unity aspects and not on precise detail. I have tossed this out on the table of debate so as to prompt input from the many out there that have taken the well spent time to study the basic Tesla coil designs parameters and can give us back some meaningful input. End

## **Observation by Mark**

"Specifically, Cagin and his partners from the University of Houston have found that a certain type of piezo electric material can convert energy at a 100 percent increase when manufactured at a very small size – in this case, around 21 nanometers in thickness. What's more, when materials are constructed bigger or smaller than this specific size they show a significant decrease in their energy-converting capacity, he said." If it looks like a duck, quacks like a duck and tastes like a duck, it probably is a duck... Substitute "resonant effect" for duck... which is just more evidence that most all of science is built on the non-resonant behavior of bulk materials/molecules/atoms. What's possible if we were to find and exploit the resonant behavior of these systems/assemblages???? Granted, the resonant frequencies involved are probably very limited and in many cases a moving target...-Mark

[Full Article](#)

## **Paper's links**

[Follow up discussion on the neutral spike taken from Kelly net](#)

[Greg Hodowanec's Mini-MRA replication document](#)

[Joel Mclain & Norman Wootan introduction to the Magnetic Resonance Amplifier \(MRA\)](#)

[Magnetic Resonance Amplifier \(MRA\) paper 2](#)

[Ferroresonance](#)

## **Patents**

The following is a detailed PDF and should only be studied to help understand the operation in conventional terms.

[Patent number 5,568,005 Davidson October 22, 1996 Acoustic-magnetic power generator](#)

## **Supplies**

Piezo supply- <http://www.bostonpiezooptics.com/>

<http://www.fuji-piezo.com/piezo.htm>

<http://www.fuji-piezo.com/prodpez.htm>

<http://www.americanpiezo.com/>

## **Technical Discussion**

<http://groups.yahoo.com/group/EVGRAY/>

## **Links**

<http://www.panacea-bocaf.org/mraevgray.htm>

[http://peswiki.com/index.php/Directory:Magnetic\\_Resonance\\_Amplifier](http://peswiki.com/index.php/Directory:Magnetic_Resonance_Amplifier)

<http://www.rexresearch.com/>

## **Credits**

The open source community and REX RESEARCH!

If you are able to contribute to this document in ANY way, IE- replication details, faculty info and or additional data please contact the non profit organization.

<http://www.panacea-bocaf.org>

<http://www.panaceauniversity.org>