

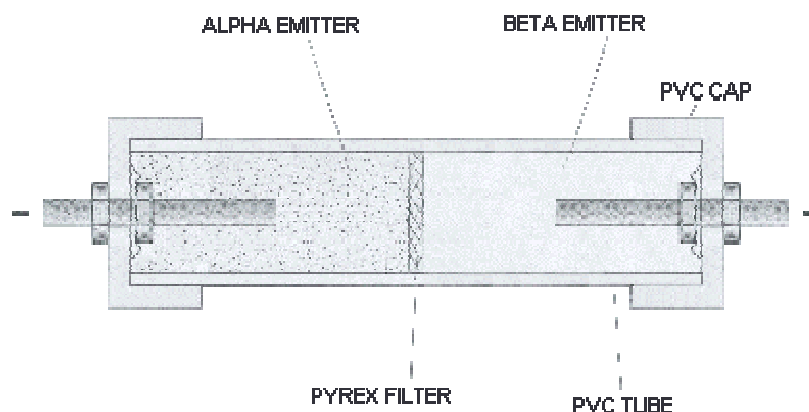
Radiant Energy Tube Construction

My first generation prototype radiant energy conversion tube contained trace amounts of radium scraped from old clock dials. This device powered two 100-watt light bulbs for about seven months, intermittently. I remember it being powered up continuously for just about a one-week stretch. One day I turned on the device and it was dead cold and would not give even the faintest glow.

The second generation prototype was only minutely radioactive. My knowledge with the concept was limited when it was conceived by me in the fall of 1995. This allowed limited results. This second prototype contained fine sand that was left behind from my final radioactive ore screenings and was very crude.

A third generation prototype was designed as a proof of concept device that the average experimenter could build. It did not call for the introduction of radioactive material. Because of this the output was extremely low. It relied on the ambient background radiation. The power from this third prototype appears to be mostly from galvanic action. It is therefore difficult to prove radiant energy conversion with this design.

In my original design I used radium scraped from old clock dials but I did not find this appropriate at the time to tell this to the do-it-yourself researcher. Only a small handful of people could get the experiment to work and very little power was obtained from it. This third generation proof of concept design did a terrible disservice to the credibility of my research. Only a small handful of people could get this design to work. This is how I met Calvin Bahlmann my mechanical engineer. He was one of the people who was successful with the chlorine substitute. He could only obtain a small amount of energy but it did prove the concept. Mr. Bahlmann is now experimenting with a semi conductive formulation of his own design. He has constructed "e-wire (electric wire)" that was designed for nano circuitry. Mr. Bahlmann is also experimenting with cell stacks for standard circuits.



Fourth Generation Prototype

I now have a solid grasp on the fundamental concept that has enabled me to work towards a higher wattage radiant energy valve. My fourth generation prototype shown in the diagram above

utilizes finely powdered semi conductive material that replaces the sand that was used in the second generation device. I now know the reason why my first device stopped functioning. It was because the electrodes became chemically corroded. This fourth generation prototype contains an electrolyte that does not chemically react with the electrodes. The electrolyte only serves to provide the vehicle for the exchange of ions.

In my [fifth generation prototype](#) a small amount of low activity [radon emissive substance](#) is introduced to serve as the fuel source. I have been running some tests that is leading up to a [sixth generation prototype](#) that will use non-radioactive substances that emit electrons after a short exposure to a specific radio frequency. This prototype will be fundamentally based on Great Britain [Patent No. 763,062](#). This patent claims that more energy is generated than what is used to excite its main component.

I have also just recently discovered substances that emit low eV electrons. This means that a device using such materials will not create a radiation harzard. No shielding will be required for this [seventh generation prototype](#).

The fundamental concept to convert radioactive decay into electrical current was shared with my peers back in 1995. It received a violent reaction from people (detractors) who could not understand its basic principles. These people prodded and probed me until they picked my brain dry. Ever since, they have taken my words and twisted them to their own agenda's. They have even accused me of plagiarizing the work of other people. Yes, it is true that I have referenced related work. However, my findings are unique and I deserve credit for my original discoveries. It is no wonder that there are inventor's or relatives of dead inventor's who can not trust anyone with their inventions that could better our human condition. They have seen how the lives of other innovator's have been ripped apart by these shameless detractors. Only when the violent reactions cease will we all see great wonders of scientific innovations come out of their hiding places. _Bruce A. Perreault

Progress Update - December 8th, 2002

As I stated at Inventor's Weekend 2002 I have been working on a tube design that is both a transmitting energy generator and energy receiving tube all rolled into one. This was to eliminate the antenna and ground connections making the invention portable. Thinking one step further, I don't see why a solid-state device couldn't be built. Essentially, my second to fourth generation prototypes seem to support a solid-state design.

In viewing [United States Patent No. 2,876,368](#) last week, I found the thread that I have missed during my researches. You may not know this but an electret with a permanent electric field draws charged particles to itself like a magnet draws iron to itself. This patent clearly describes a method that will move the electric field of an electret without a prime mover. This patent points to a practical and almost free source of energy that has been with us for over fifty years. The shortcoming of this invention is that a radioisotope is required to trigger the electric field into oscillation. Radioisotopes were cost prohibitive in 1953 at the time this patent issued. This appears to be the sticking point to this day. Tritium could be used giving the nuclear electret battery a half-life of around 12.3 years. Here is the problem with using tritium:

"The United States has not produced tritium since 1988, when the Department of Energy's (DOE's) production facility at the Savannah River site in South Carolina closed. Immediate tritium needs are being met by recycling tritium from dismantled U.S. nuclear weapons. Indeed. The US is currently looking at various options for the domestic production of tritium."

<http://www.theregister.co.uk/content/28/28206.html>

Using the knowledge that I have gleaned through the course of my researches, I believe that a safe and practical solid-state electret battery can be built. This is now my prime focus. I will be using lead-210 as my dopant in the new prototypes. It is almost a pure beta (electron) emitter that has a half-life of around 22.3 years. This is almost twice as long as tritium. This means that it is feasible to build a battery that will put out power for several years with little maintenance.

Lead-210 is even harder to obtain than tritium. However, with my priority process this isotope could be generated in pure form from radon gas. Yes, radon is a rare gas. This is no problem because this gas can be obtained from uranium ore in quantity using my process. The added beauty in using my process is that the ore can be powered and directly formed into an electret. The electret formed with the ore can remain inactive until activated at a later date. These are **blind isotopes** until activated. Can you think of a better name for them?

I will get right to work at the task of building the world's first lead-210 activated electret batteries. I am fully confident that Proof of Concept batteries will be available for demonstration for our next Inventor's Weekend event.

Bruce Perreault's Introduction Speech for IW2005

According to the law of conservation, when we give to a material body a determined quantity of energy, this energy might be transformed, but the body will never give back a quantity in excess of what it received. This principle is considered too self-evident to be disputed. It makes sense that matter can only give up energy that is given to it and is unable to create excess energy. Without violating this law, it can be demonstrated that matter can be excited into giving up its stored energy.

According to Gustave Le Bon and T. H. Moray matter is cosmic energy in a condensed state. What this means to us is that matter can be made to rapidly disintegrate, transforming itself into useful energy. This idea was unthinkable before radioisotopes were discovered. Wherefore,

condensed matter can become uncondensed if its oscillations become violent enough and henceforth transforming itself into radiant energy. No laws have been violated. They have been expanded.

My work with electronically triggered nuclear transformations now makes it possible to harness the wheelwork of nature that Nikola Tesla once spoke about.

A Nu Science is on the horizon. It involves the means of transforming matter into energy. This science recognizes the fact that matter can be transformed into useful electrical currents. It confirms Le Bon's theory that with a very small quantity of energy we can obtain a very large quantity of energy. Clearly, we do not create this liberated energy, since it already exists in the targeted material. Think of the process as a type of energy detonator that liberates great quantities of energy with only a minute amount of energy, with no laws of physics being violated.

UTILIZING AMBIENT RADIO FREQUENCIES

By Bruce A. Perreault – March 21, 2004

What do a crystal radio diode and a solar panel have in common with each other? They both are oscillating current rectifiers. A solar cell is actually a large surface area diode. It too will rectify an alternating current.

It is a generally known fact that when *light radiation* falls on a solar panel it obtains a forward-biased voltage. What is not as well known is that when this same radiation falls on the junction of a crystal diode it will also acquire a forward-biased voltage. What this shared characteristic tells us is that the solar cell and the crystal radio diode are fundamentally the same. This realization allows us to convert ambient radio frequency radiation into useful electrical current. Exposing the junction of a crystal radio diode or solar cell to radiation from radioactive decay will also yield useful electrical current but this aspect will be discussed in a future release. Our present focus is to obtain useful electrical power from ambient radio frequency energy.

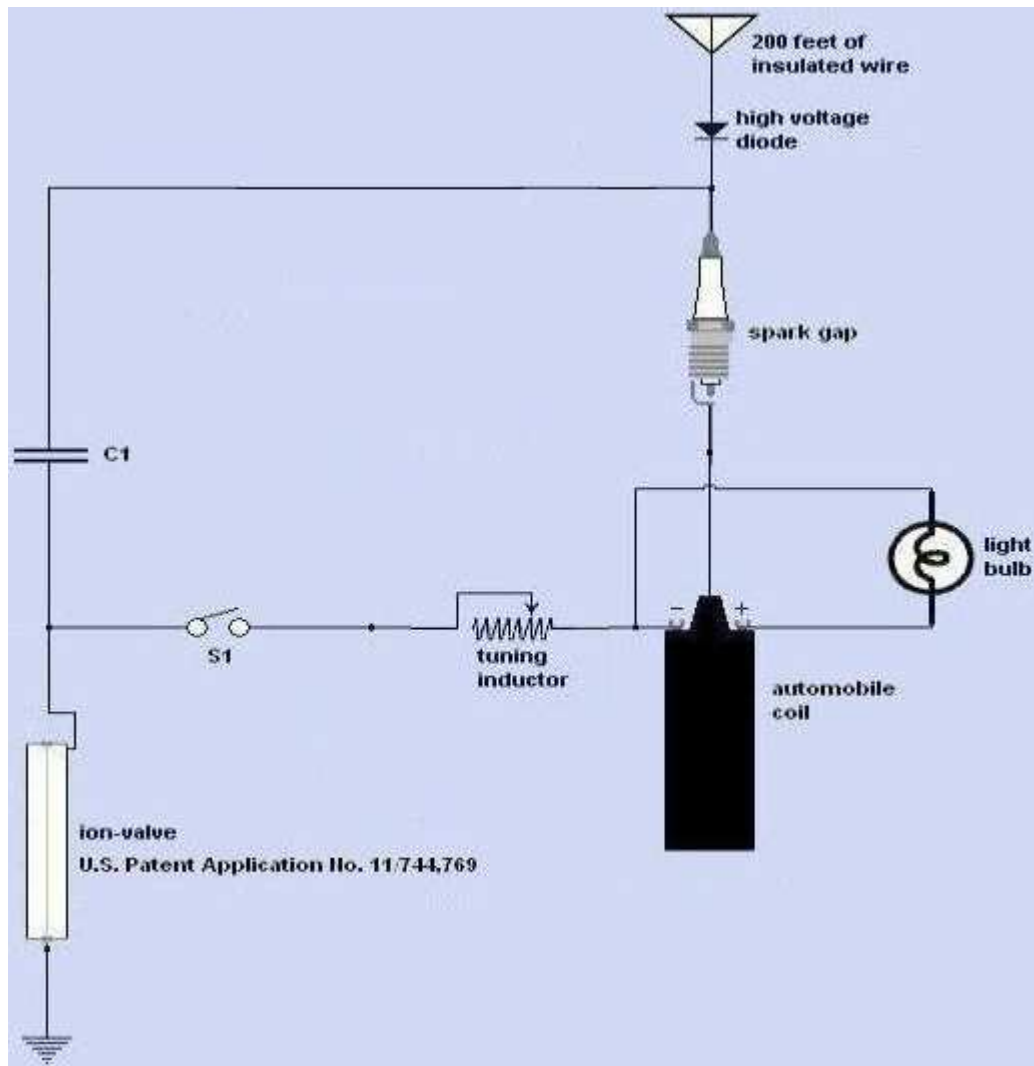
We can hear natural radio frequency energy on an ordinary A.M. Radio. It is the "static noise" that we all have heard one time or another. The truth is that this noise that we have witnessed is

not static at all. It consists of an infinite number of electromagnetic oscillations. They are the songs of the cosmos. They represent an enormous reservoir of energy. To efficiently convert this source of energy into useful current a diode with a large surface area is required. A solar panel converts light wave energy into useful electrical current. Why not build a radio panel that can convert radio wave energy into useful electrical current? The obvious answer is that nobody had discovered that this could be done. Many people have witnessed the effect but did not come to know what they had observed. This is why the effect was not further developed. In most cases it is usually shrugged off as a “galvanic effect.” I have built these components with my own hands. Realizing the true principle of how they work has allowed me take them to a more advanced state of development. By the power invested in the words herein I now place this technology into the public domain. This is one step further to a practical energy solution to better our human condition. With this said and done, more complete details will be posted to the internet during the middle of next month. Working components will be offered for a reasonable dollar amount through my online ordering system.

Happy Days, Bruce A. Perreault

MODERN RADIANT ENERGY CIRCUIT

Posted October 22, 2004 - updated December 28, 2007

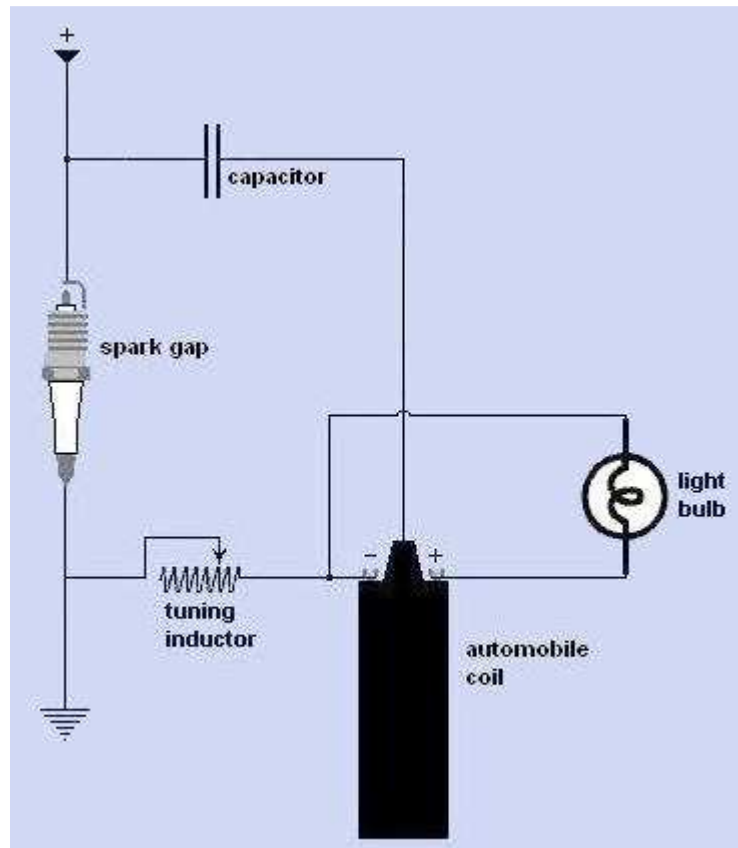


Modern Perreault Conversion Circuit

DESCRIPTION

1. S1 is closed first to charge C1. Once C1 is charged S2 is closed to initiate the tank circuit.
2. The automobile ignition coil transforms the high voltage on the primary side to a lower voltage at a higher current.
3. The primary is tuned to the secondary for resonance.
4. A pre-glow discharge is present in the ion valve.

5. Electrons are created in the ion valve through ultraviolet light (radiant energy) reactions. The valve is an energy multiplying transducer.
6. The insulated wire and ground serve as a source of ambient voltage potential.



Basic Tesla Conversion Circuit

Reference

http://www.nuenergy.org/alt/radiant_energy_diatribes

Nu Energy™ Battery

The Nu Battery™ was originally called a capture capacitor and was explained in my early [radiant energy research manual version 3.0.0](#) information release. Several improvements have been implemented since this release. Essentially the Nu Battery™ consists of two electrodes of dissimilar metals, where a liquid ion-exchange medium is sandwiched between the two electrodes. In a low power cell there exists a minute impurity of naturally occurring radioactive substance. It is always present in clays and is almost always present in ceramic materials.

If you want to generate more power you will need to add additional amounts of radioactive material to the ion-exchange vehicle. In prior art Paul Brown had obtained a patent using a dielectric to convert decay particles into electrical current but the power that could be obtained was too low to be of any practical value. See; Brown's Contact Potential Difference Cell - [U.S. Patent No. 5,087,533](#) - February 11, 1992. Paul Brown's concept presents a basic principle of how and why a high energy Nu Battery™ functions. However, Brown's concept did not contain an electrolyte and this is what makes the difference between a high power and a low power generating component..

The amperage in the Nu Battery™ is generated from its nuclear decay products and is not the result of electrochemical action. However, there is minute chemical interaction at the anode that provides the potential difference vehicle for the direct conversion of beta energy into electrical current. The method that is used to convert decay particles is a chemical/atomic hybrid method. It is not claimed that this is a new discovery because patents do exist that appear to be taking advantage of the fundamental principles. See; [U.S. Patent No. 1,217,739](#). These patents do not claim that they are inventions that convert atomic decay into electrical current. What they do claim is that the use of radioactive materials increases the efficiency of an electrochemical cell or battery. What the inventor claims is that he has expanded on the concept by minimizing the electrochemical reactions and therefore transforming it into a type of "contact potential" cell as described in the prior art [U.S. Patent No. 5,087,533](#). The chemical aspect is only used to create the required potential difference to capture the energy of the decay particles. The electrochemical reaction is kept down to a minimum. The voltage of the cell comes from the electro-chemical aspect and the amperage is obtained from the decay particles.

The inventor of the Nu Energy™ Battery also claims that radioactive material can be made to give up its stored energy more quickly through an electronic process that he has discovered. This is accomplished without splitting atoms as is done in conventional nuclear processes. Details of this process is proprietary at this time. The result is a component that can provide high power for useful applications.

Ion Capture Cell (ICC)

(inventor Bruce A. Perreault)

Updated: October 18th, 2003

ICC: a high-power density, compact electrical collector that converts the energy resulting from a well tuned and controlled chemical and ionic exchange. The Ion Assisted Reaction Cell is completely safe, and generates no toxic waste materials, high temperatures, or noise.

This unique cell was formally called a "capture capacitor." The capture capacitor is essentially an electrolytic cell. It is actually an electrolytic cell with two dissimilar metal plates. The electrolyte does not react chemically with the plates. The principle of my capture capacitor is similar to what is being called a 'super' or 'ultra capacitor'. However, I must point out that my capture capacitor functions on a different principle than what is being used as an industry standard today.

* This statement was revised on January 13, 2003.

Second generation capture capacitors contained small amounts of radioactive material doped into an air-cathode material. This would generate ozone at the surface. The ozone then reacts with water molecules in the electrolyte forming hydroxyl ($\text{OH}^\cdot$) ions and hydrogen peroxide. This greatly increases the capacity of the cell.

Third generation capture capacitors now include electrostatic methods to ionize diatomic hydrogen gas on the anode plate. The ionized hydrogen molecule reacts with water molecules forming *hydrated hydrogen ions* (H_3O^+). The fundamental principle has been publicly demonstrated by Bruce A. Perreault as early as 1997 and advanced applications are now currently under development in his laboratory. His unique discovery demonstrates how hydrogen atoms can be safely stored in water without the risk of explosion.

ICC technology can easily be mass produced and can be scaled to satisfy any power usage needs. It has a long life expectancy, and its price will be very competitive when compared with contemporary technologies. The attributes of the ICC are just what is needed in lap-top computers, boats, campers, cell phones, and thousands of other applications.

Ion Assisted Fuel Cell - Operating Chemistry

As oxygen (O_2) enters the cathode of a cell, it is absorbed. These (O_2) molecules react with the water molecules in the electrolyte that is typically $\text{KOH} + \text{H}_2\text{O}$, resulting in negatively charged hydroxyl (OH^-) ions. In this process the cathode loses electrons and becomes positively charged.

As diatomic hydrogen (H_2) molecules enter the anode side of the cell they are positively ionized. The ionized hydrogen will react with a water molecule, entering into chemical union with the water, converting it into a hydrated positive ion. The positive hydrogen ion (H^+) here appears in the above example to be a hydrated ion, or an *oxonium ion* (H_3O^+). This principle will be found useful in replacing the reformer used to feed fuel cells.

The hydrogen ions pass through the electrically non-conductive separator and react with the negative hydroxyl ions on the cathode side generating electrical current, producing water (H₂O) as a by-product.



When an electrical load is connected between the electrodes, electrons will flow to the cathode from the negatively charged anode.

To effect the required ion assisted reaction a high-voltage [power supply](#) can be used to excite the ICC.

In prior art fuel cells water molecules are treated in the presence of an expensive catalyst like platinum, converting hydrogen into ions. The ICC does not require a catalyst.

The hydrogen ions pass through a membrane (electrically non-conductive porous separator) and combine with negative hydroxyl ions on the cathode side generating electrical current and producing water as a by-product.

The structure of an ion capture cell (ICC) is very simple, yet it is unique. The energy density of the ICC is excellent, even better than any existing electrochemical systems to date. We predict that this technology will have great success in the near future.

Fuel Cell Sneak Preview

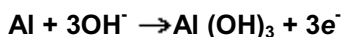
ICC technology will be used as back-up power supplies and could very well be adapted as the main power supply. Systems using this unique technology will be made available through Nu Energy Research Laboratories (NERL).

Primary Ozone Cells - How They Work

The structure of an aluminum/ozone ICC is very simple and is similar to the capture capacitor. Fundamentally, the functional principle is the same. Basically, difference is that the pH of the electrolyte is changed. A piece of aluminum is immersed in an electrolyte near a porous carbon electrode. This porous carbon electrode is exposed to ozone on it's outer surface, and the electrolyte on it's inner surface. This is shown in the diagram below.



The aluminum reacts with hydroxyl OH^- ions to form aluminum hydroxide and releases three electrons. The reaction is:



These electrons form the electric current. The above equation shows why aluminum/ozone cells are so good. The valiancy of aluminum is three, so three electrons are released. Since three electrons are released for each aluminum atom we get a lot of electricity!

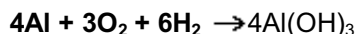
At the porous electrode the water in the electrolyte reacts with ozone supplied to the outer cylinder, and the water readily absorbs oxygen becoming hydrogen peroxide and hydroxyl ions. Electrons are released due to the dissociation of the water molecule. The electrons are absorbed by the aluminum electrode.

The hydroxyl (OH^-) ion is created as power is needed. This is accomplished by feeding a cell with a regulated amount of ozone. Pure oxygen can be supplied by an external reservoir, or as a concentrated hydrogen peroxide reserve situated somewhere outside of the cell.



Cations are formed at the carbon electrode, and so this electrode is called the cathode. It internally attracts negative ions through the electrolyte, and so it is the positive terminal of the battery.

The electrons travel through the external circuit connected to the cell, towards the aluminum electrode (the anode) and both the above reactions carry on until the aluminum is used up, or the circuit is broken. The overall reaction is:



The energy density of the aluminum/ozone cell is excellent, even better than the lithium cell. There are no side reactions that take place between the electrolyte and the aluminum. There is no corrosion of the aluminum. In a normal aluminum/air cell corrosion begins as soon as the aluminum is in contact with the electrolyte. This is because small amounts of hydrogen gas are produced. The reactions are very slow, but a great amount of corrosion takes place in the typical aluminum/air battery. In other words, the battery has a very short shelf life. However, the aluminum/ozone battery does not suffer this problem where the electrolyte is a function of the ozone, and is present only when power is required. The open circuit voltage of the cell is about **1.7 volts**, but the normal operating voltage is about 1.4 or 1.5 volts. This type of battery is typically called a *reserve battery*, and it is predicted that the aluminum/ozone battery will have great success in the energy market.

Large aluminum/ozone batteries will be used as back-up power supplies and could very well be adapted as the main power supply. Compared to lead/acid batteries they store about ten times as much energy in a given volume. We feel there is a growing demand for such power supplies that offer not only greater energy efficiency and power availability, but truly significant environmental benefits.

These batteries are being developed by [Nu Energy Research Laboratories](#)

If you could not find an answer to your question in the information above, please [email](#) us the question and we'll respond promptly.

Reference

[Method of Utilizing Ozone to Generate Electrical Energy](#)

PERREAULT CAPACITOR

It is well known that if two dissimilar metals are immersed in water and are in proximity to each other they will generate a voltage potential. However, the couple will only produce a minute galvanic current. This is due to the high electrical resistance of water. The Perreault Capacitor is constructed in a manner that high efficiency energy capture can result.

1. High-energy capture capacitor cells require that their dissimilar metals have maximized surface areas. This provides the benefit of reducing bulk and cell weight.
 2. An alloy for the positive electrode (anode) is optimally chosen to yield the highest voltage potential to achieve maximum efficiency.
 3. The negative plate (cathode) is a stainless steel finely woven mesh that is treated with finely divided graphite. This plate is optimally designed to withstand corrosion. Graphite-carbon is chosen to achieve maximum current density.
 4. The advantage that the Perreault Capacitor has over the typical electrochemical cell is that it does not require a corrosive electrolyte and it does not require a depolarizer. No wasteful amounts of hydrogen are generated because the wasteful hydroxides are not produced. These aspects make it an extremely efficient compact source of energy, which is also environmentally friendly.
 5. Another big advantage of the capture capacitor is that if it is put into the configuration of a fuel cell it can also be used to store energy. Bulky lead-acid batteries that are toxic to the environment could be replaced.
-

Operating Principles

The Perreault Capacitor has more than twenty times the capacitance density of conventional capacitors, essentially unlimited cycle life, and stable operating performance. Unlike many batteries, the Perreault Capacitor can be safely and reliably operated throughout the -55° to

+85°C temperature range. The high capacitance of the capture capacitor results from an electrostatic charge stored at the interface between activated carbon and an aqueous electrolyte in the so-called electric double layer. Since ions are physically stored rather than through chemical reactions, extremely long cycle life results. Perreault Capacitors do not dry up like electrolytic capacitors, exhibit no discharge memory effect like NiCad batteries and can be charged and discharged indefinitely.

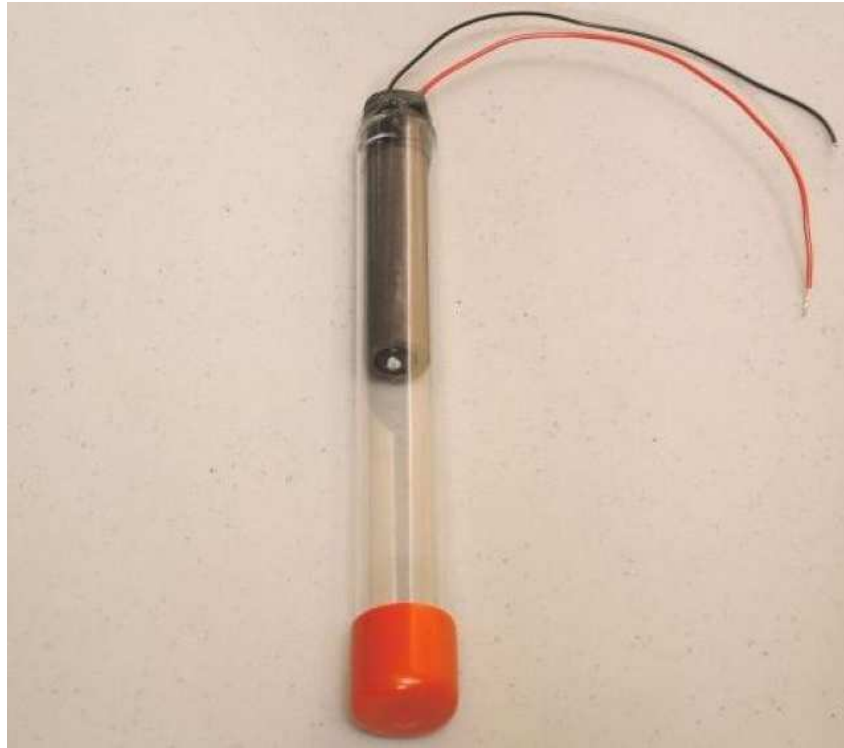
The high volumetric efficiency of the capture capacitor is derived first from the use of high surface-area carbon electrode material. It has an effective plate "surface area" of over 2000m². Secondly, its plate separation is extremely small, on the order of 10 angstroms. The naturally occurring diffuse double layer, created at the interface between the carbon and a liquid electrolyte when a voltage is applied, establishes this remarkably thin dielectric layer. Capacitance densities in excess of 30 Farads per gram of carbon is easily realized.

High power Perreault Capacitors are designed similar to electrolytic capacitors. However, Perreault Capacitors use high surface area carbon for accumulation of charge as opposed to the low surface area foils in electrolytic capacitors. An electric double layer is formed at the interface of the solid carbon electrode and liquid electrolyte. Aerogel capture capacitors use aerogel carbon as the active material, while the rest of the industry typically uses activated carbon. Aerogel carbon is known for its high level of purity, high usable surface area and high electrical conductivity.

Conventional electro-chemical batteries have too high of a resistance and will damp out the energy that it receives. The Perreault Capacitor is ideal for the storage of energy because it offers minimum resistance to accumulation of charge. Typically, Perreault Capacitors are up to 25 times more dense than conventional capacitors. Their cycle life is estimated to be greater than 100,000 and they are expected to operate for around 25 years.

By paralleling a low impedance, high power aerogel capacitor and a high impedance, high energy rechargeable battery, the result is a low impedance, high power and high energy battery pack, known as a hybrid battery-capacitor. The Industry reports that an electrical load can be powered up to three times longer by paralleling a Perreault Capacitor with the source battery.

Nu Energy™ Sodium Chloride Ion- valve

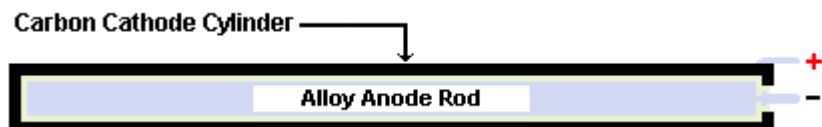


Nu Energy™ Sodium Chloride ion-valve Proof-of-Concept

The original fundamental Perreault Ion-valve principle was discovered in 1988 and was publicly announced in 1995. It utilized a minute amount of radium salt. Calcium chloride (used to chlorinate swimming pools) was explored as a possible non-radioactive substitute. This substitute proved to be too reactive and poor results were obtained. Thanks to Walter Hofmann, sodium chloride is now used as a working substitute in the ion-valve. This is a result of his "water cell" research, to which Mr. Bruce A. Perreault is forever grateful. This has allowed the development of a non-radioactive ion-valve. The original design generated more power but its radioactivity is violently opposed in this day and age. Perhaps, sometime in the future when fossil fuels are depleted it will be better received.

The structure of a Nu Energy™ sodium chloride ion-valve is very simple and is similar to a conventional store bought battery. However, this is where the similarity stops. What makes the Nu Energy™ sodium chloride ion-valve unique is the fact that it does not contain an acid or alkaline solution. Batteries that you buy from a store are too acidic or alkaline and this is what causes them to die out quickly. Instead, a .05% saline (sodium chloride) solution is used in our product serving as its ion transport vehicle. When it is first assembled a protective black oxide layer forms on the anode that protects it from destructive corrosion with the solution. This oxide layer is porous and allows a minute reaction to occur between the alloy and saline solution. This reaction generates a potential difference between the carbon cathode cylinder and alloy anode rod that allows energy to be efficiently transported from the sodium chloride ions. The energy

that it produced is believed to come from ambient radiation that ionizes sodium and chlorine molecules within the solution.



The anode alloy that is used in Nu Energy™ sodium chloride ion-valves is similar to an alloy that was used in the late 1960's, early 70's, for welding aluminum. It was called "[chemalloy](#)." The difference in the alloy anode used in a Nu Energy™ sodium chloride ion-valve is that it does not contain toxic lead. When this alloy is used in the Nu Energy™ sodium chloride ion-valve it does not appear to get used up. This does not imply that it is a catalyst. Bruce Perreault has been telling people for years that chemalloy is not a catalyst. The notion that chemalloy is a catalyst is a myth that has been passed amongst alternative energy researchers. The Nu Energy™ sodium chloride ion-valve is extremely efficient due to an extremely slow oxidation process.

Newly assembled cells generate more power at the start and then they level out to a slightly lower level. Proof-of-concept cells are 8" long x 1" diameter (including solution vessel) and output around 1.6 volts at 130 milliamps on shunted circuit. This current at first appears to be small compared to store bought batteries. However, what must be realized is that store bought batteries do not last long before they have to be replaced. One test demonstrated that two Nu Energy™ sodium chloride ion-valves generated ten amp hours of electrical current before the test was halted to check it's anode for decay. Little decay was found and we can't speculate how long the cells could have continued generating electrical power. Future longevity tests still need to be performed. Feedback from proof-of-concept cells will provide more data. This will be posted as it becomes available.

Nu Energy™ ion-valves are in the development stage that will utilize a plate design. Increasing cathode surface area increases available current. Increasing anode surface area has little effect. Nu Energy™ sodium chloride ion-valves can be combined in series for more voltage and in parallel for more current. There is no reason why it is not possible to combine enough cells to obtain several hundred watts and then build their energy up by charging storage batteries to several kilowatts for later use

UNDER DEVELOPMENT

<http://www.tinyurl.com/6fqky>

"Nuclear batteries can pack in energy at densities THOUSANDS OF TIMES greater than those of lithium-ion batteries"

Energy Content - <http://www.tinyurl.com/53roy>

What does the Swedish Stone, Moray Valve, low voltage sodium chloride ion-valve and high voltage ion-valve generator all have in common with each other? They are all radiant energy diode converters. The Swedish Stone, R.E. Moray Valve and Perreault Ion-valve are all radioactive diodes. The construction of my ion-valves are designed with effectiveness and cost considerations. Various designs can be utilized. I do not stake a claim on the discovery of the diode. Many circuits can be used to interface with an ion-valve.

My original research reveals a safe and unique method to create a synthetic radioactive radioisotope that could be used in an ion-valve generator to obtain electrical power. This can be accomplished without the heat cycle that is associated with modern fission reactors. My process is safe, and if the correct materials are chosen, toxic elements and compounds are not created. I have re-discovered atomic reactions that is being ignored by modern mainstream science. The use of radiation at the junction of a solid-state diode is not new. The use of radioactive materials in a vacuum or gas diode is not new. However, the utilization of the reactions that I have discovered are unique and have the potential to open doors to new energies.

-Bruce A. Perreault

November 12, 2004

Good Day Everyone!

In the past few days I have posted the last piece of the Moray device puzzle without reservation... Why? For one reason, I am plain tired of seeing the tail chasing that has been going on for years within our circles. For another reason, I have decided that the patent system protects no one, except for the corrupt corporate mega-systems. Most on these lists always say that an inventor should post his material all over the internet. This way, the powers that be will not stop his/her invention(s) from seeing the light of day. Well, I have done what has been prescribed. Now, it is up to all of you to do your part, whatever this might be to see that the invention does some good in this world.

Here are two simple experiments:

1. Place two thin aluminum plates into close contact with each other. Separate them with a sheet of heavy paper towel, the type that car mechanics use, that have been pre-soaked with Johnson and Johnson's original blue colored Windex. Next, pass a few volts of direct current through the plates by connecting one plate to negative and the other plate to the positive lead from a variable power supply. What you will find is that current will not pass between the two plates.
2. Place two thin copper plates into close contact with each other. Separate them with a sheet of heavy paper towel, the type that car mechanics use, that have been pre-soaked with Johnson and Johnson's original blue colored Windex™. Next, pass a few volts of direct current through the plates by connecting one plate to negative and the other plate to the positive lead from a variable power supply. What you will find is that current will be shorted between the two plates. Allow the current to flow for too long and you could fry your test leads.
3. The two above experiments demonstrates the reality of the *Perreault Effect*. These experiments prove that the effect discovered goes beyond simple galvanic action as certain people have implied.

-Bruce A. Perreault

October 30, 2003

OBTAINING ENERGY FROM MATTER

posted by Bruce A. Perreault on April 15th, 2004

According to the law of conservation, when we give to a material body a determined quantity of energy, this energy might be transformed, but the body will never give back a quantity in excess of what it received. This principle is considered too self-evident to be disputed. It makes sense that matter can only give up energy that is given to it and is unable to create excess energy. Without violating this law, it will be demonstrated that matter can be excited into giving up its stored intra-atomic energy.

According to Gustave Le Bon and T. H. Moray matter is cosmic energy in a condensed state. What this means to us is that matter can be made to rapidly disintegrate, transforming itself into useful energy. This idea was unthinkable before radioisotopes were discovered. Wherefore, condensed matter can become uncondensed if its oscillations become violent enough and henceforth transforming itself into radiant energy. No laws have been violated. They have been expanded.

With the advent of electronically triggered beta decay, a highly controlled and safe reaction can be realized and maintained. The process is relatively simple. The selected radioisotopic fuel is placed in a magnetic field causing its nuclei to go into [Precession](#). It is then subjected to a radio-frequency that is tuned to its [Larmor Frequency](#). This radio-frequency causes its radioactive nuclei to flip. When the radio-frequency is halted the radioactive nuclei relaxes and releases energy in the form of heat, electromagnetic and/or beta particle emission. A structure can be provided to capture the beta particles

to directly convert them into useful electrical current. These naturally occurring beta decay species; ^{40}K (potassium-40), ^{50}V (vanadium-50), ^{87}Rb (rubidium-87), ^{113}Cd (cadmium-113), and ^{115}In (indium-115) can be artificially stimulated into giving up their stored intra-atomic energy. All other isotopes are irrelevant because of their low abundance or energy decay rate. The most practical isotope listed appears to be In^{115} because of its abundance and its present cost. Any of these beta particle emitters are potential fuel sources. They are very old energy reserves. Their matrixes are unbalanced. The correct Larmor Frequency will cause these isotopes to seek their original balanced state with the release of enormous amounts of energy. **This method of accelerating nuclear decay can also be used to neutralize nuclear waste.** The triggered decay activity of the radioisotopes can be turned on and off at will. There is no possibility of a runaway reaction. Neither, is there any induced or residual radioactivity. The fuel reverts back to its near-zero decay rate within a short period of time.

The table given in British Patent [EP0099946](#) indicates that the planet's beta decay resources are far greater than the world supply of petroleum. This patent states that the energy of ^{48}Ca is twenty thousand times larger, ^{40}K and ^{87}Rb are also impressively larger in energy magnitude than fossil fuels. The patent further states that beta decay resources are half of fusion energy resources and three hundred times greater than fission fuel resources.

A Nu Science is on the horizon. It involves the means of transforming matter into energy. This science recognizes a few isotopes of matter that can be transformed into energy. It confirms Le Bon's theory that with a very small quantity of energy we can obtain a very large quantity of energy. Clearly, we do not create the liberated energy, since it already exists in the chosen isotope. Think of the process as a type of energy detonator that liberates great quantities of energy with only a minute amount of resonant electromagnetic energy, with no laws of physics being violated.

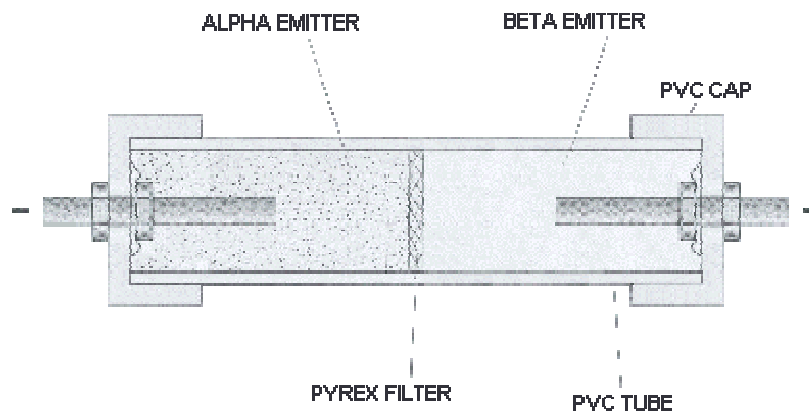
Radiant Energy Tube Construction

My first generation prototype radiant energy conversion tube contained trace amounts of radium scraped from old clock dials. This device powered two 100-watt light bulbs for about seven months, intermittently. I remember it being powered up continuously for just about a one-week stretch. One day I turned on the device and it was dead cold and would not give even the faintest glow.

The second generation prototype was only minutely radioactive. My knowledge with the concept was limited when it was conceived by me in the fall of 1995. This allowed limited results. This second prototype contained fine sand that was left behind from my final radioactive ore screenings and was very crude.

A third generation prototype was designed as a proof of concept device that the average experimenter could build. It did not call for the introduction of radioactive material. Because of this the output was extremely low. It relied on the ambient background radiation. The power from this third prototype appears to be mostly from galvanic action. It is therefore difficult to prove radiant energy conversion with this design.

In my original design I used radium scraped from old clock dials but I did not find this appropriate at the time to tell this to the do-it-yourself researcher. Only a small handful of people could get the experiment to work and very little power was obtained from it. This third generation proof of concept design did a terrible disservice to the credibility of my research. Only a small handful of people could get this design to work. This is how I met Calvin Bahlmann my mechanical engineer. He was one of the people who was successful with the chlorine substitute. He could only obtain a small amount of energy but it did prove the concept. Mr. Bahlmann is now experimenting with a semi conductive formulation of his own design. He has constructed "e-wire (electric wire)" that was designed for nano circuitry. Mr. Bahlmann is also experimenting with cell stacks for standard circuits.



Fourth Generation Prototype

I now have a solid grasp on the fundamental concept that has enabled me to work towards a higher wattage radiant energy valve. My fourth generation prototype shown in the diagram above utilizes finely powdered semi conductive material that replaces the sand that was used in the second generation device. I now know the reason why my first device stopped functioning. It was because the electrodes became chemically corroded. This fourth generation prototype contains an electrolyte that does not chemically react with the electrodes. The electrolyte only serves to provide the vehicle for the exchange of ions.

In my fifth generation prototype a small amount of low activity radon emissive substance is introduced to serve as the fuel source. I have been running some tests that is leading up to a sixth generation prototype that will use non-radioactive substances that emit electrons after a short exposure to a specific radio frequency. This prototype will be fundamentally based on Great Britain Patent No. 763,062. This patent claims that more energy is generated than what is used to excite its main component.

I have also just recently discovered substances that emit low eV electrons. This means that a device using such materials will not create a radiation hazard. No shielding will be required for this seventh generation prototype.

The fundamental concept to convert radioactive decay into electrical current was shared with my peers back in 1995. It received a violent reaction from people (detractors) who could not

understand its basic principles. These people prodded and probed me until they picked my brain dry. Ever since, they have taken my words and twisted them to their own agenda's. They have even accused me of plagiarizing the work of other people. Yes, it is true that I have referenced related work. However, my findings are unique and I deserve credit for my original discoveries. It is no wonder that there are inventor's or relatives of dead inventor's who can not trust anyone with their inventions that could better our human condition. They have seen how the lives of other innovator's have been ripped apart by these shameless detractors. Only when the violent reactions cease will we all see great wonders of scientific innovations come out of their hiding places. _Bruce A. Perreault

Progress Update - December 8th, 2002

As I stated at Inventor's Weekend 2002 I have been working on a tube design that is both a transmitting energy generator and energy receiving tube all rolled into one. This was to eliminate the antenna and ground connections making the invention portable. Thinking one step further, I don't see why a solid-state device couldn't be built. Essentially, my second to fourth generation prototypes seem to support a solid-state design.

In viewing [United States Patent No. 2,876,368](#) last week, I found the thread that I have missed during my researches. You may not know this but an electret with a permanent electric field draws charged particles to itself like a magnet draws iron to itself. This patent clearly describes a method that will move the electric field of an electret without a prime mover. This patent points to a practical and almost free source of energy that has been with us for over fifty years. The shortcoming of this invention is that a radioisotope is required to trigger the electric field into oscillation. Radioisotopes were cost prohibitive in 1953 at the time this patent issued. This appears to be the sticking point to this day. Tritium could be used giving the nuclear electret battery a half-life of around 12.3 years. Here is the problem with using tritium:

"The United States has not produced tritium since 1988, when the Department of Energy's (DOE's) production facility at the Savannah River site in South Carolina closed. Immediate tritium needs are being met by recycling tritium from dismantled U.S. nuclear weapons. Indeed. The US is currently looking at various options for the domestic production of tritium."
<http://www.theregister.co.uk/content/28/28206.html>

Using the knowledge that I have gleaned through the course of my researches, I believe that a safe and practical solid-state electret battery can be built. This is now my prime focus. I will be using lead-210 as my dopant in the new prototypes. It is almost a pure beta (electron) emitter that has a half-life of around 22.3 years. This is almost twice as long as tritium. This means that it is feasible to build a battery that will put out power for several years with little maintenance.

Lead-210 is even harder to obtain than tritium. However, with my priority process this isotope could be generated in pure form from radon gas. Yes, radon is a rare gas. This is no problem because this gas can be obtained from uranium ore in quantity using my process. The added beauty in using my process is that the ore can be powered and directly formed into an electret. The electret formed with the ore can remain inactive until activated at a later date. These are **blind isotopes** until activated. Can you think of a better name for them?

I will get right to work at the task of building the world's first lead-210 activated electret batteries. I am fully confident that Proof of Concept batteries will be available for demonstration for our next Inventor's Weekend event.

Last updated on December 22nd, 2002 at 11:05 AM

I am no longer pursuing the nuclear battery route - November 7th, 2005

How to Build an Efficient Alternative Energy Device

THE FOURTH STATE of MATTER (PLASMA) POWER GENERATION

I spoke with Steve Elswick, the Publisher of the Extra Ordinary Technology Magazine;

<http://www.teslatech.info/ttmagazine/tocframe.htm> who has given me permission to post my article...
http://www.nuenergy.org/pdf/ion_valve_article.pdf

Reading this article you will learn how I discovered what I now call an **ion valve** and how it is used in an extremely efficient tank circuit to greatly conserve the current to run motors or provide light. Tests show that motors can be run many times longer on a battery supply using the ion valve as a regulating component. I will not discuss actual numbers at this point in time. However, it is not too hard to envision a motor vehicle that used to travel 50 miles on a single battery charge that can now travel 200 miles, or a bank of light bulbs being powered up for several days on one 12 volt car battery.

You will notice that the ion valve component requires the opposite polarity to which Edwin Gray's switching tube is shown in his patent. It is not known if his patent was drawn showing this reverse polarity to protect the invention. However, it was reported that Gray did not want anyone to get too close to his device. It seems very likely that he did not want anyone to observe the correct operational polarity of his working device. The Gray conversion tube was designed to be an ultra fast switching component that can handle instant discharge of capacitors without quickly burning out, according to its patent description. The disadvantage of instantly dumping a capacitor's charge into a load is heat loss, as you will read in my article. The advantage is that power can be provided in a short duration burst. This is advantageous when used in a motor because a magnetic field can be timed when the rotor and stator are perfectly aligned, at which time, the most torque is obtained. This is how the Edwin Gray motor achieves its efficiency. If current is applied to the rotor and stator before or after complete alignment, the current is wasted. There is no mysterious "radiant event" involved.

The advantage of my system over what is shown in the Gray patent is that heat loss is avoided. The plasma glow discharge conserves energy. Near perfect resonance can be achieved with the load. In this system there is no need to recover anything. The Gray system is a direct current (Edison) system,

Bruce A. Perreault
December 30, 2003 - updated November 06, 2004



The circuit shown here will light up a home very economically. The [ion-valve regulator](#) shown in the circuit is an energy quenching device as I have described in my [Fourth State of Matter Power Generation](#) magazine article which allows the device to operate efficiently. Circuit deviations are possible and do not depart from the spirit of this device.

An **ion-valve generator** is included in the circuit that utilizes radioactive material that allows it to function as a state of the art atomic battery. This tube is the primary source of power. It's

detailed construction is proprietary at this time. However, the circuit will still function without it as a highly efficient lighting system.

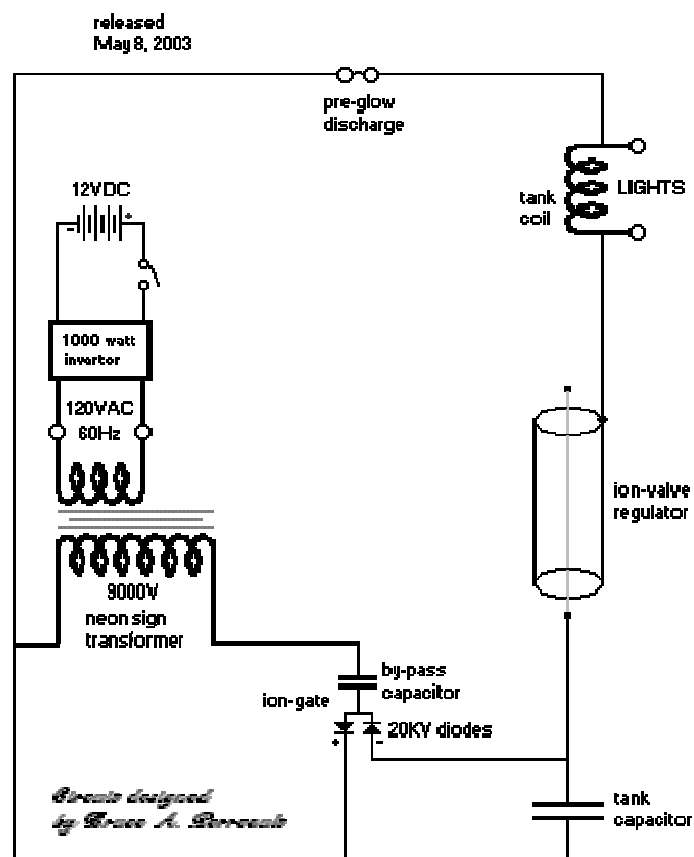
When the **ion-valve generator** is included in the circuit, once the circuitry is primed by charging the source capacitor, energy can be feed back from the output to charge the 12 volt storage unit that is used to supply power to the high frequency inverter. [Sodium chloride ion-valves](#) could be used to replace or compliment the 12 volt storage unit.

[CLICK HERE FOR IMPORTANT SAFETY CONSIDERATIONS](#)

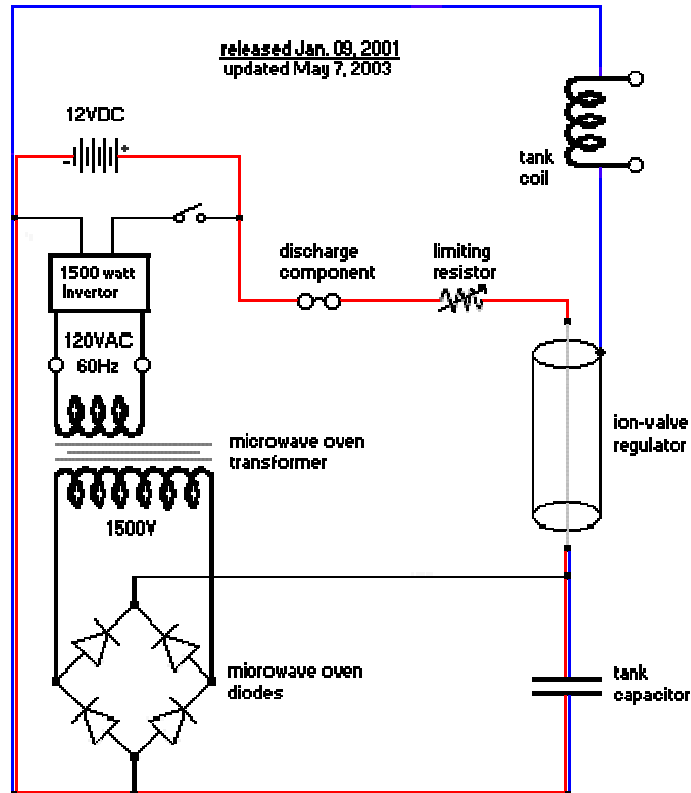
Reference

[CaptureCapacitor™](#)

[Radiant Energy Tube Construction History](#)



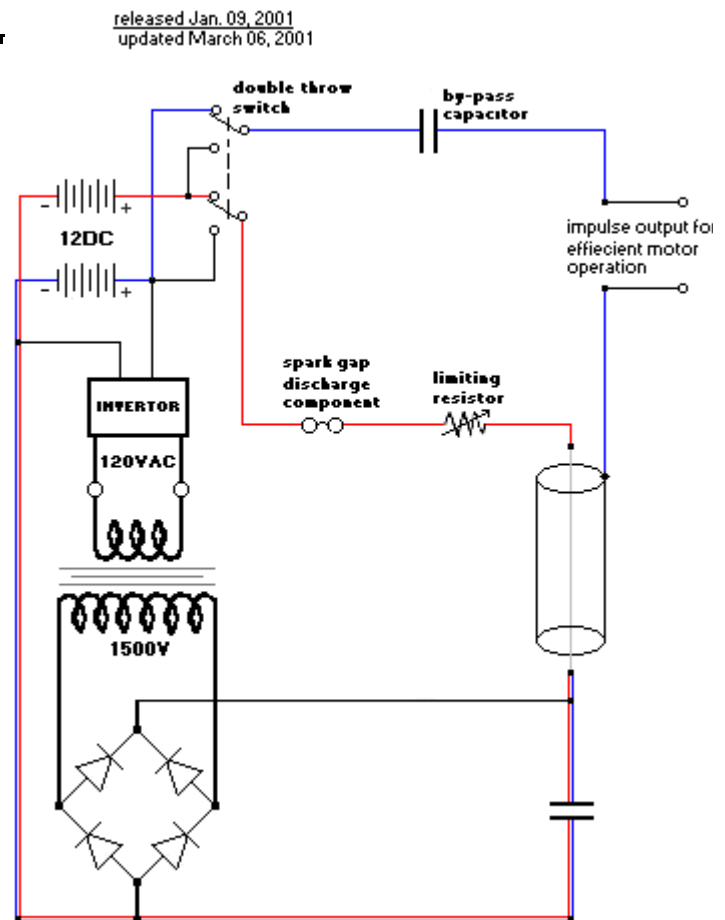
Improved Edwin Gray Circuitry



*Gray Circuit Simplified
by Bruce A. Perreault*

Simplified Edwin Gray Patent Circuit

The circuit drawn by Bruce A. Perreault at the left is without the distractions that are shown in the original Edwin Gray patent drawing shown below. This simplification gives a clear impression of how the circuit actually works. The the wire path represented by the red lines discharge the capacitor heating the central cathode rod. This has the effect of adding pulsed amperage to the tank circuit. Most of the discharge current is conserved by sending it through the source battery. The wire path represented by the blue lines is the working load circuit. More advanced circuits will be posted.



IMPORTANT SAFETY CONSIDERATIONS

Important Safety Considerations

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The Electrostatic Direct Energy Conversion System is one of the most dangerous system to repair or make modifications to. The high-voltage potential combined with the high-current capability of an operating electrostatic energy system poses a deadly threat to the reckless person. In addition, electrostatic energy systems can leak high radio frequency energy peaks if the unit is not resealed properly after a repair or modification. Normally this does not present a problem. However, improper replacement methods or tampering with safety systems could expose the unwary troubleshooter to dangerous high voltage. **Therefore, extreme caution and proper procedures MUST be used at all times.**

When diagnosing an electrostatic energy system many problems can be detected merely with careful observation, that is, *with the high-voltage section disconnected*. Most tests can be accomplished with the high-voltage disconnected from the magnetron transducer. We suggest that you leave the "live" testing to the professionals. Nonetheless, certain safety habits must be developed and maintained. If you have experience in troubleshooting electrical equipment, some of these safety precautions may be familiar. However, the *high-current potential* of the high-voltage circuits in an electrostatic energy system make them possibly life-saving steps.

If you are uneasy or unsure about any of these safety procedures or warnings; or if you feel uncertain as to their importance or your ability to manage them, it would be in your best interest to leave the repair to a qualified professional.

- a. **FIRST and ALWAYS**, before attempting any repairs, make certain that the units high-voltage section is not activated.
- b. Before touching any components or wiring, **ALWAYS DISCHARGE THE HIGH VOLTAGE CAPACITOR!** The high voltage capacitor will quite normally maintain a painfully high-voltage charge even after the high-voltage circuitry is disengaged. Some capacitors employ a bleeder resistor (either externally or internally) that allows the charge to slowly bleed (or drain) off after the high-voltage circuitry is disengaged. Do not trust a bleeder resistor--it may be open. If you forget to discharge the capacitor, your fingers may ultimately provide the discharge path. You only make this mistake a few times, because, while the electric shock is painful, the real punishment comes when you

reflexively yank your hand out leaving behind layers of skin on razor-like edges that are there as a reminder to never again forget to discharge the high voltage capacitor.



How To Discharge The High Voltage Capacitor: The capacitor is discharged by creating a short circuit (direct connection) between the two capacitor terminals and from each terminal to chassis ground bare metal surface.

- a. Do this by touching the blade of an insulated-handled screw driver to one terminal, then slide it toward the other terminal until it makes contact and hold it there for a few seconds. (This can result in a rather startling "pop!")
- b. Repeat the procedure to create a short between each capacitor terminal and chassis ground.
- c. If the capacitor has three terminals, use the same procedure to create a short circuit between each terminal and then from each terminal to ground.
- d. Some models have red, round filter capacitors mounted in the base of the magnetron transducer which can also hold a charge. Ground each magnetron terminal by creating a short circuit to chassis ground using the blade of a screwdriver as explained above.



- c. **NEVER**, under any circumstances, touch any system components or wiring with your hand or even with an insulated tool during operation.

The high-voltage circuits in electrostatic energy systems generate from **3,000 to 10,000 volts DC and higher!** This combined with the potential for high current makes the **HIGH VOLTAGE CIRCUITS OF A electrostatic ENERGY SYSTEM EXTREMELY DANGEROUS TO WORK ON OR AROUND WHEN THE SYSTEM IS ENERGIZED.**



For this reason, most manufacturers pointedly warn that **MEASURING THE HIGH VOLTAGE IS NEITHER NECESSARY NOR ADVISABLE.**

It's better (and safer) to avoid making *live tests* if possible. If such tests become necessary, and if you are adequately qualified to do so, the test can be performed safely as follows:

- a. Make sure the systems high-voltage circuitry is disengaged and that the capacitor discharged.
- b. Attach the meter leads to the prospective test points with insulated clip leads.
- c. Then step back, reconnect high-voltage circuits in the system, perform the test and observe the meter.
- d. In addition, use only one hand whenever possible. Try putting the other hand behind your back or in your pocket. (Two hands could complete a circuit through your body. Use only one hand and/or an insulated tool, even when the high-voltage is disengaged).

After any adjustment or repair on a electrostatic energy system, we require that a final microwave leakage check be performed to ensure that the unit does not emit excessive microwave radiation.



RF leakage test procedure:

- a. If there is evidence that the unit has been previously tampered with by someone of questionable competence, be prepared to check the leakage *before* energizing the electrostatic energy system.
- b. Most amateurs, and many professionals, do not own an RF leakage meter. These meters are available at appliance and electronic parts suppliers, ranging in price from about \$10.00 up to many hundreds of dollars for the certified models used at the professional level.
- c. Inexpensive RF detection devices are also available at many retail stores such as Walmart and Radio Shack.
- d. In lieu of purchasing an RF leak checker, you can send your electrostatic energy system for repair to us. We will service the unit check for leakage for free.

Do not work alone. Make sure another person is nearby in case of an emergency. Use care when lifting and carrying a electrostatic energy system. Remember, most of the weight is usually on one side.

- a. When lifting a electrostatic energy system, keep your back straight and use your legs, not your back, to do the lifting.
- b. Before carrying, secure the power cord and insure a clear path to your destination.
- c. When lifting a system in or out of an automobile, *lift* it on to the seat--*do not slide it*. Better yet, place a piece of cardboard on the seat first.

Remove your watch and other jewelry. Watches that are susceptible to magnetism will be damaged by the intense magnetic field surrounding the magnetron ion valve. Jewelry is electrically conductive and serious injury could result.

- a. Wear rubber soled shoes.
- b. Never defeat or tamper with the safety interlock switches or the fuses.
- c. Do not touch printed circuit board components or circuitry unless you are properly grounded.
- d. Static electricity can damage certain static sensitive components.
- e. Be aware that opening or otherwise modifying your equipment may void any warranty.



If you are uneasy or unsure about any of these safety procedures, or feel uncertain as to their importance, it would probably be in your best interest to leave the electrostatic energy system to a qualified professional.

Disclaimer: *The author assumes no liability for any incidental, consequential or other liability from the use of this information. All risks and damages, incidental or otherwise, arising from the use or misuse of the information contained herein are entirely the responsibility of the user. Although careful precaution has been taken in the preparation of this material, we assume no responsibility for omissions or errors.*



Bruce A. Perreault

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<http://www.fortunecity.com/banners/interstitial.html?http://www.cyberportal.net/nuenergy/main.html>

A Leader in Research for Clean & Economical Energy...

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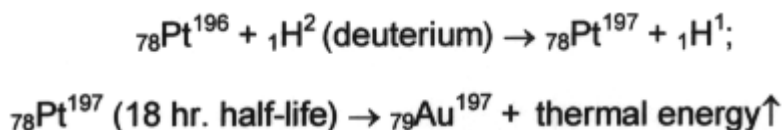
Bruce A. Perreault has quite an extensive background in electronic equipment troubleshooting and repair. Working with innovative electronic schematics for prototypes he has fine tuned his skills as an active experimenter and inventor. He has furthered research in the alternative field by writing essays, articles and research reports.

An associate of Canterbury Creative Group, "Bruce is an inventor that marches to a different drummer. His ideas, though unconventional, are not out of touch with reality. Bruce's strong individuality enables him to stick to his ideas despite the fact that some people feel they are unconventional."

Mr. Perreault's unique way of looking at problems stems from the fact that he doesn't just accept as a given what the textbooks say; he goes beyond current thinking to bring about truly creative inventions. Bruce has been dealing with advanced concepts since early youth, and is now recognized nationally as a forerunner of the next wave of electronic inventive breakthroughs. Even though his lab is small, his ideas are expansive. It is almost for certain that he will develop new products that will revolutionize our life.. Whether dealing in inventions for the home, car, or industry, Bruce is capable of viewing the present as but a meager step toward the future of a better life for us all.

Bruce A. Perreault is the originator of the Perreault Atomic Model that points into the direction of a newly born nuclear science. He is a catalyst to an emerging science that will ultimately lead to the successful construction of radiant energy power generators and is the principal investigator in the early T.H. Moray Radiant Energy discoveries - making a number of new key discoveries himself. By any normal standard this man is the discoverer of a revised nuclear standard that promises to open new roads to invention and discovery.

Perreault's Cold Fusion Formula



-Bruce A. Perreault... June 11th, 2001

Radiant Energy Diatribe

****THIS DISCUSSION WAS GENERATED BETWEEN PAUL CLINT and BRUCE PERREAULT in a series of e-mails between 01/29/2001 and 02/03/2001****

Bruce A. Perreault February 2nd, 2003 (revised 10/22/04)

e-mails were edited for clarity

Cable Generator Discussion

Static Electricity that is generated on a properly treated insulated wire will produce more than a kilowatt in a light wind, according to *Paul Clint*. This becomes possible because of a phenomenon in physics known as the electret effect. This effect occurs when the surface between a conductor and a dielectric obtains a permanent electric field. This field has the same effect on static electricity that a magnetic field has on iron filings.

A treated piece of insulated wire strung out in the wind will act as a Van de Graaf high voltage generator. In some conditions, a 400-foot length of wire can generate 50 kilowatts and even on a bright sunny day with a breeze of 3-4 mph, it will average 10 kilowatts, *according to Paul Clint's calculations.*

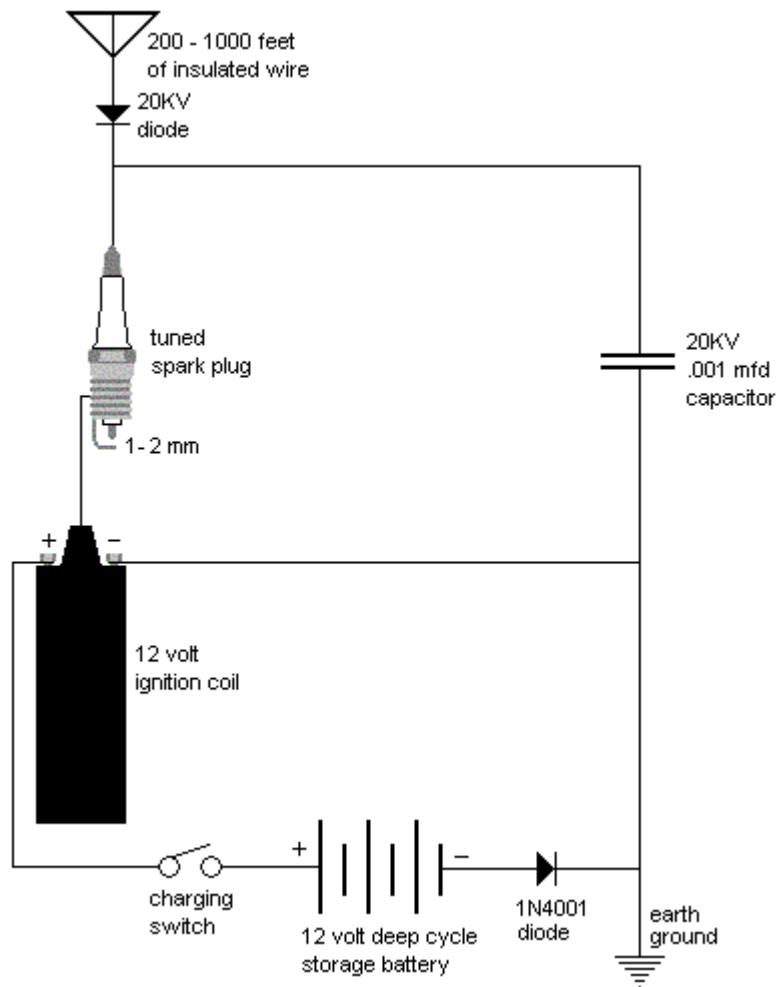
How can the static energy produced by the cable be converted into a usable form?

The only practical method I have found in the past was to charge a battery. My *ionic diode* component might be another way to do the conversion. I will run some tests when I get the time..

The static electricity generated can be used to charge a battery using nothing but a spark plug, a coil and a capacitor, but the process is only 15-20% efficient using conventional diodes. An efficient voltage controller must be used to keep your battery from overcharging. The circuit is needed to convert static charge into low voltage to charge batteries. The least expensive design uses a spark plug, an old automotive coil, a .001, 3 to 20kv capacitor and a ground rod.

Thus far, I have devised two methods. The first is simple and inexpensive but only 15-20% efficient. It simply involves breaking the current into pulses with a spark gap, and then transforming the voltage down and current up with a transformer and increasing the pulse duration with a capacitor in parallel.

The second method will use a micro-processor to monitor voltage and current. The impedance is then adjusted to make the charging current as smooth as possible. This circuit can also easily protect a battery from overcharging. Bill Alek's controller might be the perfect solution for the task.



Perreault Conversion Circuit

[click here for an updated version](#)

The electret effect is more important than you realize. Any ordinary antenna will collect charge, but without the electret effect, most of it is dissipated before it can be tapped. The electric field created by the electret effect not only attracts the charge from the air, but then it traps it in the conductor. This effect will also be produced even in a vacuum.

Virtually all insulated cable exhibits some degree of the electret effect, which the wire manufacturers consider undesirable. Treating the coax will increase the electret effect at least 10 times. Treatment cost is negligible. Obviously, the treatment process is the essential piece to receiving enough energy to be useful. Teflon tape can be dangled from a cable and wonderful results can be obtained. In a thunderstorm, using an ordinary 400-foot cable with Teflon tape has produced a continuous arc eight feet long. Essentially, what you have is a type of Van De Graff Generator. I have not witnessed this myself but this appears to be possible because a lightning discharge releases energy that has been estimated to be in the billion watt range.

Conditioning the Cable

Buy cheap coax RF cable, that has a center wire and a shield cylindrical wire. Then cut off the outer plastic skin and put the whole cable into your oven and heat it up to about 100 degrees Celsius or more, so that the internal plastic insulation almost begins to melt.

Then apply from a D.C. high voltage source around 30 kilovolts or maybe a little less, so that there will be no arc-over yet inside the cable. Then let the cable cool down slowly again, but still apply the high voltage D.C.

When the cable has come down to room temperature again, it will be a pretty good electret!

Now hang this cable in the air and the outer layer of the shield metal (which does not have any plastic isolation skin anymore), will now attract lots of free ionized electrons from the air and charge up the outer shield metal of the cable. This way you can collect lots of more charges as before and have a much higher electrical output from this cable.

Hope this helps
Regards, Stefan

The electret effect is a problem in the manufacturing of coaxial cable. This problem arises from the process used to make insulated wire; an unwanted electret effect is created. Engineers work very hard to reduce the effect but are unable to completely eliminate it. What I am saying is that all insulated wire exhibits some electret effect. The engineers go to great lengths to minimize it. The treatment as suggested by Stefan Hartmann should increase the electret effect of the cable at least 100 times, and with some cable, as much as 1000 times (depending on how hard the engineers worked). The electret effect is present wherever plastic is in contact with a conductor. It is much better to use unshielded cable and it is cheaper as well. If you do use shielded cable, it might not draw as much radiant energy. To begin your radiant energy experiments string out a 300-foot length of ordinary coax cable and do not connect the other end to anything. Use the conversion circuit in this article to convert your collected charge into electrical power. When you ground this circuit do not use the one that is connected to the electric companies meter. If you do not get at least a couple of pops per minute from your spark plug you will need to condition your cable as explained by Stefan Hartmann. Tying a bunch of 2-foot pieces of Teflon tape to your cable will also increase its draw power.

Virtually any insulated wire has a small electric field surrounding it that attracts positively charged air molecules (called ions) to itself. This charged moving air mass induces a negative charge of static electricity that builds up in the cable conductor. Under most circumstances, the conductor in a cable is connected to a circuit and the current is absorbed without notice. Nevertheless, if the conductor is connected to a spark plug (whose threads are grounded) it will produce an electric arc across the spark gap each time the voltage in the cable rises to the limit of the spark plug's gap. In some cases with a long piece of cable and some air current (wind), the

spark gap will arc almost continuously. During a thunderstorm, Paul Clint reported to me that he once witnessed an eight feet long arc during a thunderstorm. A continuous arc or one that is eight feet long indicates to me that a substantial amount of power was being received. This means that a treated piece of insulated wire can be strung out on a fence and used to generate enough power to provide a home owner with all they need. It also means that it is possible to generate power in winds that have previously been considered worthless (3-4 mph).

How can a small cable extract so much energy from little or no air currents?

This is easily explained. The energy collected from the cable is not derived from charge collection as one might first think. It is derived from induction, as the positive ions in the air rush towards the cable. As you may or may not be aware, the earth's atmosphere is a gigantic capacitor. At its upper level, air molecules are constantly being ionized and then as the air circulates, the charge is eventually carried to the ground that has a negative charge with respect to the upper atmosphere.

Ham radio operators will certainly confirm that a coaxial cable strung out, as an antenna, will become highly charged, especially in wet, stormy weather. The accumulation of charged ions is not possible in a humid environment. Therefore, the power is derived through charge induction rather than from static charge. This is clearly demonstrated from the fact that the power generated is directly proportional to the speed of the wind rather than the square of the speed.

Still, the wire hardly intersects any of the wind. How can a little wire collect so much?

The cross section of the wind from which power is collected is much larger than you might think. Remember that the electret effect creates an electric field, which attracts charged air molecules as a magnet attracts iron. The cross section of this field can be as great as 2 feet, so a 100-foot cable can intersect as much wind as a 16-foot diameter airfoil.

Have you measured the cable power output?

Measurement of the output of the cable is not a simple process. The output varies over several orders of magnitude for voltage, current, frequency, and is well beyond the capability of simple measuring devices. Because of this fact, I have devised a couple of indirect methods to measure output. In the first of these, I have connected a spark plug between a cable and ground so that whenever the voltage builds up to the arc-over value, a pulse of current is generated that can be counted. This method can be termed no more than a rough estimate because the shape and duration of the pulse still varies over a substantial range. Analysis of the pulses will eventually allow us to use an average and thus devise a formula that will give a close approximation of the power output.

The second method is simple and if done properly, very accurate. We simply place a resistive heating element between the generator and ground and then into a bucket of water. The output is then measured by the change in temperature of the water. Neither of the two methods takes into account the losses of the charging circuit, battery, or inverter, etc...

Does the electret effect wear out or dissipate over time?

The question as to whether the electret effect wears out is not a simple one to answer. It is clearly being used in a way that is unique. The fact of the matter is that, in general, the electret effect is unwanted, and engineers are normally working to prevent or eliminate it. The fact that they have to work very hard to do so is an indication that it is stable. Thus, the best answer I can give is that it does not wear out in the short term (years).

How can I determine if the cable will produce more power for its cost than I would have to pay the utility company?

Again, this can only be done over a long time-period because it is dependant on wind, location, humidity and possibly other lesser, undetermined factors.

How does humidity affect cable operation?

Ham radio operators have reported that static charge builds up on their antennas more often and more intensely in times of high humidity, rain, or snow. The technical literature reports that most atmospheric charge is carried by aerosol particles of dust or water that collect hundreds, thousands, and sometimes tens of thousands of units of charge. As they collect more and more charge, these particles migrate toward the earth's surface and constitute a major component of the fair weather current.

Have you tested cable generator in other configurations such as a spiral, coil, grid, or vertical mode?

Optimum results are obtained by suspended an insulated cable between 5 to 15 feet above the ground in a horizontal straight line. Any deviation from this will reduce the output of the cable generator.

You must use an insulated cable that is strung out horizontally. For it to function properly there should be a swag to it.

Please see... <http://www.nuenergy.org/alt/transducer.htm>

If you see that the cable is physically vibrating you will know that it is set up properly. Any wire will vibrate but it needs to be electrically insulated and possess the electret effect to generate self charge. There is more than just wind that is involved. The cable will vibrate sometimes with only the slightest breeze. As you can see here there is a real energy source that is waiting to be harnessed. Essentially, we are utilizing the induction from a moving ion field. This is why a cable can be seen to physically vibrate. Where the seat of kinetic activity actually originates from I do not know. What I do know for certain is that energy is present in the system.

Will a bare wire generate a charge?

Bare wire will not generate a charge. The electret effect has to be present.

Please see... <http://www.esdjournal.com/static/shower/shower.html>

Has anyone measured the ion density of the atmosphere?

Yes, the average is 3000 ions per cubic meter. The figure is subject to stupendous variations of many orders of magnitude as shown by this quote from "Atmospheric Electricity in the Planetary Boundary Layer" by William A. Hoppel, R.V. Anderson and John C. Willet. "Most atmospheric processes are interrelated and cannot be studied in isolation, but it is possible to identify one or two dominant influences. In the case of Atmospheric electricity in the Planetary Boundary Layer, however, separating the various causes and their effects can be extremely difficult. In fact, this field may be unique with respect to its sensitivity to many disparate phenomena spanning a tremendous range of scales in both space and time. For example, locally produced turbulent fluctuations in space-charge density have an effect roughly comparable in magnitude to that of changes in the global thunderstorm activity on electric-field variations within the Planetary Boundary Layer."

The ion density does not appear to provide enough charge to account for the current generated by the cable. Are there other sources of energy contributing to the current?

Both the electric field of the earth (typically 100-200 volts) and that of the cable produce an effect called the induction charging mechanism. This is a physical process for particle charging involving the collision of pairs of particles in an ambient electric field. Electric charge induced on particles surface by the ambient electric field is made available for transfer when the two particles come into contact. A subsequent differential particle motion that is influenced by gravity is postulated to result in large scale charge separation. The specific role of induction charging in the electrification of thunderclouds has not been resolved.

Another effect that is unquestionably effecting the cable is the double layer effect. On the surface of a substance a layer of electric dipoles whose axes have an average orientation normal to the surface, double layers may appear on the interface of a solid and gas, liquid and gas, liquid and liquid, etc. They arise whenever media with different electron affinities (forces of attraction, or work function) are contiguous, and if dipoles are available. A net potential difference, the electrokinetic potential exists across the double layer. This effect is demonstrated in the super capacitor. Therefore, our cable acts like a super capacitor of high farads.

Yet, another source of atmospheric charge collected by the cable is due to **aerosol charges**. These particles of dust or water form dipoles and disproportionally collect one charge or the other. Where ions carry only single or double units of charge, aerosols carry hundreds, to tens of thousands, of units of charge. The fact humidity is such an important factor in the output of the cable indicates that aerosols are an important source of the energy it collects.

What else would be needed besides a cable to provide a good alternate electrical source for a home?

You would need a battery or bank of batteries, a charge controller, and a grid tied inverter.

* **Note:** Paul Clint forwarded e-mails between him and Bruce Perreault to Jerry Decker who posted their discussion on Keelynet <http://www.keelynet.com/electret.htm> All e-mails between Paul Clint and Bruce Perreault are archived on hard-drive.

Electrets for Power Q&A - 02/07/01

The following information is not currently endorsed by KeelyNet because we have no direct physical evidence of the claims, though of course are highly intrigued.

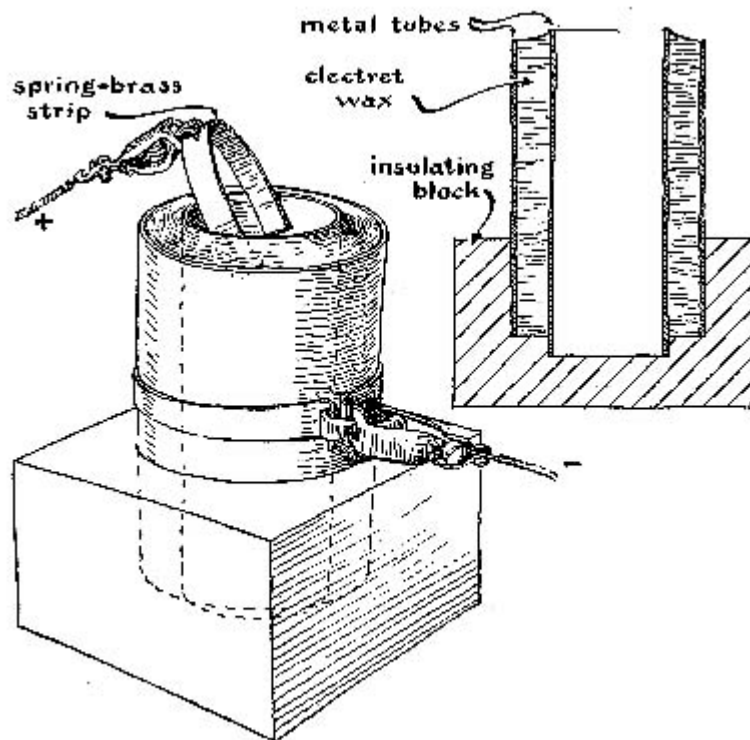
This document contains unverified claims and is being posted at the request of [Paul Clint](#).

QUESTION: What is an Electret?

ANSWER: A solid electrically insulating, or dielectric, material that has acquired a long-lasting electrostatic polarization. Electrets are produced by heating certain dielectric materials to a high temperature and then letting them cool while immersed in a strong electric field. An electret is an analog of a permanent magnet. The Columbia Encyclopedia, Sixth Edition states;

"If you take one electret and one magnet you will get a surprise. When not in motion, these two differing objects will have no effect on one another. It is only when you move them that anything happens ... and ... it is not the familiar attraction-repulsion. When a pole of the magnet is in relative motion to a "pole" of the electret they push each other at 90 degrees to the direction of motion. The effect is entirely odd and immediately unfamiliar (unless you are a physics student)."

How to Make an Electret



QUESTION: Can the Electret effect be used to generate power directly?

ANSWER: The general consensus of the experts is no, but there are some new techniques that raise doubts about their certainty. One new technique is to mix ferrite granules into the dielectric when it is formed. A magnetic field applied at a right angle to the resulting electret's field has a dramatic effect in maximizing and recharging the electret effect.

There is very little doubt, however, that the electret is much more effective in generating power indirectly by using it's field to move and trap existing electro-

static charges. A prime example of this are reports from amateur radio operators of the static charges collected by coaxial cables.

A great many of the numerous claimed free-energy machines are obviously employing the electret effect to collect electro-static charge..

QUESTION: In what materials can the strongest manifestation of the electret effect be produced?

ANSWER: In general the higher a materials insulating properties are, the better an electret it will form. Thus, teflon is near the top of the list, with glass, plastics and ceramics.

Another important factor in plastic materials is the strength of the polymer bonds. This factor also relates to the fact that the thinner the material is, the more intense the electret's field because the stress on the polymer's bond is transmitted through less intermediate material. But this is limited by the dielectric constant as well because if the electret's field generates a voltage high enough to break down the dielectric resistance, the device arcs across its own field and self destructs.

QUESTION: Where can I learn more about electrets?

ANSWER: Here are some references.

See "Electrostatics - And its Applications" by A.D. Moore (1973) is a very well researched book on electrets (p122 - 130) and electrostatic machines; "Handbook of Electrostatic Processes" by Jen-Shih Chang (1995) pp509 on electrets.

The first person to make an electret was Mototaro Eguchi, see his "On the Permanent Electret" paper in "Philosophical Magazine" Vol 49 (1925) pp178.

"How to Make an Electret" by C.L. Strong in "Scientific American" Vol 203 (Nov 1960) p202 - 210 is a practical description of how to make an electret using carnauba wax.

QUESTION: How can a small cable extract so much energy from the kinetic energy of the wind?

ANSWER: Your dilemma is easily resolved. The energy collected from the cable generator is not derived from the kinetic energy of the wind.

As you may or may not be aware, the earth's atmosphere is a gigantic capacitor. At its upper level, air molecules are constantly being ionized and then as the air circulates, the charge is eventually carried to the ground which has a negative charge with respect to the upper atmosphere.

Another source of atmospheric charge is condensing water vapor. As water evaporates, it gathers electrons the molecules in the liquid state are sharing, and leaves behind a positive charge. When it condenses in the atmosphere, it gives back the electrons creating a negative charge. This is why the cable generator's output increases in stormy weather.

Ham radio operators will certainly confirm that a coaxial cable strung out as an antenna will pick up static charge, especially in wet, stormy weather.

So the power is derived from the atmospheric charge rather than kinetic energy. This is clearly demonstrated from the fact that the power generated is directly proportional to the square of the speed of the wind rather than the cube of the speed.

QUESTION: Still the wire hardly intersects any of the wind. Even if the power isn't from the winds kinetic energy, how can a little wire collect so much?

ANSWER: The cross section of the wind from which power is collector is much larger than you might think. Remember that the electret effect creates an electric field which attracts charged air molecules like a magnet attracts iron. The cross section of this field can be as great as 2 feet, so a 100 foot cable could intersect as much wind as a 16 foot diameter air foil.

There are occasions static charge is generated though two objects are not in contacted. If a charged object moves against other object, static charge of the other object will be increased or decreased. This is called as a field induced charging. The moving charged thundercloud charges neighboring clouds because of field induced charging.

QUESTION: Have you measured the cable generators power output?

ANSWER: Measurement of the output of the cable generator is not a simple process. The form out the output varies over several orders of magnitude for voltage, current and frequency and is thus well beyond the capability of all simple measuring devices.

As a consequence of this fact, I have devised a couple of indirect methods. In the first of these, I connected the a spark plug between the generator and ground so that whenever the generator voltage builds up to the arc-over value, a pulse of current is generated that can be counted.

Upon further investigation, this method can be termed no more than a rough estimate because the shape and duration of the pulse still varies over a substantial range. Analysis of the pulses will eventually allow us to use an average and thus devise a formula that will give a close approximation of the power output.

The second method is simple and if done properly, very accurate. We simply place a resistive heating element between the generator and ground and then into a bucket of water. The output is measured by the change in temperature of the water.

Neither of these methods takes into account the losses of the charging circuit, battery, or inverter.

QUESTION: Does the electret effect wear out or dissipate over time?

ANSWER: The question as to whether the electret effect wears out is not a simple one to answer. I am clearly using it in a way that is different. The fact of the matter is that, in general, the electret effect is unwanted, and engineers are normally working to prevent or eliminate it. The fact that they have to work very hard to do so is an indication that it is pretty stable. Thus, the best answer I can give is that it doesn't wear out in the short term (years).

I have learned that when the electret effect was first observed, it was produced in a relatively soft wax and if left undischarged for a long period of time, dissipated. In order to preserve an electret device in these soft mediums, they wrapped them in foil which would have continually discharged them.

This would at first seem to to contrary to what one would expect, as the continual discharge would be, in effect, dissipating the energy the electret produced. But if you look at it from the perspective of the effect that the electric field has on the material of the device itself, it is easily understood. The electric field would produce a counter force against the molecular distortion that was producing it which would tend to undo the distortion.

This means that an electret placed in a circuit which used its field at a low level would be very, very stable.

QUESTION: How can I determine if the cable wind generator will produce more power for its cost than I would have to pay the utility company?

ANSWER: Again, this can only be done over a long time period because it is dependant on wind, location, humidity and possibly other lesser undetermined factors.

QUESTION: How can I be sure that the power to a load is energy from the cable generator rather than the battery or some hidden source?

ANSWER: This is impossible because there is no difference between them. I can take a simple circuit that charges 2 capacitors in parallel from a dead battery and then connect the capacitors in series and discharges them back into the battery. Although no new energy is put into the battery some of the batteries potential chemical energy in the battery is converted and the battery will appear to be fully charged. The charging pulses from our controller (or the spark gap-coil) is closer to the double capacitor circuit than it is to a normal battery charger (DC).

QUESTION: How can the high voltage static current produced by the cable generator be altered to a useable form.

ANSWER: The only practical method I have found to date is to charge a battery. There are, however, a number of people who have received patents on high voltage electrostatic motors.

Some generators with similarities to the Testatika machine are the "Electrostatic Energy Field Power Generating System" invented by William W. Hyde (US Patent 4897592 of Jan 30 1990) is a rotor/stator variable capacitance machine capable of producing 300 KV.

Other such generators are; "Parametric Electric Machine" invented by Ferdinand Cap (US Patent 4622510 of Nov 11 1986) which has a series resonant (LCR) circuit structured into it so that it oscillates - and indeed operates AT RESONANCE to ensure a high output;

"Electrostatic Generator" invented by Dan B. Le May (et al) (US Patent 3094653 of Jun 18 1963) is a very ingenious system of variable capacitance;

the "Electrostatic Machine" by Noel Felici (US Patent 2522106 of Sep 12 1950) is a good standard which utilizes a valve rectifier; and the "Electrostatic Generator" by William S. Spencer (US Patent 1415779 of May 9 1922) is an early

rotor/stator generator which transferred its electric impulses through a transformer to produce a higher current output.

Here is another method developed by Van DeGraff himself. For Van de Graaff's transformer see US patents 3,323,069 (May 30 1967) and 3,187,208 (June 1 1965). These patents were not just for a Van de Graaff high voltage generator, they were for a special system devised by Van de Graaff long after his generator had been in use to convert static electricity into current electricity.

QUESTION: How can you charge a battery with high voltage static current?

ANSWER: Thus far, I have devised two methods. The first is simple and inexpensive but only 15-20% efficient. It simply involves breaking the current into pulses with a spark gap, and then transforming the voltage down and current up with a coil and increasing the pulse duration with a capacitor in parallel with the coil.

The second method uses a micro processor to monitor current and voltage. The impedance is then adjusted to make the charging current as smooth as possible. This circuit can also easily protect a battery from overcharging.

QUESTION: How does humidity affect the cable generators operation?

ANSWER: Ham radio operators have reported that static discharges are more common and more intense in times of high humidity or atmospheric changes resulting in rain or snow. The technical literature reports that most atmospheric charge is carried by aerosol particles of dust or water that collect 100's, 1000's and sometimes even 10's of thousands of units of charge. As they collect more and more charge, these particles migrate toward the earth's surface and constitute a major component of the fair weather current.

QUESTION: Does the cable generator attract lightning?

ANSWER:

1. Lightning is a discharge of built up electrical charges that is initiated by an electrostatic potential sufficient to rupture the dielectric (air) between the charge differential. This is facilitated by sharp pointed objects that concentrate the electric field (lightning rods and the like).

2. If the potential difference can be minimized by discharging the area below one of the plates (cold layer) and keeping the potential below the rupture point a lightning strike is significantly less likely to occur.

3. The generator system, if spread over a large area, would appear as a more positively charged area as it is "bleeding" electrons off to the ground through its load system.

4. thus the generator could well serve as a shield from a direct strike... BUT!

5. the EMP effect of a local strike could be devastating!

QUESTION: Have you tested the cable generator in other configurations such as a spiral, grid, or vertical mode?

ANSWER: The output of the cable generator is reduced by any alteration of the cable generator from a suspension 5 to 15 feet from the ground in a straight line.

QUESTION: What type of cable works best? and Has anyone measured the ion density of the atmosphere?

ANSWER: Not just yes, but a qualified yes. The average is 3000 ions/cubic meter. The figure is subject to stupendous variations of many orders of magnitude as shown by this quote from "Atmospheric Electricity in the Planetary Boundary Layer" by William A. Hoppel, R.V. Anderson and ohn C. Willet.

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For example, locally produced turbulent fluctuations in space-charge density have an effect roughly comparable in magnitude to that of changes in the global thunderstorn activity on electric-field variations within the Planetary Boundary Layer."

QUESTION: The ion density does not appear to provide enough charge to account for the current generated by the cable. Are there other sources of energy contributing to the current?

ANSWER: Both the electric field of the earth (typically 100-200 volts) and that of the cable generator produce an effect called the induction charging mechanism.

A physical process for particle charging involving the collision of pairs of particles in an ambient electric field. Electric charge induced on the particle surfaces by the ambient electric field is made available for transfer when the two particles come into contact. Subsequent differential particle motions under gravity is postulated to result in large scale charge separation. The specific role of induction charging in the electrification of thunderclouds has not been resolved.

Another effect which is unquestionably effecting the cable generator is the double layer effect described below.

On the surface of a substance, a layer of electric dipoles whose axes have an average orientation normal to the surface. Double layers may appear on interfaces of solid and gas, liquid and gas, liquid and liquid, etc. They arise whenever media with different electron affinities (forces of attraction, or work function) are contiguous, and if dipoles are available. A net potential difference, the electrokinetic potential exists across a double layer.

Still another source of atmospheric charge collected by the cable generator are Aerosol Charges. These are particles of dust or water which form dipoles and disproportionately collect one charge or the other. Where ions carry only single or double units of charge, Aerosols carry 100's to 10's of thousands of units of charge. The fact humidity is such an important factor in the output of the cable generator indicates that aerosols are an important source of the energy it collects.

QUESTION: What else would be needed besides a cable generator to provide a good alternate electrical source for a home.

ANSWER: You would need a battery or bank of batteries, a charge controller and a Grid Tied Inverter.

GOING BEYOND THE CURIOS

by Bruce A. Perreault 02/16/02

The residues of the uranium extraction process were discarded as valueless for years until the discovery of radium by Madame Curie. In her analysis of the radioactive constituents of pitchblende, the ore was first fused with sodium carbonate and then dissolved in hydrochloric acid. The metals of the lead group in the pitchblende, such as lead, copper, and bismuth, were removed by precipitation with hydrogen sulfide. The remaining metals, such as iron and zinc were also removed by precipitation with suitable agents. A radioactive element combined with bismuth was isolated. It was called "Polonium" in honor of Madame Curie's native country.

A mixture of barium and radium chlorides remained in solution. After the removal of the metals of the first two groups, the last and most tedious process of extraction was to obtain the radium chloride as free as possible from the barium chloride.

The Curie process of extraction of radium chloride from barium chloride is called "fractional crystallization." This method depended upon the fact that radium chloride is less soluble in water than barium chloride. Therefore, if a mixture of these two chlorides is dissolved in water or alcohol, the first crystals that are deposited are richer in radium than those that remain within the solution. These first crystals are the richest in radium.

The first crystals are collected, are again dissolved, allowed to crystallize and collected as before. The cycle was repeated many times until the crystals became practically free from the barium. When the purest radium chloride was obtained its intensity was about 1,500,000 times that of uranium.

* Excerpts taken from "RADIUM: and other Radio-active Elements" by L. A. Levy and H. G. Willis; Percival Marshall & Co., p. 17 - 21.

Madame Curie's process was very time consuming and the barium was never completely removed. Only small amounts of radium could be obtained, making it a very rare substance. To this day there are very small inventories of this substance, making the cost prohibitive for research and practical applications. The Curie process of extraction, being so long and so difficult, has made radium research impractical to this day.

The Perreault Process

The method that I use to extract uranium, thorium, and radium from their parent ores is the opposite of the Curie Process. Instead of evaporating the barium solution, super saturation is used to form the doublesalts. My crystallization process takes only a few minutes whereas the Curie process takes a few months. This makes possible a new era of radium research. My method also opens a doorway to producing uranium and thorium more economically, without the normally associated hazardous and wasteful by-products.

Until now, none have thought to drive off the barium with heat. This is due to the rarity and expense that has been associated with its radium salts. The final heat treatment yields a pure oxide. There is no barium that is left behind. We now can study the true nature of what has been dubbed "radium."

Great strides have been made with the discovery of my process. However, there is more work to be done. The barium that is manufactured today consists of seven non-radioactive stable

isotopes. We need to isolate each isotope. Each individual isotope needs to be used in my process and the results must be clearly documented. What I suspect is that an individual barium isotope will cling to a specific target, be it uranium, thorium, or radium. This hypothesis is based on adding the atomic weight of helium (He^4) to the weight of one of the barium isotopes. We add four units until we hit our target metal that we want to extract.

The chart below is subject to change with further research. If I am correct about this target hypothesis, then it is not too difficult to envision how these targets form in the earth. Hasn't anyone ever wondered why the U^{235} atom "splits" leaving behind a short lived radioactive isotope of barium? The chart presented here might explain the event. What other discoveries are to be found with all of the other elemental isotopes not even discussed here? Will we now be able to isolate undiscovered elements? Unfortunately, I do not have the funds to continue with this line of research. Hopefully, some university lab will carry the torch and give me credit for this original discovery.

Isotope	Percent found in Nature	Targets
Ba^{130}	0.101%	Ra^{226} U^{234} U^{238}
Ba^{132}	0.097%	Ra^{224} Th^{228} Th^{232}
Ba^{134}	2.42%	Ra^{226} U^{234} U^{238}
Ba^{135}	6.59%	Ra^{223} U^{235}
Ba^{136}	7.81%	Ra^{224} Th^{228} Th^{232}
Ba^{137}	11.32%	unknown
Ba^{138}	71.66%	Ra^{226} U^{234} U^{238}

Chart - 1

Going Beyond the Curies

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The first crystals were collected, again dissolved, allowed to re-crystallize and collected as before. The cycle was repeated many times until the crystals became practically free from the barium. When the purest radium chloride was obtained its intensity was about 1,500,000 times than uranium.

** Excerpts taken from "RADIUM: and other Radio-active Elements" by L. A. Levy and H. G. Willis; Percival Marshall & Co., from pages 17 - 21. This book is undated, but its bookplate suggests it was new in 1908.*

Madame Curie's process was very time consuming and the barium was never completely removed. Only small amounts of radium could be obtained, making it a very rare substance. To this day there are very small inventories of this substance, making the cost prohibitive for research and practical applications. The Curie process of extraction, being so long and so difficult, has made radium research impractical to this day. Besides, it is the effects of the radon gas that the radium holds that produces the effects that many seek.

Why is my process unique?

The method that I use to extract uranium, thorium, and radium from their parent ores is the opposite of the Curie Process. Instead of evaporating the barium solution, super saturation is used to form double salts. My crystallization process takes only a few minutes whereas the Curie process takes a few months. This makes possible a new era of research that requires radon gas. My method also opens a doorway to producing uranium and thorium more economically, without the normally associated hazardous and wasteful by-products.

Madame Curie was in partial error because her method to obtain radium was not due solely to barium being a carrier for the radium. In fact, my discovery proves that the barium also carries the uranium as well as the thorium!

From this day forward my discovery will be known as FRACTIONAL PRECIPITATION. This process takes what Madame Curie did with her radium extraction to a whole new level because I have observed something that she failed to see. In fact, all scientists after her also failed to see what I have observed.

Due to the expense associated with radium salt no one had thought to expose it to high temperatures. It is the heat treatment that yields an extremely finely divided pure oxide. We now can study the true nature of what has been dubbed "radium." Great strides have been made with

the discovery of my preparation. However, there is still more work to be done. The barium that is manufactured today consists of seven non-radioactive stable isotopes. Each individual isotope needs to be used in my preparation and the results must be clearly documented.

Reference

[The Perreault Process](#)

THE PERREAULT PROCESS

by Bruce A. Perreault 02/16/02

Step #1. Half-fill a one-gallon pickle jar with crushed radioactive rocks. Next cover the rock material with muriatic acid (28% hydrochloric acid). You can get this acid from your hardware store. This is used to clean bricks. Your rock material should be fully emerged in this acid solution. Let this solution stand for about twenty-four hours before proceeding to the next step.

Step #2. Pre-screen your extract into a second cleaned one-gallon pickle jar. Use pre-cut plastic door screen obtained from your local hardware store.

Step #3. Next, filter your pre-screened solution into another cleaned one-gallon pickle jar using a coffee filter. The color of this extract solution should be canary yellow to dark green. The color will depend on your ore source.

Step #4. You will now need to prepare a barium chloride (BaCl_2) solution that precipitates uranium from your extract. You will need to purchase the BaCl_2 from a chemical supplier. The precipitating solution is prepared by adding BaCl_2 crystals to a clean one-gallon pickle jar that is $\frac{1}{4}$ filled with distilled water. You will add the crystals until they no longer dissolve. More crystals will dissolve if the water is slightly heated. Slowly stir the solution with a plastic stirrer and add the crystals until you obtain a super saturated solution. Be sure to wear safety glasses and rubber gloves when working with chemicals. Another safety rule is to always add chemicals to a solution and never add water to the chemical. This is to avoid possible violent reactions. BaCl_2 and H_2O do not violently react but it is wise to wear rubber gloves and safety glasses to avoid skin and eye contact respectively. Also, work in a well ventilated area because BaCl_2 is hazardous to breathe.

Step #5. You will now slowly add the super saturated BaCl_2 solution that you prepared in step #4 to the extracted solution from steps #1 through #3. In a few moments you will begin to see clear crystals forming in the solution. You will keep on adding the agent until the crystals stop forming. Two distinctive layers of crystals will form. My hypothesis is that the lighter top layer is a mixture of U234 and U235. The heavier bottom layer is U238. That, the uranium in the solution forms a double salt with the barium. Therefore both layers are double uranium/barium salts. Further testing by an outside laboratory will need to be done to confirm this theory. *See pages 57-58 in my [platinum edition](#) for in depth analysis.

Step #6. Next, you will need to drain off the clear liquid from the top of the crystals. You can save the clear liquid for future extracts. Do not attempt to separate the lighter crystals from the heavier ones. This would violate nuclear regulations by altering the isotope percentages.

Step #7. Finally, you will need to find yourself a cast iron frying pan. Here you will put the crystals into this pan. Now, expose the crystals to intense heat using a propane plumber's torch obtained from your local hardware store. Be sure to perform this step in a well-ventilated area because the crystals bubble and release toxic barium fumes. Do not breathe these fumes! Expose the crystals to the torch flame until there is no more reaction. What you want to end up with is a grayish-brown powdery substance. Let the pan cool before removing the substance. The grayish-brown powdery substance that you have just isolated is not radioactive at this point. It begins to show activity within a few days. It will build up to full activity in about thirty days. The value of my extraction process is that it economically converts low-grade ore into a high-grade ore that evolves radon gas. The material that we end up with from this process can be found in the natural World. This means that the material is exempt from nuclear regulation. If you can find an ore source that has a content of close to 80% uranium or better then my extraction method may not be necessary if you are using it for research purposes. The true value of my process is that it yields a high purity radon emissive oxide that can be used as a natural and economical fuel source to generate electrical power.

Reference

[Going Beyond The Curies](#)

The Bumpy Road of an Inventor

My scientific research began when I taught myself to read electronic symbols sometime around the year 1976. I remember gathering junked black and white vacuum tube type television sets and other discarded electronic consumer products. This was done alongside my paper delivery routes that spanned about a five year period.

It was between the years 1980 and 1995 when I was like a kid with a new chemistry set. I tried just about everything that you could think of in the way of building electronic circuits. I just about blew up my place of residence in carrying out chemical experiments. I also got my hands on all the books that I could find about Nikola Tesla. I learned everything that I could about what had already been known to science. This included the extraction of radioactive material from its ores, developing my own processes as I went along.

Sometime in the year 1995 I built a device that powered two 100-watt light bulbs for about seven months, intermittently. I remember it being powered up continuously for just about a one-week stretch. One day I turned on the device and it was dead cold and would not give even the faintest glow. Around this time I got a call from Steven Elswick, then the President of the "International Tesla Society." He had called to ask me to do a lecture about the device. I told him that I did not want to expose my research to the public. My prototype was not even up and running. He then convinced me that it would be the best way to keep my work safe. He said that the society Vice-President J.W. McGinnis would be calling me to promote the conference on the radio.

Next came the radio talk shows hosted by J.W. McGinnis. On the very first show he announces that I had plans for sale that fully explained my device. The very next week J.W. calls me saying that people were calling him for orders. I had no plans at that point to sell and I never told him that I did! Needless to say, I scrambled and extracted as much information that I could from my computer and from the relative information that I had collected over the years. I managed to put together a folder that included a diagram of a design that I had not yet tested. It was to utilize chlorine gas in place of the radioactive material that I was using in my working device. It was based on the working tube that powered my prototype. Later, this tube was named "ion valve." In my original design I used radium scraped from old clock dials but I did not find this appropriate at the time to tell this to the do-it-yourself researcher. Only a small handful of people could get the experiment to work and very little power was obtained from it. This is how I met Calvin Bahlmann my mechanical engineer. He was one of the people who was successful with the chlorine substitute. My own chlorine tube setup had its share of problems when I finally got around to testing the new design. It did work but the chlorine gas was so corrosive that the effect only lasted for a few short hours at best using a freshly built tube.

Then came my first conference in 1996 and I still could not get the 200-watt light bulb device to work again. I really didn't know back then precisely why it worked in the first place. J.W. hyped up the conference to the ends of the Earth. He claimed that I had a unit ready to be sold that would get people off from the grid. I did not tell him this. However, I did go along with anything that he said in fear that if I didn't he would cancel my flight tickets. Back then I was as poor as a church mouse. I know now that this was not the best choice that I have made in my life. It had the effect of damaging my credibility. All I really wanted to do was to meet people who were into the research that I was into. Ordinary people in my day to day social circles just did not understand what I was doing. Finally, I was going to meet people that could relate to me. I was proud of my research. I wanted the world to know that there was a totally new source of power waiting to be harnessed.

From the above account you can see that I have been involved in alternative research from about 1995 to 2001. This is a very short term considering what I have accomplished within these six years. It has only been in the past year that I have come to understand how my original device produced energy. I have said little about what I have gleaned in this past year. The primary reason is that I have learned there are many people who are trying to destroy my work for different reasons. Knowing this I often find myself asking other researchers questions that I know the answers to. It is an unconscious self-defense mechanism. Regardless, all the answers have been posted to my website and through my lectures. If the heart of a researcher is in the right place then they will earn their answers by doing hands on experimentation.

Presently, I am making good progress from week to week. These next few months I will be working on perfecting my fuel cell concept for the marketplace. Hopefully, by the October inventor's weekend conference I will be able to announce my first product. With the funds made from this product the commercial development of radiant energy could have a fighting chance.

- Bruce A. Perreault

Radiant Energy Defined

Professor Langley showed that out of the total amount of radiation coming from the Sun, only 19% is represented by the visible portion of the spectrum. Is there only one kind of energy radiated from the sun—light, heat and chemical effects depend entirely upon the state or condition which radiant energy may happen to fall on matter?

Professor Langley wrote that up until 1872 it was almost universally believed that there were three different kinds of **entities**—actinic, luminous and thermal, represented in the spectrum. There is only one radiant energy that appears to us as 'actinic,' or 'luminous,'

or 'thermal' radiation, according to the way we observe it. Heat and light, therefore, can not be things in themselves, but separate sensations to our bodily sensors. They are merely effects of this mysterious thing called "radiant energy."

The Italian physicist Melloni stated that, "light is merely a series of caloric indications sensible to the organs of sight, or vice versa, the radiations of obscure heat are veritable invisible radiations of light." Melloni wrote this in 1843, but it was not adopted until Langley by his elaborate researches, more refined and complex, proved it. The great physicists of society then adopted the doctrine of one radiant energy.

Only a few researchers know the immediate effect of radiant energy, electromagnetic. The results of two centuries of observation all point to this conclusion. When a mighty tongue of white-hot matter darts across the abyss of a large spot or cavern on the Sun, the equilibrium of the Earth's magnetic field is disturbed and the effect is a magnetic storm. The needles of magnetographs throughout the world shiver, tremble and oscillate. The vibrations take place on opposite sides of our planet, the impulse passes from the Sun to the side nearest of the Earth and then to the most distant side, whether through or around the Planet's surface.

After centuries of investigation from Gilbert to Tesla, this most wonderful research still holds admiration and mystery for all that study this vast science, electrodynamics. Power is cut out of the seemingly emptiness of space, and the hurrying waves are caught and chained to servitude in artificial light and electric appliances. The Sun being electromagnetic emits waves that carry power, beat and surge against the Earth. A magnetic field is space that surrounds a magnet. This space might be filled with air, wood, stone, glass, or might be a vacuum, but the waves are not quenched. They flow through all these things. A freely suspended magnet in a magnetic field will move, and the Earth's surface is surrounded by a magnetic field, that is acted upon by the Sun's magnetic field. Suspend a sewing needle by a silk fiber in the Earth's magnetic field and it will come to rest parallel to the field's north and south poles. Now, let this field become disturbed—that is, become stronger or weaker and the needle will move. This is a magnetic storm. When a gas jet is hurled across a spot on the Sun the disturbance reaches the Earth in the same time that light does, so radiance traveling at 186,000 miles per second, reaching the Earth is in eight minutes and nineteen seconds.

The most memorable magnetic storm occurred on November 17, 1882. This was one of the most violent recorded. The daily press was burdened with accounts of widespread magnetic disturbance, in some places telegraphic communication was suspended. The turbulence filled that great quadrilateral from New York to Yankton, Nashville and Winnipeg. In Milwaukee the carbons in the electric lamps were lighted, rendered incandescent by currents of electricity flowing on the wires. At other locations, switchboards in telegraph offices were set on fire and sending keys were melted, while electric balls were seen hovering on the telegraph in Nebraska.

The Earth's aurora holds the key to harnessing the Sun's daily pulsation. An aurora is the visible effect of obscure undulations from the Sun, as they come dashing on the

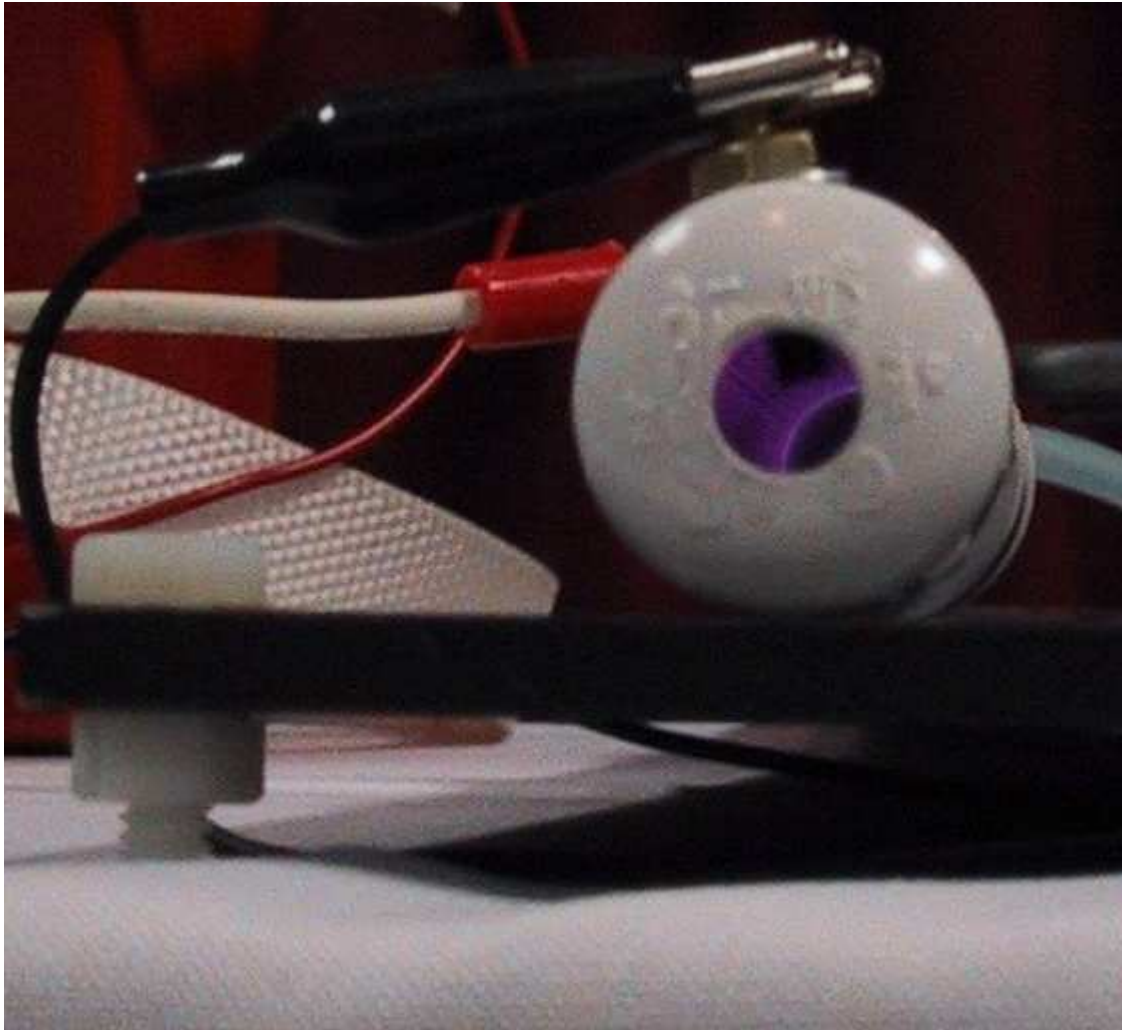
Earth with a speed of 186,000 miles per second. In a six-month winter, say at the North Pole of the Earth, the Sun is far south of the equator, and none of its rays can shine on the Earth's northern pole. However, the aurora is very bright. It displays many colors, and these flash and glow with rapid variations. The light, although caused by the Sun, does not come direct. It is caused by the turbulence set up in the Earth's magnetic field by electromagnetic upheaval on the Sun. The field of the Earth is "tuned" with the Sun's field, as was the coherers in the days of wireless telegraphy and telephony. The aurora is known to be electrical, for magnets and compass needles on ships are always affected. Could these coherers of the days of old teach us something new?

No magnet can be placed near a "current" of electricity, or a static charge without making an oscillation. Every oscillation sends out a wave, like a stone falling in water. An electromagnetic wave from the Sun disturbs the Earth's magnetic field in the same way that an induction coil used in wireless telegraphy does. The Earth and coherer are both doing the same thing with the same kind of electromagnetic waves. The coherer in a distant receiving station will react to natural electromagnetic wave fronts from the Sun. It will likewise react to the artificial wave fronts coming from the induction coil. The electromagnetic wave makes the loose particles of metal between the knobs in the glass tube coherer form a wire for each dot and dash, and thus switch in a local battery.

Making a device "oscillate with the oscillations of the Universe" may not be too far off the mark in obtaining energy. Wouldn't it be more correct to say, "make a device oscillate with the oscillations of the SUN and EARTH?"

PERREAULT ROTARY ION DISCHARGE TUBE

Originally Posted on August 1rst, 2001 - updated 09/24/01



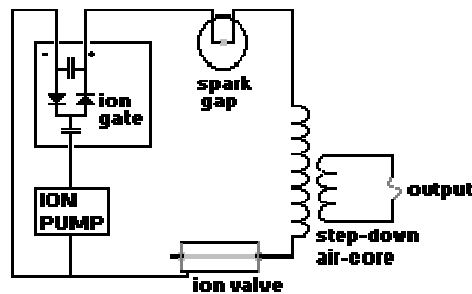
The component shown here is a high voltage, high efficiency, rotary type discharger. Its unique design takes one step beyond Edwin Gray's conversion tube. The secondary spark gap is eliminated using Perreault's construction design. No added timing components are required other than the minute air flow that this component uses. As a result, there is no wasted energy to send back to the power source. Perreault says that the air-pump can also be eliminated by using a low-level alpha emitter. However, the advanced design that utilizes radiant matter will not reach the general public until a government exemption can be secured.

The rotary ion discharge (RID) tube can be used in existing technologies. Some examples are; replacement of high powered radio vacuum tubes, amplifiers, inverters, induction heating, and high frequency lighting. Once engineers realize what this component will do it could find practical use in several areas.

Proof of Concept Radiant Energy Circuit

Energy from the Dissociation of Matter

It is no secret that electrical current can be obtained by utilizing a couple of dissimilar metals. You can plunge a dissimilar couple into an electrolyte to obtain electrical current. This is called electrochemical energy. You can heat the junction of a pair of dissimilar wires that have been twisted together at their ends to generate electrical potential. This is called "thermoelectricity." However, what is not generally known is that you can also generate electrical current with plasma or a glow discharge as your medium between two dissimilar electrodes. This effect is the result of "triboelectricity." All these forms of electrical energy are caused by the dissociation of matter. This dissociation of matter is called "radioactivity" by the scientific world. All electrical phenomenon is the result of this radioactive decay.



Proof of Concept Circuit - Figure 3

- The "ion gate" in this circuit uses two .001mfd/20kvdc capacitors and two 20kv, 100-nanosecond diodes.
- There are varieties of electronic circuits that can be built to serve as ion pumps. The circuit used was designed by Robert E. Iannini and can be found on my website at: <http://www.nuenergy.org/plasma.htm>
- The ion valve in the above proof of concept prototype consists of a standard aluminum electrical conduit that is six inches in length. Its center wire is a 60μmm. diameter tungsten wire secured with two half-inch PVC end caps.

Preliminary Ion Valve Validation

1. The output at the ion gate reads around 5KVDC using an analog high voltage test probe without the ion-regulator valve in the circuit. With the ion valve in circuit a 20KVDC reading is obtained with at least a 25% reduction in current being drawn to power the circuit.
2. The apparent energy gain in the above ion valve appears from the fact that when negative ions produced at the surface of the inner cylinder bombard the center wire secondary negative ions are generated. The negative ions, when accelerated with sufficient voltage are capable of dislodging (dissociation) other negatively charged ions by from the target against which they impinge upon; and a significant result is that the

number of secondary ions may be several times greater than the number of primary ions. This has the effect of reducing power drain from the power supply. A.W. Hull observed this effect in a thermionic tube – HULL, Proc. I.R.E., 6, 5, 1918.

3. The ion valve can be used as a quenching (regulator) device that can provide clean sinusoidal currents to the output current.

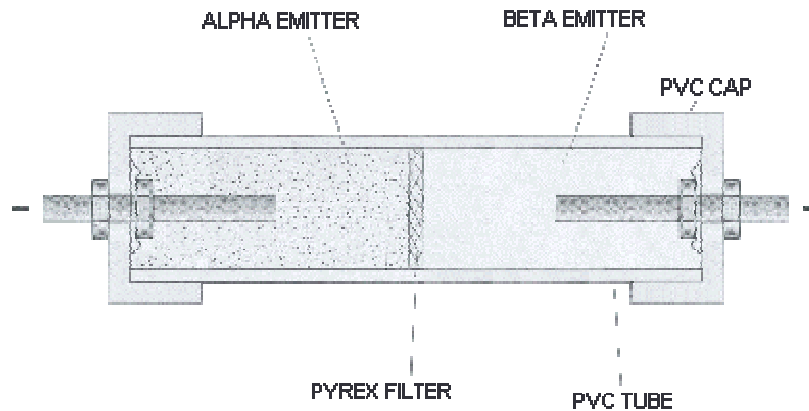
Radiant Energy Tube Construction

My first generation prototype radiant energy conversion tube contained trace amounts of radium scraped from old clock dials. This device powered two 100-watt light bulbs for about seven months, intermittently. I remember it being powered up continuously for just about a one-week stretch. One day I turned on the device and it was dead cold and would not give even the faintest glow.

The second generation prototype was only minutely radioactive. My knowledge with the concept was limited when it was conceived by me in the fall of 1995. This allowed limited results. This second prototype contained fine sand that was left behind from my final radioactive ore screenings and was very crude.

A third generation prototype was designed as a proof of concept device that the average experimenter could build. It did not call for the introduction of radioactive material. Because of this the output was extremely low. It relied on the ambient background radiation. The power from this third prototype appears to be mostly from galvanic action. It is therefore difficult to prove radiant energy conversion with this design.

In my original design I used radium scraped from old clock dials but I did not find this appropriate at the time to tell this to the do-it-yourself researcher. Only a small handful of people could get the experiment to work and very little power was obtained from it. This third generation proof of concept design did a terrible disservice to the credibility of my research. Only a small handful of people could get this design to work. This is how I met Calvin Bahlmann my mechanical engineer. He was one of the people who was successful with the chlorine substitute. He could only obtain a small amount of energy but it did prove the concept. Mr. Bahlmann is now experimenting with a semi conductive formulation of his own design. He has constructed "e-wire (electric wire)" that was designed for nano circuitry. Mr. Bahlmann is also experimenting with cell stacks for standard circuits.



Fourth Generation Prototype

I now have a solid grasp on the fundamental concept that has enabled me to work towards a higher wattage radiant energy valve. My fourth generation prototype shown in the diagram above utilizes finely powdered semi conductive material that replaces the sand that was used in the second generation device. I now know the reason why my first device stopped functioning. It was because the electrodes became chemically corroded. This fourth generation prototype contains an electrolyte that does not chemically react with the electrodes. The electrolyte only serves to provide the vehicle for the exchange of ions.

In my fifth generation prototype a small amount of low activity radon emissive substance is introduced to serve as the fuel source. I have been running some tests that is leading up to a sixth generation prototype that will use non-radioactive substances that emit electrons after a short exposure to a specific radio frequency. This prototype will be fundamentally based on Great Britain Patent No. 763,062. This patent claims that more energy is generated than what is used to excite its main component.

I have also just recently discovered substances that emit low eV electrons. This means that a device using such materials will not create a radiation hazard. No shielding will be required for this seventh generation prototype.

The fundamental concept to convert radioactive decay into electrical current was shared with my peers back in 1995. It received a violent reaction from people (detractors) who could not understand its basic principles. These people prodded and probed me until they picked my brain dry. Ever since, they have taken my words and twisted them to their own agenda's. They have even accused me of plagiarizing the work of other people. Yes, it is true that I have referenced related work. However, my findings are unique and I deserve credit for my original discoveries. It is no wonder that there are inventor's or relatives of dead inventor's who can not trust anyone with their inventions that could better our human condition. They have seen how the lives of other innovator's have been ripped apart by these shameless detractors. Only when the violent reactions cease will we all see great wonders of scientific innovations come out of their hiding places. _Bruce A. Perreault

Progress Update - December 8th, 2002

As I stated at Inventor's Weekend 2002 I have been working on a tube design that is both a transmitting energy generator and energy receiving tube all rolled into one. This was to eliminate the antenna and ground connections making the invention portable. Thinking one step further, I don't see why a solid-state device couldn't be built. Essentially, my second to fourth generation prototypes seem to support a solid-state design.

In viewing [United States Patent No. 2,876,368](#) last week, I found the thread that I have missed during my researches. You may not know this but an electret with a permanent electric field draws charged particles to itself like a magnet draws iron to itself. This patent clearly describes a method that will move the electric field of an electret without a prime mover. This patent points to a practical and almost free source of energy that has been with us for over fifty years. The shortcoming of this invention is that a radioisotope is required to trigger the electric field into oscillation. Radioisotopes were cost prohibitive in 1953 at the time this patent issued. This appears to be the sticking point to this day. Tritium could be used giving the nuclear electret battery a half-life of around 12.3 years. Here is the problem with using tritium:

"The United States has not produced tritium since 1988, when the Department of Energy's (DOE's) production facility at the Savannah River site in South Carolina closed. Immediate tritium needs are being met by recycling tritium from dismantled U.S. nuclear weapons. Indeed. The US is currently looking at various options for the domestic production of tritium."
<http://www.theregister.co.uk/content/28/28206.html>

Using the knowledge that I have gleaned through the course of my researches, I believe that a safe and practical solid-state electret battery can be built. This is now my prime focus. I will be using lead-210 as my dopant in the new prototypes. It is almost a pure beta (electron) emitter that has a half-life of around 22.3 years. This is almost twice as long as tritium. This means that it is feasible to build a battery that will put out power for several years with little maintenance.

Lead-210 is even harder to obtain than tritium. However, with my priority process this isotope could be generated in pure form from radon gas. Yes, radon is a rare gas. This is no problem because this gas can be obtained from uranium ore in quantity using my process. The added beauty in using my process is that the ore can be powered and directly formed into an electret. The electret formed with the ore can remain inactive until activated at a later date. These are **blind isotopes** until activated. Can you think of a better name for them?

I will get right to work at the task of building the world's first lead-210 activated electret batteries. I am fully confident that Proof of Concept batteries will be available for demonstration for our next Inventor's Weekend event.

Last updated on December 22nd, 2002 at 11:05 AM

I am no longer pursuing the nuclear battery route - November 7th, 2005

New Generation of Radiant Energy Devices



Bruce Perreault

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Reprinted from:
Exotic Research Report (V2N2, Apr/May/Jun 1998)



Nikola Tesla's Viewpoint

Brooklyn Eagle
(July 10, 1932)

I have harnessed the cosmic rays and caused them to operate a motive device. Cosmic ray investigation is a subject that is very close to me. I was the first to discover these rays and I naturally feel toward them as I would toward my own flesh and blood. I have advanced a theory of the cosmic rays and at every step of my investigations I have found it completely justified.

The attractive features of the cosmic rays is their constancy. They shower down on us throughout the whole 24 hours, and if a plant is developed to use their power it will not require devices for storing energy as would be necessary with devices using wind, tide or sunlight.

Historical Background

The quest for radiant energy is not new. In fact, the *Father of the 20th Century... Nikola Tesla* experimented quite intensively with radiant energy and even devised a device to capture *cosmic rays*. Later, Tesla's work was greatly expanded by the research and inventions of *T. Henry Moray*.

T. Henry Moray not only developed a super radiant energy receiver, but a strong case could be made that he was the original inventor of the transistor. The Moray Valve - patented in 1932 - is a semiconductive device that regulated voltage and current flows. The Moray Valve was a germanium based device whereas the transistor was silicon based (*silicon* is similar but *less* efficient than germanium for switching electrical currents).

Moray's first cousin, Fletcher, knew all about the valve since 1925 when Moray developed it. Coincidentally Fletcher worked for Bell Labs. It should be no surprise that Bell Labs was looking at semiconductive materials for switching currents.

Concurrently with the development of radiant energy receivers was attempts to artificially induce radiant energy. Much of this work was done by Lord Rutherford. In 1932 the first artificially accelerated decay transformation took place at the Cavendish Laboratory using the unstable metal.... lithium.

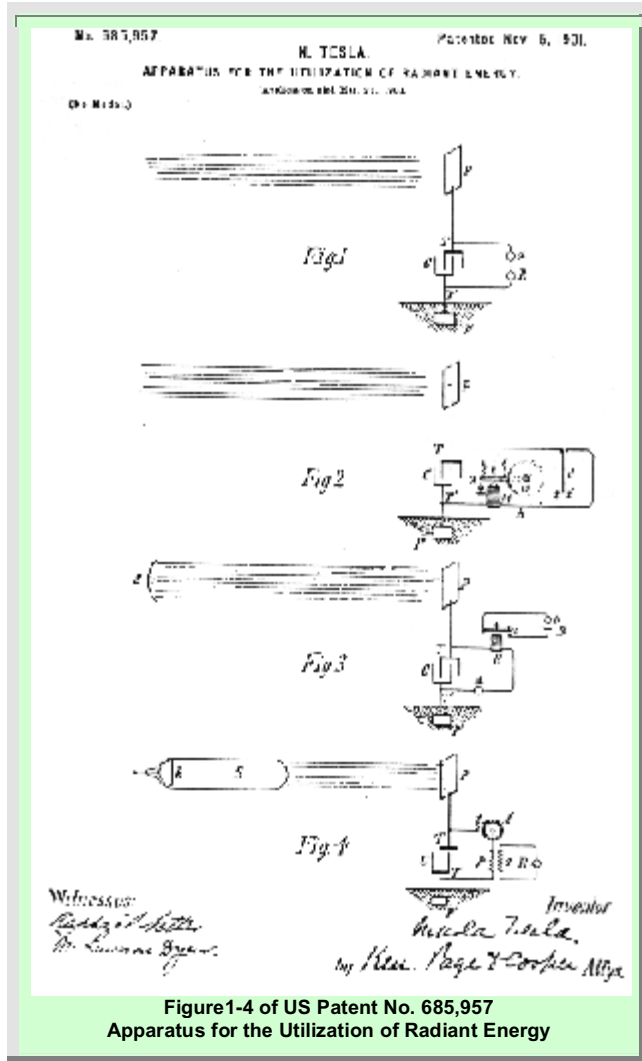
More recently, I published a brief article in the *Extraordinary Science* (Oct/Nov/Dec1994) in the "Mail Call" column that "Cold Fusion" was a result of a special type of hydrogen reaction due to certain catalysts. I also submitted a paper on August 16th, 1994 stating that there was a thermoelectric effect (or "Peltier effect") involved.

At the Tesla conference in April of this year I announced a totally unsuspected source of energy and how to harness it. More information will be released at this year's Exotic Research conference in Phoenix, AZ.

My conference presentations and published writings point to the fact that I have rediscovered T.H. Moray's suppressed technology. I will attempt to make clear in the coming days that an unconventional process to cause a clean nuclear reaction can be created and harnessed. I will soon show that a truly unique nuclear reaction can be converted to electrical power through alpha fusion and thermoelectric effects. These two discoveries are revolutionary to both nuclear fusion reactor and energy conversion technologies of present day science, respectively.

All of my investigations seem to point to the conclusion that they are small particles, each carrying so small a charge that we are justified in calling them neutrons. They move with great velocity, exceeding that of light.

More than 25 years ago I began my efforts to harness the cosmic rays and I can now state that I have succeeded in operating a motive device by means of them. I will tell you in the most general way, the cosmic ray ionizes the air, setting free many charges ions and electrons. These charges are captured in a condenser which is made to discharge through the circuit of the motor. I have hopes of building my motor on a large scale, but circumstances have not been favorable to carrying out my plan.



Nikola Tesla's Radiant Energy System

Nikola Tesla was one of the most prolific inventors in the world's history. His endeavors ranged from energy production to medical devices. In 1901 Nikola Tesla was one the first to identify "radiant energy." Tesla said that the source of this energy is our Sun. He concluded that the Sun emits small particles, each carrying so small of a charge, that they move with great velocity, exceeding that of light. Tesla further stated that these particles are the neutron particles. Tesla believed that these neutron particles were responsible for all radioactive reactions. Radiant matter is in tune with these neutron particles. Radiant matter is simply a re-transmitter of energy from one state to another.

Figure 1 of US Patent No. 685,957 is a diagram of Tesla's first radiant energy receiver. It stored static electricity obtained from the air and converted it to a usable form. Tesla's invention is a simple version of T. H. Moray's device. Moray's device used a unique rectifier (RE-valve) to efficiently capture the static electricity from the surrounding air.

Moray's *oscillator tubes* utilized this high-voltage energy to generate an internal *secondary* "cold" nuclear reaction.

Stick an antenna up in the air-the higher the better-and wire it to one side of a capacitor. Connect the other side of the capacitor to a good earth ground. The potential difference between air and earth will then charge the capacitor. By connecting across the capacitor some sort of switching device so that the capacitor can be discharged at periodic intervals, you will have an oscillating electric output. Moray expanded on Tesla's idea to use high-voltage to create ionic oscillation.

Tesla was fascinated by radiant energy and its free-energy possibilities. He called the Crooke's radiometer, a device which has vanes that spin in a vacuum when exposed to radiant energy "a beautiful invention." He believed that it would become possible to harness energy directly by "connecting to the very wheel work of nature." On his 76th birthday at his yearly ritual press conference, Tesla announced a "cosmic-ray motor" when asked if it was more powerful than the Crooke's radiometer, he answered, "thousands of times more powerful."

The **New York American** (November 1st, 1933 issue) announced Tesla's invention in an article:

Device to Harness Cosmic Energy Claimed by Tesla

...This new power for the driving of the world's machinery will be derived from the energy which operates the universe, the cosmic energy, whose central source for the earth is the sun and which is everywhere present in unlimited quantities....

Tesla's free-energy concept was patented in 1901 as an "Apparatus for the Utilization of Radiant Energy." The patent refers to "the sun, as well as other sources of radiant energy, like cosmic rays," The fact that the device works at night is explained in terms of the night-time availability of cosmic rays. Tesla also refers to the ground as "a vast reservoir of negative electricity."

**Tesla 'Harnesses'
Cosmic Energy**

**Inventor announces discovery to
displace fuel in driving machinery.
Calls Sun main source.**

A principle by which power for driving machinery of the world may be developed from the cosmic energy which operates the universe, has been discovered by Nikola Tesla, noted physicist and inventor of scientific devices, he announced today.

This principle, which taps a source of power described as "everywhere present in unlimited quantities" and which may be transmitted by wire or wireless from central plants to any part of the globe, will eliminate the need of coal, oil, gas or any other of the common fuels, he said. Dr. Tesla in a statement today at his hotel indicated the time was not far

How Tesla's Radiant Energy Receiver Worked

From the electric potential that exists between the elevated plate (plus) and the ground (minus), energy builds up in the capacitor, and, after "a suitable time interval," the accumulated energy will "manifest itself in a powerful discharge" that can do work. The capacitor, says Tesla, should be "of considerable electrostatic capacity," and its dielectric made of "the best quality mica, for it has to withstand potentials that could rupture a weaker dielectric."

Tesla gives various options for the switching device. One is a rotary switch that resembles a Tesla circuit controller, another is an electrostatic device consisting of two very light, membranous conductors suspended in a vacuum. These sense the energy build-up in the capacitor—one charging positive, the other negative—and, at a certain charge level, are attracted, touch, and thus fire the capacitor. Tesla also mentions another switching device consisting of a minute air gap or weak dielectric film that breaks down suddenly when a certain potential is reached.

Tesla received two patents for this radiant energy device:

US Patent No 685,957 - Apparatus for the Utilization of Radiant Energy

US Patent No 685,958 - Method of Utilizing Radiant Energy

Both patents were filed on March 21, 1901 and granted November 5, 1901. In these patents he explains:

The sun, as well as other sources of radiant energy throw off minute particles of matter positively electrified, which, impinging upon the upper plate, communicate continuously an electrical charge to the same. The opposite terminal of the condenser being connected to ground, which may be considered as a vast reservoir of negative electricity, a feeble current flows continuously into the condenser and inasmuch as the particles are ...charged to a very high potential, this charging of the condenser may continue, as I have actually observed, almost indefinitely, even to the point of rupturing the dielectric.

The Earth's Electrostatic Charge

Tesla's intent was to condense the energy trapped between the earth and its upper atmosphere and to transform it into an electric current. He pictured the sun as an immense ball of electricity, positively charged with a potential of some 200 billion volts. The earth, on the other hand, is charged with negative electricity. The tremendous electrical force between these two bodies constituted, at least in part, what he called cosmic energy. It varied from night to day and from season to season but it is always present.

distant when the principle would be ready for practical commercial development. Asked whether the sudden introduction of his principle would upset the present economic system, Dr. Tesla replied, "It is badly upset already." He added that now as never before was the time ripe for the development of new resources.

While in its present form, the theory calls for the development of energy in central plants requiring vast machinery. Dr. Tesla said he might be able to work out a plan for its use by individuals. The central source of cosmic energy for the earth is the Sun, Dr. Tesla said, but "night will not interrupt the flow of new power supply."

--from *Philadelphia Public Ledger*, November 2, 1933

The positive particles are stopped at the ionosphere and between it and the negative charges in the ground, a distance of 60 miles, there is a large difference of voltage - something on the order of 360,000 volts. With the gases of the atmosphere acting as an insulator between these two opposite stores of electrical charges, the region between the ground and the edge of space traps a great deal of energy. Despite the large size of the planet, it is electrically like a capacitor which keeps positive and negative charges apart by using the air as a non-conducting material as an insulator.

It has been calculated that the earth's ambient state contains 1.6×10^{11} joules or 4.5 megawatt-hours of electrical energy. In order to utilize this high-voltage energy you must do two things - make an energy sink and then devise a way of making the "sink" oscillate.

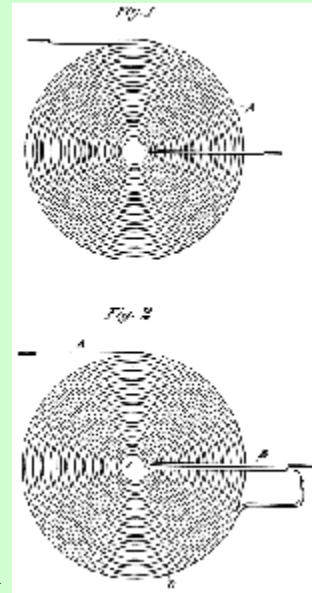
Zero Point Energy?

Such a "sink" has to be at a lower energy state than the surrounding medium and, for the energy to continually flow into it, the energy must be continually pumped out of it. Additionally, this "sink" must maintain a lower energy state while meeting the power requirements of the load attached to it. Electrical energy-watt-seconds-is a product of volts x amps x seconds. Because the period of oscillation does not change, either voltage or current has to be the variable in this system's energy equation. Bifilar wound coils are used in the system because a bifilar wound coil maximizes the voltage difference between its turns, the current is then minimized.

A coil in our system, then, will be set into oscillation at its resonant frequency by an external power source. During the "zero-point" portion of its cycle the coil will appear as one plate of a capacitor. As the voltage across the coil increases, the amount of charge it can siphon will increase. The energy that is taken into the coil through the small energy window (zero-point), call it what you will, appears to be the key to the success of this system.

**United States
Patent Number
512,340
COIL FOR
ELECTROMAGNETS
Nikola Tesla,
Inventor**

Figure 1 is a standard pancake coil (many Tesla coil builders are familiar with this style). Figure 2 is a **bifilar coil**, the crux of the patent is where Tesla winds a dual wire and then connects the ends in a series (an interesting experiment for coil builders).



Tesla explains that a standard coil of 1000 turns with a potential of 100 volts across it will have a difference of .1 volt between turns. A similar **bifilar coil** will have a potential of 50 volts between turns. In that the stored energy is a function of the square of the voltages, the energy in the bifilar will be $50^2 / .1^2 = 2500 / .01 = 250,000$ times greater than the standard coil!

It is at this zero-point where energy is condensed into positive and negative components of current. When energy escapes from the "sink" the magnetic field collapses and a strong magnetic quake is created in it's wake. A properly tuned system can capture and convert radiant energy in such a prescribed arrangement.

Direct Conversion of the Atom's Energy

The radiant energy system is a self-oscillating capacitive system. Once it is set into oscillation, very little power is expended in keeping it going. Because it is an electrostatic oscillating system, only a small amount of charge moves through the system per cycle (low current). If the charge is used at a low rate, the energy stored in the system will be turned into heat at a slow rate enabling the oscillations to continue for a long period of time.

Tesla's US Patent No. 512,340- "Coil for Electromagnets"- is a very special coil design because, unlike an ordinary coil made by turning wire on a tube form, this one uses two wires laid next to each other on a form but with the end of the first one connected to the beginning of the second one. In this patent Tesla explains that the double coil will store many times the energy of a conventional coil.

Measurements of two coils of the same size and with the same number of turns, one with a single, the other with a bifilar winding, show differences in voltage gain. These bifilar coils can be explained solely on the basis of their electrical activity. A bifilar coil is capable of holding more charge than a single wound coil. When operated at resonance, the distributed capacitance of the bifilar coil is able to overcome the counter electromotive force (emf) normal to coils - inductive reactance.

Because of the electrical activity, a bifilar coil does not work against itself in the form of a counter - emf, the potential across the coil quickly builds to a high value. The difference between the turns becomes great enough that the energy is practically all potential, at this point, the system becomes an electrostatic oscillator.

Minimal work is done in my radiant energy system due to the absence of wasted displacement currents. As small heat losses occur, oscillations are maintained by surplus charge generated by atomic catalytic reactions, energy is siphoned from the kinetic moments of these charges.

Very low energy expenditure allows power delivery to an electrical load over an extended time period without an external fuel supply. After an initial input of energy from an outside source, the radiant energy electrical generator will operate as a very efficient device.

First Artificial Accelerated Decay Transformation

On April 28, 1932, at a meeting of the Royal Society, Lord Rutherford announced that two of the workers in Cavendish Laboratory, J.D. Cockcroft and E. T. S. Walton, had

successfully demonstrated the release of excess radioactive energy from lithium elements and other light elements by protons entirely artificially generated by high electric potentials. The most surprising feature at the time was the relatively low voltage necessary. The generator installed had a peak voltage of about 750,000 volts, but artificial decay started at only one-sixth of this, 125,000 volts.

Indeed, later Rutherford, using deuterons (atoms of the hydrogen isotope of mass 2) instead of protons, pushed back the starting point to some 20,000 to 40,000 volts, which is well within the range of quite a small x-ray induction coil. The protons were generated in a long vertical hydrogen vacuum-tube, specially designed to withstand the high voltage, and with a window of the thinnest possible mica leaf at the end, through which they emerged to impinge on the target element being bombarded. The protons were estimated to have a velocity of one-thirtieth of that of light, and their range in air was only 1 cm. The bombarded substance was examined by the scintillations produced in zinc sulfide, through a screen thick enough to absorb the protons.

At 125,000 volts, bright scintillations, in every respect identical with those produced by the fastest normal alpha-rays of radioactive thorium, began to appear, and, as the voltage was increased, their number rapidly increased, but not their range or the brightness of the scintillations. At 400,000 volts, several hundred a minute were counted.

Radioactive Lithium Decay is Clean!

The proton, however, has only one-sixtieth of the kinetic energy of the alpha-particles produced. This showed that they merely pulled the trigger, and released energy could be produced from radioactive lithium. The scintillations were proved to be due to veritable alpha-particles of some 8.76Mev, which is practically the same as those of the radioactive thorium range 8.6 cm. in air, and somewhat faster than those from radium of 7 cm.

Though the term "fission" has since come into special use to denote the new type of disintegration which radioactive uranium and radioactive thorium undergo in certain circumstances, this artificial disintegration of isotopic lithium is pure and simple.

It is said that lithium of mass number 7 reacts with a proton of mass number one, momentarily to produce the unstable beryllium isotope of mass number 8, which splits into equal parts, giving two alpha-particles or helium elements. In this "fission" to "fusion" reaction, from 7 grams of lithium and one of hydrogen to 8 grams of helium, approximately, there is a loss of 0.0181 gram, equivalent to 17.1 Mev, due to the Aston fraction of hydrogen and lithium being so much greater than that of helium. This is in good accord with each of the two elements that results from the fission reaction, each split particles receiving some 8.76 Mev.

It is also said, some of the unstable beryllium elements produced from lithium, emit, during the fission cycle, a gamma-photon of no less than 17 Mev, which at the time was an unprecedented energy for these rays, the subsequent fission into two helium elements then occurring with relatively little energy. By using deuterons instead of protons, the

lithium isotope of mass 6, acts much like that of mass 7 with protons, but the energy released is even greater, namely, 22 Mev.

Energy Evolved from Isotopic *Lithium*

It is noteworthy that about 43 Mev is released per fission to fusion reaction. This may seem small compared to the 200 Mev released in the fission of a heavy isotope like uranium-235.

However, the released energy per mass of fuel is actually greater for the lithium reaction. Weight for weight, 43 Mev energy is some ten times the given out in the complete disintegration of radioactive uranium and thorium into lead and helium, in their natural radioactive change, and is twice as great as in their artificial decay in a nuclear reactor; but radioactive thorium less than 1 per cent of its mass undergoes accelerated decay ("fission").

The bottom line here is that the disintegration of isotopic lithium by either protons or deuterons, affords, weight for weight, more energy than any other possible nuclear change. Additionally, the disintegration of radioactive uranium or radioactive thorium produces deadly radioisotopic toxic by-products that nobody seems to know where to properly dispose of them. The disintegration of isotopic lithium yields pure helium as its by-product, this gas finds further use in other areas.

Lithium is the lightest metal, in fact, the lightest of all solids. It is actually lighter than cork and will float on water or oil. Whereas a cubic foot of aluminum weighs 169 pounds, a cubic foot of lithium weighs 33 pounds. Lithium is a very unstable metal and will easily combine with gases, especially tritium. Weight for weight radioactive lithium will yield two times more energy than radioactive uranium.

Peltier Effect Enhancement

When an electrical source is used to send current through two dissimilar metals, called a thermocouple, heat can be absorbed at the colder junction and given off at the hotter junction. This is called the "Peltier effect." It can be used either for cooling with the cold junction or for producing heat at the hot junction.

The heat energy given off at the hot junction is equal to the total heat absorbed by the cold junction along with all of the electric energy supplied to it. Thus, more heat energy is given off than the total electric energy supplied to the device.

In principle, many thermocouples in series, with cold junctions outside and hot junctions inside, could be used to pump heat from the lower temperatures outside to higher temperatures inside a building, theoretically the heat energy supplied could be greater than the electric energy supplied.

Unfortunately the effect is so small in most materials that too many couples are required for practical applications. Furthermore, the conduction of heat from hot to cold junctions severely limits the applicability of the Peltier effect, especially with metallic junctions. The discovery of thermoelectric semi-conductive materials has resulted in materials with sufficiently large Peltier effects for a number of practical applications. Recent research in what is now being called "cold fusion" hints to a way to produce greater levels of Peltier effects.

In the cold fusion cell the electrolyte serves as a junction between two dissimilar electrical conductors. Thus, the electrolyte becomes hotter than the electrical energy supplied. This heat is pumped from its ambient environment. This heat causes the catalytic cathode material to produce excess hydrogen. The electrolyte limits the conduction of heat from hot to cold junctions, resulting in an enhanced Peltier effect. The advantage here is the reduced thermal conductivity, for greater thermoelectric efficiency is obtained with a higher ratio of electrical to thermal conductivity.

Use catalytic metals like platinum, nickel or palladium for the electrode thermoelectric materials and you get an interesting catalytic effect. Now add a suitable electrolyte and what you have built is a breakthrough device that utilizes thermodynamic principles with catalytic properties.

Radiant Energy Devices

Clearly, when Tesla refers to his radiant energy device, he is not talking about an atomic reactor. He is directly converting ionized particles generated by radiant matter. It is not nuclear energy as we know it today. Radiant Energy is directly converted to electrical power! Tesla believed that the Sun generates highly charged particles and that radiant matter is a re-transmitter of energy. It is this transfer of energy that could be used for practical purposes.

Radiant Energy as herein used is that energy existing in the luminiferous of the Universe, kinetic and exercised in wave transmission and rendered sensible by conversion of its energy into a detectable frequency, the phenomenon of the transducer combined with fusion. Radiant energy devices are means of using the energy released by the fusion reactions taking place in the stellar crucibles of the universe.

I have designed an apparatus and method that will optimize reactions that are similar to what is explained in the above treatise. I designed special capture capacitors to take advantage of the released energy of nuclear reactions. The use of radiant energy to generate electrical power is no longer out of reach!

Inventors Beware!

It is my intent of this treatise and through my other writings to explain the many facets of "radiant energy" and how it is possible to draw power from it. I have notarized papers and

articles predating similar claims made by others. The Moray lead formula is just one example. I advise all inventors who want proper public credit to do the same.

By reviewing history it is understandable why some inventions are not commercialized. It is economics, not science, that is the main factor. It will be remembered that alternating current was opposed by powerful financiers in Tesla's time.

Michael Pupin, noted in his autobiography:

...captains of industry... who were afraid that they would have to scrap some of their direct current apparatus and the plants for manufacturing it, if the alternating current system received any support. A most un-American attitude... but ignorance and false notions prevailed in the early nineties, because the captains of electrical industries paid small attention to highly trained scientists.

Once again, we face Tesla's battle with the organized opposition! __BP

URGENT Statements for Year 1999

Press Release for: **Wednesday, December 16, 1998**

Press Release Originally slated for: **Thursday, December 31, 1998**

We are truly out of time. Our planet resources are quickly being depleted. Our environment is becoming more and more toxic by each passing day. Our social system is in the state of chaos. Alpha fission technology must be implemented now...

The results of my years of experimentation has opened a doorway that could soon lead to electronically induced nuclear fusion. This process I named "alpha fission" to denote my electronically assisted atomic reaction. The term was so chosen as to cause the least adverse social reaction to this new promising technology, owing to the fact that the public at large has been duped into a state of paranoia by its global governments. With this technology isotopic fuels can be easily breed.

[Thoron \(Rn - 220\)](#) has a short half-life of life of 54.5 seconds, while [Radon \(Rn-222\)](#) has a considerably long half-life of 3.5 days. Therefore **thoron** is safe and convenient to work with, as there is no long-lived product in its disintegration chain, unlike radon-222. Owing to this fact, there is minimal danger of permanent contamination.

The parent substance, radiothorium, may be obtained from thorium solutions breed from my "alpha fission" process.

As a parent source of thoron it is general to use the substance known as "radiothorium," which has a conveniently long period of nearly two years. This means that we have a clean power source that will last for almost two years.

COLD FUSION CONFUSION

Alpha fission is actually Cold Fusion. The end result generates neutrons from the production of fusion by alpha particle collision. Simply, since mass x speed is temperature, represented by a kinetically energetic alpha particle, then there is a *temperature differential* in contrast to the target that it impinges upon. However, no new neutrons will result because the reaction consumes what it releases. **This is cold fusion.** The square of the reaction is cold in the general sense as in contrast to reactions that produce excess residual heat.

To site a cross correlation; a thermal heat pump will absorb hot particles right out of the cold air of winter. The average mean temperature is cold. This analogy can be applied to the alpha fusion reaction sited, the particles involved are in the mist of relatively cool particles. The average mean temperature is cold. This is my justification for dubbing it a "cold fusion" reaction. You may still consider the reaction to be hot, in fact, it is in every real sense of the word. Even so, the term cold fusion is a non-mathematical term that we can use to denote the difference between reactions that result from a CERN particle reactor and one that is naturally directed by the ultra chemical reaction. By the way, as you can see, I don't buy into the fixation on what the textbooks say what constitutes a nuclear vs. chemical reaction. **All** reactions are chemical in my line of vision. The sited alpha reaction is an ultra extension of chemistry. The textbooks have over complicated the "nuclear reaction" and in doing so it has fogged the vision in many instances.

So called "cold fusion" researchers have overlooked the fact that the electrodes that they are using contain traces of naturally occurring radioisotopes that are alpha emitters, platinum-190 & platinum-192 are two such examples. The end atomic ash is helium gas, exactly what these researchers should be finding.

Neutrons are generated as a result of a cold fusion reaction but they are not always detected. Simply stated, the neutrons generated equal the neutrons absorbed in the reaction. This is what I perceive as being a CLEAN nuclear reaction.

THERMOFUSION

Attempts at "clean" fusion have been tried by scientists using particles at the same temperature so that clean fusion can not occur regardless of how high the temperature gets to be. Attempts to fuse hydrogen atoms to create inert helium have failed and not one single helium atom has ever been produced. This has been proven by the so called

"clean" fusion device known as the hydrogen bomb (H-bomb), when, in fact, military scientists detected little or no helium after detonation.

Let me tell you something that not too many scientists know, and if they do they are not saying anything. Tritium will fragment mechanically. If you put a small amount of tritium salt on a hard surface and hit it with a hammer, it will fragment and will expel neutrons. Fortunately only a very few molecules will do this, because if a larger number of them did there would be a terrible explosion.

The H-Bomb did not work on a "clean" thermonuclear principle. It released its energy primarily to fragmentation, resulting in a "dirty," toxic, thermonuclear reaction, this observation is clear. The scientists involved with the testing detected enormous amounts of neutrons. It is a fact that when neutrons are absorbed they create radioactive elements. These results were never publicly published, along with the fact that there was extreme levels of neutrons generated.

GENERAL SUMMARY

The Department of Energy (DOE) has hindered the development of clean nuclear research over the years. They fear that a "clean" miniature power source will deny the Department of Defense its supply of weapons-grade plutonium. The DOE's H-bomb "dirty" fusion program has lasted for about 50-years, it sucks up all government fusion funding. The DOE's fusion projects are located in a Princeton University Plasma Physics Lab. These projects are top-secret cold-war research projects for the use of fusion for massive production of plutonium and tritium for nuclear weapons. Their fusion reactor burns tritium, a radioactive fuel that produces deadly neutron radiation, 80% of its total output of energy. This reactor if used in conjunction with a breeder reactor, is capable of "breeding" 100 times more plutonium than can be produced by a conventional utility reactor. They have a fuel machine for their "weapons of mass destruction." This new reactor would be so "dirty" that even the utility companies are rejecting this government fusion program.

The bottom line is that "clean" atomic reactions do not generate weapons fuel. The DOE would stand to lose its funding for nuclear weapons fuel if non-radioactive reactors were to be given to the people on the streets. Clean nuclear energy devices threaten all nuclear power plants.

The conclusions are obvious. Methods to procure fusion in our government research labs produce deadly nuclear reactions. From 1981 to 1984 experiments were performed using protons at CERN. Only "dirty" fusion were reported. The protons were then at the highest temperature than ever used in any other current thermonuclear device and they did not generate a CLEAN nuclear reaction. This means that proton-proton

thermofusion will not produce a CLEAN by-product. These facts are being ignored by scientists because it destroys their well established doctrines. The sad truth is that they are spending and wasting billions of taxpayer dollars each and every year to find better ways to obtain weapons grade materials for weapons of mass destruction. Isn't it time that we explore other options?

The mechanism to harness stored up energy in radioisotopic material is not new. What I hope to reveal here is a fascinating energy mechanism. The results of this science are striking, confusing, and its interpretation, intricate. I do not always write my releases as clearly as I would like to. However, if someone points out something in my writings that needs to be corrected I will try my best to right it and correct the statements. I update the document and hope that the revisions give a better picture of what I have tried to convey.

The powers that be do not want the results of my research in the hands of the common person. The devices based on principles found in my research have been kept under wraps by certain undisclosed organizations and individuals.

"Their biggest fear has always been that the power concept would escape to the man in the street and they would lose the ability to control him." _Former CIA Agent

MY ATOMIC BATTERY SOLUTION

When radium transforms, a great deal of energy is liberated continuously as heat. The amount of stored energy in this transformation is of a very high magnitude. One gram of radium evolves about 134 calories per hour, and the total heat available is over 2,000,000,000 calories. One quarter of the generated energy comes from the decay of radium into **radon gas**. The remaining three quarters comes from the decay of the radon gas. One gram of radon, therefore represents 1,500,000,000 calories per gram. This translates into 5,944 BTUs per gram. Therefore, one pound will generate 2,698,825,592 BTUs. The radioactive fuel in a nuclear power plant generates 200,000,000 BTUs per pound. This means that radon gas generates 13.5 times more BTUs than nuclear reactors pound for pound of material.

Radon gas is present everywhere in our atmosphere. It is one hundred times more concentrated in our soils. Planet Earth has been exposed to this source of energy since it's birth. It may well be the very source that gave life to all living matter. It may as well be the very source that saves humankind.

It was known by the Atomic Scientist of yesteryear that if a suspended wire was given a **negative charge of 1,000 volts** or greater, that it would collect enough radon gas from

the surrounding air to produce an effect on a photographic plate. One parent source of radon is radium. Radium is widely distributed throughout the minerals of the earth. An approximate reported calculation indicates that every 2.6 km² (1 mi²) of soil to a depth of 15 cm (6 inch) contains about 1 gram of radium, that emits radon in trace amounts to the atmosphere.

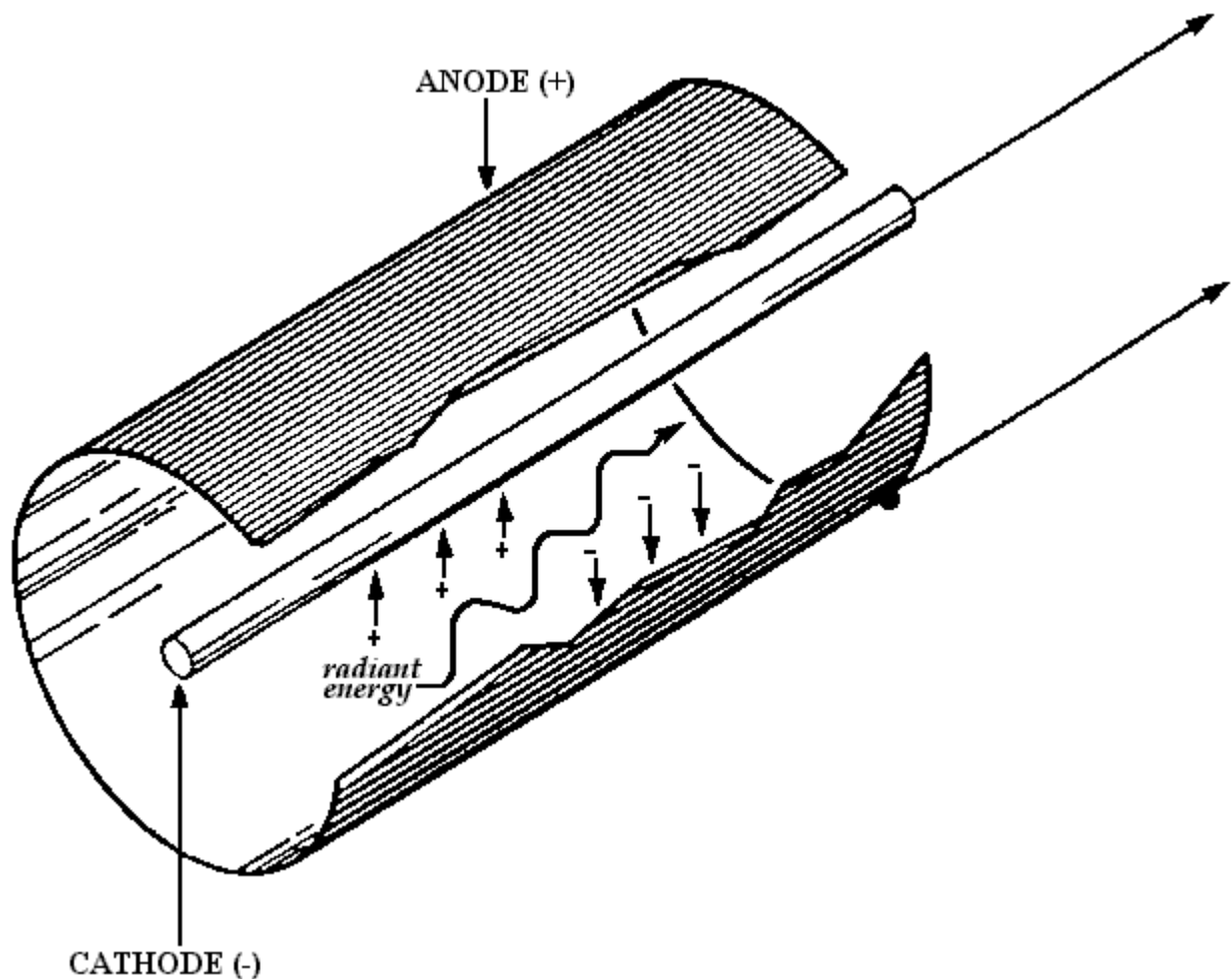
An energy converter has been built that will harness the energy stored up in either radon or thoron gas. It attracts and converts radioactive *radon gas* into electrical power. Radon gas can be drawn in by **ion-valves** that are the very heart of this energy converter. If active gas is absorbed from our atmosphere then it will take a few minutes for it to accumulate on the central wire of the glo-regulator. I would like to point out here that people who have radon gas problems with their homes could benefit greatly with this type of converter. Not only would this device clean up the problem but it would also generate electricity as well.

This system is not perfect, electric transport vehicles will certainly require sealed tubes that contain an adequate radon or thoron source. The accumulation will vary from location to location. Some areas may not have sufficient active gas for the converter to function properly. Electric transport vehicles will certainly require sealed tubes that contain an adequate radon or thoron source. Tube standards need to be considered before dependable products can be manufactured.

Ion Valve Technology

Explained

The ion valve converter (ion valve) shown here has an axial negatively charged tungsten cathode wire that extends the length its cylinder and is capable of emitting secondary negatively charged ions. The anode cylinder is positively charged and is made from a semiconductive material that will readily capture electrons.



Ion Valve - Figure 3

Within a few milliseconds, the accumulated negative ions are attracted to the positively charged onrushing atomic ions. When the negative and positive charges collide, they neutralize each other generating high frequency electrical oscillations.

The ion-valve provides a stable potential difference that prevents energy from flowing back to its high voltage power supply. It allows AC to flow through it. It is an "energy dam" for the lack of a better description. The valve has a charge blocking effect in one direction. This is why Moray stated that his

valves were not rectifiers in the sense that they operated as radio valves in changing AC or HF to DC. There is an actual valve action in stopping the "flow" of potential energy in one direction. Diodes used to change AC or radio frequencies to DC are current rectifiers. The ion-valve is a **charge separator**. Its function might be thought of as an oscillatory action similar to the waves of the sea, without rectification, preventing energy from returning to the energy source. * The Sea of Energy, fifth edition, p. 209.

There appears to be a common thread shared between several alternative energy devices. It is the pre-glow discharge. The report on the **Hans Coler** device released by the British Government indicates that there is excess energy released when electrical contacts are opened and closed. The **Lester Hendershot** device utilized a buzzer circuit with opening and closing electrical contacts. In the **Alfred Hubbard** coil pre-glow discharge flowed through electrical contacts, a distributor cap and radium soaked spark plug. **Thomas Moray** invented a glowing, cold cathode, discharge tube that was the heart of his radiant energy receiver. **Hermann Plauson** was granted U.S. Patent No. 1,540,998 that used spark gaps to convert atmospheric energy. **Frank Wyatt Prentice** was granted Canadian Patent No. 253,765 that detailed his invention, which lighted fifty sixty-watt carbon lamps with an input of only five hundred watts. His invention utilized a spark gap driven high frequency tuned resonant system. **Chancy Britten** used ion valves constructed with a central wire that was surrounded by a coil of wire which is described in his US Patent No. 1,826,727. Britten's valve was said to have lit up his home in the 1930's according to a local newspaper article. **Alexander Chernetski** experimented with what appears to have been a type of ion valve that was filled with hydrogen gas. It is said that he got up to five times more energy out of his device than what he put into it. **Paulo N. Correa** and **Alexander N. Correa** obtained patents for their pulsed pre-glow discharge system that recovers energy and recharges its battery power source. **Edwin Gray** was granted U.S. Patent No. 3,890,548 for his spark gap driven capacitive discharge motor. This motor ran efficiently by instantly discharging the energy stored in capacitors via spark gaps. Discharge occurred when the magnetic fields of the rotor and stator coils were in complete alignment, at which time, the most torque was obtained. The problem was that the high energy arcing would wear down the spark gaps rather quickly. He solved this problem by replacing the spark gaps with a controlled switching tube. His U.S. Patents No. 4,595,975 and No. 4,661,747 describes this tube in detail. It was designed to eliminate spark gap wear. On close examination, we find that the capacitive discharge between the anode and cathode in this switching tube wastes energy by generating heat losses that are not recovered.

I have found that radiant energy is generated when a plasma field is in contact with the atoms of an electrical conductor. Most importantly, the quantity of radiant energy is greatly increased when the plasma field occurs between the inter-electrode couple of two differing electrical conductors. The plasma glow discharge conserves energy. It is an effective energy quenching mechanism.

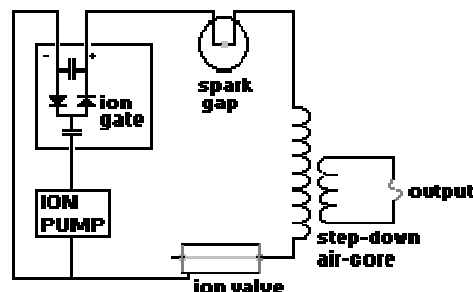
In the embodiment in **Figure 3**, the negative charge on the wire in the ion valve negatively ionizes any gas that contacts it. These ions rush towards the positively charged cylinder. When a gas or metal vapor ion carries an excess electron and hits head-on with a positively charged onrushing gas, or metal vapor ion, such as mercury, a violent union of the two oppositely charged ions occurs. During this union, the ions violently oscillate, and thereafter, charge neutralization occurs. The "**sea electron model**" helps to explain this effect. According to the sea electron model, metals are bonded to each other through electron sharing. The model suggests that metal atoms be bathed in a sea of electrons. If this model is taken one step further it can be illustrated that if metallic atoms become dissociated from each other, their electrons can generate electrical oscillations of high frequency (radiant energy). This occurs because the electrons no longer take part in the inter-atomic binding force that existed before the dissociation took place. It becomes clear that the freed electrons can give amperage back to the electrical circuit to which generated its free state. Henceforth, the equation $I \times E = P$ holds true in this system. Where, "I" represents the electrons (amperage), "E" electromotive force (ionic voltage), and "P" the power generated.

The ion-regulator valve is an important component to the radiant energy converter. Electric motors can be made to draw less current from a power supply. Communication systems that take advantage of the ion valve as an oscillator could obsolete present day radio transmission. Electrical power transmission and its generation could also receive a fresh new start. The possibilities are refreshing. It is an honor to offer humankind this technology. It is my goal to build and bring devices to market that will introduce new products that will better the quality of our lives.

Proof of Concept Radiant Energy Circuit

Energy from the Dissociation of Matter

It is no secret that electrical current can be obtained by utilizing a couple of dissimilar metals. You can plunge a dissimilar couple into an electrolyte to obtain electrical current. This is called electrochemical energy. You can heat the junction of a pair of dissimilar wires that have been twisted together at their ends to generate electrical potential. This is called "thermoelectricity." However, what is not generally known is that you can also generate electrical current with plasma or a glow discharge as your medium between two dissimilar electrodes. This effect is the result of "triboelectricity." All these forms of electrical energy are caused by the dissociation of matter. This dissociation of matter is called "radioactivity" by the scientific world. All electrical phenomenon is the result of this radioactive decay.



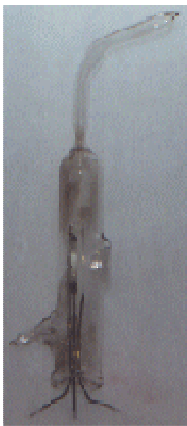
Proof of Concept Circuit - Figure 3

- The "ion gate" in this circuit uses two .001mfd/20kvdc capacitors and two 20kv, 100-nanosecond diodes.
- There are varieties of electronic circuits that can be built to serve as ion pumps. The circuit used was designed by Robert E. Iannini and can be found on my website at:
<http://www.nuenergy.org/plasma.htm>
- The ion valve in the above proof of concept prototype consists of a standard aluminum electrical conduit that is six inches in length. Its center wire is a 60μmm. diameter tungsten wire secured with two half-inch PVC end caps.

Preliminary Ion Valve Validation

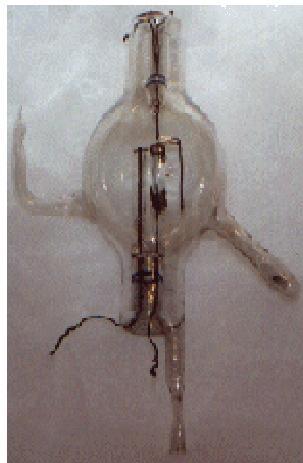
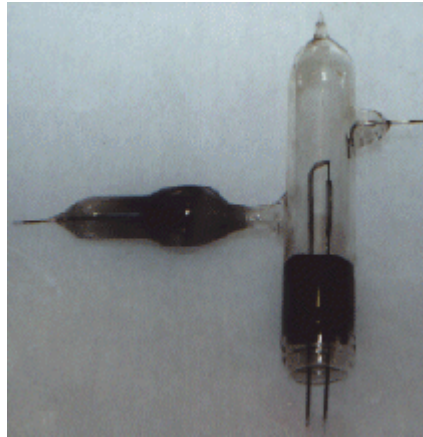
1. The output at the ion gate reads around 5KVDC using an analog high voltage test probe without the ion-regulator valve in the circuit. With the ion valve in circuit a 20KVDC reading is obtained with at least a 25% reduction in current being drawn to power the circuit.
2. The apparent energy gain in the above ion valve appears from the fact that when negative ions produced at the surface of the inner cylinder bombard the center wire secondary negative ions are generated. The negative ions, when accelerated with sufficient voltage are capable of dislodging (dissociation) other negatively charged ions by from the target against which they impinge upon; and a significant result is that the number of secondary ions may be several times greater than the number of primary ions. This has the effect of reducing power drain from the power supply. A.W. Hull observed this effect in a thermionic tube – HULL, Proc. I.R.E., 6, 5, 1918.
3. The ion valve can be used as a quenching (regulator) device that can provide clean sinusoidal currents to the output current.

T. H. Moray Radiant Energy Tube Showcase



Low Power Capacitor Discharger

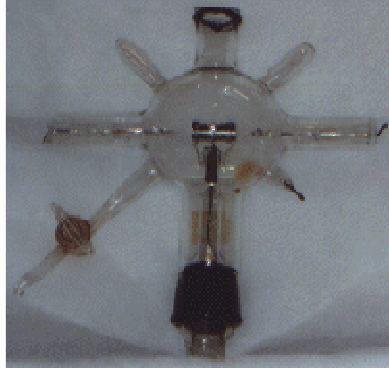
Medium Power Capacitor Discharger



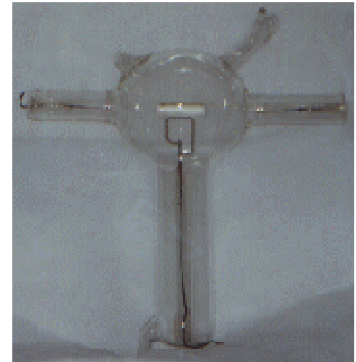
High Power Capacitor Discharger

Semiconductor used in Low & Medium Capacitor Discharger Tubes





Ion-Regulator Type Moray Tubes



Taped up to Protect the Invention



I had often asked myself; what ever became of Moray's radiant energy tubes? Wouldn't it be nice to run some tests on them? Well, as fate would have it, I have had the opportunity to test some of his tubes. I now possess several of Moray's tubes that he used in his research. Many years ago a man named Stan Mahurin obtained a steel case loaded with Moray's experimental vacuum tubes and a notebook from his widow. This man knew T. H. Moray and his wife quite well.

Mr. Mahurin passed the tubes onto Dr. William A. Rhodes, 'a close friend for many years', because he had no clue as to their function but did insist on keeping the notebook. The tubes

were a big mystery to Rhodes and he had them stored away for over twenty-five years. I was contacted because of my passion for radiant energy research and was given the opportunity to purchase these tubes. I promptly replied and have had the honor to inspect them first-hand.

Upon inspection of the tubes there is no outward sign of radioactivity. None of the tubes indicate the presence of radioactivity when approached with any of my radiation sensing meters. Several of the tubes contain a cylindrical anode and wire filament. I conclude that these tubes were used to rectify the received radiant energy waves. They had to have been the tubes that Moray used when he ran out of his Swedish Stone mineral. None of the tubes that I bought from Dr. Rhodes turned out to be of any real importance to my research. However, they do hold historical value. This is of no consequence to me because I have developed tubes that contain my own special semiconductors that I manufacture.

I am now attempting to rebuild a radiant energy device that will demonstrate a few hundred watts of excess power above what the circuits require to be self-sustaining. My next goal will be to develop a commercial unit.

Re: Bruce Perreault Questions...

- *From:* **Bruce A. Perreault**
- *Date:* Thu, 5 Aug 1999 07:13:13

Keith Nagel wrote:

>

> Hi.

>

> OK, lets all put down the flame throwers and asbestos

> underwear, you said you wanted to talk about technology

> so this should start happening, yes????

I believe that is why we all joined this list.

>

> I could start by asking a few questions about that chlorine
> tube gadget that I ran across a while back on Jerrys site,
> but that seems like a bad idea at this point. It's just
> too hot here for more flame action...

This is no problem for me. In fact, I want to thank you for bringing up the file that you have mentioned here. I read over the file again last night and realized that Dr. Paul Brown is using my concept for radiant energy cells in his atomic batteries. The basic chemistry was posted on 12/15/95 in this file. The only difference is that Dr. Brown is using SiT in his cells. He uses a fairly complex process to get the active materials that he is utilizing in his cells. You do not create SiT for the radiant energy cell. There are more economical ways to achieve the same end result.

Here is the file -> <http://www.nuenergy.org/text/coldfiss.txt>

Please realize that progress has been made since this file was first posted on 12/15/95. I do not use the same circuitry. Bottled chlorine gas is not used now because it is too reactive, and is very dangerous. I have added notes to this text to clarify some of the statements that are not my own.

>

> I seem to remember from your site that you've done some
> work with atomic batteries. Care to talk about this?

The above referenced coldfiss.txt contains a patent draft that outlines the basics of my work with atomic batteries. As you will see my technology is a marriage between an atomic cell and a chemical, primary cell.

>

> Now, you seem to be edging towards the super regenerative type
> technology. Interesting stuff, to be sure, how about some
> discussion about your demo at Exotic Science...

This seems to opening some Nu doors lately. However, don't completely rule out the radiant energy cell yet. Combining this cell with the 500Khz. electrostatic radio receiver may provide us with phenomenal results. I have a very good feeling about this.

-Bruce A. Perreault

**Bruce A. Perrault's bogus 'Chlorine Cold Fission Tube'
originally posted as COLDFISS.ASC on 12/15/95
on the KeelyNet BBS**

This file has been reposted on the KeelyNet website to warn people of this intentional, fraudulent scam perpetrated on KeelyNet, the International Tesla Society and a wide range of others who trusted the claimant and purchased his bogus plans, which never worked. At the time of its posting, we believed Perrault, events have since shown his true colors. Everyone gets one chance where we take them at their word, he failed miserably.

Take everything which follows as a WARNING of how some people will abuse your trust to get your money. He continues today, offering 'free' plans to get you to buy 'parts' from him.

The following file is the most fascinating information that has come out in dozens of years with respect to some of Henry Morays' experiments with the production of electrical energy using cold cathode chemical reactions.

To get up to speed about Moray's work, please refer to the files MORAY1.ASC through MORAY4.ASC on KeelyNet.

If you contact Bruce Perrault based on information specified in this document, please mention you got it from the KeelyNet file COLDFISS. Bruce is looking for confirmations and people serious about not only duplicating the tube but EXPANDING the power output. Thanks!!

Bruce Perrault has been experimenting with what he calls COLD FISSION for several years. His experiments were first brought to the attention of the International Tesla Society which led to a one hour interview by ITS President J. W. McGinnis. The following is how Bruce's work came to the attention of KeelyNet;

Message 1443 DATE/TIME: 11/25/95 18:37
From : JIM SHAFFER -- RECEIVED --
To : JOEL MCCLAIN
Subject: (R) More Moray
Folder : A, "Public Mail"

Did you hear the Extraordinary Sciences Hour on November 12th? There's a guy named Bruce Perault (guessing at the spelling here) who has built Moray-like devices using ionized chlorine tubes and iron pyrite as the detector. He said Moray used molybdenum sulfide, but iron pyrite is the second-best thing. The ITS is selling plans for \$39.95, for a device that will cost about \$500 to build. He says he's getting 50KW out of a device weighing about 60 pounds.

*** I never said that I was getting 50KW. What I said was that T. H. Moray was able to obtain 50KW from his 60 pound device! -Bruce A. Perreault**

Message 1471 DATE/TIME: 11/27/95 22:52
From : JERRY DECKER (SYSOP)
To : ALL

Subject: ITS Free Energy Device
Folder : A, "Public Mail"

Hi Folks! After reading a public message (1443), I was so fascinated I had to call JW McGinnis and find out the truth about it. So here's the story (but first read message 1443);

...

A fellow named Bruce Perrault claims he has discovered how to build a 'cold cathode' vacuum tube, similar to the one developed by Henry Moray. Perrault's tube uses CHLORINE and he claims he has a WORKING prototype which produces 250 Watts. He believes it is scalable and has plans detailing one that might produce the 50KW which Moray achieved.

*** Please note here, 'prototype' and 'might produce.' -Bruce A. Perreault**

The plans are being distributed through the International Tesla Society for \$39.95. The order number is 700032. Their voice phone is 719-475-0918, or 800-397-0137 and their FAX is 719-475-0582.

JW says this guy contacted him and explained his device, from there JW invited him to be interviewed on the Extraordinary Science hourly show. He has NOT seen a working model of this device and the inventor sends the plans to ITS where they sell them for him. JW says this device will be in the next Extraordinary Science Journal and they might even do a video of it kind of like the one Bearden did with Sweets device, where everything is shown, measurements are made and various devices operated from the produced power....

So, if you are interested, go for it, DESPITE what Don Lancaster says, we CAN'T waste ALL of our time on this 'pseudoscience' stuff....>>> Jerry

I ordered the plans from ITS and they arrived this past Thursday. They consist of a stack of papers about 3/4" thick in a loose folder. Many are patents relating to energy tapping from the air, thermal and other processes, a 1956 FATE magazine article about Henry Moray's Radiant Energy Receiver and how Moray could do transmutations!!!, and the inventor's (Bruce Perrault) patent for his energy generation system.

At the end of the folder are several papers showing diagrams of how the device is constructed, another paper describing how the parts are assembled and a resource list to buy the parts necessary. Though I did not see any power claims (JW said 250 Watts), it is a fascinating compilation of information to backup why Perrault's invention should work.

*** Notice how Jerry admits here that there are NO power claims and that he was fascinated with what he received for his money and that this information backed up my research! - Bruce A. Perreault**

The device consists of an evacuated cylinder with an anode on one end and a cathode on the other, both separated by sand. The unit is filled with chlorine gas and ionized by a 4KV

pulsetrain. The pulsetrain can be adjusted to set the frequency of the device, from DC to as high as you want. I suggest you order the planset, if for no other reason than to support the inventor in further experiments which he plans to share for quite nominal fees. If there is sufficient demand, he may even offer kits, maybe even with preconstructed cylinders, you just attach an ionizer and boom, power comes out of it.

*** Jerry admits here that the work is experimental. -Bruce A. Perreault**

Oh, by the way, he says you just have to tickle it with the high voltage to begin the pumping action. Once it gets going, the thing runs on its own. Perrault also indicates power production will degrade over time and the cylinder will need replacement or rebuilding, although possibly a shot of fresh chlorine gas might make it run a bit longer.

I thought it VERY SIMILAR to Chernetskii's PLASMATRON, which also uses a

plasma that is pumped with high density magnetic pulses to produce over-unity. The addition of the chlorine gas is a twist and the inventor indicates these cylinders can be ganged or scaled up for higher power levels. GET A COPY!

Coincidentally, on Friday, 12/14, I got a phone call from Mr. Perrault because Bruce Meland, publisher of 'Electrifying Times' (keeps abreast of current research/technology relating to electric cars and road rally events where they are tested) (503) 388-1908, had sent him one of the KeelyNet Roundtable newsletters. That newsletter was VSRTNOV.95, and intrigued Mr. Perrault enough to want to get a copy of that paper which was preceded by a short review from the Borderlands Journal of the discoveries of Nathan Stubblefield with 'earth batteries' and how they could be used to provide electrical energy directly from the earth.

Stubblefield routinely powered a SCORE of CARBON ARC LAMPS 24 hours per day from this earth battery system. There are numerous other interesting statements in the article that report on devices which are even now unknown and misunderstood. Gerry Vassilatos did a marvelous report that could easily be expanded into a full book to include all the details and pictures that are still available. If you might want to read this full article and/or subscribe to Borderlands, backissues are \$6.95 and a yearly subscription is still only \$25. Phone (707) 825-7733 or FAX (707) 825-7779. While you are at it, ask if they might be able to run off a copy of the Farnsworth FUSOR article published earlier this year.

Another recent Borderland article from a few months back dealt with the Farnsworth FUSOR and Multipactor. This unit multiplies electrons by extracting space energy from the environment for power accumulation. A recent packet of amazing material was sent to Keelynet, courtesy of Mr. Steve Hall. Steve works with Charles Yost at Electric Spacecraft Journal (704) 683-0313, FAX (704) 683-3511, subscription \$24 per year.

This incredible information (written by Rodney Sego in May 1981) correlates the Multipactor with the Moray power generating system. The packet had a document that I never knew existed and which consisted of an interview with a close Moray family member (believed to be Chester Todd) who recounted all that he had seen from the original Moray experiments to the final

version. As a result, this document will wind up as a new Moray file to be placed on KeelyNet and transferred to the InterNet for Bill Beaty's Science page.

The document provides details on power generation by the use of radioactive elements to produce an ionized area from alpha emissions and in conjunction with electron multiplier technology as used in the Multipactor. Everything points to a means of using an extremely minute excitation current to stimulate a very large power production. Floyd Sweets VTA also used this phenomenon.

I find it REMARKABLY coincidental how the Moray document, kindly shared with KeelyNet by Steve Hall and bearing a November 3rd postmark, preceded the email comment by Jim Shaffer letting us all know about the November 12th Perrault radio interview with ITS president J.W. McGinnis.

From the VSRTDEC.95 Roundtable newsletter;

Mr. Perrault says he has successfully operated his energy tube for 7 months outputting 200 Watts before it gave out. A platinum wire was used as the resistive element to load the circuit. Bruce says it is a slow fission process and has given KeelyNet FULL permission to post his plans online as well as pass them to computer networks through the country. A very nice guy and we are exchanging information and contacts that will be shared with everyone.

*** note: I never stated that this was a continuous output! I now remember this "platinum wire," it was my hot amp meter from Shockly's Estate. When Jerry mentioned this platinum wire at the 1996 conference I told him that I did not use a platinum wire to test the load as I did not, it was a meter that had a platinum wire. When current passes through this wire it expands or contracts according to the amount of current flowing through it. This is an excellent way to measure current flow at any frequency and as it is not effected by voltage. At the conference there were many things going on where I could not remember every fine detail. When Jerry mentioned the wire at the conference I did not remember that the platinum wire was associated with my old hot amp meter. In fact, it was not until I added the notes to this file when I remembered this. I still have this meter. -Bruce A. Perreault**

Bruce says he just wants the plans out to everyone and they will soon be selling the tubes, beginning with basic low energy versions and slowly progressing to more powerful versions as people get involved in experimenting and supporting this type of research. The advanced tube construction will remain a trade secret and available through a future distribution network.

*** Key word here, "EXPERIMENTING." -Bruce A. Perreault**

The main thing now is to let people know what is going on and how the thing works, with support from others who have duplicated it. An excellent approach! Speaking just for myself, I think Bruce would appreciate some donations to help him along. He is very sincere and when you see the info, YOU WILL BE IMPRESSED, especially as others post their successful replications!!!

*** Jerry is soliciting for "DONATIONS" here, not me. -Bruce A. Perreault**

Because of the importance of this information and with the FULL PERMISSION OF Mr. Perrault, KeelyNet is providing the construction details in this document in ASCII file form AND with additional .GIF drawings to ensure accurate reproduction of the information.

The files will be : COLDFISS.ASC - this construction and part source file COLDFISA.GIF - the cold fission tube layout COLDFISB.GIF - ionizer circuit diagram...(it might be after Christmas before the .GIFs are available)

COLDFISS.ZIP - all the above files in .ZIP form

We will post additional information as it comes in.

This is the patent application that Bruce Perrault was planning to file:

http://www.nuenergy.org/technology/perreault_radiant_energy_patent.htm

Perrault, Bruce.....November 16th, 1993

**METHOD OF UTILIZING RADIANT ENERGY FOR THE GENERATION OF EFFICIENT
ELECTRICAL ENERGY AND DEVICE**

Inventor : Bruce A. Perrault, Mad River Road, Thornton, New Hampshire 03223

References Cited

U.S. Patent Documents

Number Name Date

685,957.....N. Tesla.....Nov. 5, 1901

685,958.....N. Tesla.....Nov. 5, 1901

1,540,998.....H. Plauson.....June 9, 1925

4,368,416.....James, deceased.....January 11, 1983

Other References

Primary Batteries (1891), Shelford Bidwell's Battery pg. 113 Direct Conversion of Energy
(1964), by William R. Corliss pp. 28-29

(the above articles will be posted on KeelyNet early in 1996)

Abstract

A method is disclosed for generating electrical energy, including a new and novel device. The device includes electropositive and electronegative electrodes. The electrodes are provided with electrical connections leading to the electrodes.

A sufficient amount of radiant energy applied to a reactive gas causes the gas to react ELECTROCHEMICALLY with the electropositive electrode. This causes an electrical current to flow between the electropositive and electronegative electrodes. An electronic circuit is used to absorb and convert the generated electric current.

METHOD OF UTILIZING A RADIANT ENERGY FOR THE GENERATION OF EFFICIENT ELECTRICAL ENERGY AND DEVICE

BACKGROUND OF THE INVENTION

The present invention relates to a device for the conversion of radiant energy to electrical energy and more particularly, to the utilization of GAS IONIZATION to effect an electrochemical reaction. This device absorbs radiant energies emitted by natural or synthetic reactions, more particularly to a device and method that provides improved performance over prior art converters that convert radiant energies into electrical power.

There are devices that convert radiant energy to electrical current, with poor results.

U.S. Patent Nos. 685,957 and 685,958 issued both patents on November 5, 1901, utilizes air-borne ionized particles to charge an electrical capacitor. The accumulated ions jump a spark-gap and discharge through a load. One difficulty known to exist with this system is the low useable energy that develops.

U.S. Patent No. 1,540,998 issued June 9, 1925, calls for increased collecting surfaces of electrical capacitors, in an attempt to capture more energy. Yet another method converts high voltage and low current strength to voltages more suitable and of greater current. This system is impractical because of the required cumbersome balloons and collectors involved.

Atomic batteries generate electric currents by the disintegration of radioactive substances. William R. Corliss discusses the direct use of ionized particles expelled by radioisotopes in his report; Direct Conversion of Energy (1964) pp. 28-29. In this report high-velocity ionized negative particles emitted by strontium-90 creates a current of ionized particles.

The charge on the particles becomes neutralized by a metallic cylinder. The neutralized particles will find their way back to the strontium-90 becoming again ionized. This cycle repeats itself so long as the strontium-90 remains radioactive. The power generated by this method does not create USEABLE amounts of electrical energy.

Thermionic and thermoelectric energy conversion are discussed in U.S. Patent No. 4,368,416 - James, deceased January 11, 1983. One limitation known to exist with converters of this type is the relatively large heat source required to produce electrical power.

Nuclear reactors generate heat by burning UO_2 . This material is sensitive to X-ray energy. When the UO_2 is exposed to X-ray energy it emits photoelectrons. The photoelectrons cause a chemical reaction. Present day nuclear reactors use a natural source of X-ray energy, called U^{235} . This reaction produces heat. This heat boils water that produces steam.

The steam powers a turbine which in turn generates electricity. This type of energy generator requires complex building materials that make this method quite costly. Consumers have paid billions of dollars to build these power plants. Furthermore no one seems to know what to do with the waste products produced by these power plants. The U^{235} breaks up forming highly toxic radioisotopes.

Despite the prior art that exists in this technology, it is believed that previously there has not existed a small, compact electrical device capable of generating usable levels of power. It is the object of this invention to provide a method embodying an improved device to furnish efficient electrical power to a load.

The present invention removes limitations of past attempts to harness radiant energies. Toxic radioisotopes are not formed in the present invention. The primary object of the present invention is to provide a direct method for converting radiant energy to electrical energy, and a new and novel device for converting radiant energy with high efficiencies.

SUMMARY OF THE INVENTION

Thus in accordance with the present invention, there is provided a method of utilizing ionized particles for the generation of efficient electrical energy.

In the present invention, new and novel improvements are apparent. The need for an enormous collector surface no longer exists. Transistors can now replace the outdated spark gap and or high vacuum transmission tubes. The present invention efficiently converts ionizing energy to voltages suitable for practical usage.

A source of X-ray energy is provided by the present invention. This source can be artificially generated and will not produce toxic radioisotopes.

Converted energy in the present invention may be directly available for driving motors, lighting, production of heat and used in electrochemistry.

The method of the invention includes, means for exposing a REACTIVE GAS, such as CHLORINE to a source of ionizing energy.

Other objects and advantages of the present invention will become apparent from the following description of the preferred embodiment of the present invention, with references to the attached drawings, in which:

Fig. 1 is a block diagram of the present invention;

Fig. 2 is a diagram showing the present invention being exposed to a source of ionizing energy of extreme voltage and of short duration.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Thus in accordance with the present invention, there is provided a radiant energy converter comprising a first metallic electrode made of ZINC METAL and a second metallic electrode made of IRON SULFIDE nested parallel to the first electrode.

A number of electrode couples may be used and still not depart from the spirit of this invention. The inter-electrode spacing contains the reactive gas CHLORINE. A number of gasses MAY BE USED and still not depart from the spirit of this invention. Means are also provided, at the end of the electrodes, to provide external electrical leads from the electrodes to a load circuit.

The method to generate electrical energy also includes, with a device just described, means for exposing the internal reactive gas to a radiant energy source of sufficient strength.

The conversion of radiant energy to useful electrical energy is apparent. The small solid-state components of this apparatus make it a practical compact unit. An electronic circuit effects energy absorption.

The electronegative electrode may contain oxygen gas in the form of a solid. Manganese dioxide may be used for this purpose. The electropositive electrode may contain hydrogen gas in the form of a solid. Lithium hydride may be used for this purpose.

*** Please note here that TRITIUM is triple weight HYDROGEN. This is important because reference will be made to this in future documents. This may appear incidental but is of great importance. -Bruce A. Perreault**

The gasses react when the inter-electrode spacing of these electrodes is subjected to radiant energy pulses. The gasses become SUPER CONDUCTIVE. This causes the oxygen and hydrogen gasses to react chemically with minute energy loss. Chemical energy is now converted to electrical energy with extreme efficiency. Furthermore, an electrical transformer can be utilized to transform this electromotive energy to a usable voltage.

*** The use of triple weight hydrogen was not clearly detailed here. However, I must point out as a matter of record that TRITIUM can be the source of "radiant energy pulses." - Bruce A. Perreault**

Referring now to FIG. 1 of the drawings,

(1) consists of a gas tight vessel. Provision is made for an inlet tube (2) to introduce chlorine gas (3). Provision is made for iron sulfide electrode (4) and zinc electrode (5).

ANY NUMBER of electrode couples, or gas combinations may be utilized and still not depart from the spirit of this invention. A source of ionization (6) is provided.

The chlorine gas (3) must become ionized in order for it to bombard the electrode (5). When the chlorine gas (3) is ionized it becomes a conductor, its conductivity is a measure of its ionization.

There are a number of ways to ionize the chlorine gas (3). X-ray energies emitted from the sun will ionize the chlorine gas (3). Radioactive materials will ionize the chlorine gas (3). Pulsating high-voltage produced by an electrical transformer will ionize the chlorine gas (3).

Any number of ionizing sources may be utilized and still not depart from the spirit of my invention. I stake my claim to the method of power generation.

If an electronic ionizing source (6) is used, once started, the energy produced by said invention will keep the electronic circuit energized.

Initially the electronic circuit must be PRIMED by an outside power source (7). When said invention begins generating electrical energy the external source (7) IS NO LONGER NEEDED. A small rechargeable battery may be used as the external source (7). Said invention will keep the external source (7) fully charged.

Greater amounts of energy can be stored in a compact manner than any previously known electrochemical system. Furthermore, if radiant energy is used as the ionizing source its energy is converted into electrical power.

The voltage from said invention is very stable. The output can be varied from a non-pulsating, direct current, to a high frequency pulsating output. The output pulsation rate is varied by the rate in which the electronic ionizing source (6) pulsates.

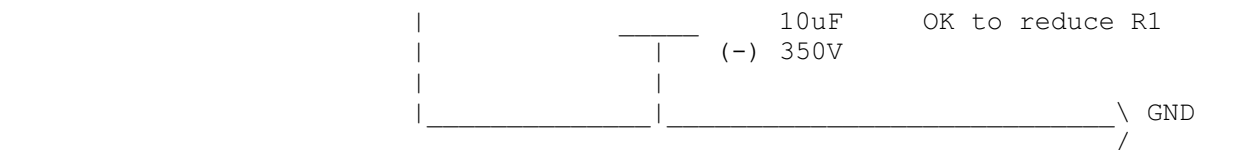
The pulsation rate of the ionizing source (6) is determined by its circuit characteristics. These characteristics are well known in the engineering field. Any number of known electronic circuits may be utilized for the electronic ionizing source (6) and still not depart from the spirit of said invention. If the ionizing source comes from radiant energy the pulse rate is a factor in the decay rate.

*** This invention may use a resistant FABRIC dielectric woven to serve as a strong mechanical separator, at the same time sufficiently porous to PERMIT CIRCULATION of the gasses between the electrodes. Fabrics made of borosilicate (PYREX) fibers are particularly suitable for this invention. * Please note that there are not any power claims as this has NOT yet been accurately determined! -Bruce A. Perreault**

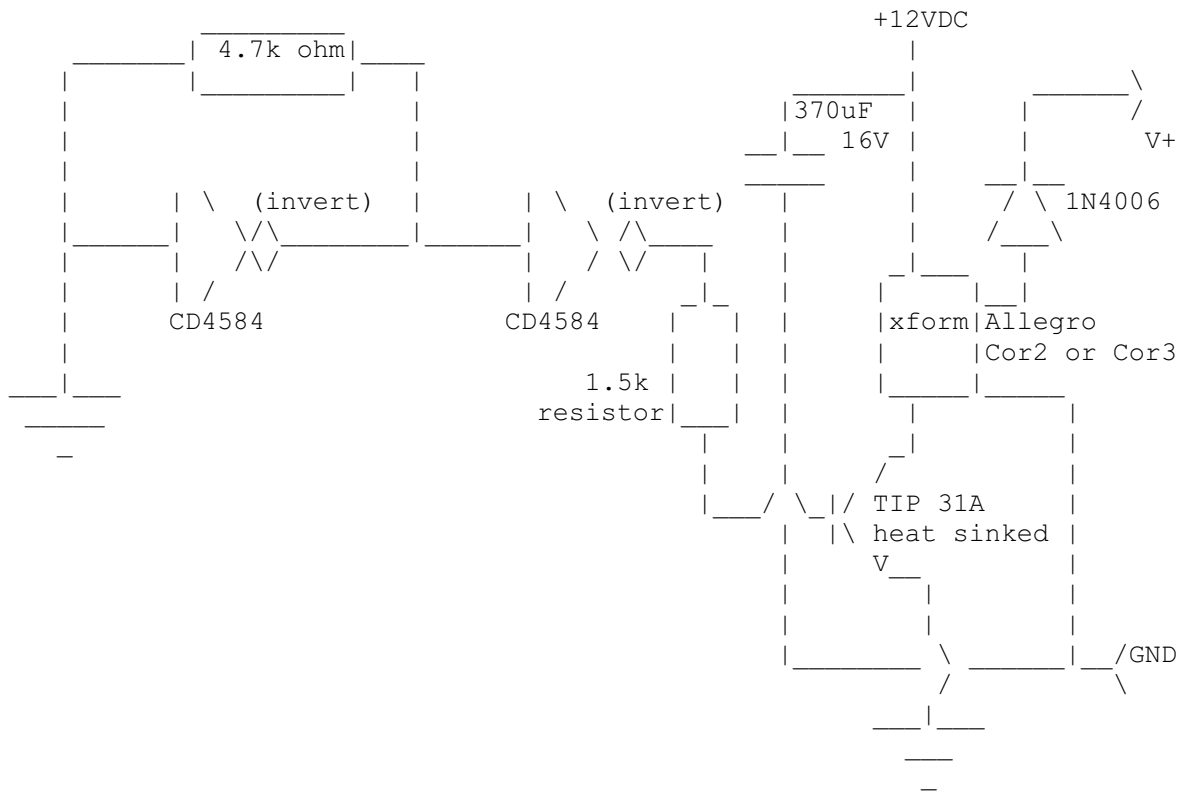
Figure 1 - Cold Fission generator layout

(the left side of the diagram is off the page on my copy, but it appears to be related to the transformer POWER TAP from the system via the transformer and bridge rectifier)

(the left side of the diagram is off the page on my copy, but it appears to be related to the transformer POWER TAP from the system via the transformer and bridge rectifier)

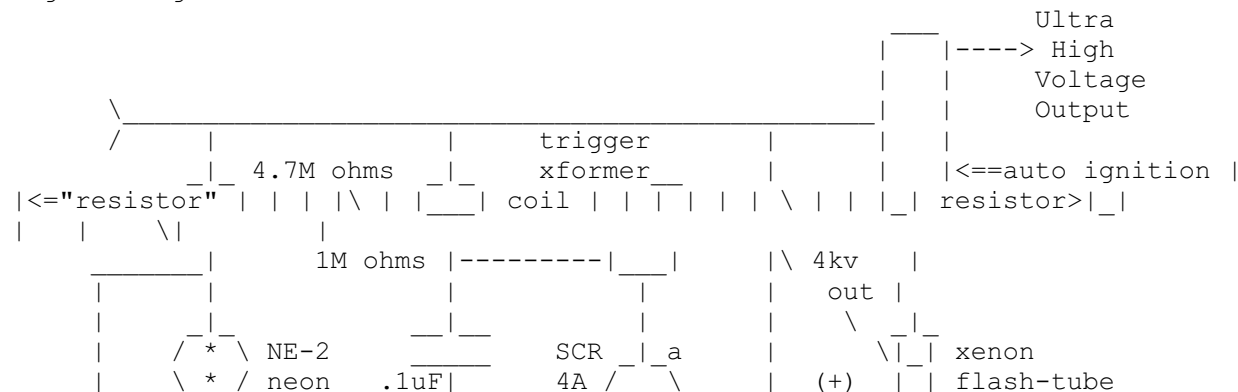


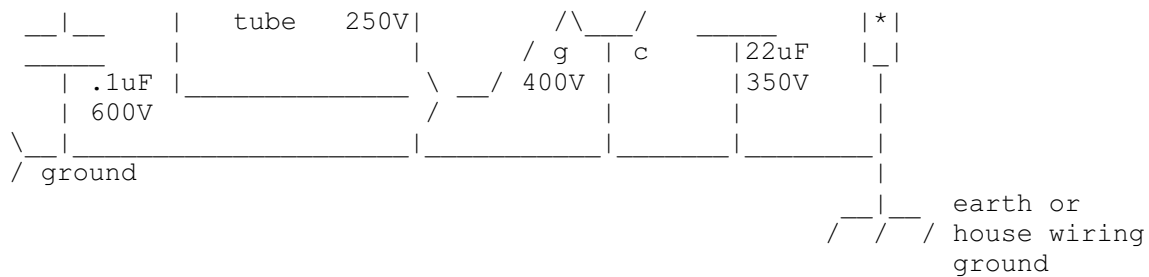
Pulse/Frequency Driver section - CMOS version



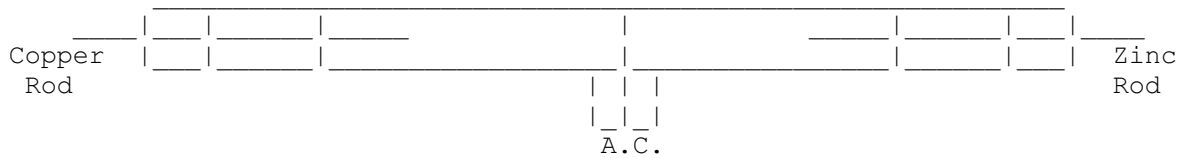
In an additional phone conversation with Bruce on Friday, December 15th, he said the pulses were very sharp spikes and occurred 20 times per second. This is based on a comment by Henry Moray in his book "The Sea of Energy". These spikes are necessary to maintain the fission reaction.

High Voltage section





December 16th, 1988 - Bruce A. Perrault



* I have found it advantageous to introduce CHLORINE GAS to the tube. A high voltage electrostatic field renders the tube CONDUCTIVE. When the tube becomes conductive, it PRODUCES ENERGY. -- November 20th, 1992

CONSTRUCTION DETAILS

Radiant Energy tube Ionizer

Assemble as shown in the circuit diagrams. The auto ignition coil as a transformer and choke. A choke will store energy in its windings as a capacitor does.

In this device the ignition coil absorbs energy when a xenon flash-lamp is triggered into conduction. The flash-lamp behaves like an open circuit with infinite resistance until it is triggered. The flash-lamp is triggered by way of a small, lightweight transformer that supplies a 4,000 volt pulse to the lamp. This pulse is capacitively coupled to the xenon gas inside the lamp. This pulse initiates lamp conduction. The xenon, once ionized by the 4KV pulse, suddenly behaves like a switch of only a fraction of an ohm. This allows the coil to energize.

When the 4KV is removed the flash-lamp returns to its infinite resistance state, it is again an open switch. Energy that is stored in the ignition coils primary windings discharge across the lamp. This results in a moving magnetic field that induces a series of high voltage surges from the secondary windings of the coil.

This is an electronic device that generates AT LEAST 250,000 volts. DO NOT HANDLE this device unless you are familiar with high-voltage safety precautions. This device is POTENTIALLY dangerous.

Radiant Energy Tube

Dimensions of these tubes are NOT critical. However, you must PACK DOWN the powders HARD.

I have found that raw iron pyrite ORE serves well as the collector (anode) of energy in these tubes. Platinum and Palladium absorb MORE energy but they are too expensive. Iron pyrite ore works quite well and is inexpensive when bought in bulk. Pure zinc metal serves well as the emitter (cathode) material. Magnesium will work better but it is UNSTABLE and probably will explode. Do not use magnesium metal as your emitter material. Lithium Hydride as the emitter material will work best but it is expensive.

Chlorine gas is added to the tubes LAST. You must make the tubes AIR-TIGHT. All the air must be sucked out before the chlorine gas is introduced. This vacuum is not critical. The chlorine gas is now allowed to fill the vacuum tube. Ambient pressure is fine. Make sure the tubes are SEALED WELL.

*** I failed to indicate here that when this was done the tube had to be energized while filling it with a gas.**

-Bruce A. Perreault

You can buy bottled chlorine gas but be prepared to go through bureaucratic red tape. To avoid this hassle you must generate this gas yourself. Calcium Hypochlorite (swimming pool chlorinator) will release chlorine gas when water is added to it. Make sure that you are working in a well-ventilated area when generating this gas.

Chlorine gas can accumulate in your lungs forming hydrochloric acid. This would cause SERIOUS lung damage. Severe exposure could BE FATAL. So take the proper precautions and respect this material. You must contain the Calcium Hypochlorite in a closed vessel. This vessel must have a valve and small diameter rubber delivery hose that connects to the tubes.

I have used pvc-tubing as my containing vessel. Make sure that you have a pressure gage built into your gas generating container. Pvc-tubing should not exceed 100PSI of pressure. This is the limit established by the manufacturers of pvc-tubing.

Priming your Radiant Energy Converter

You may prime this device a number of ways. You can use a 110 volt to 220 volt step-up transformer supplied by a 110 volt wall outlet, or you can build the 12 volt DC inverter circuit and power it with a car battery. You may even prime the circuit with static electricity.

Replacing the Radiant Energy tubes

How long will the tubes last? This will depend on the type of emitter material used. A new shot of chlorine gas MAY bring them back to life. There is no doubt in my mind that one of you will find better materials to lengthen the life of the tubes. There are materials that I would like to try but finances have not permitted this at this time.

Hopefully there will be enough interest in this power generator so that I may continue my research with the device. I am confident that the tubes could be made to last a long time before needing to be replaced.

Sources for Construction Materials

PVC-tubing, sealant, fittings, nuts and bolts

These materials may be obtained from your local hardware store. Chlorine gas source may be obtained from Calcium Hypochlorite

This material may be purchased from your local hardware or swimming pool supply stores. Ask for a chlorinator for swimming pools.

Ignition Coil

Can be bought at any automotive parts store.

Electronic parts

They can be bought from your local Radio Shack.

(NOTE as of January 2002, the Perrault scam these days is to offer 'free' plans where you must buy the parts from him! Back then you had to buy the bogus plans TOO!)

Cathode and anode materials, vacuum-pump and gage, radiant energy tube ionizer

These items can be purchased from:

Nu Energy Horizons
Route 175, Box 445
Campton, NH 03223

Cathode material consists of 99.9% pure - 100 mesh zinc metal.

\$11.95 per 1/2 lb. Stock #chemzn

Anode material consists of raw iron pyrite ore

\$14.95 per 1 lb. Stock #chemfiss

Corrosion Resistant Vacuum/Pressure Pump

\$99.00 20" Hg max. vacuum -- 18 PSI max pressure Stock #dpump

3" Compound Vacuum/Pressure Gage

\$39.95 Range 30" Hg vacuum to 30 PSI for air and gases Stock #dgage

Completely assemble RADIANT ENERGY tube ionizer

\$149.95 Stock #degi

* Bulk orders are available

** Kits may be offered at a later date. If you would like to be informed

when kits are offered, please send a postcard with your name and address to the Nu Energy Horizons address above.

If you choose to experiment with this device, please;

- 1) Be careful
- 2) Share your results with others
- 3) Inform Bruce Perrault of your progress at the Nu Horizons address

*** Paul Brown used silicon and tritium in his "beta voltaic cells." My radiant energy cells are different in many aspects. Brown utilized a fairly complex process to create these cells. I point this out to show that we have developed atomic cells independently from each other, and that in my opinion my process is a more practical approach. It is in my experience that you do not have to use SiT in a radiant energy type cell. Alpha fusion may also be applied to the formulas to achieve higher output wattage. Please realize that progress has been made since this file was first posted. I do not use the same circuitry. Bottled chlorine gas is not used now because it is too reactive, and is very dangerous. I have added notes to this text to clarify some of the statements that are not my own.**

-Bruce A. Perreault November 20, 1999

Perreault, Bruce.....November 16th, 1993

METHOD OF UTILIZING RADIANT ENERGY FOR THE GENERATION OF EFFICIENT ELECTRICAL ENERGY AND DEVICE

Inventor : Bruce A. Perreault, Mad River Road, Thornton, New Hampshire 03223

References Cited

U.S. Patent Documents

Number Name Date

685,957.....N. Tesla.....Nov. 5, 1901

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4,368,416.....James, deceased.....January 11, 1983

Other References

Primary Batteries (1891), Shelford Bidwell's Battery pg. 113

Direct Conversion of Energy (1964), by William R. Corliss pp. 28-29

Abstract

A method is disclosed for generating electrical energy, including a new and novel device. The device includes electropositive and electronegative electrodes. The electrodes are provided with electrical connections leading to the electrodes.

A sufficient amount of radiant energy applied to a reactive gas causes the gas to react ELECTROCHEMICALLY with the electropositive electrode. This causes an electrical current to flow between the electropositive and electronegative electrodes. An electronic circuit is used to absorb and convert the generated electric current.

BACKGROUND OF THE INVENTION

The present invention relates to a device for the conversion of radiant energy to electrical energy and more particularly, to the utilization of GAS IONIZATION to effect an electrochemical reaction. This device absorbs radiant energies emitted by natural or synthetic reactions, more particularly to a device and method that provides improved performance over prior art converters that convert radiant energies into electrical power.

There are devices that convert radiant energy to electrical current, with poor results.

U.S. Patent Nos. 685,957 and 685,958 issued both patents on November 5, 1901, utilizes air-borne ionized particles to charge an electrical capacitor. The accumulated ions jump a spark-gap and discharge through a load. One difficulty known to exist with this system is the low useable energy that develops.

U.S. Patent No. 1,540,998 issued June 9, 1925, calls for increased collecting surfaces of electrical capacitors, in an attempt to capture more energy. Yet another method converts high voltage and low current strength to voltages more suitable and of greater current. This system is impractical because of the required cumbersome balloons and collectors involved.

Atomic batteries generate electric currents by the disintegration of radioactive substances. William R. Corliss discusses the direct use of ionized particles expelled by radioisotopes in his report; Direct Conversion of Energy (1964) pp. 28-29. In this report high-velocity ionized negative particles emitted by strontium-90 creates a current of ionized particles.

The charge on the particles becomes neutralized by a metallic cylinder. The neutralized particles will find their way back to the strontium-90 becoming again ionized. This cycle repeats itself so long as the strontium-90 remains radioactive. The power generated by this method does not create USEABLE amounts of electrical energy.

Thermionic and thermoelectric energy conversion are discussed in U.S. Patent No. 4,368,416 - James, deceased January 11, 1983. One limitation known to exist with converters of this type is the relatively large heat source required to produce electrical power.

Nuclear reactors generate heat by burning UO₂. This material is sensitive to X-ray energy. When the UO₂ is exposed to X-ray energy it emits photoelectrons. The photoelectrons cause a chemical reaction. Present day nuclear reactors use a natural source of X-ray energy, called U²³⁵. This reaction produces heat. This heat boils water that produces steam.

The steam powers a turbine which in turn generates electricity. This type of energy generator requires complex building materials that make this method quite costly. Consumers have paid billions of dollars to build these power plants. Furthermore no one seems to know what to do with the waste products produced by these power plants. The U²³⁵ breaks up forming highly toxic radioisotopes.

Despite the prior art that exists in this technology, it is believed that previously there has not existed a small, compact electrical device capable of generating usable levels of power. It is the object of this invention to provide a method embodying an improved device to furnish efficient electrical power to a load.

The present invention removes limitations of past attempts to harness radiant energies. Toxic radioisotopes are not formed in the present invention. The primary object of the present invention is to provide a direct method for converting radiant energy to electrical energy, and a new and novel device for converting radiant energy with high efficiencies.

SUMMARY OF THE INVENTION

Thus in accordance with the present invention, there is provided a method of utilizing ionized particles for the generation of efficient electrical energy.

In the present invention, new and novel improvements are apparent. The need for an enormous collector surface no longer exists. Transistors can now replace the outdated spark gap and or high vacuum transmission tubes. The present invention efficiently converts ionizing energy to voltages suitable for practical usage.

A source of X-ray energy is provided by the present invention. This source can be artificially generated and will not produce toxic radioisotopes.

Converted energy in the present invention may be directly available for driving motors, lighting, production of heat and used in electrochemistry.

The method of the invention includes, means for exposing a REACTIVE GAS, such as CHLORINE to a source of ionizing energy.

Other objects and advantages of the present invention will become apparent from the following description of the preferred embodiment of the present invention, with references to the attached drawings, in which:

Fig. 1 is a block diagram of the present invention;

Fig. 2 is a diagram showing the present invention being exposed to a source of ionizing energy of extreme voltage and of short duration.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Thus in accordance with the present invention, there is provided a radiant energy converter comprising a first metallic electrode made of ZINC METAL and a second metallic electrode made of IRON SULFIDE nested parallel to the first electrode.

A number of electrode couples may be used and still not depart from the spirit of this invention. The inter-electrode spacing contains the reactive gas CHLORINE. A number of gasses MAY BE USED and still not depart from the spirit of this invention. Means are also provided, at the end of the electrodes, to provide external electrical leads from the electrodes to a load circuit.

The method to generate electrical energy also includes, with a device just described, means for exposing the internal reactive gas to a radiant energy source of sufficient strength.

The conversion of radiant energy to useful electrical energy is apparent. The small solid-state components of this apparatus make it a practical compact unit. An electronic circuit effects energy absorption.

The electronegative electrode may contain oxygen gas in the form of a solid. Manganese dioxide may be used for this purpose. The electropositive electrode may contain hydrogen gas in the form of a solid. Lithium hydride may be used for this purpose.

The gasses react when the inter-electrode spacing of these electrodes is subjected to radiant energy pulses. The gasses become SUPER CONDUCTIVE. This causes the oxygen and hydrogen gasses to react chemically with minute energy loss. Chemical energy is now converted to electrical energy with extreme efficiency. Furthermore, an electrical transformer can be utilized to transform this electromotive energy to a usable voltage.

Referring now to FIG. 1 of the drawings,

(1) consists of a gas tight vessel. Provision is made for an inlet tube (2) to introduce chlorine gas (3). Provision is made for iron sulfide electrode (4) and zinc electrode (5).

ANY NUMBER of electrode couples, or gas combinations may be utilized and still not depart from the spirit of this invention. A source of ionization (6) is provided.

The chlorine gas (3) must become ionized in order for it to bombard the electrode (5). When the chlorine gas (3) is ionized it becomes a conductor, its conductivity is a measure of its ionization.

There are a number of ways to ionize the chlorine gas (3). X-ray energies emitted from the sun will ionize the chlorine gas (3). Radioactive materials will ionize the chlorine gas (3). Pulsating high-voltage produced by an electrical transformer will ionize the chlorine gas (3).

Any number of ionizing sources may be utilized and still not depart from the spirit of my invention. I stake my claim to the method of power generation.

If an electronic ionizing source (6) is used, once started, the energy produced by said invention will keep the electronic circuit energized.

Initially the electronic circuit must be PRIMED by an outside power source (7). When said invention begins generating electrical energy the external source (7) IS NO LONGER NEEDED. A small rechargeable battery may be used as the external source (7). Said invention will keep the external source (7) fully charged.

Greater amounts of energy can be stored in a compact manner than any previously known electrochemical system. Furthermore, if radiant energy is used as the ionizing source its energy is converted into electrical power.

The voltage from said invention is very stable. The output can be varied from a non-pulsating, direct current, to a high frequency pulsating output. The output pulsation rate is varied by the rate in which the electronic ionizing source (6) pulsates.

The pulsation rate of the ionizing source (6) is determined by its circuit characteristics. These characteristics are well known in the engineering field. Any number of known electronic circuits may be utilized for the electronic ionizing source (6) and still not depart from the spirit of said invention. If the ionizing source comes from radiant energy the pulse rate is a factor in the decay rate.

INVENTION AND DISCOVERY

Radiant Energy Power Generation

**Nuclear
Science has
been**

It would be logical to except that the discovery of fission was the authoritative answer to nuclear science. It would be normal also to accept that no single individual could really claim to be its "inventor," since it is a natural physical process, and required the efforts of many thousands to write it into existence. Countless descriptions of the origin of atomic decay were theorized. Since the

***incorrect
since the
advent of the
Atomic
"chain
reaction"***

advent of the atomic chain reaction nuclear science has been written into scientific law. However, this is not absolute and surely is not correct according to what we now know.

The concept of "invention" does not generally require the physical proof of the invented thing. This fact is clearly recognized by patent law, it does not require a working model in order to get a patent awarded. It is common for inventions to require additional discoveries and developments before an actual prototype can be made. In these cases, an invention may fairly have more than one inventor - the originator of the principle idea, and the individual who actually made the first workable model.

In the case of the Perreault Atomic Model there is clearly one man who is the originator of this newly born nuclear science. He is a catalyst to an emerging science that will ultimately lead to the successful construction of radiant energy power generators and is the principal investigator in the early T.H. Moray Radiant Energy discoveries - making a number of new key discoveries himself. By any normal standard this man is the discoverer of a revised nuclear standard that promises to open new roads to invention and discovery. [This man is Bruce A. Perreault.](#)

The C-stack from Cris Paltenghe

A simple device that could be a new electronic component, and possibly have over-unity implications

Created on 06-21-01 - JLN Labs - Last update 06-21-01

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Abstract

A theory and construction of a new device is discussed that is analogous to a transformer. Similar to a transformer, which is two or more inductively coupled coils, a C-stack is two or more capacitance coupled capacitors. The unique behavior is discussed and a case is made that

the novel behavior qualifies the device as a new electronic component. The unusual ability to decouple voltage somewhat from current leads to some speculation and experimentation with over-unity concepts. The device is extremely simple to make and is well within the capabilities of most home experimenters.

Background

Although I am not an engineer or scientist, I have a technical background and have been an experimenter for a long time. Tesla has always fascinated me, and many of the things found at the [JLN labs site](#) are of great interest to me. Many things on that site inspired the thinking that led me to this idea. The actual mental path to this idea is rather long and convoluted, so I will spare you the boredom and cut to the chase as quickly as I can.

Concepts of a conventional Capacitor

Consider figure 1, that of a conventional capacitor. A capacitor is made up of two, parallel conductive "plates" (films, foils, etc.) separated by an insulation material known as a dielectric. Almost any non-conductive material can be used as a dielectric, but some are much better than others. In general, the larger the conductive plate surface area and the closer the two plates are together, the higher the C value.

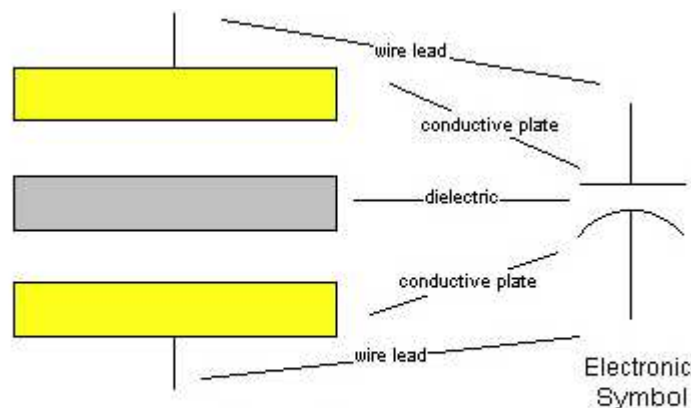


Figure 1
Conventional Capacitor

The C value is the metric used to rate the ability for a capacitor to store energy. It is stated in Farads. The actual energy stored in a capacitor depends on the voltage. The energy stored in a capacitor for a known voltage is

$$J = \frac{CV^2}{2}$$

where J is expressed in joules (watt-seconds). Notice that because the voltage is squared, small changes in voltage make a rather dramatic difference in the energy stored. The voltage rating,

therefore is important, and is governed primarily by the thickness of the dielectric and its breakdown voltage.

The theory of why a capacitor can actually maintain and hold a charge is an important concept.

The conventional wisdom states that,

...although an insulator cannot conduct electric current, it can respond to an electric field in another way. The molecules of all substances either normally have a non-uniform distribution of electric charge within them or assume such a distribution under the influence of an electric field. Such molecules are known as polar molecules and behave as though one end is positively charged, and the other negatively charged.

"Physics", Arthur Beiser, Cummings Publishing, ISBN 0-8465-0521-5

In an assembly of polar molecules when there is no external electric field present, the molecules are randomly ordered (figure 2).

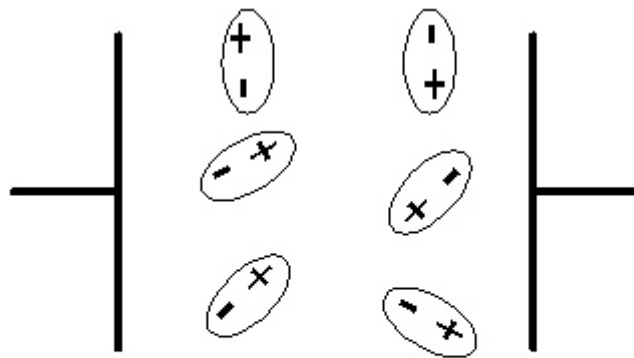


Figure 2
Polar molecules randomly align when no electric field is present

When an electric field is present, it acts to align the molecules opposite to the field (figure 3).

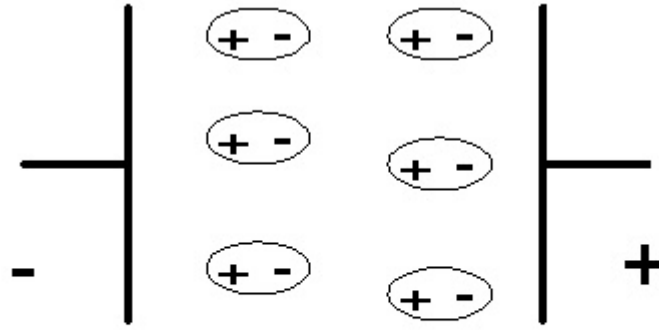


Figure 3
Polar molecules align when an electric field is present

It is this electric field, also known as the Electro Motive Force (EMF) that aligns the polar molecules in the dielectric, which in turn "hold" the surplus of electrons on the negative plate and the deficit of electrons on the positive plate, which constitutes what is known as the charge on the capacitor. The charge will remain unless an electrical circuit path is established for the charged poles to discharge to each other, thereby reaching equilibrium. The circuit path need not be conventional wires. Ionized air works quite well and is responsible for capacitor "leakage" overtime.

The Basic Concept of a C-stack

The term C-stack I coined for lack of a better term. It refers to a stack of capacitors, but this is already in trouble. Stacking capacitors has been a practice for a long time by the manufactures of capacitors to either increase their C value or increase their rated voltage. If the capacitors are "wired" in parallel, their C value will increase. If they are connected in series, the voltage rating will increase and their C value will decrease.

Capacitors hooked up in either series or parallel, or some combination of both, are generally referred to as capacitive networks. I hope to make a case, that although there are strong similarities to my device and a capacitive network, the behavior is different enough to warrant considering it a new component and not a network.

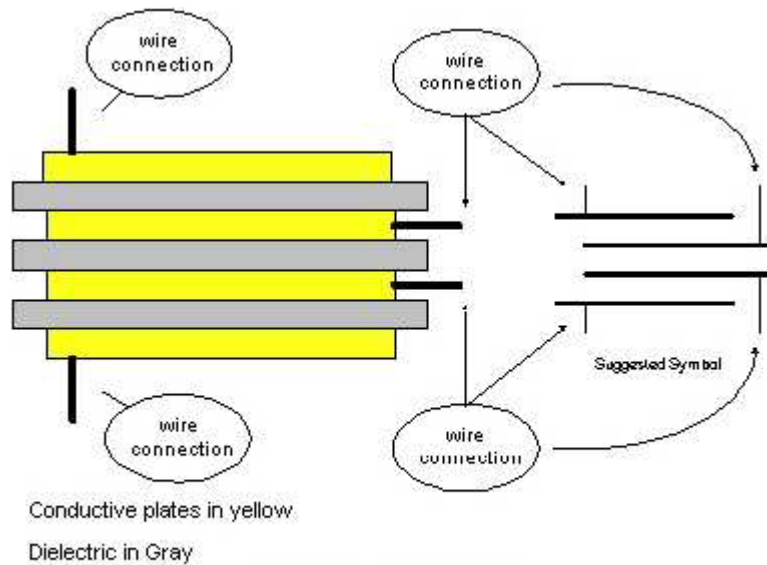


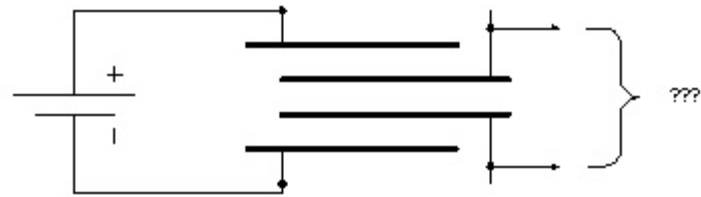
Figure 4 : a C-Stack

Picture four conductive plates, instead of two, all separated by dielectric material. That is, in essence, a C-stack. The basic difference of this device to capacitor stacks used in manufacturing is that there is no electrical connection between any of the plates.

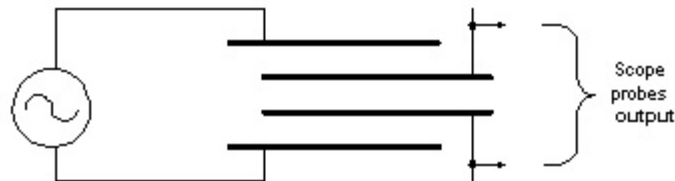
This may not seem much of a revelation at first, but consider what must happen to the inner set of plates if a charge is placed upon the outer plates.

If an EMF has a sufficient intensity to place a charge on the outer plates, then it must, necessarily, affect the inner plates, because they are intrinsically part of the dielectric for the outer plates. If capacitor theory is correct, a charge distribution of the polar molecules in all of the dielectric material must take place, even though no electrical connection has been made to the inner plates.

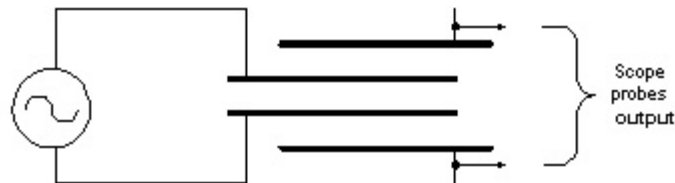
So what happens to the inner plates? What would happen on the outer plates if one placed an input signal on the inner plates? (Figure 5).



What happens to the inner plates when a sufficient EMF is placed on the outer plates to put a charge on them ?



Test 1: Voltage Step-down, current step-up



Test 2: Voltage Step-up, current step-down

Figure 5: C-stack operation

To find out, I constructed my first C-stack out of 4 pieces of copper foil, each 6" x 6". I separated them with .0125" thick vinyl, found in hardware stores to protect furniture (polyethylene would have been much better).

I used a digital capacitance meter to test the value of the inner versus the outer plates. As expected, the outer plates had much less capacitance due to their much greater distance apart. The capacitor defined by the outer plates was .499 nano-Farads, whereas the capacitor defined by the inner plates was 1.977 nano-Farads.

I used a signal generator attached to the outer plates and put the scope probes without a load to the inner plates. After sweeping through several frequency ranges, I selected one that appeared to have the greatest output.

With a 2.9 MHz signal at 10 volts on the outer plates, I observed an 8 volt signal on the inner plates.

Before we discuss the implications of this, let us take a detour and discuss a conventional model to explain the behavior. So far, getting a voltage step-down is not unexpected and could be readily explained using network theory, allowing for measurement errors.

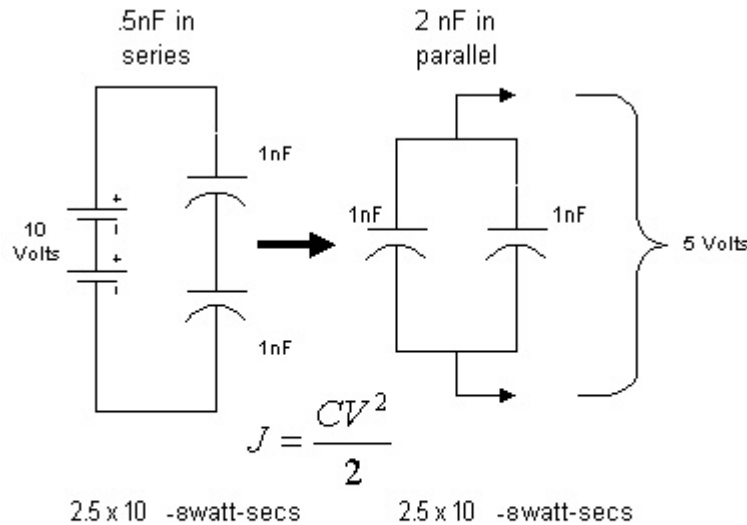


Figure 6
Switching from a series network to a parallel network
changes parameters but the energy state remains
constant

Consider figure 6. In the left hand circuit, assume two 1nF (1×10^{-9}) capacitors are in series and they are being charged by a 10 volt source. The C value for the two capacitors in series is

$$C = \frac{1}{\frac{1}{C_1} + \frac{1}{C_2}} = .5nF$$

Therefore, the energy stored is $J = \frac{CV^2}{2}$ Or $.(5nF * 10v^2) / 2 = 2.5 * 10^{-8}$ joules or watt-seconds.

Now, suppose that after the charge has been placed upon these capacitors, that the configuration is changed to the parallel network illustrated on the right hand side of figure 5, without discharging them.

Because the two capacitors were initially in series when the charge was applied, when we break them apart, they effectively divide the voltage between them, halving the voltage. The capacitance, however, goes up, for a parallel configuration, where the C value is defined by

$C = C_1 + C_2$ so that $C = 2nF$, and the energy stored is, again, $J = \frac{CV^2}{2}$ or $(2nF * 5v^2)/2 = 2.5 * 10^{-8}$ joules or watt-seconds.

Notice that the energy state did not change, just the parametric values between the two configurations. Thus, network theory would predict that although the parametric values can

change by shifting the network configuration of discrete components, the energy state would remain the same.

Lets return to the C-stack experiment and see what happened.

Well, as you might expect, the capacitance values come very close to the theoretical values because the plates of both capacitors were exactly the same, only the distance between them was different. We see that the outer plates .499 nF, was very close to the theoretical .5 nF predicted by two capacitors in series and the, inner plates 1.977 was fairly close to the predicted 2 capacitors in parallel computation of 2 nF.

The expected drop in voltage, however, should have been to 5 volts and I observed 8 volts. So lets see what happened to the theoretical energy states.

	C-Value	Voltage	Watt-Secs
Outer plates (input)	4.99E-10	10	2.495E-08
Inner plates (output)	1.977E-09	8	6.3264E-08
	output/input		2.53563126

In theory, the output energy state was two and half times the input !

Now, to be sure, this had to be measured. The method I chose was to measure both the input and output across a 2.1 ohm load resistor. By measuring the voltage across a known load, the amperage can be computed. The output power is then volts times amps. If the theory was correct, I should see a higher output power than the input. If the device is acting as an unusual transformer, then EI1 should equal EI2. Once again the parametric values for voltage and current will be different on each side of the equation, but their products should be equal, as they would be in a conventional transformer.

Sadly, this was not the case. In fact, the power was much lower than predicted by the transformer model, let alone the $.5 \cdot CV^2$ model. I am embarrassed to say that I was so disappointed by the results, that I forgot to record the actual numbers, or I would have presented them. Even if I had, I was not measuring RMS values, but just looking for peak-to-peak values as an indication of relative changes. These experiments should be replicated with much better equipment and skill than I had at my disposal.

It wasn't until a few days later that the significance of what I observed struck me. Both predictions were based upon *conventional* models. The very fact that neither model predicted the result, strongly implied that the device was, in fact, *unconventional*.

In a conventional capacitor, if the capacitance is known, and the voltage is known, and the capacitor is allowed to charge to that voltage, then the energy stored must be $.5*CV^2$. This was not the case.

In a transformer, the input voltage multiplied by the current must equal the output voltage multiplied by the current. This was not the case.

Granted experimental error due to measurement errors and inefficiencies of homemade devices must be taken into consideration, but they should only account for several percent, not several orders of magnitude!

This is the basis for my case that a C-stack is not merely a capacitive network, nor is it an unusual kind of transformer.

The real question became, what would explain the results that I did get, and is the device useful?

I believe that the reason the current did not manifest on the output side was because it simply couldn't. Recall that the inner plates are not electrically connected to the outer plates, so current simply could not flow. However, the current was not zero, just very low. This might be a case, as my father-in-law has suggested, for inductance coupling. Nevertheless, I do not believe this to be true because EI_1 should have been equal to EI_2 , or at least close for an inductively coupled system.

I believe that the two sets of capacitors are capacitance coupled by virtue of sharing their dielectrics and the coupling due to the EMF was enough to create the voltage potential on the output plates. Because the output plates did not have a source of surplus electrons (a power source), the only current that moved was essentially those electrons available in the measurement circuit.

Now, this leads me to predict some

potential usefulness for the device...

On November 5th, 1901 Nikola Tesla was granted [U.S. patent 685,957, entitled "Apparatus for the utilization of radiant energy"](#). It is a fairly simple patent, all of 5 pages. It is an extraordinary idea. Picture a capacitor aligned vertically. Further, picture the top wire attached to a large conductive plate exposed to the sun, and the bottom wire attached to earth ground.

According to Tesla, the radiant energy of the sun caused the large conductive plate to take on a positive charge. His explanation as to why this happened may be viewed dimly with conventional wisdom. It could very well be that what he observed was a form of the photo static effect, the same that is used to make Xerox copies. Incoming light would dislodge electrons from the surface of the metal plate, causing it to become positively charged.

Once the photo plate has a positive charge on it, it would, in turn, remove electrons from the top plate of the capacitor. That would, in turn, cause an EMF charge distribution to take place in the

dielectric, which would, in turn, cause a surplus of electrons to accumulate on the opposite plate, if there was a source for them. As it turns out, earth ground is a huge supply of free electrons and provided the source of the surplus electrons. The net effect is that capacitor becomes charged. Tesla invented the first electron pump.

There have been others that have built upon Tesla's ideas. [Jean-Louis Naudin's site](http://jnaudin.free.fr), JLN Labs (<http://jnaudin.free.fr>) has a good deal on [Tesla Technology](#), and some [very interesting experiments with electron pumps](#) that indicate the possibility of over-unity. There are even some [Russian patent replications](#) of similar devices.

A common problem these devices have that limits their practicality is that they require their input side to be electrically isolated from their output side. The output side is typically the side connected to earth ground, either directly, or via ionic coupling. The input side must not be connected to earth ground, or the circuit will draw electrons from the power supply rather than the environment, obviating its usefulness. To get around the coupling problems, the devices often use batteries on the input side, which also limits their practicality.

It occurred to me that a C-stack is inherently isolated, so it should be possible to build an electron pump using a C-stack to isolate the input from the output. The output side of a C-stack could provide a voltage potential that by nature prevents it from drawing current from its own power supply. The environment, specifically earth ground, would supply the surplus of electrons required to complete the charging of the capacitor. One criteria would be that the voltage be high enough to be of ionizing potential to reject positive ions from some sort of antenna or pin farm.

I performed the following experiment on June 12th of 2001 with some encouraging results.

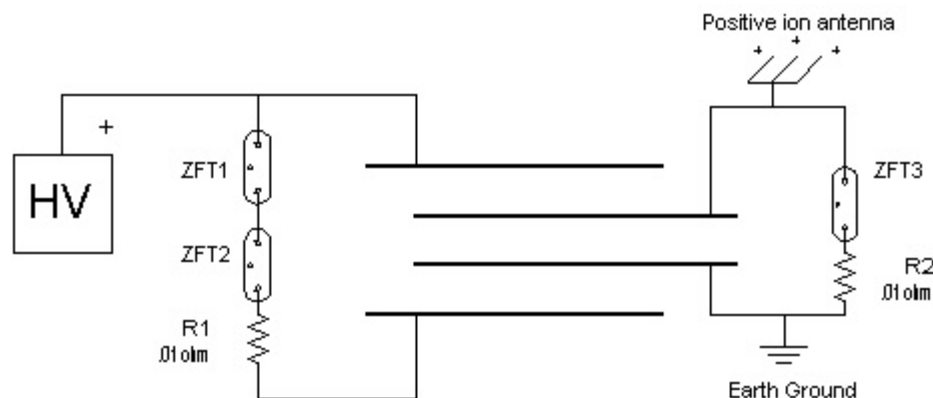


Figure 7
Electron pump using a C-stack for isolation

The box labeled "HV" in figure seven was the power supply from a Tesla toy called a Laser Ball. This engaging desk ornament throws a shower of lightning bolts between inner and outer glass spheres. I was delighted to find out that the bulb simply comes out and is supplied by a single wire! I have no idea what the actual voltage was, however.

ZFT1 - 3 were Radio Shack supplied Xenon flash tubes, each with a trigger voltage of about 4Kv. I put two of them in series with a .01 ohm load resistor on the input side. The idea was that the high voltage supply would begin to charge the outer plates. When it reached the 8Kv breakdown voltage of the tubes, it would discharge through the resistor, and start the process all over again.

The output side of the C-stack used a single Xenon flash tube in series with another .01 ohm resistor, because of the voltage reduction inherent in the configuration. In this way, I hoped I could measure the current and voltage across both resistors and compare the results.

Unfortunately, I do not have high-voltage test equipment that could measure either the voltage or the current. But I can tell you that the output side of the device glowed much brighter than the input side. I am not jumping to conclusions that this is over-unity, its probably just due to the increase in current. But to know for sure, this experiment should be replicated with much better equipment than I had.

Other Potential Uses

Voltage Step-down or step-up circuits

A conventional voltage doubler requires two discrete capacitors and diodes to double the voltage. It also takes an AC signal and yields a DC potential. A C-stack can be configured to step-up or step-down simply by which set of leads you select, inner versus outer respectively. It would be a single component solution that would yield AC from an AC signal. Designed appropriately, C-stacks could be manufactured to have step-up or step-down ratios that are not multiples of 2, and could even be non integer values.

The disadvantage that I see is that if a voltage increase were desired, the AC signal will have to be in its narrow resonant frequency band, which can be quite high for small devices.

Current Isolators

Regardless of the mode (up or down), the input plates in a C-stack are electrically isolated from the output plates. This makes a degree of current limitation possible without adding appreciable resistance. In fact, one of Tom Bearden's requirements (*"THE FINAL SECRET OF FREE ENERGY", A.D.A.S. 1993*) is that the voltage potential be decoupled from the current source, such that the voltage, only, is supplied by the device, and the current is drawn from elsewhere, presumably from the environment.

Non-linear hybrid devices

Over-unity observations have been claimed in non-linear ferro-electric capacitors (see the "VariCond" references and [The Nicolay ZaeV Generator](#) . at the JLN Labs site.) Perhaps a C-stack made with Barium Titanate and Barium Ferrite ceramics would yield non-linear results.

Electrets can also be made from Barium Titanate. Electrets are unusual capacitors that are permanently polarized, meaning that they have a permanent charge distribution "baked" into their dielectrics. They actually will charge themselves overtime. This may have some interesting implications with C-stacks used in environmental electron pumps, or VariConds, or both...???

Conclusion

In conclusion, I believe that this device is a unique component. I base this on the fact that its observed behavior does not appear to conform to standard network or transformer models.

I also believe that the device is useful, although there may be better alternatives to given functions that it would perform. It appears, however, to be more simple and cost effective than to most of its alternatives.

Miscellaneous Notes:

I have noticed that the device will also work in the reverse configuration. One can use the inner plates as input, and the outer plates as output and get a voltage increase and a current decrease. This appears only to work at its resonant frequency, however. (You can expect that the resonant frequencies of devices on the scale that I built will be in the 3 - 4 MHz range, larger devices will be less). The resonant frequency will be a narrow band and appears out of nowhere as you frequency sweep. The original configuration (outer plates as input = voltage step-down) is much less sensitive to frequency.

I have also built devices where the inner and outer plates were not exactly alike. I used a copper mesh for the inner plates one time expecting the capacitance to be less due to all of the holes. Surprisingly, the capacitance was astonishingly high. Apparently, when the mesh is made, it is made from a solid sheet. The holes are not actually punched out, but are punched and folded back, creating much more surface area than a flat plate. The $.5 \cdot CV^2$ value for the output was 132 times that of the input !!! Too bad the actual power out wasn't as high. But, there still may be a way to get there if we can figure out how to charge the plates from the environment. The C-stack gets us half way there because the voltage potential is there, and it is inherently current decoupled from its power supply.

Closing Remarks

I would like to encourage all who are interested to replicate my experiments and try new ones. Not having the engineering background, or the equipment, puts me at somewhat of a disadvantage.

I am still not sure whether the device is useful, or if my theories explain its behavior. I believe the device is useful and would love it if some of the more advanced among you would try it with some of your experiments, particularly those in Tesla devices like electron pumps. Your critiques are important to the discovery process.

Additionally, your input, and your experimental results are important to me because of the way the patent laws work in the U.S. We are still on a "first to invent" rather than "first to file" basis. Therefore, I am somewhat protected by this publication and other mechanisms for up to a year, in which time I will be evaluating this idea. Your experiences will help me decide how viable the idea is, and whether to go forward with it or not.

Good luck, and please keep me informed of your results.

Cris Paltenghe

Oak Park, CA.

June 16 2001



Cris_Paltenghe@yahoo.com



ACG v1 : Preliminary test results

Tests by Jean-Louis Naudin

Created on December 15th, 2002 - JLN Labs - Last update December 15th, 2002

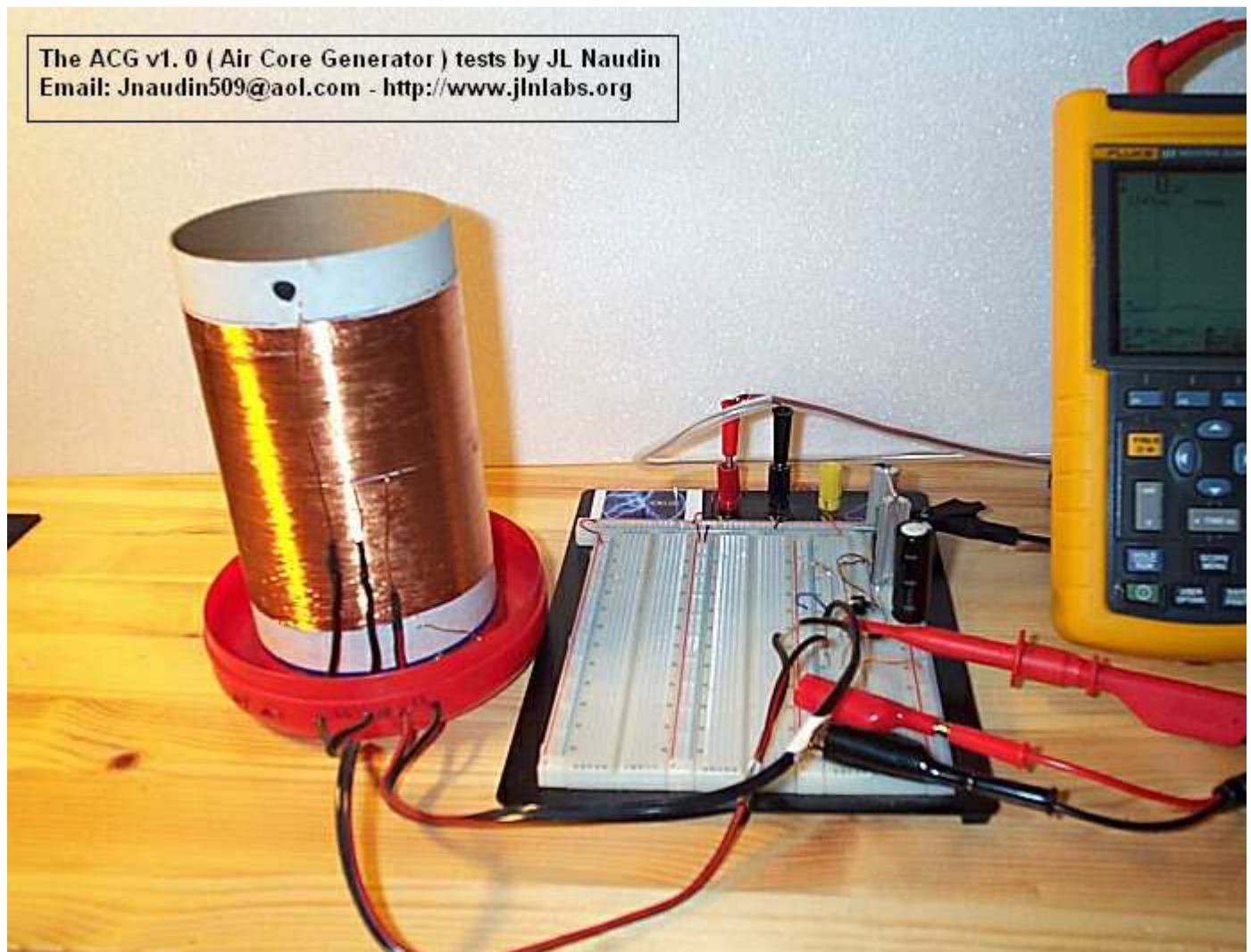
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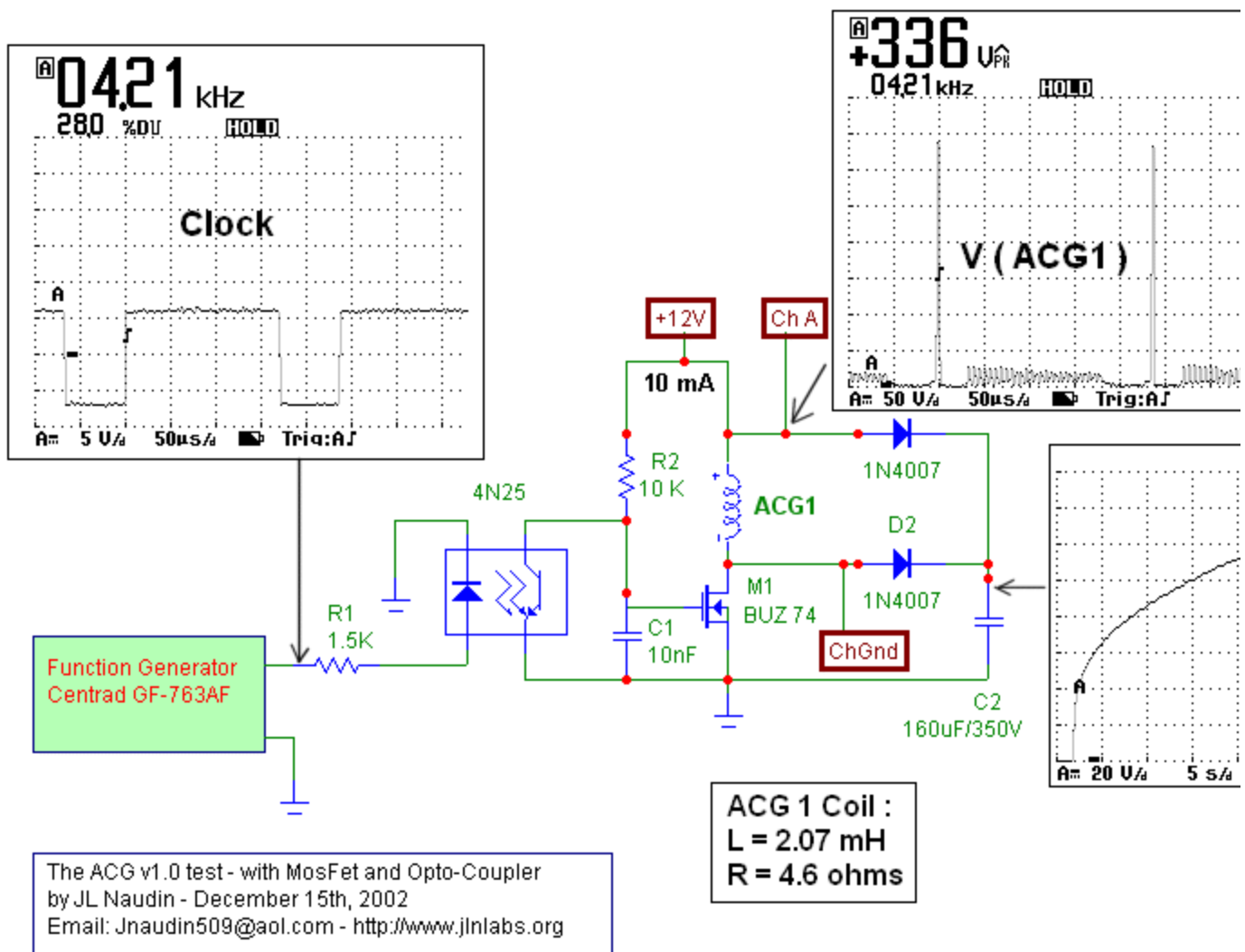
All informations and diagrams are published freely (freeware) and are intended for a private use and a non commercial use.

This a preliminary test with the ACG v1.0 (Air Core Generator), the ACG name has been invented by Joe Arnold. The ACG principle is based on the [Tesla U.S. Patent 577,670](#) from 1897. The coil used is a old air core coil that I have used during my TEP project, the coil is composed of two coils connected in series, the ACG v1.0 total inductance is 2.07 mH (4.6 ohms). The clock pulses are generated with a Centrad GF 763AF function generator set at 4.2 KHz (28% -DTC). A N-Channel MosFet transistor [BUZ 74](#), send positive pulses (+12 V) at 4.2 KHz at 28% +DTC to the ACG coil. The function generator is fully isolated from

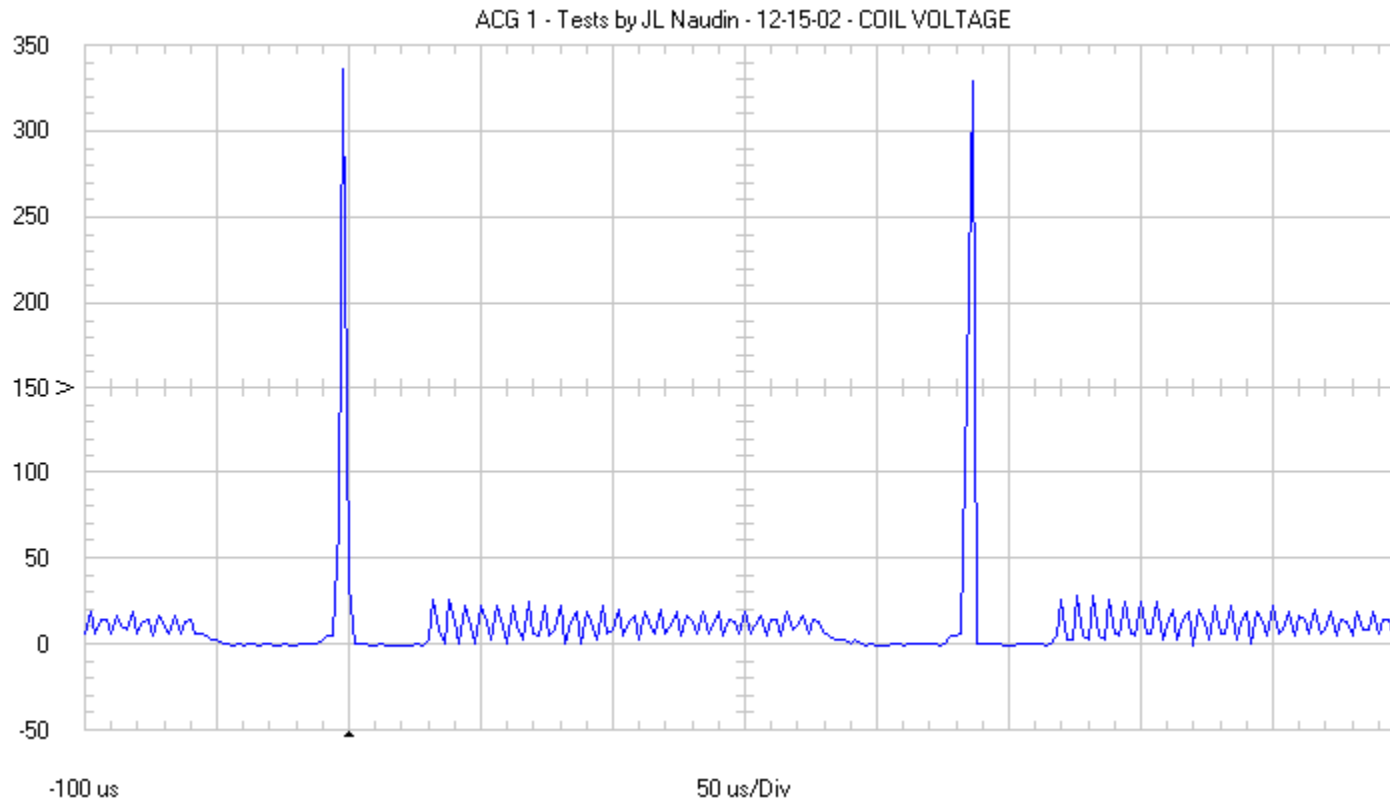
the ACG driver by a 4N25 opto-coupler. All the measurements have been done with a fully ungrounded and battery powered digital [oscilloscope Fluke 123](#).

The circuit that I have used for this test is fully based on the electronic diagram that Jean-Michel Cour has sent to me, I have just only adapted some components. I am grateful to Jean-Michel Cour, Joe Arnold and Tim Harwood for their helpful contribution to this projet.

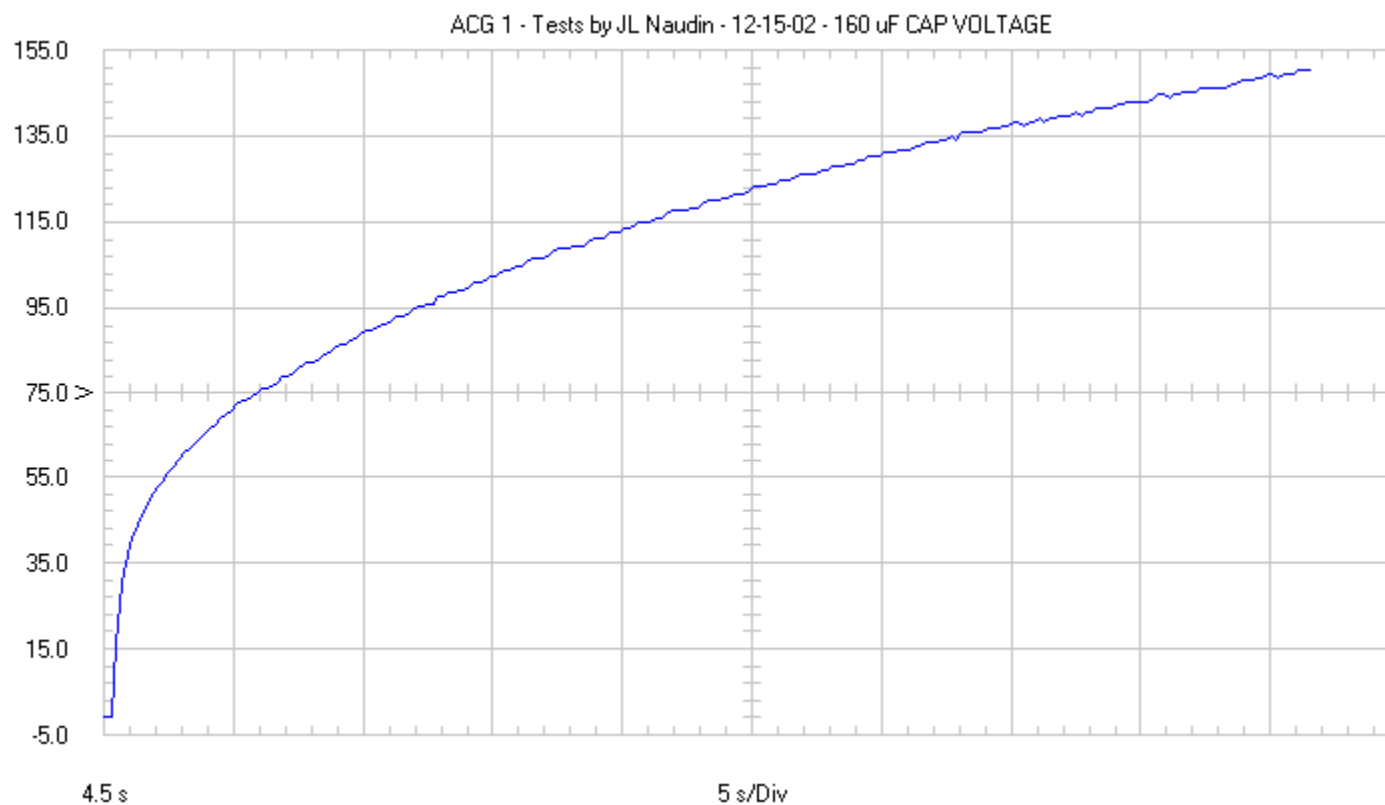




Download the N-Channel MosFet transistor [BUZ 74](#)



Voltage across the ACG coil (clock pulse at 4.2 KHz at 28 % +DTC).
The measured voltage spikes across the ACG coil are very strong (up to 336 V).
The Power input is weak : 120 mW (12V @ 10 mA)



**The voltage spikes across the ACG coil are able to charge a tank capacitor. Above, the
Voltage across the capacitor C2 ($C=160\mu\text{F}$ / 350 V)**



Comment from JL Naudin : The ACG V1.0 circuit works well with a such air core. The voltage measured across the tank capacitor C2 goes up to 320 V (and more) in few seconds. At this moment, I confirms the Jean-Michel Cour and Tim Harwood tests and measurements about the ACG device...

Direct link to the Harwood's ACG web site :

- [The Nikola Tesla Patent US577670](#)
- [The ACG \(Air Core Generator \) based on the Tesla's patents](#) by Tim Harwood
- [The Tesla Radiant energy, the Quest of Negative Energy](#) by Tim Harwood

Interesting to read carefully :

- [Step-Up switch mode power supply : Ideal boost converter](#)

- [A diode circuit with a free wheeling diode](#)

Negative Energy Guide

Posted on Sunday, May 26, 2002 @ 09:37:00 PDT by [vlad](#)

- [Tim Harwood](#) writes: In 1992-1993, Mr Robert Adams of New Zealand put a working free energy device into the public domain. Since then several people have replicated it, but it is one of those situations where everyone stands around waiting for someone else to do something. Tim Harwood has for the first time, placed a detailed guide to construction into the public domain, and as a recent development, a wholly original solid state derivation of the Adams motor besides. It is hoped with the widespread distribution of the underlying theory behind negative energy manifestation, combined with simple how to device construction guides, a revolution in science can now rapidly be ushered in.

Devices

- The file is too large to be posted in this box.
- It can be downloaded from this attachment.

Re: Negative Energy Guide (Score: 1)

by Anonymous on Sunday, May 26, 2002 @ 22:49:00 PDT

vlad (vlad@zpenenergy.com) writes: Tim,

The file is excellent and I hope people will step up and help to move this research forward.

You're not the first one who challenges my statement in the Remember box that: "As of TODAY, still NO PROVEN DEVICE that harnesses USEFUL POWER from the ZPE." In my opinion, for the statement to be removed the two attributes "Proven" and "Useful" must be met.

Even though for you and many other experimenters who have build/seen these devices working, the proof is clear, in reality, for the rest of the people, the proof can only come in two ways: The scientist will officially admit these claims are true (measurements) or a device is produced commercially and people can use it and laugh at the skeptics that say it doesn't exist! Of course, the power produced must be useful, because toys that run cold and forever are nice, but nobody cares.

Don't get me wrong; these toys are important to prove the concept and stimulate the scientific world, but from a practical perspective, we have to go after the proof as stated above to trigger the new energy revolution and for you, or any other inventor for that matter who succeeds, to get the Nobel prize!

-

Re: Negative Energy Guide (Score: 1)

by Anonymous on Monday, May 27, 2002 @ 06:14:00 PDT

Tim Harwood (timharwood@usa.net) writes: Skepticism is fine so long as it is not excessive. Not everyone who has tried to replicate the motor template I have offered has been successful. However, several have been successful, and some people getting results have now been kind enough to submit pictures. This has added enormous credibility to my previous statements, since with work and application, 100% independent replications are now clearly shown to be possible. What I have designed is basically the logical cut down simplified 'home edition' of the Adams motor, and perfecting the bizarre and non standard rotor / stator geometry was very important. In this respect I simply did what Mr Adams informed me was required (4:1 clearly stated in the patent and Nexus articles) and built it as stated.

As for the POD unit, when properly adjusted is it basically the old Sweet SQM / VTA unit reborn, but simpler, cheaper, more reliable, and able to use cheap standard off the shelf Radio Shack ceramic magnets, with no 'treatment' required. It is a very exciting technology that may become the basis for all energy research going forwards. Again, while not everyone gets results, there are people out there who seem very happy with their independently constructed POD units. The replication 'hit rate' for these experiments, while certainly not 100%, seems to be far ahead of anything else yet tried. And as I always say, why not try building both? Since the underlying physics is identical, if you can just get either the motor or POD to work, you will probably learn enough to make the other device work also. Finally, I agree with the two conditions set 'proven' and 'useful.' The proof will come as yet more replications stack up above many already claimed. As for the 'useful,' given the astonishingly low cost base of POD units, the lack of moving parts, and the 100% 'off the shelf Radio Shack' nature of the device, I can not think of anything more useful then POD. It can be added as a simple \$50 upgrade to existing DC motors, hence no major round of new investment will be required to make use of it.

Tim.

•

Re: Negative Energy Guide (Score: 1)

by Anonymous on Saturday, June 15, 2002 @ 14:11:00 PDT

Dave Narby (dnarby@acmemail.net) writes:

Tim,

, ,
,

If you want people to take you seriously **then you need to address these issues** which I have posted in response to your claims on multiple email lists:

' '

=====

What we need to see from this group with regards to the POD is ', 'this:

1. Start with 2 batteries (or capacitors), 1 charged, 1 discharged.

' '

2. Run the device off the charged battery, using it to charge up the discharged one.

3. Switch the batteries. Repeat.

After a number of repetitions, they should end up with two fully charged (or very nearly so) batteries.

' '

If they are getting OU this **should** work... **Right**?

If this works (which I doubt) then the next step would be to perform a comparative power test, or better yet, a calorimeter. A lot of OU 'disappears' when measured with highly accurate instruments vs. cheap ", 'DMMs.

What we also need see from this group with respect to endothermic operation ('cold running') in Tim Harwood's Adams-type motor is this:

1. Isolate the item (transistor, coil, etc) to undergo temperature measurement from all moving air produced by the rotor. Also isolate the ambient temperature thermometer/thermocouple. This needs to be done because I have read a report on another list of an experimenter observing a temperature drop which disappeared after he isolated his probe from the air being moved by his motor.
2. If using a thermocouple instead of a mercury thermometer, move the item to be measured FAR AWAY from the coil, moving magnets and power source. This is because another experimenter has noted that thermocouple measurements can be made highly inaccurate by a moving magnetic field!
3. Measure the ambient room temperature and the item BEFORE starting the motor. Amazingly, no one has even done this ', 'yet!
4. Take measurements over TIME.
5. Switch the thermometers and repeat to help account for margin of error.

If results are achieved, then further testing with more sensitive thermometers is in order. One would expect a large temperature difference from Tim Harwood's reports ('It runs stone cold' etc., ad infinitum).

=====

' '

Without addressing these issues, there is **NO EXPERIMENTAL PROOF WHATSOEVER** for your claims, only your 'say so'.

Your theories are another matter, as anyone familiar with the material of Adspen, Bearden and Dragone can clearly see you've simply plagiarized from them and cobbled together an assortment of bits and pieces from their works.

Dave Narby
(aka Dave N.)

•

Re: Negative Energy Guide (Score: 1)
by Anonymous on Tuesday, June 18, 2002 @ 14:31:00 PDT

Tim Harwood (timharwood@usa.net) writes: Dave, the tests you demand were performed by an independant third party many months ago, as you well know.

<http://www.geocities.com/theadamsmotor/podrl.html>, '
What is your agenda is spreading such falsehoods?

Who pays you to do this? Exxon-Mobil?

You seem to spend all day every day sending me abusive emails. You should get out more.

Tim.

•

Re: Negative Energy Guide (Score: 1)
by Anonymous on Tuesday, June 18, 2002 @ 16:04:00 PDT

Dave Narby (dnarby@acmemail.net) writes:

Tim,

' , '

Unless the page you referenced has been updated as of 6:45 PM EST, **anyone can see that there is NO test posted there like the one I described earlier.**

I find it ironic that you accuse me of falsehoods when you so blatantly indulge in them yourself. I am confident at this point that it **IS** a falsehood (and not a simple misunderstanding) as this is the fifth or sixth time I have requested this test be done. The public record on JLN's Yahoo group list, the Sweet VTA list and the NuEnergy list all contain it now and are part of the public record, as is this. ' , '

I would also like to recommend that you skip the accusations and ad hominem personal attacks if you wish to retain a shred of credibility.

' , '

If they work as claimed, I fail to understand why you continue to resist exacting testing of your devices.

Dave Narby

, ,

•

Re: Negative Energy Guide (Score: 1)

by Anonymous on Wednesday, June 19, 2002 @ 14:09:00 PDT

Tim Harwood (timharwood@usa.net) writes: Dave,

You are utterly obsessed with slandering me. Every day a new slander. I think you are a paid agent of the oil companies. What normal person could be so obsessive? You have a one man crusade going here, to be sure.

The reason people who have replicated POD do not wish me to post their names, address, and phone numbers, as you desire, is because guys like you scare them off.

If abusive types like you did not exist, these people would be willing to come forward.

The tests you demand, were carried out months ago by a fully independant third party, who contacted me and summarized his results.

', 'http://www.geocities.com/theadamsmotor/podr1.html

Now, if you wish to play this game of accusing everyone who has replicated the Adams motor and the POD unit of being delusional / a liar, then that is fine by me.

I've seen the physics on my lab bench, so have they, we know it is for real.

I will not respond further to your slanders.

Who is Dave N anyway?

Tim.

•

Re: Negative Energy Guide (Score: 1)

by Anonymous on Thursday, June 20, 2002 @ 12:34:00 PDT

Dave Narby (dnarby@acmemail.net) writes:

Tim:

| New posting on 'ZPEnergy.com':

| Tim Harwood

wrote:

|

| Dave, You are utterly obsessed with slandering me. Every day a new slander.

Slander is spoken. You meant libel. Libel involves misrepresentation. I have not done this. This is moot ', 'however, as everyone reading this has the facts in this argument. They will make up their own minds.

| I think you are a
| paid agent of the oil
companies.

**Now, that is libel. Thanks
for proving to everyone here you're a ", 'hypocrite.**

I warned you skip the ad hominem personal attacks.

| What normal person could be so obsessive?

| You have a one man
|
crusade going here, to be sure.

Perhaps I am on a crusade. People do that for the truth quite often. But it's easily arguable that I'm not ", 'obsessed - I actually have to spend very little time rebutting your arguments.

' ,
,

| The reason people who have replicated POD do not ', 'wish me to post
| their names, address, and phone numbers, as you desire, is
because guys like you scare them
| off. If abusive types like you did not
exist, these people would be willing to come forward.

' ,
,

Anyone can see that I have simply asked that a basic test be performed. You are the one abusing me by accusing me of being obsessed, a stooge for the oil companies, abusive etc. You are quite adept at this tactic of accusing someone of something and then immediately doing it to them!

If these people who you claimed to have replicated the POD do not come forward for further tests, then they're results are less than useless. If they exist at all.

| The
| tests you demand, were carried out months
ago by a fully independant third party, who
| contacted me and summarized his
results.
| <http://www.geocities.com/theadamsmotor/podr1.html>face=Arial>

Again, this page obviously does not have the tests ', 'results contained in my previous challenge. Anyone can see that!

' '
,

| Now, if you wish to play this game of
| accusing
everyone who has replicated the Adams motor and the POD unit of being delusional
/ a
| lair, then that is fine by me.
' ,

**You are trying to put words in my mouth. I
have not said they were liars. I have not said they were delusional.
I have not said anything about them. My comments have been towards
you. This is another tactic you are quite adept ', 'in!**

**I will say now that they are MISTAKEN
and WRONG. They have not performed even the most basic tests. ', 'After the battery
charging test, the next step would be more accurate
instrumentation (i.e. an oscilloscope) and after that a comparative power test
(better yet, a calorimeter). Checking Pin vs. Pout with a cheap DMM
proves nothing except that a better test has to be
performed.**

' , "

| I've seen the physics on my lab bench, so have
they, we know it is for
| real.

**I will admit that It's obvious that you
think you do.**

| I will not respond further to your slanders. Who is Dave
N anyway? Tim.

' ,
,

**My name is Dave Narby, as previously
noted. We might very well ask the same thing
of Tim Harwood. I am heartened by the fact that
you are going to stop responding to this thread as you do not seem to be able to
introduce any new information, but merely repeat your protestations that the
tests have been done and that I am being unfair in my criticisms. It is
rapidly proving to be a waste of time to try and get any real information out of
you, as you respond by putting words in people's mouths to create 'straw ', 'men' that you
may then destroy.**

**BTW, thank you for providing an easy way to sum up
the measurement and testing inadequacies in your POD and Adams motor variant
and your evasiveness in rectifying it. I have been linking to this
thread in emails as a way of quickly summing up the arguments. Thanks
for saving me the time I used to spend cutting and
pasting.**

' ,
,

Dave Narby

•

Re: Negative Energy Guide (Score: 1)

by Anonymous on Friday, June 21, 2002 @ 12:05:00 PDT

vlad (vlad@zpenenergy.com) writes: Gentlemen, please...let's cut it here. The important fact is that Bill, Tim, John (and others) are working together on the eBike project and the 3610-30 SmartPak model wired in self-powered mode using an "over-unity" Head (POD) Assembly, if it works as intended, would be the final test (proof) many are waiting for.

<http://groups.yahoo.com/group/smartpak/files/System/3610eBikeSelf.gif>

•

Re: Negative Energy Guide (Score: 1)

by Anonymous on Thursday, August 15, 2002 @ 12:58:00 PDT

Dave Narby (dnarby@acmemail.net) writes:

' ,

Hi Vlad (I assume Tim is staying True to his word and ignoring this thread),

' ,

There have been some recent developments that I thought I would add here.

It appears that one of Tim's group members may have reproduced the Bedini method of making a negative resistor in a battery:

<http://www.cheniere.org/techpapers/Bedini.pdf>

by

using an Adam's style pulsemotor setup:

<http://www.geocities.com/theadamsmotor/replication4.html>

This is consistent with how Bedini did it.

Also, there seems to be a problem with Tim's 'theory':

<http://www.geocities.com/theadamsmotor/adams.html>

since ', 'it requires permanent magnets - this is because someone else has shown that a POD type device without the magnets or steel core actually performs better than with them:

http://sparky.cis.smu.edu/wca/motor_pictures/airpod.html

Whether

or not the Bedini negative resistor phenomenon can be observed with these setups remains to be seen, I have asked the experimenter to investigate this.

To date, Tim has not even addressed any of the testing methods I outlined in this thread and continues to simply insist that he's done enough to prove his devices work as claimed.

Thought you would like to know.

', '

Best,

Dave N.

•

Re: Negative Energy Guide (Score: 1)

by Anonymous on Saturday, September 28, 2002 @ 09:17:00 PDT

Wakan writes: I think it would benefit us all if we could develop a generalized test procedure to begin with... maybe post it on this website? so all experimenters can have a standardized guage and be on the same level so we might avoid disputes like this.. im new to this site so if this has already been done please disregard this.

•

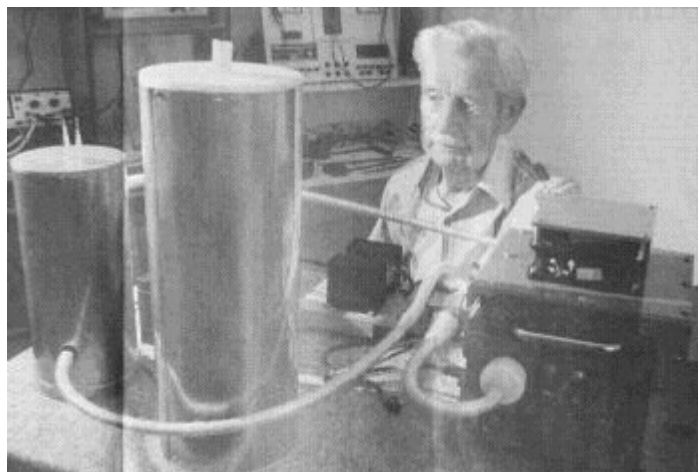
Re: Negative Energy Guide (Score: 1)

by Anonymous on Sunday, September 29, 2002 @ 18:25:00 PDT

vlad (vlad@zpenenergy.com) writes: Wakan, you are right, but easy said than done. I have seen a few attempts to do just that for different types of devices with various types of output power... but nothing like a comprehensive generalized test procedure so far. If you want to see some of the problems and proposed solutions, I'm attaching here a recent extract from the KeelyNet discussion list, on the topic of "measuring power".

The Adams Active Thermo Electric High Voltage Pulsed DC Permanent Magnet Switched Reluctance Electric Motor

(c) 2002 Tim Harwood & John Jankowski



Introduction:

The most obvious question people ask is why no-one invented the Adams motor before 1969, and the answer is fairly simple - the materials needed to build it were not widely available. It is a great pity that ideas about what electric motors are capable of doing were fairly firmly fixed, long before the materials required to properly experimentally explore electric motor design were developed.

'While most small DC motors are now produced with permanent magnets, this has not always been the case. It has been only relatively recently that permanent magnet materials have been developed sufficiently to make them useful in practical machines. From the late 19th century until the early 1940's, steel permanent magnets were used in applications where permanent magnets were necessary for the device to function (compasses, etc.) Only in the late 1940's did Alnico and Ferrite permanent magnets finally improve sufficiently to be practical in applications previously reserved for electromagnets.'

Switched Reluctance Motor Systems Poised for Rapid Growth Amory B. Lovins, Bill Howe

The emergence of a rugged, versatile, and highly efficient alternative to conventional electric motors promises to have a major impact on drivepower markets over the next decade. Although switched reluctance drives are not yet available "off the shelf" from major motor manufacturers, they are likely to compete favorably across a broad range of applications, due to their superior performance characteristics. Switched reluctance drives maintain higher torque and efficiency over broader speed ranges than can be achieved with other advanced variable-speed systems, can be programmed to precisely match the loads they serve and, in high-volume production, are likely to be less expensive than competing systems. The principal obstacle to rapid commercialization of switched reluctance motors is the fact that few engineers are trained to perform the exacting and specialized design that this technology requires. This hurdle is gradually being overcome as over two dozen firms now design or manufacture switched reluctance drives, and several are moving into mass production applications. As these and other firms gain experience with the technology, new opportunities will arise for utilities, energy users, and original equipment manufacturers to capture the benefits of switched reluctance motor systems (1992).

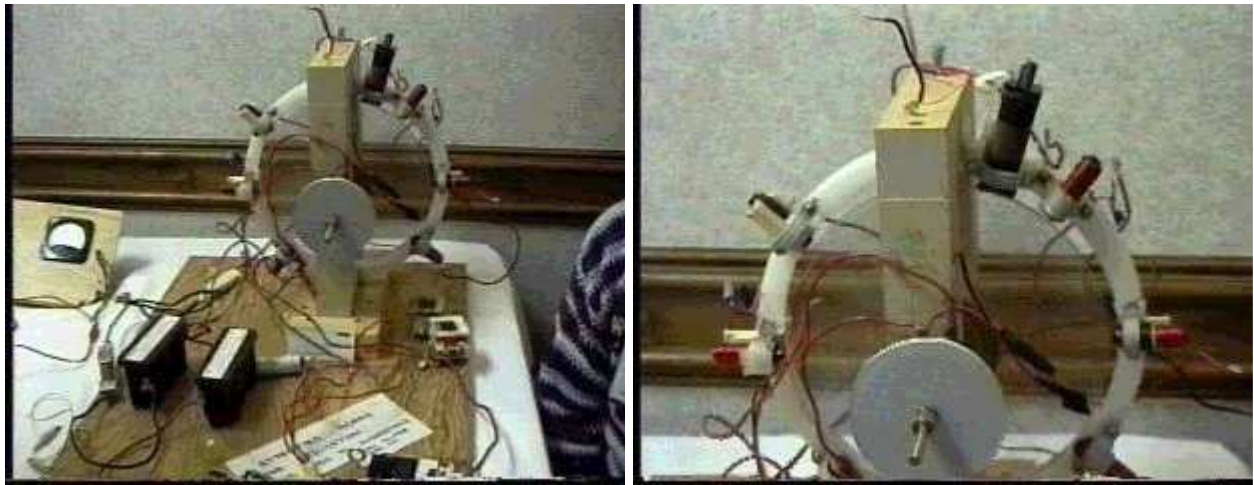
Brief History

Invented in the period 1967-1969 by Mr Robert Adams of New Zealand, for a variety of reasons the technology did not win immediate acceptance, not least of which was that the New Zealand government and the Lucas corporation, for various reasons, allegedly directly suppressed it, followed by a typically botched and incompetent CIA assassination attempt. That this direct suppression could happen during a period of global economic crisis triggered by the 1970s oil shock, is simply astonishing, and with hindsight, outright scandalous. As for the academics, they ignored it, and simply told Mr Adams free energy was impossible and 'against all the laws of physics'. Academics like to put theory before experiment - it is their way. Frustrated in 1992 Mr Adams published his technology in *Nexus Magazine*, putting for the very first time, a working free energy device into the public domain. However, sadly, the continued lack of interest in free energy solutions from the general public, government, big business, scientific community, and environmental organizations alike, means the motor has still not been commercialized.

Subsequent to the 1992 original Nexus article, an Englishman called Mr Harold Aspden helped draw up what became GB Patent 282 708, a document which like the original Nexus article, is certainly not without its flaws, due primarily to the lack of experimental experience of the author. For example, Mr Aspden was apparently unaware the motor runs off time reversed negative current, something anyone with a working unit knows full well. Nonetheless, the patent remains an important landmark in Adams motor research, because of the more recognizably modern and scientific terminology Mr Aspden used to describe the motor, and as a consequence, is given in the appendix to this document.

1994 Institute of New Energy (INE) Conference

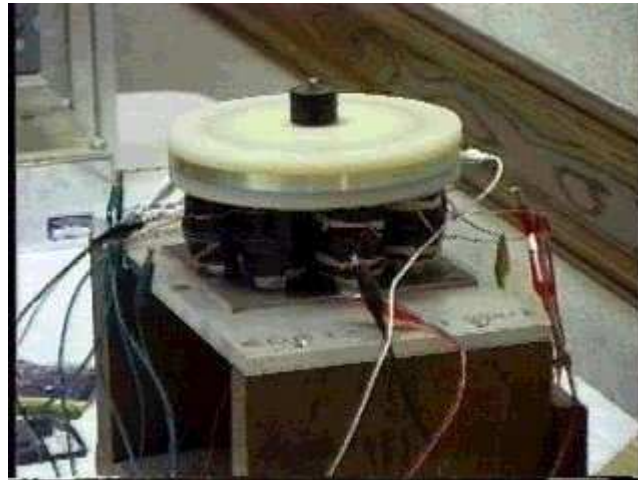
As well as Mr Aspden's contribution, this conference marks an important inflection point in the history of the Adams motor, because for the first time a group of educated men discussed the device, and several real motors were brought to the conference, attempting to replicate the over-unity performance. However, sadly none of the motors present were of sufficient engineering quality to manifest the elusive over-unity effect, and one must lament the missed opportunity this conference represented. As a matter of historical record, photos of some of the machines present are included in this document. These are among the earliest attempts to replicate the Adams motor.



The spindle motor (my nickname).



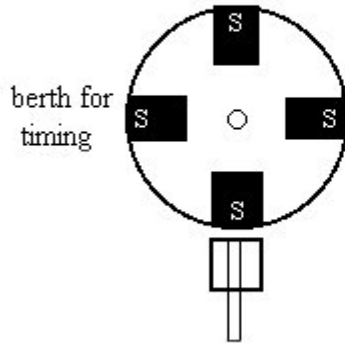
The plastic motor (my nickname).



Saucer motor (my nickname).

Quick Guide to Design

The Basic Adams Motor Configuration



Simple ceramic / ferrite magnets are fine
 9v is the first negative energy harmonic
 Hence for best results I suggest 9-12v
 I also find 3/8" cores are easy to work with
 Which implies roughly 6/8" rotor magnets
 I also found 24g wire to be easy to work with
 Magnets can be all N or S poles out
 I use S poles for the benefit of my Hall ic
 A second stator can be added if desired

It seems to me there are 3 key stages to the stator cycle of the Adams motor that deserve particular attention, and to properly appreciate it, one should also understand that an Adams stator is really a 10 ohm generator winding:-

1. **Attraction to Stator Core:-** The permanent magnet rotor is attracted to a wound stator core. No electrical current is supplied. The kinetic energy gained comes from the intrinsic ferromagnetic state of the magnet, and is 'on loan,' and must be paid back at the stator. In other words, to remove the magnet from the stator, an equal amount of energy must be inputted to separate the magnet from the core. This is where the energy 'loan,' made in stage one, is normally paid back. The laws of conservation of energy state this.
2. **Demagnetization of Stator Core:-** When the rotor magnet is in register with the stator core, the timing circuit is closed and a current pulse is delivered to the stator coils. The stator is wired such that the current flow creates an opposing magnetic field to that of the rotor magnet. This works to offset the magnetization induced in the stator core across the air gap. The stator coils 'dull' the field induced in the stator core, and can even overcome it and provide repulsion at sufficient voltage. Consequently, the total current cancels out much if not all of the drag back of the rotor to the stator, and the rotor is capable of 'free wheeling,' out of the stator zone using the remaining inertia gained in stage one. The magic is that this current pulse is complemented by additional current freely induced in the stator windings by the rotor magnets, which as per the dictates of Lenz's law (1834), opposes the force that induced it. **THIS IS WHERE THE OVER-UNITY EFFECT HAPPENS, AT THE MOMENT OF SWITCH CLOSURE!** The permanent magnets in effect provide free precharge to the motor circuitry when in register!
3. **Recovery:-** Now the rotor has moved away from the stator zone, the timing circuit is open again, the stator windings lose power, and stator core reverts to its default magnetized state. Restart at stage 1.

Clarification of above

In permanent magnet switched reluctance design, it is important to understand the windings are fundamentally demagnetizing windings, and NOT as many people intuitively assume - magnetizing windings. Important difference. This is not to say the windings can not with enough voltage be used as magnetizing windings, but this is not really the proper mental image to use to visualize how the motor functions. Try it this way - the units I am about to use are not intended to correlate to real values, simply to make a point. The rotor is attracted to the stator core. When in register, the core is energized by the pole face of the permanent magnet to a strength of (negative) -10. In order to totally neutralize the temporarily acquired magnetism of stator core, and enable the rotor to 'free wheel away,' an electromagnetic field of + 10 must be induced in the stator windings. The Lenz current / precharge in full register where the greatest number of stator turns are cut, might be equivalent to, say, + 8. The timed delivered DC pulse, has a value of + 12. So with Lenz current / precharge, the net magnetism of the stator when in register is +10. That is $((-10) + (8)) + (12) = +10$. Without Lenz current the calculation would be as follows $(-10) + (12) = +2$. We have therefore made a 'free energy,' gain of + 8 units - equivalent to the size of the Lenz current / precharge induced in the windings.

The Stator - An Electromagnetic Field Splitter

A stator has two main parts.

- Firstly the central core. A piece of material that is in an ideal world *magnetically non retentive, highly permeable, with a very low magnetic orientation and response time, and an inductance rating of 1.5 Teslas or above..* Obviously, the rotor will be most strongly attracted to this substance.
- Secondly, the stator is wound with many hundred of turns of wire, the current induced in this wire by the magnet will be of a polarity that repels the magnet, as per Lenz. The 1.5+ Tesla inductance rating of the core, ensures a solid pole face is formed by the core when the windings are energized and an electromagnetic field applied.

As stator and rotor come into alignment, the field spread over the stator windings is at its greatest extent, hence the current induction is at its strongest, exactly at the 'in register,' position, when it is most needed, **which is also where we close the timing circuit enabling current to flow.** Therefore at the 'stuck,' point where the stator core and magnet are effectively temporarily as one, you will get a large current induced, that acts to offset the field the magnet has been inducing in the stator core, which is the basis for the mutual attraction of the rotor to the core. We are therefore left with a most fascinating electromagnetic paradox, whereby the *magnet is fighting for control of the stator core simultaneously from two directions.* It is both trying to extend its flux field into the stator core to create an attraction effect, but it is also trying using current induced, to make the stator core repel itself. Both actions on their own are fully predicted and explained by existing electromagnetic law, some of it 170 years old, yet what no-one in the mainstream has ever investigated, is what might happen when you perform both actions near simultaneously. The answer seems fairly simple to me. Space time is, in a manner, short circuited. The magnet has gained kinetic energy in being attracted to the stator core, yet when it arrives at the stator core and should get 'stuck,' its own field energy causes partial demagnetization (repulsion with delivered pulse) from the said stator core via the windings. It is

therefore forced to keep a % of the kinetic energy it gained in being initially attracted to the stator core, in an apparent violation of the laws of conservation of energy.

Hence, we have taken advantage of a switched reluctance motor's mechanical yaw to register, to force energy out of the field of a permanent magnet, by using stator cores configured as generator windings. It has required less electrical energy to demagnetize the stator core, than the sum of the kinetic energy we gained on approach, because of the 'free precharge' provided by the pm field to the stator windings. Thus an electromagnetically asymmetrical operation has been performed upon the field of a permanent magnet, temporarily depleting the field strength of the magnet below that defined by the atomic structure of the magnet. Demagnetization is a fundamental over-unity concept!

It is this two way magnetic energy field extraction optimization the Adams motor delivers, that turns the permanent magnets into negative inductors, that time reverse all particles caught up within the negative flux field created on the pole face of the permanent magnets. The negative time flux field of the magnet is a direct response to the field depletion effect manifested, and is the mechanism whereby the magnet draws in energy to rebalance the voltage component of its field and restore normal strength, as defined by the atomic structure of the magnet. Since the magnets run cold, and since this energy draw takes place in a time reversed zone of negentropy, I hypothesize this mechanism to be a loss less and direct thermo electric conversion. Photons radiate energy from a high potential source into space under normal physics in a direct electric-thermal conversion (called I^2R losses in conventional physics), when time reversed, they do just the opposite. They take thermal energy from space, and concentrate it on the magnets to replenish their field strength. The circuitry of the motor is of course caught up in the field replenishment routine of the magnet, hence cold current in device circuitry, as well as further reductions in current draw, in excess of the 50% reduction provided by the basic unit.

In terms of device optimization, cold current wires need to be small enough to offer maximum vacuum surface area contact, while large enough to allow electrons to flow. The exact equations that determine performance have not yet been derived, but Adams stators in series should have a total resistance approaching 10 ohms for best result. So if using 2 stators in series, that implies about 4-5 ohms each. Obviously, the photons absorb any of the heat the electrons emit in their passage through the wire and convert it directly back to potential, so conventional I^2R losses are a complete non issue. If you use conventional equations in your stator construction process with the Adams motor, you will most likely fail. Because true cold current is fully time reversed, the electrons flow backwards recharging the source, hence the device is really a mechanical transducer, changing energy from one form to another. This reversal of current can give the appearance of polarity reversal in device circuitry. But this is an effect and not a cause, of course.

Finally, the importance of voltage should be noted here. Voltage is electrical pressure. If you recall we are performing a time reversal operation, the higher the voltage the greater the heat dissipated in conventional circuits. Hence in a time reversed state, the greater the voltage, the greater the photon accretion from the vacuum. The relationship between voltage and energy gain does not appear to be linear, and the below table gives the known values. Current draw falls as each input voltage threshold is crossed, increased voltage multiplication effects above supply can also be manifested.

Summary: Known Negative Energy Voltage Harmonics

Crossing each harmonic further reduces current draw beyond the basic 50% result.

Increased above supply voltage multiplication effects have also been noted.

It is extrapolated that current flow may stop entirely around 720v.

Important switching speed harmonics also exist

9v	Source: Sparky Sweet, Tim Harwood
120v	Source: Sparky Sweet, Robert Adams
240v	Source: Robert Adams
350v	Source: Chris Arnold (360v?)

In the case of the Adams motor, I hypothesize the magnitude of the negative impulse from the permanent magnets, to be equivalent to the size of the free precharge, PLUS the kinetic energy gained on rotor attraction to the stator. No doubt this can be modeled mathematically, but the key point is that it is the mechanical yaw to register, that scales the very brief negative impulse from the rotor pms, to such a size as to be technologically useful.

Close up of Adams Stator / Rotor Interaction



Stator windings are potentialised / precharged by field of magnet

When circuit closes charge manifested in windings is above supply

Precise geometrical use of 'Lenz gate' enables load less energy gain

Magnet's flux field becomes time reversed negentropic to restore itself

Circuitry within flux field also becomes time reversed

Photons directly convert disordered heat energy from the vacuum to potential

If field depletion is sufficient, electrons flow backwards, giving polarity reversal



End view of stator and rotor magnet. Stator core 1/2 width / height of rotor magnet, as per Mr Adams 4:1 area ratio rule. This is to ensure the stator winding get plenty of 'free precharge,' as well as facilitating the negative inductor function of the permanent magnets



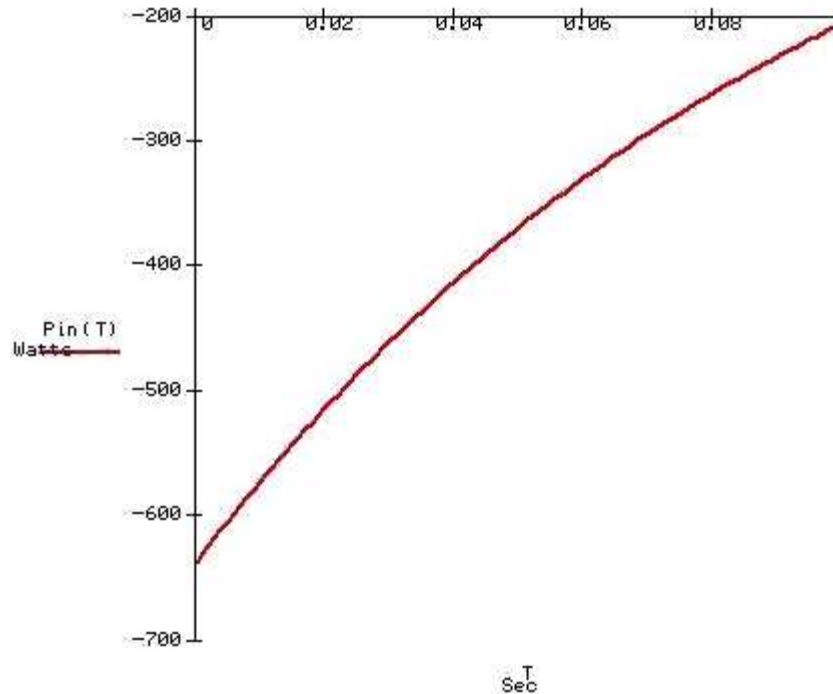
Finished generator configured Adams type stator. Solid 24 awg wire. When tested on the pole face of a permanent magnet in a solid state setup, after 10 minutes it started to burn up. When installed in a motor unit and correctly configured for the 'yaw to register,' it runs cold even after extended periods of operation.

'Back Emf' - a Common Source of Confusion

Back emf is a Lenz effect reversed polarity current surge that happens whenever current is suddenly stopped - as happens all the time in a pulse motor. Many people confuse back emf with the negative energy manifested in the Adams motor. Transducted negative time reversed energy flows BACKWARDS to its source - hence enormous amounts of what people assume is 'back emf' can be extracted from Adams motors, with 97% of input already seen with magnetite cores. You treat it as if it is back emf, it looks like back emf, but it is not. To get the best out of this motor, you have to figure out a system to remove the 'back emf' (also called counter emf, cemf) from the stator windings. A mosfet is in this case extremely helpful, because a simple pnp transistor does not manifest the return to source current flow - only the cold running, reduced current draw, and increased speed. In this case, most effective use is made of the 'back emf,' by gating it into a 250v+ capacitor, rather than simply shunting it back to recharge the source.

Visualizing the Permanent Magnet Negative Impulses

The following is kindly taken from Bill's mathematical analysis of the Dragone equations, as both devices force permanent magnets to deliver the exact same brief negative impulses. This graphic illustrates how the strength of the negative impulse, decays from the moment of switch closure. This is why smaller magnets (3/4" being about optimal) work better than larger ones, and why the motor runs colder at higher rather than lower speeds. It is all about pulse width.



In Search of Nikola Tesla The Quest for Cold Electricity (Tesla Radiant Energy)



Nikola Tesla. To understand negative energy two simple new scientific terms are required.

Hot Current: This is the normal form of electrical charge. Since 101 textbooks abound, no further discussion is required.

Cold current: This is simply the time reversed counterpart of normal hot current.

Discussion of cold current:

A device that time reverses an electromagnetic wave is called 'phase conjugate mirror,' in the standard scientific literature. The concept is not in any way new or outlandish, but it is the key to 'free energy.' The mistake made by the academic establishment was to assume a constant increase in entropy is the inevitable result of all physical interactions. This is only true so long as

time flows forward. Entropy is in fact a process governed by local time flow. Entropy increases when time flows forward, and decreases when time flows backwards. While the universe as a whole has a well documented time forwards entropy increase bias, local entropy with time flow engineering can be slowed, or reversed. If time flows backwards, then a decrease in entropy is possible, and indeed is predicted by standard equations. That is a negentropic physical interaction will take energy from a disordered state, and convert it to an ordered state, giving a net energy gain to a technological system above supply.

For the historical background on Tesla's work, we are entirely indebted to Gerry Vassilato's classic text *Secrets of Cold War Technology: Project HAARP and Beyond*. The following is some choice quotes from this text.

Through successive experimental arrangements, Tesla discovered several facts concerning the production of his effect. First, the cause was undoubtedly found in the abruptness of charging. It was in the switch closure, the very instant of "closure and break", which thrust the effect out into space. The effect was definitely related to time, impulse time. Second, Tesla found that it was imperative that the charging process occurred in a single impulse. No reversal of current was permissible, else the effect would not manifest. In this, Tesla made succinct remarks describing the role of capacity in the spark-radiative circuit. He found that the effect was powerfully strengthened by placing a capacitor between the disrupter and the dynamo. While providing a tremendous power to the effect, the dielectric of the capacitor also served to protect the dynamo windings. Finally, the effect could also be greatly intensified to new and more powerful levels by raising the voltage, quickening the switch "make-break" rate, and shortening the actual time of switch closure.

Not yet sure of the process at work in this phenomenon, Tesla sought the empirical understanding required for its amplification and utilization. He had already realized the significance of this unexpected effect. The idea of bringing this strange and wondrous new phenomenon to its full potential already suggested drilling new possibilities in his mind. He completely abandoned research and development of alternating current systems after this event intimating that a new technology was about to unfold.

Thus far, Tesla employed rotating contact switches to produce his unidirectional impulses. When these mechanical impulse systems failed to achieve the greatest possible effects, Tesla sought a more "automatic" and powerful means. He found this "automatic switch" in special electrical arc dischargers. The high voltage output of a DC generator was applied to twin conductors through his new arc mechanism, a very powerful permanent magnet sitting crosswise to the discharge path. The discharge arc was automatically and continually "blown out" by this magnetic field.

Imperative toward obtaining the desired rare effect, the capacitor and its connected wire lines had to be so chosen as to receive and discharge the acquired electrostatic charge in unidirectional staccato fashion. The true Tesla circuit very much resembles a pulse jet, where no back pressure ever stops the onrushing flow. Electrostatic charge rises to a maximum, and is discharged much more quickly. The constant application of high voltage dynamo pressure to the circuit insures that continual successions of "charge-rapid discharge" are obtained. It is then and only then that

the Tesla Effect is observed. Pulses literally flow through the apparatus from the dynamo. The capacitor, disrupter, and its attached wire lines, behave as the flutter valve.

Tesla found that impulse duration alone defined the effect of each succinct spectrum. These effects were completely distinctive, endowed with strange additional qualities never purely experienced in Nature. Moreover, Tesla observed distinct color changes in the discharge space when each impulse range had been reached or crossed. Never before seen discharge colorations did not remain a mystery for long. Trains of impulses, each exceeding 0.1 millisecond duration, produced pain and mechanical pressures. In this radiant field, objects visibly vibrated and even moved as the force field drove them along. Thin wires, exposed to sudden bursts of the radiant field, exploded into vapor. Pain and physical movements ceased when impulses of 100 microseconds or less were produced. These latter features suggested weapon systems of frightful potentials.

Transformer

By 1890, after a period of intense experimentation and design development, Tesla summarized the components necessary for the practical deployment of a radiant electrical power distribution system. Tesla had already discovered the wonderful fact that impulse durations of 100 microseconds or less could not be sensed and would do no physiological harm. He planned to use these in his power broadcast. Furthermore, shocking waves of 100 microsecond duration passed through all matter, a fitting form of electrical energy to broadcast throughout the stone, steel, and glass of a power-needy city. Tesla would not expect distortions with specially adjusted energy fields, vectors which permeated matter without interactive effects.

Tesla made a most startling discovery the same year, when placing a long single-turn copper helix near his magnetic disrupter. The coil, some two feet in length, did not behave as did solid copper pipes and other objects. The thin walled coil became ensheathed in an envelope of white sparks. Undulating from the crown of this coil were very long and fluidic silvery white streamers, soft discharges which appeared to have been considerably raised in voltage. These effects were greatly intensified when the helical coil was placed within the disrupter wire circle. Inside this "shockzone", the helical coil was surrounded in a blast which hugged into its surface, and rode up the coil to its open end. It seemed as though the shockwave actually pulled away from surrounding space to cling to the coil surface, a strange attractive preference. The shockwave flowed over the coil at right angles to the windings, an unbelievable effect. The sheer length of discharges leaping from the helix crown was incomprehensible. With the disrupter discharge jumping 1 inch in its magnetic housing, the white shimmering discharges rose from the helix to a measured length of over two feet. This discharge equaled the very length of the coil itself. It was an unexpected and unheard transformation.

Here was an action more nearly "electrostatic" in nature, although he knew that academes would not comprehend this term when used in this situation. Electrostatic energy did not fluctuate as did his shockwaves. The explosive shockwave had characteristics unlike any other electrical machine in existence. Yet Tesla stated that the shockwave, during the brief instant in which it made its explosive appearance, more nearly resembled an electrostatic field than any other known electrical manifestation. just as in electrostatic friction machines, where current and

magnetism are negligible, a very energetic field component fills space in radiating lines. This 'dielectric' field normally launches through space in a slow growth as charges are gathered. Here was a case where a DC generator provided the high voltage. This voltage charged an insulated hoop of copper, growing to its maximum value. If all values in the circuit were properly balanced, in the manner prescribed by Tesla, a sudden charge collapse would then occur. This collapse was necessarily very much shorter than the interval required to charge the hoop. The collapse comes when the magnetic disrupter extinguishes the arc. If the circuit is properly structured, no backrush alternations ever occur.

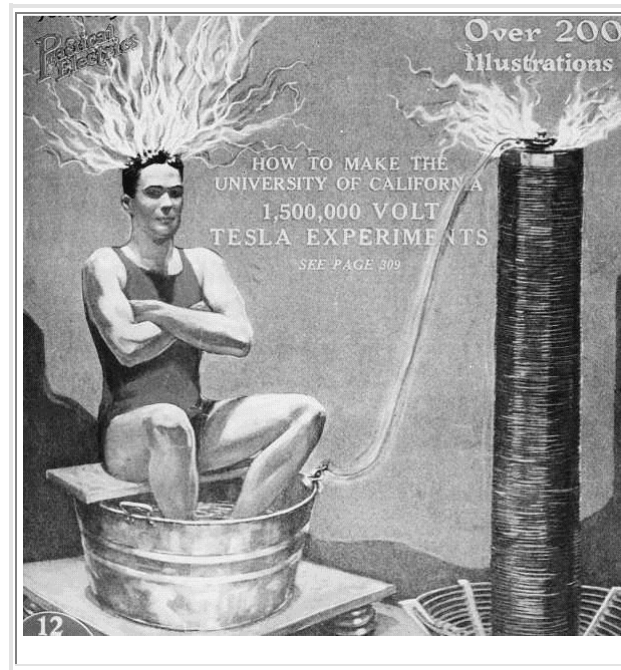
This unidirectional succession of charge-discharge impulses causes a very strange field to expand outward, one which vaguely resembles a "Stuttering" or 'staccato' electrostatic field. But these terms did not satisfactorily describe the conditions actually measured around the apparatus, a powerful radiant effect exceeding all expectable electrostatic values. Actual calculation of these discharge ratios proved impossible. Implementing the standard magneto-inductive transformer rule, Tesla was unable to account for the enormous voltage multiplication effect. Conventional relationships failing, Tesla hypothesized that the effect was due entirely to radiant transformation rules, obviously requiring empirical determination. Subsequent measurements of discharge lengths and helix attributes provided the necessary new mathematical relationship.

He had discovered a new induction law, one where radiant shockwaves actually auto-intensified when encountering segmented objects. The segmentation was the key to releasing the action. Radiant shockwaves encountered an helix and "flashed over" the outer skin, from end to end. This shockwave did not pass through the windings of the coil at all, treating the coil surface as an aerodynamic plane. The shockwave pulse auto-intensified exactly as gas pressures continually increase when passing through Venturi tubes. A consistent increase in electrical pressure was measured along the coil surface. Indeed, Tesla stated that voltages could often be increased at an amazing 10,000 volts per inch of axial coil surface. This meant that a 24 inch coil could absorb radiant shockwaves which initially measured 10,000 volts, with a subsequent maximum rise to 240,000 volts! Such transformations of voltage were unheard with apparatus of this volume and simplicity. Tesla further discovered that the output voltages were mathematically related to the resistance of turns in the helix. Higher resistance meant higher voltage maxima.

He began referring to his disrupter line as his special "primary", and to the helical coil placed within the shockzone, as his special "secondary". But he never intended anyone to equate these terms with those referring to magnetoelectric transformers. This discovery was indeed completely different from magneto-induction. There was a real and measurable reason why he could make this outlandish statement. There was an attribute which completely baffled Tesla for a time. Tesla measured a zero current condition in these long copper secondary coils. He determined that the current which should have appeared was completely absent. Pure voltage was rising with each inch of coil surface. Tesla constantly referred to his "electrostatic induction laws", a principle which few comprehended. Tesla called the combined disrupter and secondary helix a "Transformer".

Tesla Transformers are not magnetoelectric devices, they use radiant shockwaves, and produce pure voltage without current. No university High Frequency Coil must ever be called a "Tesla Coil", since the devices usually employed in demonstration halls are the direct result of apparatus

perfected by Sir Oliver Lodge and not by Nikola Tesla. The Tesla Transformer is an impulse apparatus, and cannot be as easily constructed except by strict conformity with parameters which Tesla enunciated. Tesla Transformers produce extraordinary white impulse discharges of extreme length and pressure, which exceed the alternating violet spark displays of Lodge Coils. This is illustrated by noting the manner in which Tesla Transformers are actually constructed. While looking and seeming the same, each system actually performs very different functions. Lodge Coils are alternators. Tesla Transformers are unidirectional impulses. The most efficient Tesla Transformations were obtained only when the disruptive radiating wire line equaled the mass of the helical coil.



Construction Guide: How to Build an Adams Motor for Under \$50

Having briefly covered the history and theory of device operation, I will now present a simple guide to construction. This is a genuine cold current motor I have built and tested myself.

Costing a 4 Pole Adams Motor - List of Parts You Need for Construction		
Part	Price US\$	Description and comments
2 CDs	Free	Can be taken from old computer magazine covers,

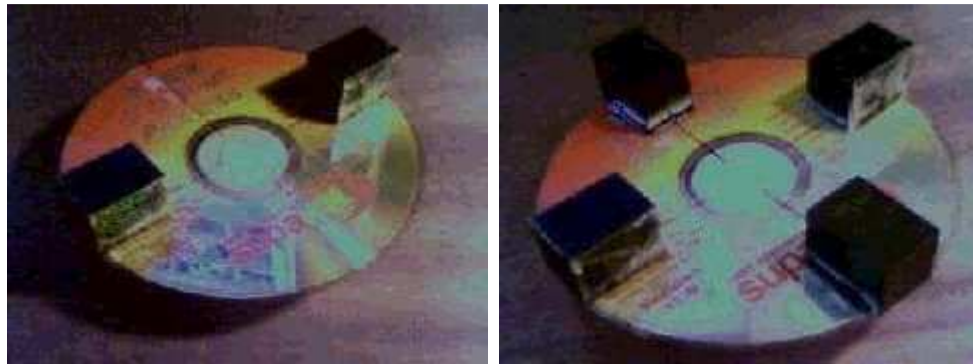
		for example
4 magnets	14	Basic ceramic / ferrite parts are just fine
Circuitry	10	Hall ic, transistor / mosfet, general purpose wire
12v battery	4	Basic 12v unit is fine
1 reel 24awg stator wire	5	Enameled copper required to wind stator (0.56mm)
4 mild steel nails	2	1 for the stator, 1 for central shaft, 2 to hold wood crossbar down
Washers / nail head covers	5	Needed to mount CD, end stators, etc
Wood	5	To fix rotor
2,500 psi epoxy glue	5	To fix magnets
TOTAL COST	\$50	Cheap by any definition

Note: You may misorder parts, and find you have to order in bulk above the quantity strictly required for your motor. The point remains however, you can build a cold electricity device for \$50 on a per unit basis. No question. That includes absolutely EVERYTHING.



The first step is filling in the center of the CD. I illustrate with two methods I used. The first did not deliver complete rotor stability, the second a simple doorstop made of hard shiny plastic, did. I only mount the lower CD. The upper CD provides rotor stability, completing the magnet 'sandwich.' Other people have used parts from old video recorders, hard drives, record players,

1/4" bike bearings, etc - any decent mounting is fine. Use parts to hand and common sense. Plastic parts are to be preferred because they are non conductive and offer only frictional losses.



The magnets are fixed with **2,500 psi epoxy glue** (comes in 2 syringes, resin and hardener). Be sure to mix thoroughly for best results, and try and get an exothermic brand for faster setting. I now apply it in layers. One thin application, 12 hours to set, then another, etc. Magnets are all S poles out. This is mainly for the benefit of the Hall ic timing circuit, but S poles also seem to deliver a small performance gain over N poles. Note: CDs only make stable rotors when used in epoxy magnet sandwich pairs, and you need a classic hard pressed CD, not a flimsy CD-R type.



This is the rotor fitted onto a wooden board, with a nail hammered through a wooden crossbar as the central shaft. You have to do this bit in the right order.

1. First I hammered the main shaft nail into the base board to depth of 1cm or so, leaving a 1 cm deep hole
2. Then I removed the nail and hammered it through the crossbar - be neat!
3. Newly embedded crossbar nail threaded on rotor
4. Nail head cover supports placed on lower part of nail as pivot for rotor
5. Glued crossbar underside to fix itself on side supports when put in position, this is backed up by nails
6. Shaft nail pushed into previously established hole in base board made in stage one, but which is newly filled with sealer glue. Give one tap to drive the nail in a little deeper. Leave to set for 1 hour.



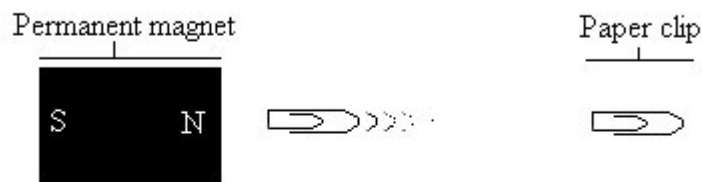
Stators. Many people ignore Mr Adam's 4:1 instruction, and do not build stators with the geometry suggested (stator head HALF width / height of rotor magnet - VERY IMPORTANT). **The stator wind is the most critical part of the motor**, and while I appreciate conventional theory says these stators are wrong in several respects, I can assure you this is what is required. The reason everyone has been having such TERRIBLE trouble replicating the Adams motor, and there must have been a reason somewhere, is that none of the people with the academic skills to do this properly, will countenance using such an apparently bizarre and dysfunctional rotor / stator geometry. It is a high ohm mess frankly, and I am fully aware this design would just burn up in a conventional motor. **If in any doubt, just copy what you see in the pictures above.** A mild steel nail about 100mm long with an 8.5mm head makes a most excellent and highly cost effective stator core, and I used a tap washer (bathroom section in your local hardware store, a non conductive part) to 'end,' my stator. Pair that with rotor magnets about 18mm (3/4" approx) in diameter. Works great. Please only try something else once you have got the motor already running cold / ambient. Many people are trying to 'improve' this motor with ferrite cores etc, and usually end up with inferior results. The stators MUST be wound solid to 90-100% of the rotor magnet width, with as many turns as possible to maximize current induction on each rotor pass and precharge / potentialize / the stator windings. I have found 24 awg (0.56mm) wire to be a helpful base to work from in this respect. If you do not massively over wind the stators, the over-unity effect when motor speed doubles and current draw halves, DOES NOT FULLY MANIFEST. Basically the trade off here is a loss in efficiency due to poor rotor / stator geometry from a strictly conventional point of view, but you more than get it back because the same design 'flaws' facilitate the over-unity effect. You just have to take the hit, and do what is required to manifest the over-unity effect. No way round it.

- Stator construction is where most people building an Adams motor screw up. A properly engineered Adams motor requires a stator that to conventionally trained eyes, looks like an utterly horrific I^2R loss inducing mess. How can such a badly designed stator possibly be used on a high efficiency motor? Well, the answer is of course that the o/u feature of the motor is the Lenz current freely induced in the stator windings. The stator is therefore designed from the point of view of optimizing current induction, all other design parameters are rescinded. The stator therefore has an integrated generator functionality, and is NOT a classical motor pure drive device as such.

- Ultra low ohm sets perform **much worse**, and the inability to grasp this simple fact, is one reason why most scientifically educated people find it almost impossible to build Adams motors. 24 awg wire is a suggested sensible starting point for experimentation (0.56mm). No lower.
- S poles seem to work a little better. Mr Adams generally illustrates with N poles, the difference is not large enough for him to have noticed it, apparently.
- Circular or square faced magnets are not critical. Both have now been shown to work. Square magnets like mine are easier to fix down, but only circular faced magnets are sold in suitable sizes it would appear. If thin magnets are obtained, glue 2/3 together to make one longer magnet.
- The magnets should 'yaw' into register. Tiny button magnets do not do this. Make sure you have built a demagnetization motor, and NOT just a push motor. While you can get over-unity results of sorts with push motors, cold running has yet to be demonstrated. Optimizing for a 'yaw' effect, also requires proper rotor balance and low friction. Pay attention to that.
- In its most basic manifestation, negative energy offers halved current draw, with **NO LOSS IN DELIVERED POWER**. This is a very large part of the over-unity effect, and the coldness of your motor is an excellent real time guide as to whether you are getting reduced current draw or not. This is not to be confused with the return to source current flow, which is separate. Increased speed is also noted.
- The motor uses simple ferrite / ceramic magnets. You should only try working with NIB magnets once you have experience.
- Keep the motor SMALL, for the critical short pulse duration cold current demands. Use 3/8 cores and 6/8 magnets (mine are 8.5mm cores and 18mm magnets - to be precise. All numbers refer to diameter). Size matters. The o/u mode seems a bit on/off in its performance, and hence extra turns does not give you extra resonance. Current draw is either halved or it is not. Yes / no type situation. Also, it seems to be better to make the motor smaller than this suggested size, rather than larger, in general.
- Apart from the stator cores, keep as much metal out of the design as possible. It acts as a drag upon the rotor, lowering efficiency. For example, wood is a useful material, despite the fact it may appear to be low tech and 'primitive.'
- A standard household power supply that was previously running my computer speakers was used for initial testing purposes, speed at 3,6,9,12v and 500 ma regulated, with 13W power. These units are readily available from any decent hardware store. However, *NOTE* while the chill factor fully manifests with these regulated power units, and they are great for testing because they do not run down, if doing serious efficiency testing, an unregulated battery power supply will generally produce superior results.
- It is not illustrated above, but tape two tape insulation layers are both simple and beneficial in construction. Put one insulation layer on the stator core (nail body), and a second round the finished and fully wound stator, to enclose it between the two non conductive tap washers.
- Expect to build 2/3 CD rotors before you get it right. Small rotor instability problems can really kill the rpms, and you never quite know how the rotor will perform until it is actually up and running. You need to be very neat and careful.
- When firmly pushed your rotor should spin for 8-20 seconds (no stators present of course!), depending upon rotor mass and flywheel effect manifested, of course. If not, maybe you need to think some more on executing properly on the mechanical basics....
- Hall ic timing is done directly off the S pole faces of the magnets. Branded side of Hall ic faces rotor magnets.

- Air gap somewhere in the range **1-1.5 mm**. The high end of that range is fine. NOTE: if you use NIB magnets you will have to use 24-30v to enable this (only at 24-30v do you get full stator demagnetization). Which is one of several reasons why NIB motors are much harder to build, unless you use small 1/2" NIB magnets.
- Understand the 4:1 ratio. Basically this just means your stator core is half as wide/tall as your rotor magnet. Does not matter if you have round stator, square rotor magnets. Do not fixate on the area, rather the twice as aspect of it. And point to note: this is not sacred geometry! The 4:1 rule is not precise, it is a rule of thumb. There is no reason why 3:1 or 5:1 could not in the right setup be made to work, but 4:1 is a sensible ratio with margin for error to aim for. The conversion to cold current is a probability function, and a 3:1 configuration may mean that not all the current is properly converted, sharply reducing the amount of 'back emf' you can pull off.
- I used 24awg wire (0.56mm), which is small enough to offer decent performance, while being large enough to be fairly easy to wind. Also, point to note, high ohm sets and tend to blow Hall ics. 24awg is within the limits of Hall ics. It is a good place to start - other higher ohm sets and additional stators can be tried later if desired.
- Run the motor at multiples of the 9v negative energy harmonic for optimal current draw results e.g. 12 is the minimum required to fully close the air gap down, but after that 18v, 27v, 36v, 45v, etc should be used.
- Bifilar winds on the stators, while not in any way essential to manifesting the over-unity effect, deliver stronger electromagnets and hence superior results
- DO NOT put a mechanical load on the rotor
- Oil the rotor shaft (basic but necessary). With 30-40 minutes use you may also find your rotor improves and 'works itself in.' Then try adding a little more oil.
- Mild / bright steel nails are to be preferred as stator cores because of the reduced carbon content
- Stators wound to paperclip test depth described below

Setting Stator Wind Depth - The Paper Clip Test



No need to over complicate this process
 Take one permanent magnet, and one paperclip
 Place on smooth surface, and push paper clip towards pm
 Note distance at which paper clip flies into face of magnet
 Repeat to verify test result
 Your stator winding depth is now set

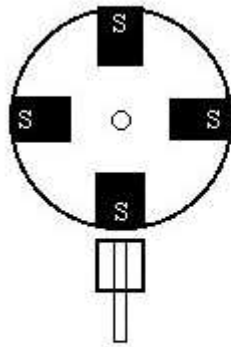
Mr Adams refers to using batteries to 'tune,' his motor at low voltage (9-12v), before taking his motor up to the 120v or 240v range, which is where the real action happens. No exact guidance is given on how to do this however. Now I have built my motor, I have found a very simple way to tune an Adams motor. Basically you just put your finger on the power transistor. It is that simple. With tuning I have found you can always eliminate the heat from the transistor. Now, that may mean closing the air gap, increasing rotor stability, rewiring the stator, or improving the timing circuit, etc. Whatever. I am just pointing out that having assembled something, you should expect to spend 3/4 nights, or more, fiddling with it to get best results. Only when you have built, detested (sic), shaken down, and tuned a basic 1 / 2 stator 'soft,' design, should you move onto something harder with more poles, stronger magnets and so on.

'It was in the switch closure, the very instant of closure and break, which thrust the effect out into space' - Nikola Tesla

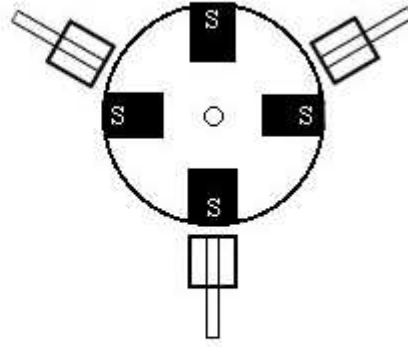
Yes. **I have seen no evidence whatsoever with my motor that there are any 'difficult' rpms.** At 12v it runs smooth, fast, and stone cold. The dynamic pulse duration optimization my motor delivers by timing directly off the faces of the magnets must help in this respect. It 'wants' to go as fast as possible, and seems much 'happier,' and indeed colder, at higher speeds than lower speeds. This is in line with statements made by Tesla and others on the properties of **cold current**, where short pulses (read high rpms) are to be preferred.

The nails need to be sensibly picked. What I mean is too large and a ferrite / ceramic magnet can not permeate them properly and the rotor gets 'stuck' in register, too small, and the initial attraction of the magnet to the nail head is too weak. BALANCE. Basically you need to buy 3/4 packs of suitable looking nails and play around. My nails were carefully picked with these design parameters in mind. I observed with simple hand experiments that the 125mms tended to get 'stuck' in front of magnet faces, the 75 mms offered less initial rotor attraction, so that basically left me with the 100mm long 8.5mm head nails, because they offered all the qualities I was looking for. Excellent rotor magnet initial attraction, easy demagnetization, with no 'stuck' in register problem. Everything I wanted. Basically, about 3/8" head diameter is a good size to pair up with 6/8" ceramic magnets, combined with a 12v pulse. I also used nails with a sloping transition from body to head, and NOT straight right angle. I figured this would make flux passage from nail body to head easier. Lightly sanding down the nail head is probably not a bad idea either. I also used mild / bright / soft steel nails because of the reduced carbon content and improved magnetic conduction properties. All these little things add up, take every tiny optimization you can.

Design Templates For Simple Adams Motors



Initial testing layout
 Hopeless with a mechanical load
 S poles perform slightly better
 Place Hall ic opposite stator



Suggested optimal rotor drive layout
 0, 120, 240 degree stator spacing
 Delivers near constant rotor torque
 Stators pulsed and timed separately

'It was in the switch closure, the very instant of closure and break, which thrust the effect out into space' - Nikola Tesla

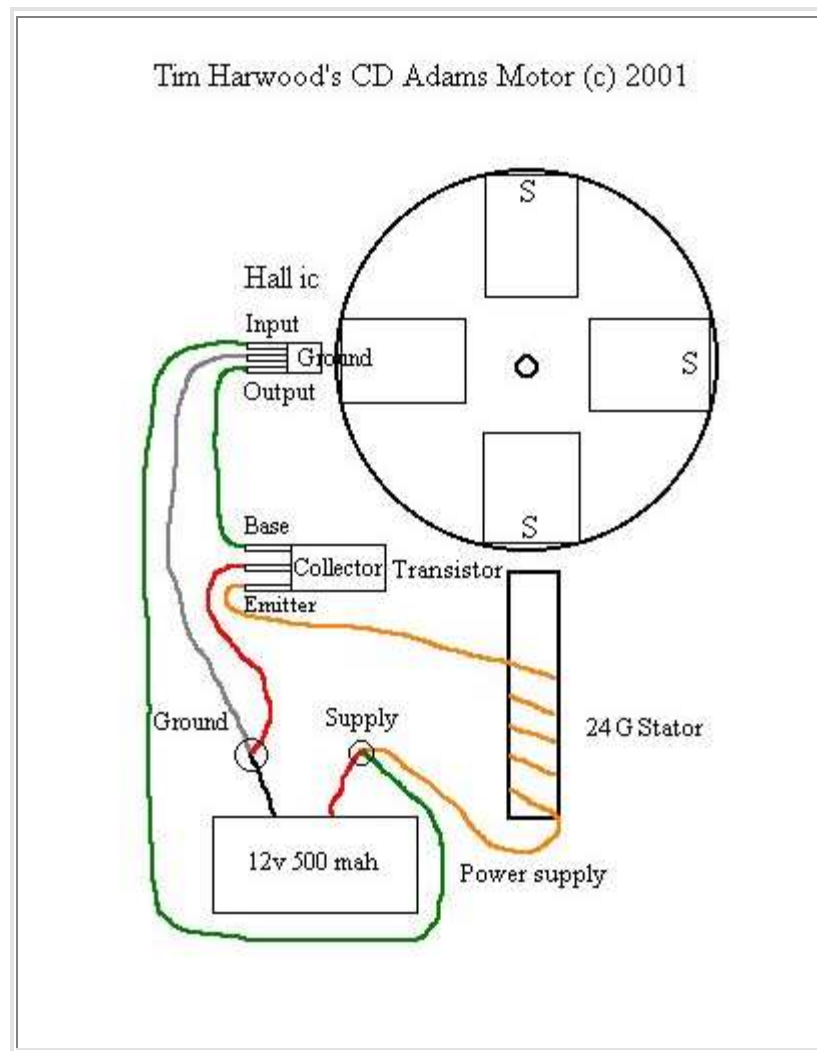
Magnets

The negative impulse delivered by the pms rapidly decays to zero as soon as the timing switch is closed. Hence the larger your magnets, the longer the pulse duration required, the harder it becomes to obtain 'cold current.' However, too small a magnet, and no 'yaw to register' is manifested - ESSENTIAL for the generation of the negative impulse in the first place. Push only motors can only ever be hot current devices. My basic conclusion is that magnets of diameter 15-20mm are the sweet spot for the Adams motor. They yaw to register nicely, but also deliver reasonably short pulse lengths. Some people have complained these magnets are hard to find - so I have proved they are not, and produced this list of suppliers. I have not ordered or used these magnets, so I can not vouch for them, but they all look fine to me. Also I can not vouch for whether grade 5 or 8 magnets are better, since I have not done that experiment. But anything other than the inferior grade 1 ceramics should work okay. The only downside is that they are thin - in which case just carefully epoxy 4 of them together to make one long magnet. The result should closely approximate to my rather nice 18mm x 18mm x 25mm custom cut magnets.

Circuits

Basic Hall ic circuit. Make sure you buy 5 extra Hall ics. I've already blown 2. They are a little fragile if mistreated. Banded side of Hall ic faces the S pole rotor magnets. I suggest starting with just one stator - these things can be a pain to wind, although 24awg is fairly easy to work with, and two stators in series can be tried once you are up and running. Bifilar winds are worth the hassle. They do perform better. In order to send the 'back emf' back to source, you simply need to substitute the pnp for a mosfet. Try both to see the difference. It is considered good practice to wire a diode in parallel with a mosfet, to protect it from reverse voltage spikes. When fitted with a mosfet and an appropriate rechargeable battery, source drain is minimal. Because

timing is done directly off the pole faces of the magnets, pulse duration is dynamically reduced automatically as speed increases, which is very helpful. And yes, the pnp / mosfet is wired backwards, but this is because the current flows backwards. The emf pulse leaves the battery, enters the stator windings, where a transduction operation is performed upon the current, turning it into time negative emf, which then flows BACKWARDS into the source. Finally, this circuit is only suitable for magnets of 18mm diameter, or very close to that value. If using 25.4mm magnets (1"), you will be forced to use 555 circuitry to adjust the pulse width down to get proper results.



Bill offers the following advice based upon his research and analysis with Dragone cores:

The PNP needs a diode to gate the current back to the battery. Mosfets have this diode built in. Because you are using a PNP, the negative energy has nowhere to go but remain in the coil and ring. If the negative energy were high enough, it could breakdown the transistor. Keep in mind that negative energy appears as a high voltage when the transistor FIRST turns on! Don't confuse this with the Lenz's Law effect when the transistor turns off (back emf). I should also mention that this negative energy is a time-

reversed current flow coming from the coil back to the battery. Ideally, a switch should be used instead of a transistor, and this is what he means by commutation (Mr Adams is still using commutation timing). I think a mosfet will do very nicely instead of a PNP transistor with commutation diode. My latest device uses a very good mosfet (MTY100N10E) and a commutation schottky diode (MBR6045WT) in parallel.

1. Wind one or two solid 24awg stators in series, and get the stator/s running slightly chilled, the power transistor ambient, and the stator supply wire cold. Any rotor instability, air gaps over 1.5mm, etc, will kill off the cooling effect fairly quickly. The basic low tech mechanical stuff most certainly has to be done correctly, and the over-unity effect is quite sensitive to the rotor / stator geometry, which is where the 'action' happens. In my experience, the real test of the depth of resonance you obtain, can be found in the stator supply wire - it should have a very clear ambient thermal sink effect. **THIS IS THE COLD PART.** Do not expect the whole device to be universally cold, it is not. Simple ambient running for extended periods is a very good result.
2. Once the **stator supply wire chill effect is fully manifested** and any rotor instability issues attended to, try seeing how much 'back emf' you can pull off. You will be most pleasantly surprised by your results. The record to date is 97% of input using NIB magnets and magnetite cores, although it is not suggested NIB magnets and magnetite is necessarily suitable for CD motors. Of more immediate relevance an AVERAGED 80% of input has been recorded in the hard drive motor using permalloy cores. Finally note: it is of course time reversed emf and not back emf. This does mean that a circuit which looks fine from a conventional point of view is not always guaranteed to work. Please keep that in mind. But optimize for coldness before you bother attempting any numbers. Always first things first.

COP Figures - Mechanical not electrical over-unity

If properly wired to send the emf back to an appropriate rechargeable source battery, mechanical COP figures of 3-6 are possible with the CD motor unit. That depends upon such factors as quality of construction, stator winds, and measurement methodology. Given the problematic nature of mechanical efficiency calculations, many prefer to use the crude 'back emf to supply' metric, to measure the performance of their units. As a rough guide, allowing for the halved current draw effect and the increased rotor speed documented by Mr Adams, an 80% of back emf to input number, indicates a mechanical COP of about 6 to me, and an electrical COP of 0.8.

What is a 'true' Adams motor?

There have been some sour grapes from people who say I have not built a 'true' Adams motor. Well, allow me to point out that the early Adams motor prototypes used star wheel timing systems and alnico magnets. It hardly needs to be said star wheel is a very primitive mechanical timing system, and alnico magnets demagnetize very easily, and are inferior to ceramic magnets for motor applications. Not even Mr Adams builds such 'true' Adams motors any longer. The Adams motor is a system of physics - it does not specify construction materials. The basic principals are a switched reluctance pulsed DC electric motor, whose rotor magnets are wider than the stator core faces, and whose stators contain an integrated generator functionality. The result of this is the delivery of a brief negative impulse from the rotor magnets when in register,

that converts the delivered current to time reversed emf, that flows backwards to the source. The logical cut down home edition of those principals, is the experiment given on this web page.

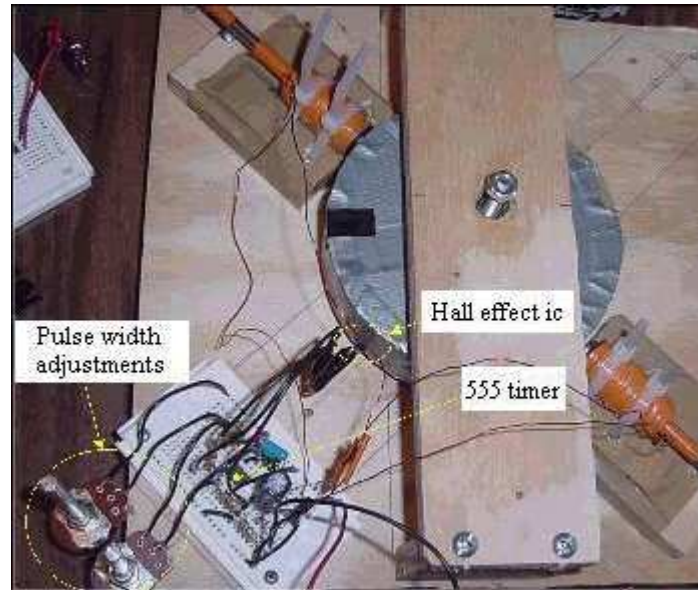
Is the Adams motor a free energy device?

Depends how you define free energy. Let me quote from the learned Mr Aspden's outstanding patent abstract:

An electrodynamic motor-generator has a salient pole permanent magnet rotor interacting with salient stator poles to form a machine operating on the magnetic reluctance principle. The intrinsic ferromagnetic power of the magnets provides the drive torque by bringing the poles into register whilst current pulses demagnetize the stator poles as the poles separate. In as much as less power is needed for stator demagnetization than is fed into the reluctance drive by the thermodynamic system powering the ferromagnetic state, the machine operates regeneratively by virtue of stator winding interconnection with unequal number of rotor and stator poles. A rotor construction is disclosed (Fig 6, 7). The current pulse may be such as to cause repulsion of the rotor poles.

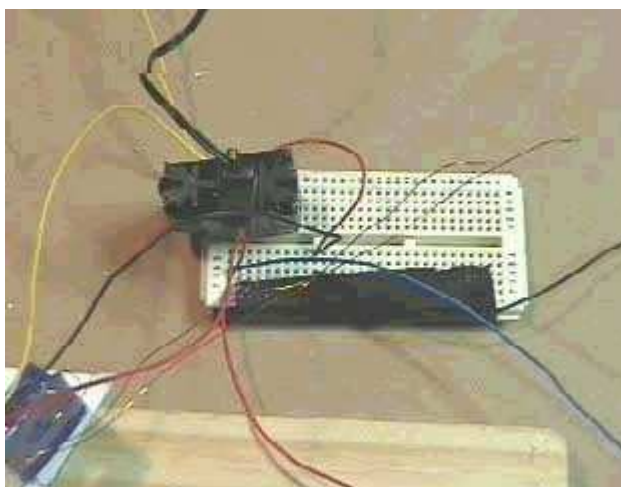
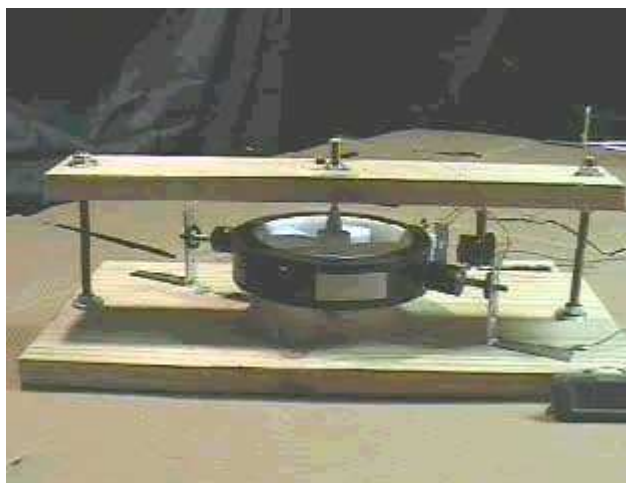
As stated above, it requires less energy to demagnetize the pm field in the stator cores, than you gain in the 'yaw to register' stator attraction phase, because of the 'free precharge' Lenz effect manifested in the over-wound generator configured stator coils. Is that free energy? You tell me. Sounds just like a scientific effect to me, rather than something 'free' and magical. What Mr Aspden was unable to state because his unit for unknown reasons was not capable of the necessary high rpms, was that the 12-15% energy gain you make from that asymmetry, causes a brief negative impulse to be issued from the central pole face of permanent magnets, a process clarified by the recent disclosure of the POD magnetic schematic. This is conducted along the length of the stator core, hence the current pulse is converted to a time negative polarity. It then promptly flows BACKWARDS to the source, which it recharges. To this extent, it is perhaps more accurate to describe the Adams motor as a mechanical transducer, rather than a free energy device as such. I do not see the term 'free energy' as scientifically helpful here. The Adams motor simply converts energy from one form to another, in so doing reversing the direction of current flow, enabling a high speed rotor to be run essentially for 'free.' Mr Adams has quoted an unloaded mechanical efficiency of 600% - getting within striking distance of that kind of number is actually fairly easy, you may be surprised to learn, when wired with an appropriate mosfet and rechargeable battery. Hence in the basic setup massive unloaded mechanical over-unity in the hundreds of percent, yes, electrical over-unity, no. It is the Adams motor - not the Adams generator.

Brian's CD Motor Replication



I was most gratified to see Brian finally get a result with this motor. He really did put a lot of genuine hard work into this device, and he most definitely deserved a positive result. I think the fact he opted for 1" magnets with a longer pulse duration complicated this motor, but the problems that created have recently been solved with 555 circuitry to adjust the pulse width down. Instead of running hot and slow, it now runs fast and cold - as it should. Pulse width is key, and even if he is using 25.4mm magnets verses my 18mm magnets, it just goes to prove you can design round potential problems that crop up in Adams motor construction. Brian did not try to be clever, he did not 'improve' aspects which looked wrong, he just built what I said, including the bizarre over-wound stators. If you do the same, your motor will also run off negative energy. Note, Brian also used disc magnets, proving square faced magnets are not critical to the manifestation of negative impulses

CD Motor Design Template Replication



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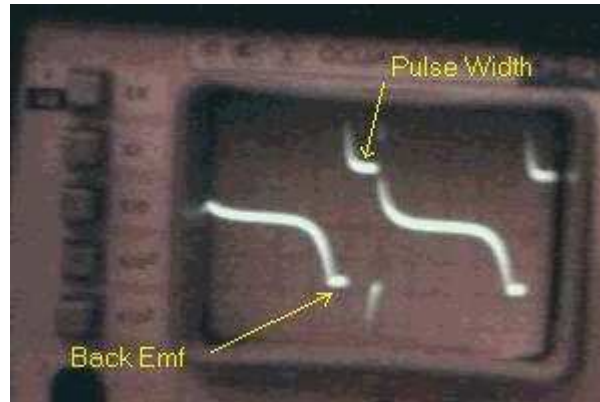
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From the Homestead of AdeOne-KonAde. 3 motors were required before the proper layout was perfected and cold current delivered.

Another Cold Running Adams Motor (Using A Hard Drive Platter to Make an NIB Motor)



This fascinating motor was based upon a rotor scavenged from an old computer hard drive. Hence as one would expect, it is almost entirely frictionless, and also very well calibrated. Between the dual hard drive platters reside 4 1/2 " (12.7mm) square faced NIB magnets, fixed in place with high strength epoxy glue, at 90 degrees apart. The diameter of the hard drive platters (disks) is 130mm. The stator cores are made from permalloy (these were found to produce better results than relay cores). The dimensions of stator cores are as follows = 6x6x45mm. Each stator has 450 turns of enameled copper wire of 0.56mm diameter / 24awg. The switch timer circuitry was borrowed from one of John Bedini's motors.



In the above picture you can see the oscilloscope reading. The back EMF (cemf) was connected to the power supply (car / automobile battery 12V). The duration of the pulse command and back EMF spike was measured on an oscilloscope, and as can be seen, the back EMF is a full 80% of the delivered pulse width! Hence the constructor of this motor believes the efficiency of his motor is 80% and NOT OVER-UNITY. The motor runs at about 2800 RPM, and does so **ABSOLUTELY COLD**, as does the circuitry.

The initial motor test results were as follows:

- The battery started with a rating of 12.38V
- Then a load (the motor) was placed on it, and the battery voltage fell to 12.32V
- After 2 hours the battery voltage rose to 12.35V
- After 20 hours battery voltage was recorded slightly lower at 12.32V
- Then the battery was then disconnected

Conclusions:

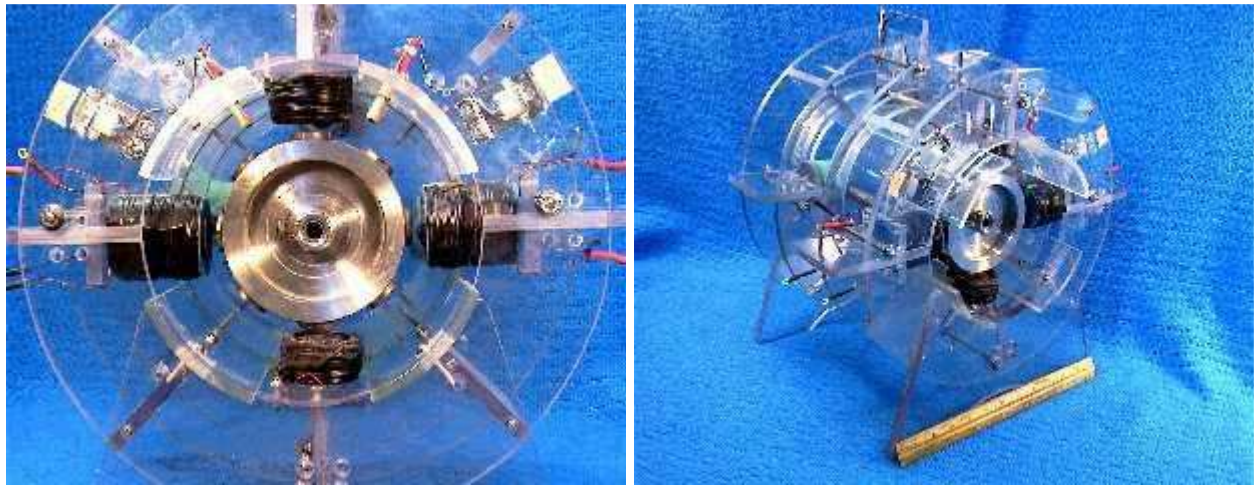
As Sweet noted with his SQM unit many years ago now, the efficiency of negative energy devices fluctuates for reasons that are still not properly understood. The time reversed 'back emf' from this motor is at times enough to compensate for current draw, at other times not, giving an overall averaged battery recharging efficiency of about 80%.

For comparison, a previous motor managed 10000 RPM - but it ran hot, and efficiency was only about 20%. It had larger magnets (NIB) and fewer stator turns. So this this constructor had to build 2 motors before he obtained cold current.

Fully Independent Adams Motor Replication

This motor is a successful over-unity cold current design. The constructor wishes to remain anonymous. He also warned me, these pictures show an early version, and **significant modifications were subsequently undertaken**. Exact mechanical efficiency numbers are not available, but they are clearly well over 100%. The constructor so far measures his performance by the amount of back-emf he can pull off relative to input - 97%. Which is

absolutely astonishing! Secondary windings could most easily be added to the stators to push that number well past 100% - battery charging in excess of motor draw, is clearly no problem. The constructor also notes the benefits of alternate N/S Muller type setups. But I was most interested to read his comments on pulse duration, and the importance of fine tuning this parameter for best results.



Construction Notes:

- Timing and pulse width are critical.
- To obtain best results, patience and perseverance may be required.
- A timer and rheostat was used to control pulse duration. 555 circuitry can also be useful.
- When you get up to 2-3 thousand RPM, you must adjust the pulse width down.
- The higher the voltage, the shorter the pulse width.
- The higher the voltage, the more efficient the unit becomes.
- Best results were obtained using magnetite cores and bifilar windings
- I have two connected rotors, one is all N faces out, and the other alternate N/S faces.
- The alternate N/S configuration, has proved itself to be capable of manifesting a greater electrical output than the N/N configuration.
- If one dumps the back EMF directly into a secondary coil you can achieve about 1/3 more torque, which allows you to take more off the back end.
- I have not quite been able so far to run the unit on one rotor, and collect enough back EMF to keep a battery up. When I get the unit up to about 3-4 thousand RPM with 80-100 volts with no load, I can recover 97% of the input simply from the back emf spikes. At this point you must balance any load on the back end to push the unit into o/u.
- The bifilar windings make it much easier to take the back EMF off, single windings require capturing then separating and switching the back EMF back to the source. Which I found not to be very efficient. It is much easier to just dump the secondary windings onto a bridge then to the source.
- I have not yet been able to properly measure the mechanical output of the unit, but I believe it is a significant o/u result.

- I believe based upon my results to date, that the configuration given in the Adams patent of 8 rotors and 7 stators is more efficient. I note with interest, Mr Muller has incorporated this type of setup into his units.

Conclusion

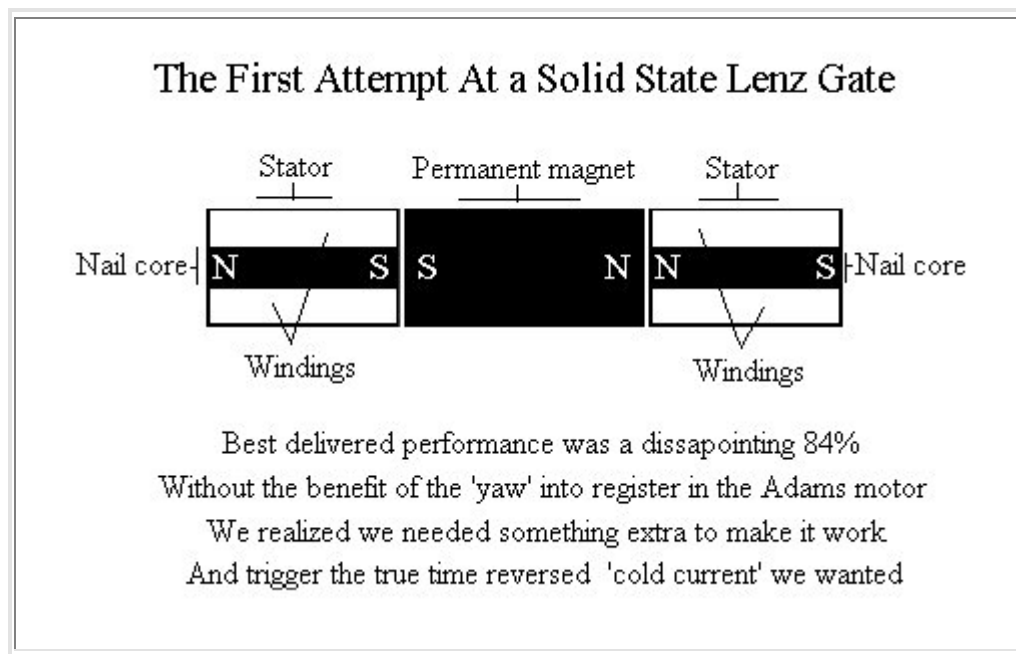
I believe Mr Adams has most certainly unlocked the secrets of over-unity physics for us all, discovering a method of forcing magnets to deliver a short negative impulse, offering an alternative method for the generation of Tesla's 'radiant energy.' But one has to approach this subject in this correct manner. Recall, these motors are really no more than switching devices, and some kind of solid state derivation of the Adams motor principals, must be the ultimate goal. This whole process is not to be taken lightly, as these negative impulses are so short and brief, that trying to nail them down, and produce repeatable results, is extremely difficult. The majority of people trying to build Adams motors, will most likely continue to fail to generate these negative impulses.

Harwood-Jankowski POD (Power On Demand) \$40 Solid State Over-Unity COP 2.0 Transductor

Costing a Solid State Transductor - List of Parts You Need for Construction		
Part	Price US\$	Description and comments
Permanent magnet	10	Basic ceramic / ferrite parts are fine
Ring permanent magnet	8	Basic ceramic / ferrite parts are fine, can use 3/4 thin magnets glued together
Battery	4	To power device
Jumpers	4	Connections
Enameled wire	4	To wind stators
Electric Motor	3	To provide a pulsed DC load

Full wave bridge rectifier	2.50	For output conversion to DC, 4 diodes, essentially
Diode + capacitor	2.50	Circuitry
Nails	2	Stators
TOTAL COST		Solid state o/u for \$40 with Radio Shack parts!

The Basic Device Schematics and Concept

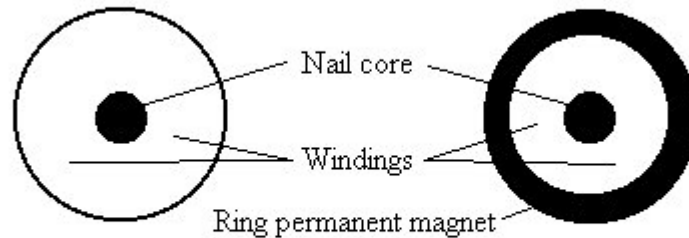


The project reasoning, methodology, and underlying field depletion theory, was directly copied from my successful over-unity CD motor project. We wanted to generate negative energy in a solid state setup, and initially cold running was made the primary device optimization parameter - all other priorities were rescinded. The assumption was made that if the thermal properties were as desired, the numbers would consequently be excellent. So we were initially disappointed to discover a simple static Adams stator would not produce the time reversed cold current we were looking for, as illustrated directly above. Additional energy yes, cold running and halved over-unity current draw, no. Hence we learned that the loss of the additional kinetic over-unity vectors when the magnet 'yaws' into register, was a greater blow than we had anticipated. However, at this point, John came up with what turned out to be a excellent idea - place a ring magnet round the stator coils. This concept is not transferable back to my original CD motor unit, but works wonders in a static setup, providing exactly the kind of performance boost we needed to be successful. The resulting device modification is illustrated below.

The Second Attempt At a Solid State Lenz Gate

End view first stator design

End view second stator design



Second stator is enclosed by ring permanent magnet
 As well as facing the pole face of a permanent magnet
 This doubling up of 'free' permanent magnet potential
 Compensates for the loss of the mechanical 'yaw' to register

This modified setup has indeed been found to deliver true 'cold current,' and excellent over-unity results have already been observed and replicated. They are summarized in the below table. That such strong over-unity results can be delivered for such little cost, is nothing short of remarkable. This document proves **you can build an over-unity motor AND and an over-unity solid state transducer, for a combined total of under \$90!**

Summary of Device Testing Results To Date	
3.7 W average	1 hour power consumption of isolated motor when connected directly to the battery source, with no other connected circuitry (drop the reading across the battery terminals)
41.3 W	Disconnected battery prior to over-unity test:
39.4 W	Disconnected battery after test over-unity:
1.9 W	Total power consumption with John's transducer device
COP 2.0	50% of normal draw using a DC electric motor as a load - basic setup
COP 1.4	A lower figure was obtained with an incandescent lantern bulb

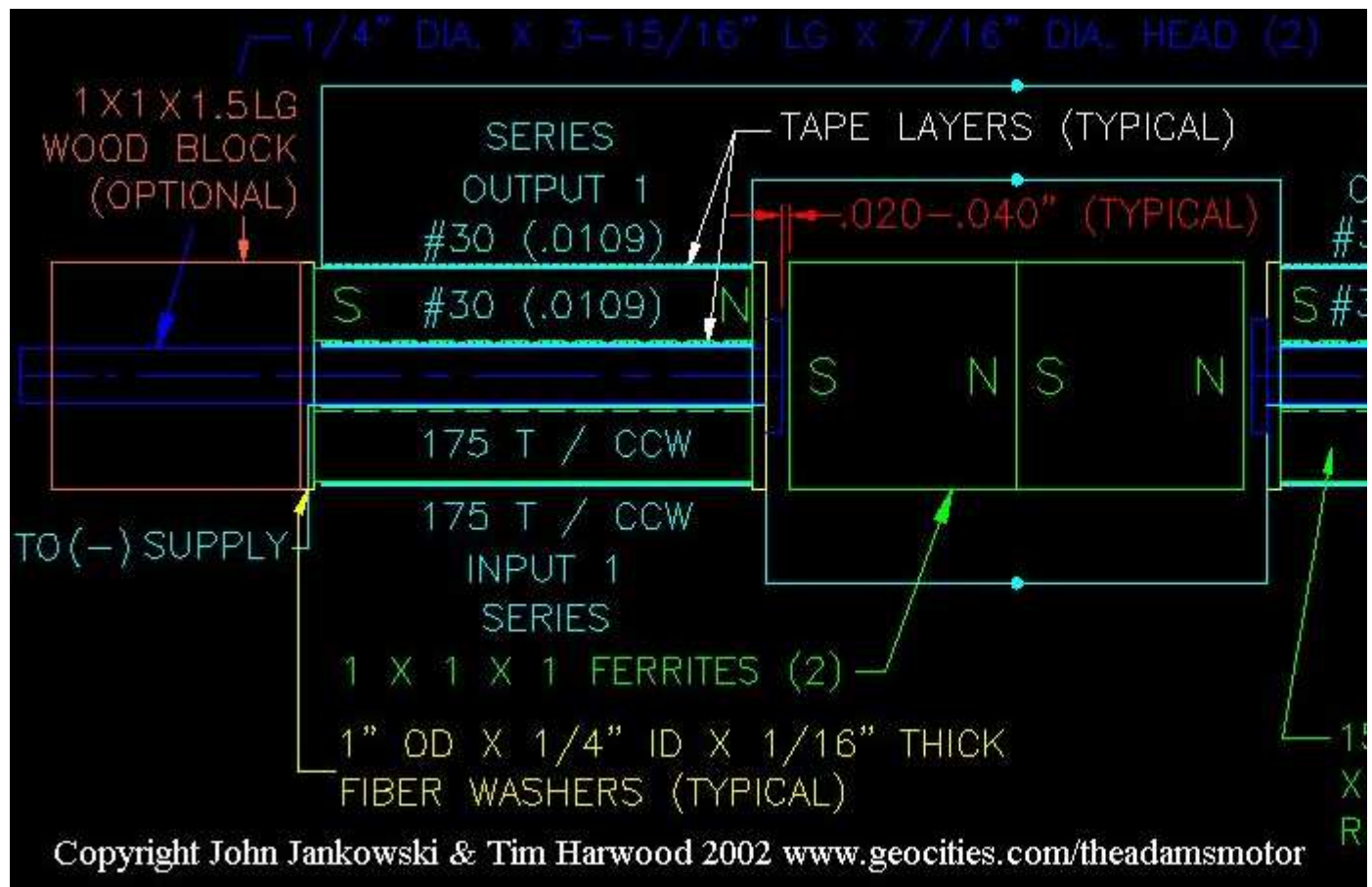
Testing notes: the above figures are **an average of several tests**, each conducted for a time period under load of 1 hour. The motor used was an unloaded 12vdc motor rated at 1.3 amps and 11,500 rpm loaded, and 15,200 rpm unloaded. Performance with a loaded motor is currently untested. A different battery was used in each test series, one fully charged and the others slightly undercharged. The arrangement was tested using 6v alkaline battery sources to determine total power consumption as indicated across the disconnected terminals before and after each test. The COP figures refer to device current draw.

John Jankowski's Transductor Device : Important General Construction Notes

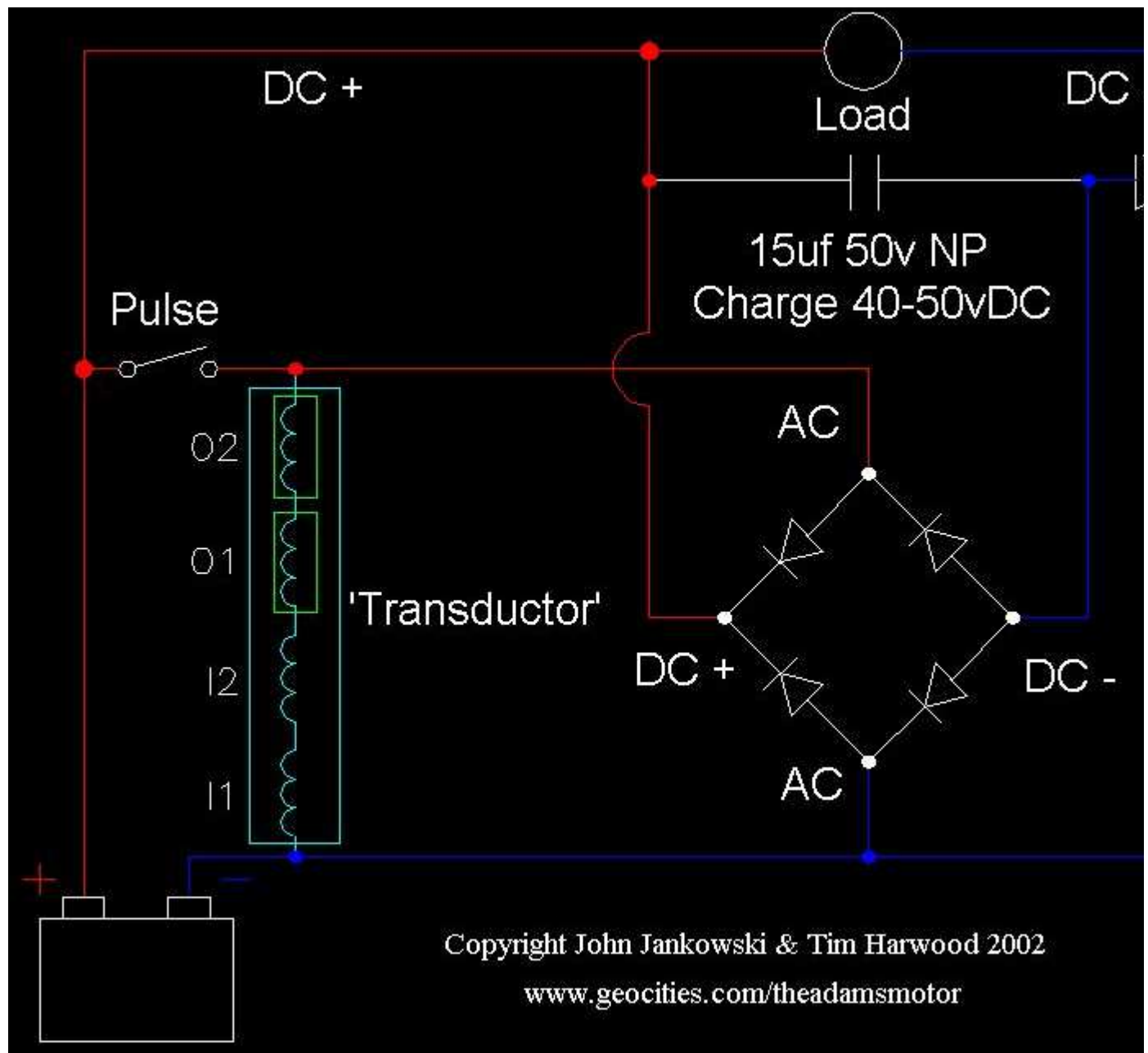
- The coils must be wound directionally as indicated and connected in series as shown.
- Counter clockwise wind is determined by facing the nail core head or PM directly and proceeding back as noted.
- The use of the thin double sided tape as insulation is convenient and beneficial.
- Best results were obtained at **9v** - the first negative energy harmonic value
- Stator wind depth can be set by placing a paper clip in front of a magnet pole face, and moving it closer until such time as frictional forces are overcome, and it flies into the face of the permanent magnet. Note this length, and wind stator core to this depth.
- ***DO NOT USE A REGULATED POWER SUPPLY*** Results to date have been disappointing.
- Air cores do not appear to work. Slightly counter intuitively, iron / mild steel is essential to device operation - without it, this device cooks, and the sharply reduced current draw over-unity effect is not manifested
- Stator windings should be about 10 ohms for optimal results
- It has been found S pole faces work slightly better than N pole faces

Device Schematics

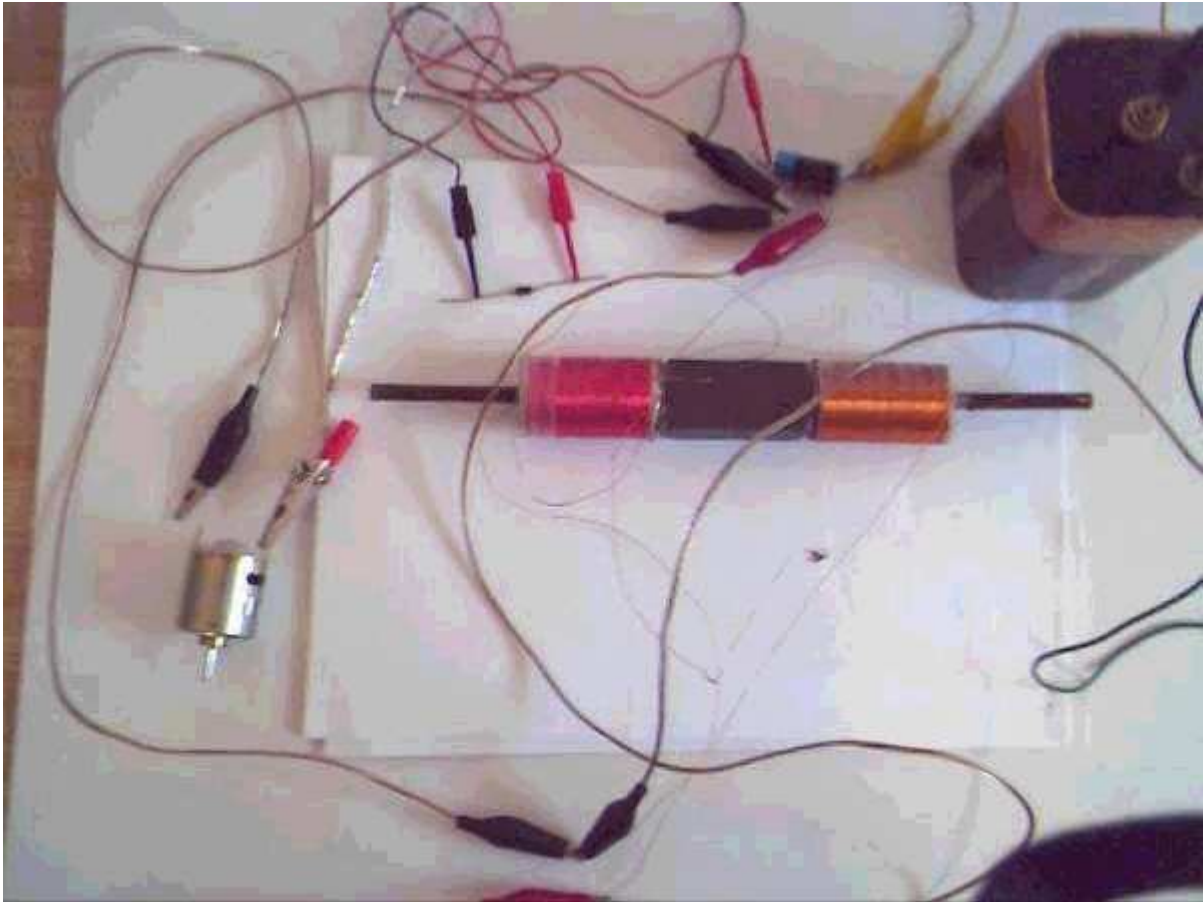
This is John's very own schematic of his device, which gives more detailed and precise technical information about the device, than the previous simple background and introduction to principal images offered.



John's second image gives precise circuitry details. Again, nothing especially complicated here - but very precisely intellectually reasoned, nonetheless.



Picture of Device



Operation Procedure

1. Disconnect the load and pulse the unit at approximately 60hz for approximately 5 seconds until the dc voltage across the capacitor reads 40-50 volts.
2. Connect the load.
3. Pulse the device at approx. 60 hz for approx. 5 seconds every 30+ minutes. There is no need to disconnect the load during this re-charge. Motor rpm will drop noticeably during this time then immediately return to normal.
4. Be advised that a vom across the charge cap will slightly increase the time required to reach the desired voltage at pulse.
5. Voltage indicated across the cap was kept in the 20-50v range, although a dissipation to under 20v, but above supply, may work as well or more efficiently.

Other Notes and Observations

- With a confined circuit configuration, the unit would generally charge the cap as high as 75vdc with a 12 volt supply, but amperage reading never exceeded 1.2 (see below)
- Amperage would decline with increasing voltage, but 45-50v at 1 amp was the median across the cap in the isolated circuit.
- The coils could be connected in reversed-series, but capacitor voltage failed to exceed 40 volts in a timely manner with any but the final arrangement.

- The above 3 tests were all unloaded and used a modified circuit. A clamping diode directly across the load apparently did no harm but no extraordinary benefit could be concluded.
- Various diode and capacitor arrangements across the ac/dc leads of the full wave bridge rectifier were also tried but were either detrimental or of no obvious benefit.
- An increase in motor rpm during operation was occasionally noted, the cause of which is undetermined. The increase would generally be sustained for 10-15 minutes, but this increase was not observed at all during 1 test.
- A crude manual arrangement was used to pulse the cap.
- Incorporation of solid state momentary PB and/or sensing/timing strategies is discretionary - if not advised. Of course, this will alter the net efficiency for better or worse.
- Drop across the battery terminals during pulse is nominal. ($<.1\text{ W}$)
- Resistance of the series connected coils is approximately 10 ohms.
- Substitution of the device with a small step-up transformer produced 60v @ 20ma across the cap which rapidly dissipated, while use of the device typically yields 40-50v @ 2.5-3 amps and amps hold steady.
- The cap normally showed a 20v drop at shutoff with amps steady, implying that the arrangement is still grossly inefficient versus dissipated potential, an element which needs to be addressed.
- Although the margin of error is large, the results so far are enough to suggest an operational gain.

The unit charges the cap most efficiently with a 9v supply, less efficiently with a 6v supply, and least efficiently with a 12 volt and 18 volt supply. The above figures were determined with the device unloaded, so loaded results may vary.

John's Commentary on Device Development

The biggest thing I missed early on was the importance of series connection. The first units had isolated input and output coils keeping the input and output separate. When Bill pulsed his output coil, I knew we had to do that also (provide a carrier current). It is essential to manifest the over-unity effect, and is basic to the operation of the Adams motor. I did not want to make an entirely separate active supply circuit to do this, so the obvious solution was simply to hook up the inputs and outputs in series. Naturally that instantly worked, and I had nothing to lose by trying it. So my main error was to worry about losing potential, which if everything is routed to the eventual output anyway, is never going to happen! I then connected the device in parallel with supply, which never allowed the load to see less than supply potential.

The final trick was to prevent the charged cap potential from instantly and totally dumping into the load. This is what everyone does and, of course, it never works. So I coupled the (-) charge indirectly to the load circuit by inserting a diode BACKWARDS of normal. This does 2 things: allows the diode trickle access to the load, but only on demand (as nature sees fit) and, because (-) supply terminal must be a LOWER potential than the (-) leg of the charge cap, then the charge

can reach ground when any natural aberration dictates, but ONLY through the load. Finally hooking in parallel to the (+) leg apparently allows the amperage components to couple with the device so total watt (amp) potential in the storage cap is 50-125 times higher than a common transformer would produce.

In sum all the fields are coupled and uncoupled without wasting any potential to do so. All the gains are then stored in the charge cap, and dissipated JUDICIOUSLY by nature, which probably no human could ever match in effectiveness. Then we just sit back and let nature perform the implementation, which apparently, it does rather nicely.

Feedback notes:

Q: *What sort of cct is used to pulse the coil with 60Hz?*

I initially used a crude mechanical "commutator" made from a small dc motor, but a solid state arrangement could / should be tried. Or, if a 60hz line supply setup were used, one could utilize the non filtered pulsing dc from that with no further frequency manipulation needed. 555 circuitry can also be employed. Motor variations are so simple I do not understand how anyone could have trouble fixing a basic 60hz supply.

Pat in the AM Egroup: I found this quick and dirty pulse generator circuit in the July 1988 electronics now magazine. I am building one to use to test the POD device. See the attached photo. Sorry about the picture quality. Also corrections were posted to the circuit in Sept. 1988 edition. The circuit is based on the TLC556 dual timer One of the timers sets the period and the other sets the pulse width. There is a better "Precision Pusle Generator" in the December 1998 edition but it is quite a bit more involved to build.

Precision Pulse generators. Note: I have not bought or used these products, these links do not constitute an endorsement, and you deal with the vendors entirely at your won risk.

'The 555 timer is one of the most remarkable integrated circuits ever developed. It comes in a single or dual package and even low power cmos versions exist - ICM7555. Common part numbers are LM555, NE555, LM556, NE556. The 555 timer consists of two voltage comparators, a bi-stable flip flop, a discharge transistor, and a resistor divider network. The 555 timer is ideal for astable free running oscillators as well as the one shot monostable mode.'

4khz works well with POD - much improved results over the basic 60hz input. Since I've given you one of the switching harmonics, you can be fairly sure that if you rig a non variable 4 khz 555 circuit, that should work quite nicely. 555 calculators are provided to determine the required part values.

- [555 Timer ic guide](#)
- [The 555 Timer - Tim Surtell](#)
- [The 555 chip](#)
- [Counting / timing](#)
- [The 555 as table circuit in detail](#)
- ['one of the most popular ics of all time'](#)
- [Example application](#)
- [555 to power a 12v led](#)
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- [Astable circuit](#)
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- [Oscillators, pulse generators](#)
- [Pulse generator circuits](#)
- [555 calculator - Javascript applet](#)
- [555 calculator \(2\)](#)
- [555 data sheet](#)
- [555 application note](#)

Mims, Forrest M., *555 Timer IC Circuits*, 3rd Ed, Engineer's Mini-Notebook, Radio Shack

Q: *I used a single layer #30 around the nail core. none of the windings are bi-filar. They are series connected, unidirectional on the outer pm ring only, i.e. wind 1 layer #30 and connect the end to a 2nd 175t #30 layer at the start of that layer. (front to back from nail head)*

So you will have 175t #30 on the nail, series connected to 175t around the ring pm then another 175t around that. This will give you a total series resistance of around 10 ohms. Be certain to wind all coils counterclockwise as indicated and include the insulating tape layer between each. This eliminates capacitive coupling effects. [See Doug Konzen's unidirectional winding methods.](#)

Q: *How does the 175 turns relate to the POD construction? Is it just 175 turns x 1 on the inside layer? How many layers on the outside? 1 layer of #30 and 1 layer of #18 ?*

core: 175t 1 layer

ring: 175t 1st layer, 175t 2nd layer

Series connect all unidirectional (back to front) (or finish to start) core-ring1-ring2 as per Konzen, not Tesla (thanks for that 10 spot, Doug). Check at 10 ohms nom. POD II outer insulated steel same <40t (your option) if used, connect front to back ring2. Should then be just under 11 ohms.

Q: *Also do you happen to know what happens if all of the coils are inside the ring magnet instead of one being on the outside?*

No. It might work just as well - if the total resistance remains around 10 ohms. That part is important. Originally, the inner (core) coils were used as "inputs" with the outer (ring pm) coils as outputs. But that was abandoned and they were then all series connected which produced a much higher potential across the charge cap.

Q: *What happens if the tape is too thick?*

I have not tried various tape thicknesses. I imagine that capacitive coupling would be reduced but net output might also be reduced with thicker tapes.

Q: *I have built a POD and I am in the process of building a circuit to test it. I noticed the addition of the steel wire winding on the POD II. It appears to be connected in series with the other coils. Can you tell me how you attached the steel wire to the copper wire?*

Just wrap the end of the 2nd ring coil around the start of the steel winding - all unidirectional series ccw. The only tough part is placing shrink tubing over the bare wire, although insulated steel wire is available at some sources. Used for thermocouples and some other applications. I would avoid a stranded wire, though, not having tried it at this point. I used common 18ga. baling wire. Otherwise, just wind tape on it.

Q: *Is magnet size important?*

It is not irrelevant, but you must understand the reason magnets of about 3/4" size are required with the Adams motor, is because rotor magnet size approximates to pulse width. Small pulse widths are required because the negative energy impulses produced by the permanent magnets rapidly decay to zero. In the POD unit, magnet size does not determine pulse width, hence magnet size is not going to be so important. The bottom line here is use common sense. It is impossible for myself and John to try every combination of everything with everything else. In fact, such an approach would be extremely stupid and wasteful of time and energy. Rather we use our intelligence, and go after the variables that seem most interesting.

Q: *I can't easily get the 1" ceramic cube magnets described, are stacked ring magnets ok? Does the end magnet diameter have to be larger than the coils or just the metal core nail?*

There is no absolute proof cube magnets are needed at this time - but since there is need to alter what works, that experiment has not been performed. Recent successful replications of Tim's CD Adams motor suggest circular faced magnets can also deliver negative impulses without problem. But other device parameters seem more interesting and worthy of study at this time. However, ceramic magnets have been demonstrated to manifest negative impulses more readily than the much more powerful NIB magnet type, hence are to be preferred. allmagnetics.com offer a decent range of ceramic parts. And yes, stacked ring magnets do indeed seem to work just fine.

Q: *I don't understand how this can possibly work? If the coil is disconnected from the circuit it wouldn't have any effect on power consumption and wouldn't improve COP.*

The device is used to charge the storage capacitor. At that point, what to do with the charge? Do you just dump it carelessly into the load, as everyone else has tried to do? It is mindless! Instead, you allow it to trickle into the load on demand as supply fluctuates. That is how you reduce the burden on supply - even with a battery source. Battery sources also fluctuate during loading regardless of what someone may have assumed or postulated. That is also why an incandescent bulb will benefit. Of course, although any fluctuation in supply will instigate impedance/reluctance cycles in the filament, the bulb itself is not the cause, but the effect of the supply fluctuations. This in turn will trickle charge potential into the supply line, although understandably at a lesser rate than with an actively fluctuating load such as the dc motor. It's really very simple. ALL power supplies fluctuate. Even the most highly filtered and regulated

ones. How does a regulated supply work? It DUMPS excess voltage/amperage to ground. In other words, they PURPOSELY waste power. The term "regulated" is therefore something of a misnomer. "Dumpulated" would be a more accurate description.

Q: *Does it make more sense to use an Adams motor in an automobile (car), or a POD driven conventional DC motor?*

I would say the latter. In pursuit of optimizing the over-unity effect, the final design of Adams motors is rather strange, struggles with a mechanical load, and can only be regarded as heavily compromised from a conventional point of view. In this case, I think it makes more sense to build a motor optimized as per conventional physics, and then feed it solid state POD input. POD 2 has now finally made that proposal worthwhile.

Q: *Does this device have any similarity to Nikola Tesla's U.S. patent 568,176 that Bill has recently highlighted as a possible radiant energy device?*

Maybe. This is something I have attempted to investigate recently. The Tesla unit relies on self oscillation within the core, as each pulse is delivered when the magnetic polarity in the core has only partially decayed from that established by the previous pulse. You therefore get a form of flux movement and 'free precharge,' to the main circuit. Hints of cold current are contained in the patent which talks of 'converting and supplying electrical energy in a form suited to the production of certain novel electrical phenomena' and more importantly 'around the break or point of interruption I place a condenser or condensers to store the energy of the discharge current,' and a 'high electromotive force which is induced at each break of the main circuit furnishes the proper current for charging the condenser, which may therefore be small and inexpensive.' This is in line with the observed properties of the POD technology, which is also able to store large amounts of charge in capacitors much more quickly and reliably than conventional science teaches is possible. My current gut feeling is that Tesla's setup is basically the same thing, just much harder to tune. But since the Tesla patent hints that it may be possible to completely eliminate the magnets from the POD layout further decreasing costs, it is worth keeping in mind.

Response to detailed questions from successful POD constructor:

Q: *The unit is not cold running. It actually runs quite warmly. I am not (yet) using the circuit that was provided on the web page. I am using a 555 timer circuit with which I use variable resistors to change the frequency and duty cycle, with a MOSFET switch. I am trying to understand the functioning of this device by using this setup and monitoring the effects with my oscilloscope.*

When constructed per the site, the arrangement runs room temp to cool. This varies between components with the only element exhibiting any warmth being a loaded output (drive) motor. There will be no heat whatsoever in the pod coil or other electrical components. Keep in mind that with a 10 ohm set in there, simply being room temp involves a substantial net cooling effect.

Q: *The pm ring stack is approx 2 inches in length. 4 segments doesn't sound right unless they*

were 1/2" in thickness each.

All the dimensions are posted in the construction diagram. Just follow that. The unit and circuit have been replicated by several other people to date. The pod is actually 2 parts:

1. The pod device itself which is only used to generate potential and charge the storage capacitor. Thus the pod device itself is only pulsed 5-10 seconds at approx 1/2 hour run-time intervals. (unloaded motor)
2. The distribution circuit which is used to dispense that stored potential into a useful load "on demand". It is useless to simply dump the potential carelessly into the load circuit. Hence, "Power On Demand".

- sounds as if you are pulsing the pod device continuously.

Q: Also, my local hardware store does not carry soft or mild steel nails, so right now I am using a standard steel nail. Is a mild steel core necessary for the cold current effect?

Nails can be purchased at any Home Depot or Lowes. Just don't inadvertently grab any of the aluminum ones. Get a 6000 ft. spool of #30 at www.mcmaster.com - around \$15 and will last forever. The pm ring diameter sounds fine. That is not critical. You can get the ring pm magnets at any Radio Shack or mail order. BaFe magnets as used in the old Sweet SQM / VTA unit are **not necessary**. Exotic magnets are not required at all. In fact, they should be avoided because they require higher voltages. If further experimentation is the strategy, be aware that supply voltage should be substantially higher if going with nebs, samarium, etc. The SQM was a flawed device, beset with several major problems, that would have in all probability prevented commercial development, even if Sweet had lived longer and been more sensible in the contracts he signed. Yes, the SQM is useful background reading, but please do not bring the flaws of the SQM unit across to the POD technology.

Q: Also, your comment about the capacitor charging voltage...for some reason, the back EMF from this coil system rises instantly to almost exactly 100V, stays there to form a short plateau, then falls down normally. I am not sure why there is a plateau there at 100V, but I think it could be connected to my MOSFET setup. The MOSFET has a built in shunt diode. So I have not been able to charge a cap up to anything past 99.8V or so (using a bridge just like the schematic on your web page).

This is due to capacitance. 15uF will get you to around 95v max. 4.7uF to 150v. 2uF to 200v+ and 1 uF up to 250v. use 250v capacitors (for pod II) since higher voltages will be obtained in the next version. As for your circuit and components, anywhere you provide a leak, it will leak. same goes for regulated power supplies. They dump excess to ground by design. Use a battery supply and (later) a battery re-charge at output or experiment with a pulsing dc variant from line.

Q: I have been pulsing it all throughout the audio spectrum, from about 50 hz to maybe 10-15 kHz or so. Most of my tests were conducted in the 1-5 kHz range (most of the peculiarities of the device seemed most prominent in this range).

Go for it.

Q: *Also, I have been using some fairly low-grade/low-cost (less than \$100) DMMs for some readings, and while I know that these are not going to be very accurate, they seem to convey relations pretty well, i.e. if they record a voltage increase then when measured with the oscilloscope there is an increase observed as well. So keeping this in mind, I tried pulsing one of the inner coils and measuring the voltage and the current on another one of the inner coils (remember, I have 3 inner coils in this device).*

The coils are all series connected. separating the coils as input or output entities does not work. Build it as shown and alter or experiment from there.

Q: *I had one meter measuring input current and one measuring output voltage and current (the output voltage and current being measured separately, of course) Generally, my meters recorded a halving of input current when the end magnet was added, and a doubling of output current and voltage when measured separately. When one of the coils is loaded, the input current drop is less remarkable (i.e. the greater the load, the higher the input current and the less the current drop when the end magnet is added). I have been pulsing it with about 10-12V unregulated low-ripple DC - that is, a step-down transformer from the power line with a 60000MFD cap and bridge on it.*

Let me know if the unregulated DC supply is successful since I have not yet tried this. You should be able to use this (pulsing dc) as the pulse frequency / source as well.

Harwood-Jankowski POD 2

(Power On Demand)

Solid State Transductor Technology

Comments:

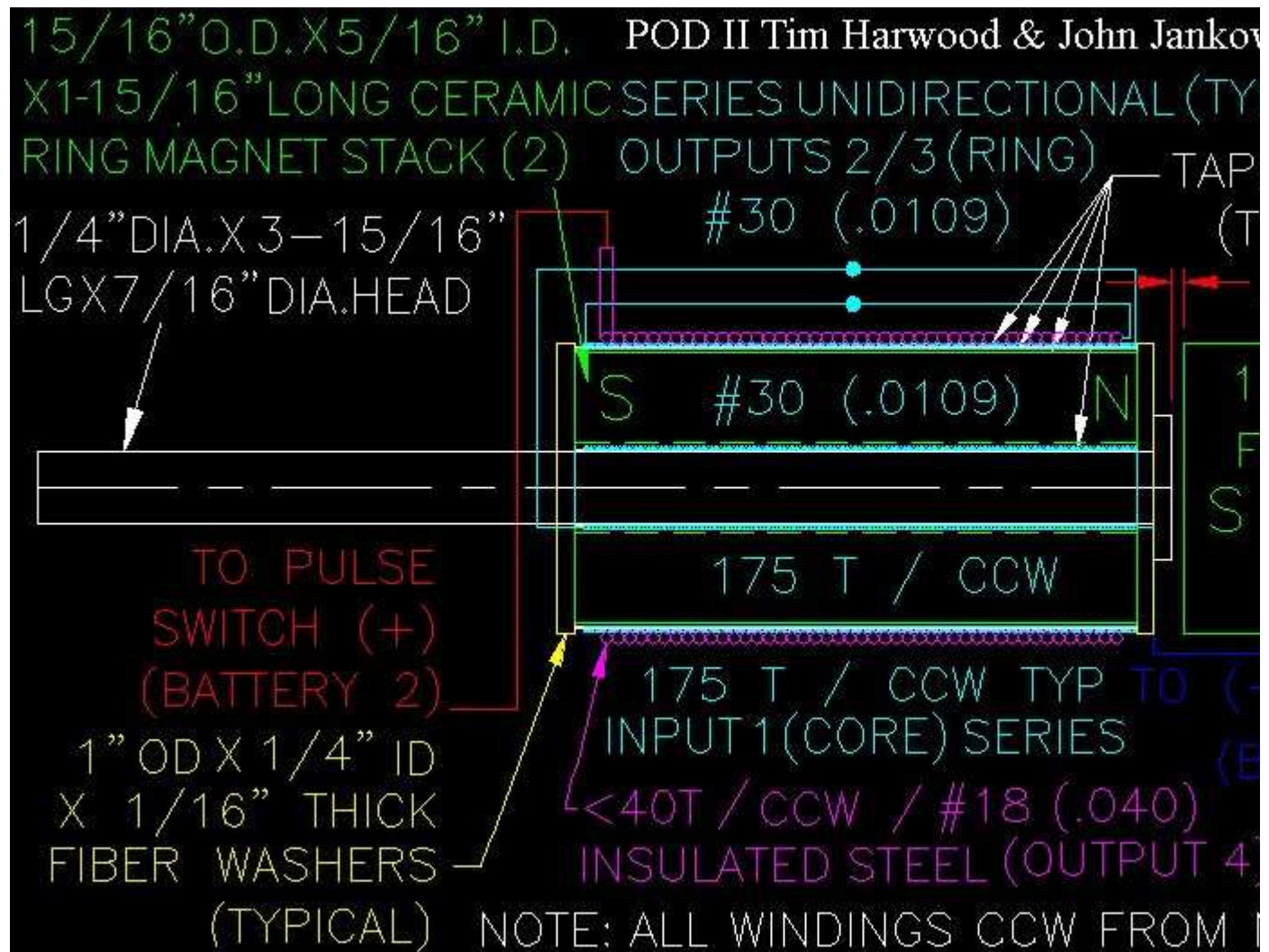
The POD technology is astonishingly cheap, simple, flexible, robust, and effective. Too many possible configurations and applications exist for this web site to even attempt to cover a fraction of them. This being the case, the POD 2 layouts on this page, present only some of the most obvious further optimizations that can be undertaken. I highlight the following features for particular attention:

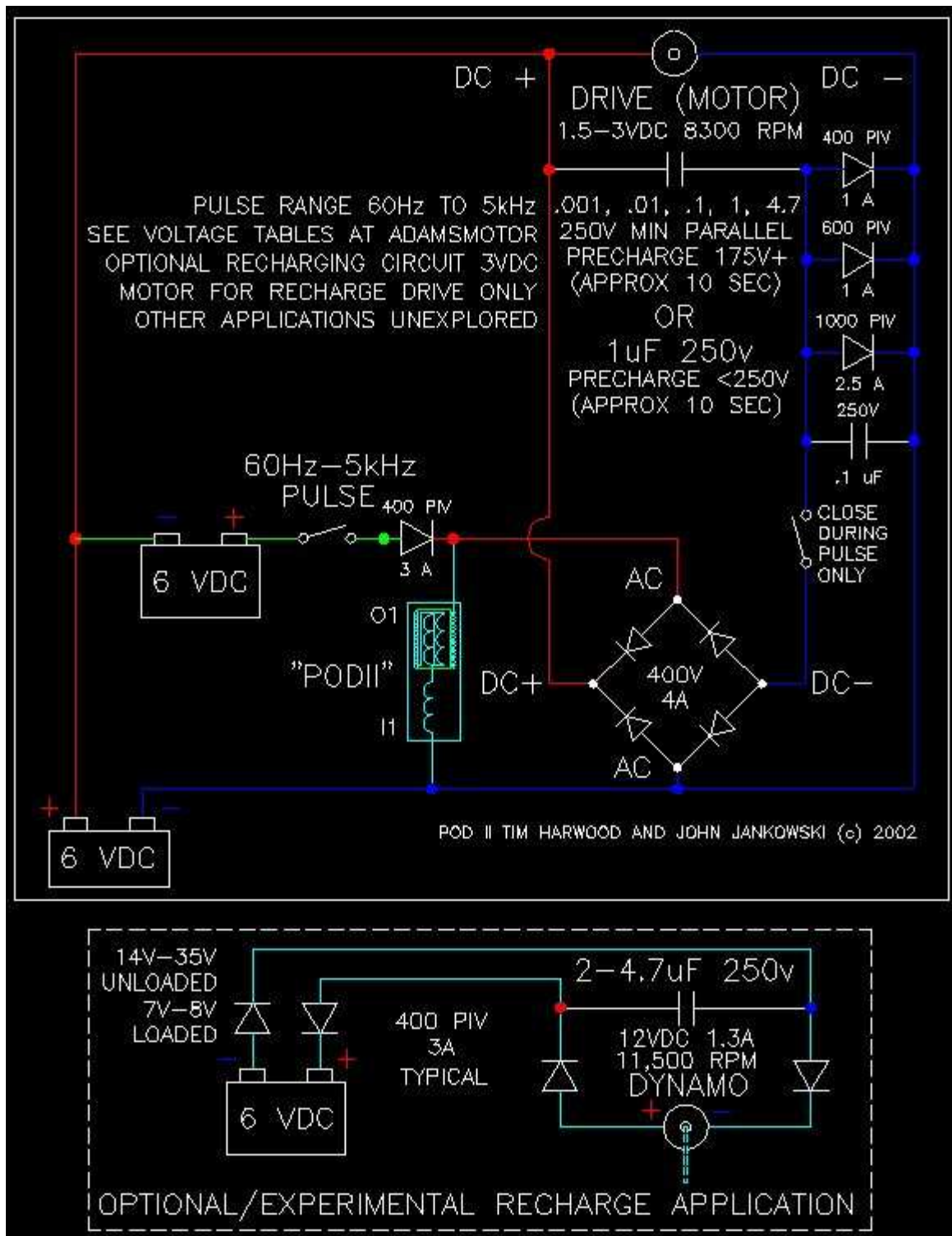
1. The circuitry switch closed only during the pulse
2. Increasing the capacitor voltage to 250v
3. Increasing the switching speed to 4khz
4. Adding 40 turns of steel wire to the circuit (adds about 35v to cap charge)

The performance increase delivered by applying all those optimizations together genuinely has to be seen to be believed. POD 2 is a multi layered over-unity technology, with many carefully devised optimizations now seamlessly integrated into one package. Each of these optimizations

can be added individually or collectively to the basic physical POD layout, and all greatly benefit performance. Future development might include raising the switching speed even higher, taking the capacitor voltage into the 350v-600v range, and using improved core materials such as permalloy or magnetite.

No Patents: Finally, I would remind you all that POD was freely placed into the public domain. It is therefore now utterly impossible for any aspect of this technology to be patented. Tom Bearden took out 30 patents for his MEG - we give it all away for free.





Example application: Monster Truck Madness

Radio Control Full Function Nissan Frontier with 9.6V Battery and Charger (27 MHz)
by Scientific Toys Ltd



A POD unit could be fitted onto the back of this truck, significantly extending the rather short battery life of 30-45 minutes. The POD enhanced battery life would really be dependant upon the quality of your engineering, so much as any inherent limitation in the POD performance curve. This is a simple example of how much good clean fun is to be had with POD technology - I am sure you can think up many others.

Suppliers of interest - Links do not constitute an endorsement, use at own risk	
Ring magnet supplier	Nice range offered
http://www.mcmaster.com/	Useful general supplier, enameled wire, etc
Radio Shack	Well known supplier - but not the cheapest
http://www.newark.com/	1uF 250v metal film caps - capacitor type guide
http://www.digikey.com/	Electronics supplier - 'Quality components superior service'
http://www.allelectronics.com/	Electronics supplier - 'Serving the electronics industry since 1967'
http://sales.goldmine-elec.com/	Electronics supplier 'The lowest prices available on components'
http://www.vishay.com/products/capacitors/	Capacitor product guide with regional supplier info
Farnell Magnetsales	2 English suppliers, for electric components and ceramic magnets

The Tesla Connection (a reminder)

Secrets of Cold War Technology: Project HAARP and Beyond, by Gerry Vassilatos.

This book is well worth the money, and I don't say that about many. Much wonderful original research on Tesla. Genuinely very helpful. Obtaining a copy of this book appears to have transformed Mr Adams' research in the mid to late 1990s, with his latest models gating the 'back emf' into high voltage capacitors (250v), which then deliver the pure voltage / wattless / zero amp, state of energy Tesla documented over a century ago now. POD 2 was carefully designed to conform to Tesla's clear and specific negative energy optimization instructions, with in consequence, vastly improved results.

Through successive experimental arrangements, Tesla discovered several facts concerning the production of his effect. First, the cause was undoubtedly found in the abruptness of charging. It was in the switch closure, the very instant of "closure and break", which thrust the effect out into space. The effect was definitely related to time, impulse time. Second, Tesla found that it was imperative that the charging process occurred in a single impulse. No reversal of current was permissible, else the effect would not manifest. In this, Tesla made succinct remarks describing the role of capacity in the spark-radiative circuit. He found that the effect was powerfully strengthened by placing a capacitor between the disrupter and the dynamo. While providing a tremendous power to the effect, the dielectric of the capacitor also served to protect the dynamo windings. Finally, the effect could also be greatly intensified to new and more powerful levels by raising the voltage, quickening the switch "make-break" rate, and shortening the actual time of switch closure.

100% Independent POD Replication



- POD using 2 magnetite cores from the Adams motor
- Showed O/U at certain frequencies
- Also employed a pulse width modulator
- 555 circuitry can be used to advantage
- Takes time and patience
- Difficult to maintain constant results and repeat the frequency and pulse width

- Fundamentally works as claimed with sufficient applied experimental skill

Second 100% Independent POD Replication

The following post was made entirely unsolicited to an Egroup recently. I have been unable to procure a photo, but the replication claim remains fully valid. Since no photo has been offered, I have decided not to give a separate web page to this device. I must say this is one area of misunderstanding. Some people seem to think I have the power to force people to buy webcams and post their full names, address, and telephone numbers on the internet. In reality, most people replicating the technology on this website dislike attention, which is something I always respect.

Message ***** of 21870 | Previous | Next [Up Thread] Message Index

From: "<*****>"

Date: Sun *** **, 2002 7:26 am

Subject: POD units

Hello all, I am wondering if anybody out there has looked at the solid-state "Power-On-Demand" / POD modules that are at URL

www.geocities.com/theadamsmotor/pod.html

Has anyone tried experimenting with this type of device? It is very easy to build. I have built one myself and it exhibits some interesting properties like halving (or better) the current draw when the "end" magnet is added. I do not fully understand the device's functioning or the effects it creates.

I would love to hear about anybody's experiences or insights concerning this device.

Third 100% Independent POD Replication

futuresky123 posted this to the Adams motor Egroup:

Greetings, I've recently been experimenting with Parallel Path but decided to set it aside for now and replicate POD. I have already built a working Adams motor that runs cold, but have yet to measure cop. So I took one of the stators from my Adams motor and wired it per POD specifications, and low and behold the current draw halves. The POD I built uses ring magnets stacked from speakers that are rather large, 3/8" bolt for core. I built the POD unit very quickly not counting wire turns etc. Now let's get to the numbers. I performed two tests

1. IN .16A,17.3V OUT .2A,17.3V @ 252hz = **cop of 1.25**

2. IN .1A,18.1V OUT .2A,18.0V @ 450hz = **cop of 1.99**

So I would say with the numbers there is **no doubt about over-unity** and these numbers can only get better with improved materials and further experimentation.

Comments:

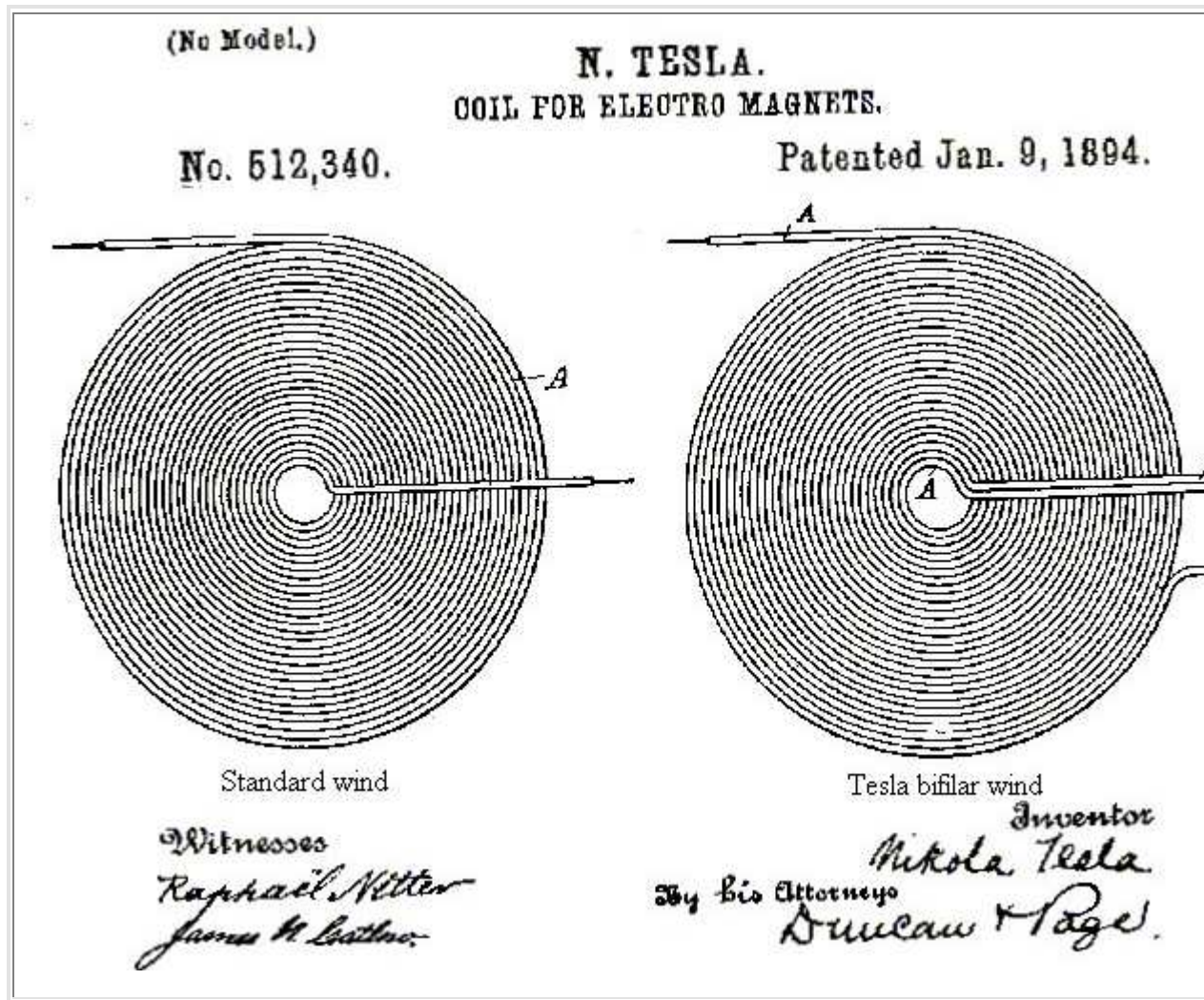
- The reason we say 60hz to 5khz, is that depending upon rotor / stator geometry, core materials, magnet type, and other factors, optimal switching speeds vary from one unit to the next.
- Try 1-5khz switching for significantly improved results above the basic COP 2 result, in particular 4khz.

Appendix

2001 Update From Mr Adams

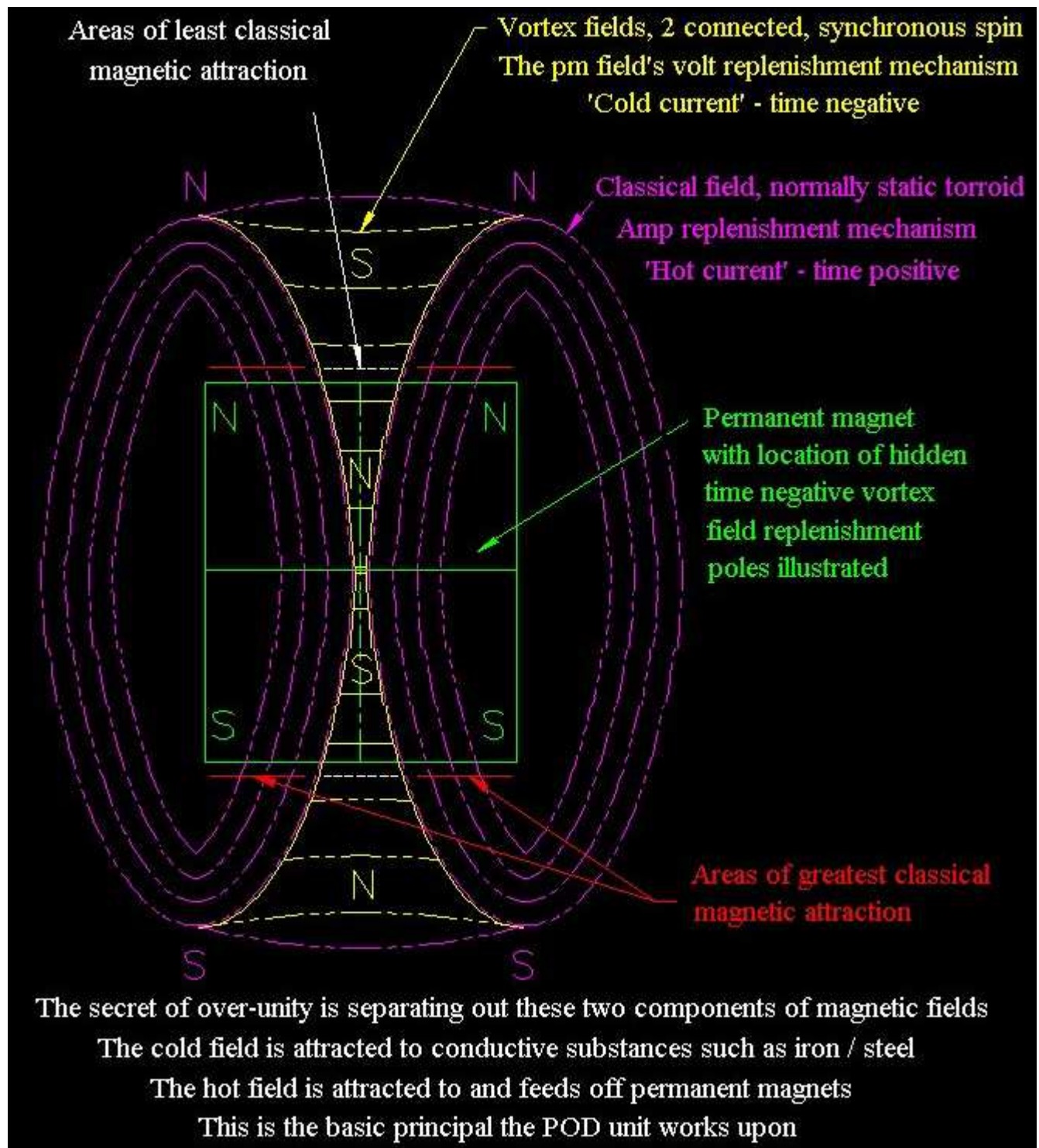
The cardinal mistake being made here is that most of these experimenters are concerned about I²R losses! If you are seeking high/super performance with these powerful magnets, then discard all concerns in relation to Ohms Law, for in the Adams technologies Ohms **Law** becomes a non-entity. Instead of expecting results of a high order with stators of very low resistance, such as under 10ohms, increase the total series electrical resistance instead to 72ohms and instead of expecting spectacular results using these powerful magnets with only 12 - 24 volts, increase the voltage to a minimum of 120v. Upon having done this you must give attention to other important factors, i.e., stator to magnet air gap should be 1 - 1.25mm, impulse duty cycle should be 0.25 - 0.35, "mosfet" gate signal impulse 10 - 20v of good clean stable D.C. Upon initial experimental tests, I have always used batteries. Reduce the face area of stators to 75% of the magnet face. Now having said all this, choose your own method of signal switching, whether it be photo, hall, magnetic, reed or mechanical, etc. Upon fine tuning, and now having reached greatly increased power and performance, 'DOUBLE' the power supply voltage to 240v and you will have a machine in the "kilowatt" range, the exciting stage of your progress.

Nikola Tesla's Patented Classic 1894 Bifilar Coil Schematic.



All magnetic fields have 4 poles - a possible mechanism for negentropy

My friend John Jankowski has very kindly supplied a diagram of the possible true nature of magnets, putting solid pictorial form to my theories. Even if this graphic turns out to be wrong, the temporarily enlarged time reversed secondary poles, are an excellent way to visualize the field depletion process manifested in the Adams motor. One can model the negative impulse mathematically, but that is different from the actual physics of how the effect is in reality manifested.



Important Recent experimental validation of secondary vortex pole theory

Solid state experiments have now shown that air cored stators are not capable of delivering cold current. This conclusively proves it is not the flux field of the magnet that becomes time reversed negative - only a relatively small part on on the magnet pole faces, that does not ordinarily

extend far from the physical limits of the magnet, even when field depletion has occurred. An iron core attracts this secondary pole, and conducts it along its length over the generator turns, enabling phase conjugation of the delivered current pulse.

Sweet VTA

This device appears to have manifested the same negative energy as the Adams motor.

'Negative energy is fully capable of lighting incandescent lights, running motors, and performing all of the functions of positive energy tested to date. When run in parallel with positive energy however, cancellation (annihilation) of opposing power types occurs. This has been fully tested in the laboratory.'

'The coils are very small diameter copper wire but are capable of producing in excess of 5 kilowatts of useful power; this in itself is a clear indicator that the type of electrical energy provided by the device is not conventional. The wire sizes employed by the device would not be capable of carrying such large currents without excessive heat gain, however, the triode's coils actually run cooler when loaded at 5 kW.'

The Space Energy Newsletter (1993), Vol. IV, I, also offered some fascinating insights

Floyd's experiments demonstrated that the VTA loses weight in proportion to the amount of generated "Negative Energy". This was carefully documented by Floyd on a kitchen scale. The machine weight was observed decreasing with increased load in a quite orderly fashion until a point was suddenly reached when Floyd heard an immense sound, as if he were at the center of a giant whirlwind but without actual air movement. The sound was heard by his wife Rose in another room of their apartment and was heard by others outside the apartment. The experience was very frightening and the experiment has not been repeated (These power levels perhaps took Sweet right up to the edge of ripping open a worm hole - as Tesla's equipment did in 1943, with the infamous and tragic 'Philadelphia experiment' - Ed).

One frustrating aspect of the VTA has been its failures, evidenced by the output voltage slowly decaying to zero over a few seconds or minutes. There also has been spontaneous instances of the voltage rising above 120 VRMS as observed by the increased lamp load bank brightness. The volt meters, ammeter, and power meter did not correlate with the brightness change except when the machine would fail to produce any power.

The 20 gauge magnet wire in the output coils consisting of several hundred turns has significant DC resistance which is not correlated with the unvarying output terminal voltage at different loads. It is speculated that this energy does not travel within the copper wire or its passage through the copper wire does not generate a voltage drop - a most useful feature when transferring energy from one place to another.

Many times the VTA was normally left on powering a lamp load bank 24 hours a day. During a period of time when it appeared to be functioning properly all day long, Floyd got up at 3:00 AM to go to the bathroom. As he walked past the room where the VTA was located, he noticed that the lights appeared dim. He measured the voltage at 70 VRMS. Being tired at the moment, he

returned to bed. The next morning when he rose, the voltage was back to the normal 120 VRMS and stayed there all day. The next night Floyd got up at 4:30 AM. The voltage was measured at 85 VRMS. Floyd returned to bed. The voltage was normal the entire next day.

The reliable conditioning of the magnets in a manner that assures long time operation is the Achilles heel of this device.

Some observers of the light emanating from ordinary 120 volt 100 watt incandescent bulbs powered by the VTA claim the light is different, softer, than normal incandescent light. The VTA magnets and coils when powering loads of over a kilowatt become cold and temperatures of 20 degrees Fahrenheit below ambient have been observed.

When the VTA output wires had been accidentally shortened, first an extremely brilliant flash occurred. When the wires involved were examined shortly afterward, they were found covered with frost.

Conventional instruments used to measure volts, amps, or watts appear to correlate machine output as coupled to loads, but only up to approximately 1 KW; above that value they may indicate zero or some other value not related to the known actual load. Floyd's attempts to use conventional electrical design formulas relating number of coil turns, amp turns on drive coils, and any other parameter to predict observed outputs have all resulted in failures with calculations. Empirical formulas based on actual tests have been documented.

Magnet size seems to be secondary to volume of the windings wire, diameter, input voltage and current.

Quality of oscillator is important- there should be no harmonic distortion i.e. pure sine wave output.

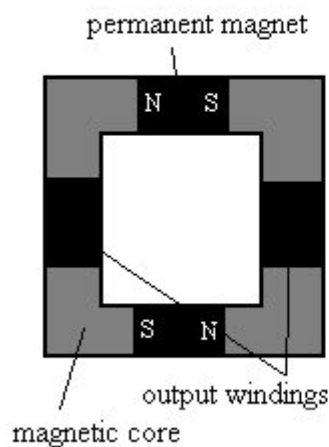
The VTA "likes" to always see a minimum load of 25 watts.

The effect is manifested at 9v and above (this agrees with my results - Ed).

Electrical shock to humans from the VTA may be more damaging than contact with a 120 VRMS 60 HZ conventional powerline voltage. Floyd has accidentally had VTA current pass from his thumb to his smallest finger. It appears to freeze the flesh and was extremely painful for at least two weeks. The mechanism by which negative energy makes copper conductors cold but will also heat light bulb filaments is not understood.

Bill's Leon Dragone Metglas Core Cold Current Unit

Energy From Magnets by Dragone



Permanent magnets wound with stator coils

When coils are pulsed, pm field is cancelled

Hence pm field in core collapses

When pulse ends, pm field in core is re-established

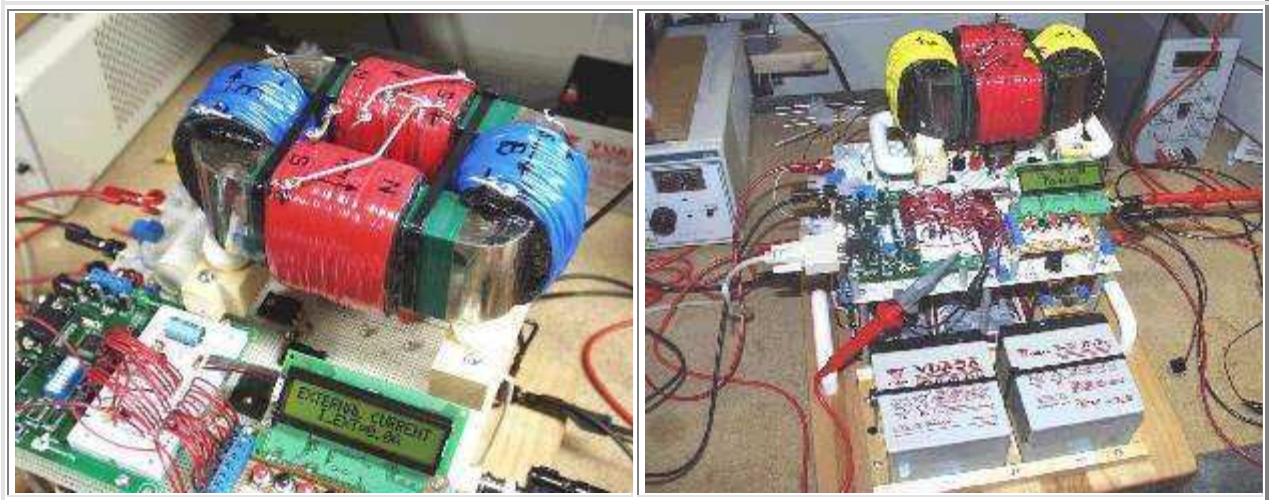
Pm returns cancellation energy to device circuitry

Secondary output turns provide over-unity output

Thus 200% COP is indicated

Experiment indicates this is conservative

Below are pictures of Bill's working unit. The first device produced an impressive COP 1.93 as planned, COP 4.03 has already been obtained with proper adjustment. Vastly superior results are most certainly possible, because the output is time reversed 'cold current.'



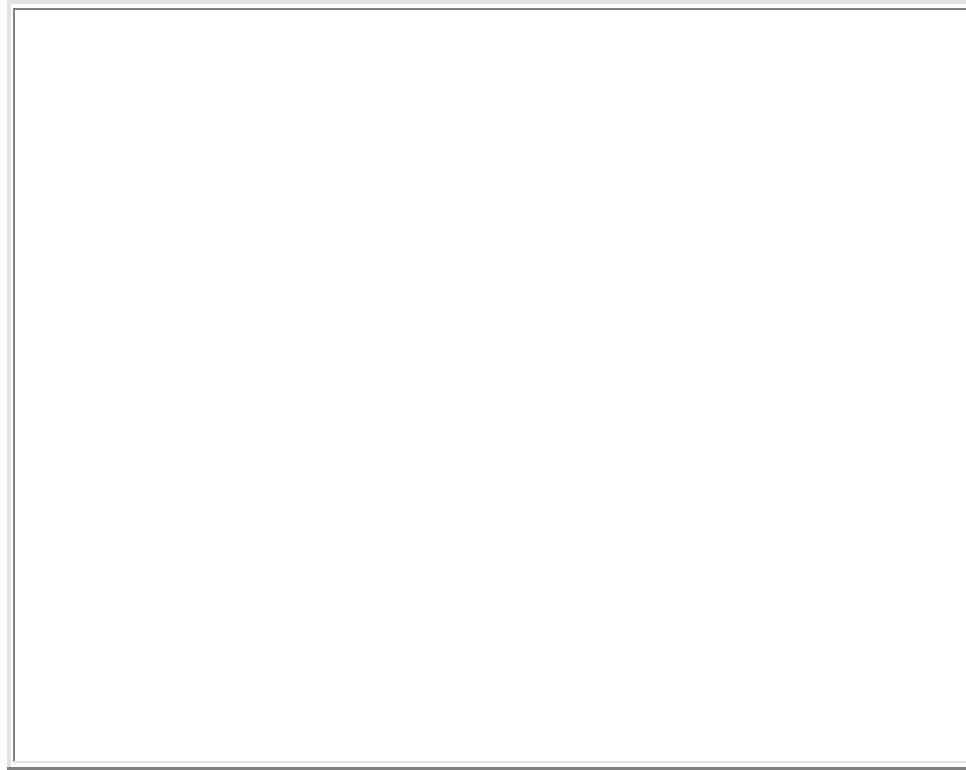
A most fascinating mathematical analysis, that demonstrates the negative impulse manifested by the permanent magnets, begins to decay the moment the switch is closed. The Adams motor is based upon the exact same physics of course.

[Bill's mathematical analysis of the Dragone equations](#)

The original Dragone papers are also available on-line for reading

[Original Dragone Equations](#)

The below diagram is just one of the several graphs provided in Bill's analysis, and illustrates how the negative impulse generated at switch closure rapidly decays.



And finally, Bill has recently published a most fascinating analysis, that suggest that Nikola Tesla's U.S. patent 568,176, is in a fact a cold current generation device. I have decided to omit it for space reasons, but this document contains sufficient insight into the physics of negative energy generation, for anyone with talent to properly interpret the schematics.

Full patent text. Note certain statements are in error e.g. that large Adams motors made of huge magnets could be used to power commercial liners. The pulse duration for such a device would be much too long for effective operation, of course.

ELECTRICAL MOTOR-GENERATOR GB2282708

DATE OF A PUBLICATION: 12.04.1995

Applicant(s):

Harold Aspden- SOUTHAMPTON, United Kingdom

Robert George Adams-New Zealand

Date of Filing: 30.09.1993

Application No: 9320215.8

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Field of Search:

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ONLINE DATABASES : WPI. CLAIMS

Agent and/or Address for Service:

Harold Aspden, SOUTHAMPTON, United Kingdom

ABSTRACT

An electrodynamic motor-generator has a salient pole permanent magnet rotor interacting with salient stator poles to form a machine operating on the magnetic reluctance principle. The intrinsic ferromagnetic power of the magnets provides the drive torque by bringing the poles into register whilst current pulses demagnetize the stator poles as the poles separate. In as much as less power is needed for stator demagnetization than is fed into the reluctance drive by the thermodynamic system powering the ferromagnetic state, the machine operates regeneratively by virtue of stator winding interconnection with unequal number of rotor and stator poles. A rotor construction is disclosed (Fig 6, 7). The current pulse may be such as to cause repulsion of the rotor pole

FIELD OF INVENTION

This invention relates to a form of electric motor which serves a generating function in that the machine can act regeneratively to develop output electrical power or can generate mechanical drive torque with unusually high efficiency in relation to electrical power input.

The field of invention is that of switched reluctance motors, meaning machines which have salient poles and operate by virtue of the mutual magnetic attraction and / or repulsion as between magnetized poles. The invention particularly concerns a form of reluctance motor which incorporates permanent magnets to establish magnetic polarization.

BACKGROUND OF THE INVENTION

There have been proposals in the past for machines in which the relative motion of magnets can in some way develop unusually strong force actions which are said to result in more power output than is supplied as electrical input.

By orthodox electrical engineering principles such suggestions have seemed to contradict accepted principles of physics, but it is becoming increasingly evident that conformity with the first law of thermodynamics allows a gain in the electromechanical power balance provided it is matched by a thermal cooling.

In this sense, one needs to extend the physical background of the cooling medium to include, not just the machine structure and the immediate ambient environment, but also the sub-quantum level of what is termed, in modern physics, the zero-point field. This is the field associated with the Planck constant. Energy is constantly being exchanged as between that activity and coextensive matter forms but normally these energy fluctuations preserve, on balance, an equilibrium condition so that this action passes unnoticed at the technology level.

Physicists are becoming more and more aware of the fact that, as with gravitation, so magnetism is a route by which we can gain access to the sea of energy that pervades the vacuum. Historically, the energy balance has been written in mathematical terms by assigning 'negative' potential to gravitation or magnetism. However, this is only a disguised way of saying that the vacuum field, suitably influenced by the gravitating mass of a body in the locality or by magnetism in a ferromagnet has both the capacity and an urge to shed energy.

Now, however, there is growing awareness of the technological energy generating potential of this field background and interest is developing in techniques for 'pumping' the coupling between matter and vacuum field to derive power from that hidden energy source. Such research may establish that this action will draw on the 2.7K cosmic background temperature of the space medium through which the Earth travels at some 400 km/s. The effect contemplated could well leave a cool vapour trail' in space as a machine delivering heat, or delivering a more useful electrical form of energy that will revert to heat, travels with body Earth through that space.

In pure physics terms, relevant background is of recent record in the August 1993 issue of Physical Review E, vol. 48, pp. 1562-1565 under the title: 'Extracting energy and heat from the vacuum', authored by D.C. Cole and H. E. Puthoff. Though the connection is not referenced in that paper, one of its author's presented experimental evidence on that theme at an April 1993 conference held in Denver USA. The plasma power generating device discussed at that conference was the subject of U. S. Patent No. 5,018,180, the inventor of record being K. R. Shoulders.

The invention, to be described below, operates by extracting energy from a magnetic system in a motor and the relevant scientific background to this technology can be appreciated from the teachings of E.B. Moullin, a Cambridge Professor of Electrical Engineering who was a President of the Institution of Electrical Engineers in U. K.

That prior art will be described below as part of the explanation of the operation of the invention.

The invention presented here concerns specific structural design features of a machine adapted for robust operation, but these also have novelty and special merit in a functional operation. What is described is quite distinct from prior art proposals, one being a novel kind of motor proposed by Gareth Jones at a 1988 symposium held in Hull, Canada under the auspices of the Planetary Association for Clean Energy. Jones suggested the adaptation of an automobile alternator which generates three-phase a. c. for rectification and use as a power supply for the electrics in the automobile. This alternator has a permanent magnet rotor and Jones suggested that it could be used, with high efficiency gain and torque performance, by operating it as a motor with the three-phase winding circuit excited so as to promote strong repulsion between the magnet poles and the stator poles after the poles had come into register. However, the Jones machine is not one exploiting the advantages of the invention to be described, because it is not strictly a reluctance motor having salient poles on both stator and rotor. The stator poles in the Jones machine are formed by the winding configuration in a slotted stator form, the many slots being uniformly distributed around the inner circumference of the stator and not constituting a pole system which lends itself to the magnetic flux actions to be described by reference to the E.B. Moullin experiment.

The Jones machine operates by generating a rotating stator field which, in a sense, pushes the rotor poles forward rather than pulling them in the manner seen in the normal synchronous motor. Accordingly, the Jones machine relies on the electric current excitation of the motor producing a field system which rotates smoothly but has a polarity pattern which is forced by the commutation control to keep behind the rotor poles in asserting a continuous repulsive drive.

Another prior art proposal which is distinguished from this invention is that of one of the applicants, H. Aspden, namely the subject of U.K. Patent No. 2,234,863 (counterpart U.S. Patent Serial No. (4,975,608). Although this latter invention is concerned with extracting energy from the field by the same physical process as the subject invention, the technique for accessing that energy is not optimum in respect of the structure or

method used. Whereas in this earlier disclosure, the switching of the reluctance drive excited the poles in their approach phase, the subject invention, in one of its aspects, offers distinct advantages by demagnetization or reversal of magnetization in the pole separation phase of operation.

There are unexpected advantages in the implementation proposed by the subject invention, inasmuch as recent research has confirmed that it requires less input power to switch off the mutual attraction across an air gap between a magnet and an electromagnet than it does to switch it on. Usually, in electromagnetism, a reversal symmetry is expected, arising from conventional teaching of the way forward and back magnetomotive forces govern the resulting flux in a magnetic circuit. This will be further explained after describing the scope of the invention.

BRIEF DESCRIPTION OF THE INVENTION

According to one aspect of the invention, an electrodynamic motor-generator machine comprises a stator configured to provide a set of stator poles, a corresponding set of magnetizing windings mounted on the stator pole set, a rotor having two sections each of which has a set of salient pole pieces, the rotor sections being axially spaced along the axis of rotation of the rotor, rotor magnetization means disposed between the two rotor sections arranged to produce a unidirectional magnetic field which magnetically polarizes the rotor poles, whereby the pole faces of one rotor section all have a north polarity and the pole faces of the other rotor section all have a south polarity and electric circuit connections between an electric current source and the stator magnetizing windings arranged to regulate the operation of the machine by admitting current pulses for a duration determined according to the angular position of the rotor, which pulses have a direction tending to oppose the polarization induced in the stator by the rotor polarization as stator and rotor poles separate from an in-register position, whereby the action of the rotor magnetization means provides a reluctance motor drive force to bring stator and rotor poles into register and the action of the stator magnetization windings opposes the counterpart reluctance braking effect as the poles separate.

According to a feature of the invention, the circuit connecting the electric current source and the stator magnetizing windings is designed to deliver current pulses which are of sufficient strength and duration to provide demagnetization of the stator poles as the stator and rotor poles separate from an in-register position. In this regard it is noted that in order to suppress the reluctance drive torque or brake torque, depending upon whether poles are converging or separating, a certain amount of electrical power must be fed to the magnetizing windings on the stator. In a sense these windings are really 'demagnetizing windings' because the polarity of the circuit connections admit the pulse current in the demagnetizing direction. However, it is more usual to refer to windings on magnetic cores as 'magnetizing windings' even though they can function as primary

windings or secondary windings, the former serving the magnetization function with input power and the latter serving a demagnetizing function with return of power.

According to another feature of the invention, the circuit connecting the electric current source and the stator magnetizing windings is designed to deliver current pulses which are of sufficient strength and duration to provide a reversal of magnetic flux direction in the stator poles as the stator and rotor poles separate from an in-register position, whereby to draw on power supplied from the electric current source to provide additional forward drive torque.

According to a further feature of this invention, the electric current source connected to stator magnetizing winding of a first stator pole comprises, at least partially, the electrical pulses induced in the stator magnetizing winding of a different second stator pole, the stator pole set configuration in relation to the rotor pole set configuration being such that the first stator pole is coming into register with a rotor pole as the second stator pole separates from its in register position with a rotor pole.

This means that the magnetizing windings of two stator poles are connected so that both serve a 'demagnetizing' function, one in resisting the magnetic action of the mutual attraction in pulling poles into register, an action which develops a current pulse output and one in absorbing this current pulse, again by resisting the magnetic inter-pole action to demagnetize the stator pole as its associated rotor pole separates.

In order to facilitate the function governed by this circuit 10 connection between stator magnetizing windings, a phase difference is needed and this is introduced by designing the machine to have a different number of poles in a set of stator poles from the number of rotor poles in each rotor section. Together with the dual rotor section feature, this has the additional merit of assuring a smoother torque action and reducing magnetic flux fluctuations and leakage effects which contribute substantially to machine efficiency.

Thus, according to another feature of the invention, the stator configuration provides pole pieces which are common to both rotor sections in the sense that when stator and rotor poles are in-register the stator pole pieces constitute bridging members for magnetic flux closure in a magnetic circuit including that of the rotor magnetization means disposed between the two rotor sections.

Preferably, the number of poles in a set of stator poles and the number of rotor poles in each section do not share a common integer factor, the number of rotor poles in one rotor section is the same as that in the other rotor section and the number of poles in a stator set and the number of poles in a rotor section differs by one, with the pole faces According to a further feature of the invention, the electric current source connected to a stator magnetizing winding of a first stator pole comprises, at least partially, the electrical pulses induced in the stator magnetizing winding of a different second stator pole, the stator pole set configuration in relation to the rotor pole set configuration being such that the first stator pole is coming into register with a rotor pole as being of sufficient angular width to assure that the magnetic flux produced by the rotor

magnetization means can find a circuital magnetic flux closure route through the bridging path of a stator pole and through corresponding rotor poles for any angular position of the rotor.

It is also preferable from a design viewpoint for the stator pole faces of this invention to have an angular width that is no greater than half the angular width of a rotor pole and for the rotor sections to comprise circular steel laminations in which the rotor poles are formed as large teeth at the perimeter with the rotor magnetization means comprising a magnetic core structure the end faces of which abut two assemblies of such laminations forming the two rotor sections.

According to a further feature of the invention, the rotor magnetization means comprises at least one permanent magnet located with its polarization axis parallel with the rotor axis. The motor-generator may include an apertured metal disc that is of a non-magnetizable substance mounted on a rotor shaft and positioned intermediate the two rotor sections, each aperture providing location for a permanent magnet, whereby the centrifugal forces acting on the permanent magnet as the rotor rotates are absorbed by the stresses set up in the disc. Also, the rotor may be mounted on a shaft that is of a non-magnetizable substance, whereby to minimize magnetic leakage from the rotor magnetizing means through that shaft.

According to another aspect of the invention, an electrodynamic motor-generator machine comprises a stator configured to provide a set of stator poles, a corresponding set of magnetizing windings mounted on the stator pole set, a rotor having two sections each of which has a set of salient pole pieces, the rotor sections being axially spaced along the axis of rotation of the rotor, rotor magnetization means incorporated in the rotor structure and arranged to polarize the rotor poles, whereby the pole faces of one rotor section all have a north polarity and the pole faces of the other rotor section all have a south polarity and electric circuit connections between an electric current source and the stator magnetizing windings arranged to regulate the operation of the machine by admitting current pulses for a duration determined according to the angular position of the rotor, which pulses have a direction tending to oppose the polarization induced in the stator by the rotor polarization as stator and rotor poles separate from an in-register position, whereby the action of the rotor magnetization means provides a reluctance motor drive force to bring stator and rotor poles into register and the action of the stator magnetization windings opposes the counterpart reluctance braking effect as the poles separate.

According to a feature of this latter aspect of the invention, the electric current source connected to a stator magnetizing winding of a first stator pole comprises, at least partially, the electrical pulses induced in the stator magnetizing winding of a different second stator pole, the stator pole set configuration in relation to the rotor pole set configuration being such that the first stator pole is coming into register with a rotor pole as the second stator pole separates from its in-register position with a rotor pole.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 presents magnetic core test data showing how the volt-amp reactance power required to set up a constant magnetic flux action in an air gap, as assured by constant a. c. voltage excitation of a magnetizing winding, falls short of the associated power of the potential implicit in the force action across that air gap.

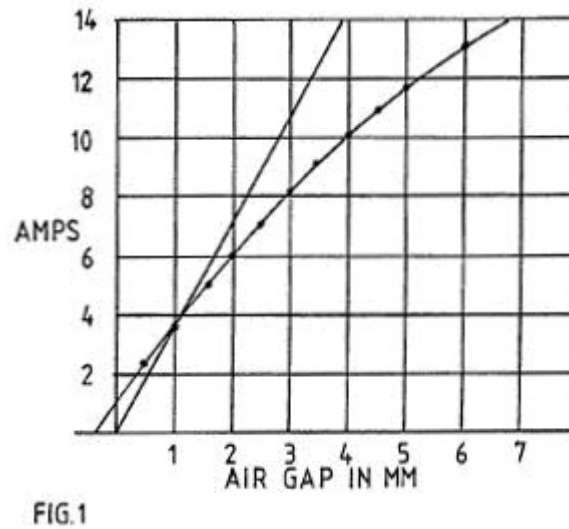


Fig. 2 depicts the test structure to which Fig. 1 data applies.

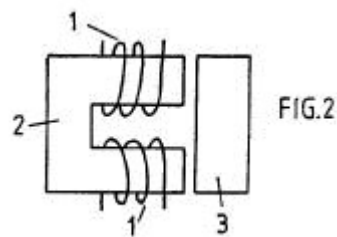


Fig. 3 depicts the magnetization action at work in causing magnetic flux to traverse an airgap and turn a corner in a circuit through a magnetic core.

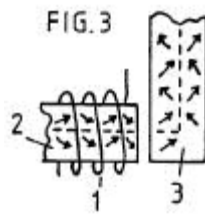


Fig. 4 shows the configuration of a test device used to prove the operating principles of the invention described.

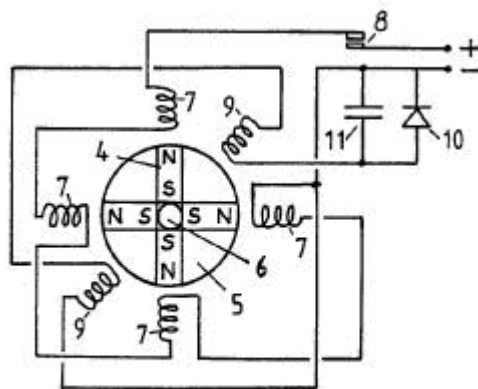


FIG. 4

Fig. 5 in its several illustrations depicts the progressive rotor pole to stator pole relationship as a rotor turns through a range of angular positions in a preferred embodiment of a machine according to the invention.

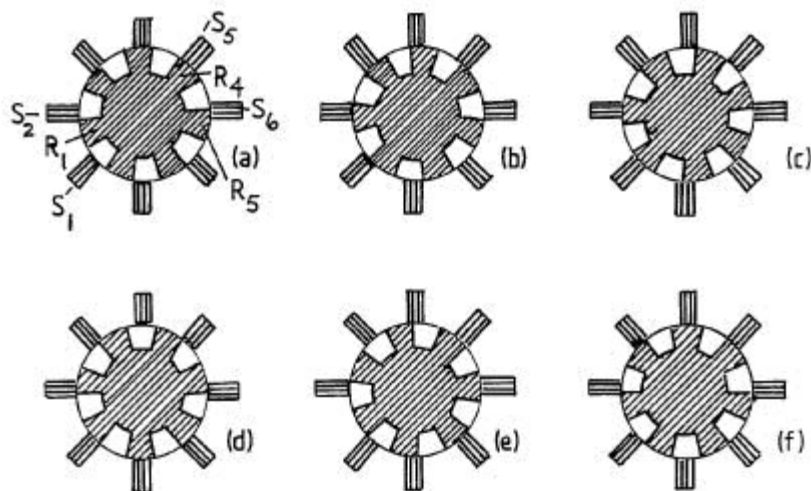


FIG. 5

Fig. 6 shows the form of a disc member which provides location for four permanent magnets in the machine described.

FIG. 6

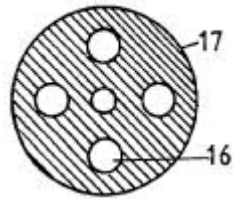


Fig. 7 shows a cross-section of the magnetic circuit structure of a machine embodying the invention.

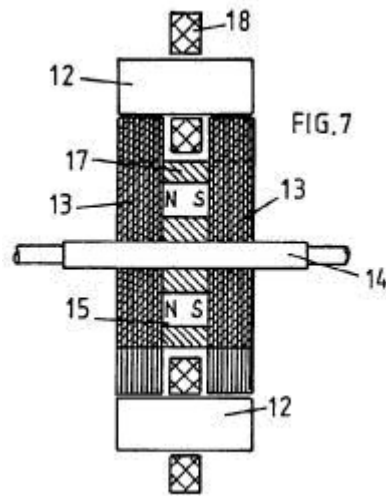
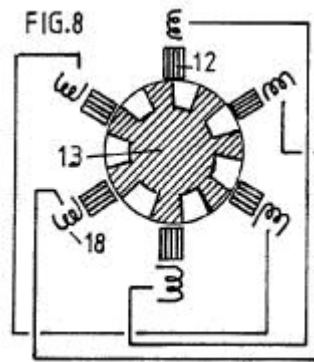


Fig. 8 shows a six stator pole configuration with a seven pole rotor and depicts a schematic series connected linking of the magnetizing windings of diametrically opposite stator poles.



DETAILED DESCRIPTION OF THE INVENTION

The fact that one can extract energy from the source which powers the intrinsic ferromagnetic state is not explicitly evident from existing textbooks, but it is implicit and, indeed, does become explicit once pointed out, in one textbook authored by F. B. Moullin.

His book *'The Principles of Electromagnetism'* published by Clarendon Press, Oxford (3rd Edition, 1955) describes on pages 168-174 an experiment concerned with the effect of air gaps between poles in a magnetic circuit. The data obtained are reproduced in Fig. 1, where Professor Moullin shows a curve representing a. c. current input for different air gaps, given that the voltage supplied is constant. In the same figure, Moullin presents the theoretical current that would need to be applied to sustain the same voltage, and so the related pole forces across the air gap, assuming (a) no flux leakage and (b) that there is complete equality between inductive energy input and the mechanical energy potential for the magnetization that is established in the air gap in a quarter-cycle period at the a. c. power excitation frequency.

The data show that, even though the level of magnetic polarization is well below the saturation value, being confined to a range that is regarded as the linear permeability range in transformer design, there is a clear drop-off of current, and so the volt-amp reactive power input needed, as current increases, compared with that predicted by the mechanical potential built up in the air gaps.

Unless leakage flux is excessive, here was clear evidence of anomalous energy activity.

Moullin discusses the leakage flux inferred by this experiment but points out that there is considerable mystery in why the effect of a small gap, which should certainly not result in much flux leakage in the gap region, nevertheless has an enormous effect in causing what has to be substantial leakage in the light of the energy discrepancy.

Moullin did not contemplate that energy had been fed in from the zero-point field system and so he left the issue with the statement that it was virtually impossible to predict leakage flux by calculation.

He was, of course, aware of magnetic domain structure and his argument was that the leakage flux problem was connected with what he termed a 'yawing' action of the flux as it passes around the magnetic circuit. Normally, provided the level of polarization is below the knee of the B-H curve, which occurs at about 70% of saturation in iron cores of general crystal composition, it requires very little magnetizing field to change the magnetic flux density. This is assuming that every effort is made to avoid air gaps. The action involves domain wall movements so that the magnetic states of adjacent domains switch to different crystal axes of easy magnetization and this involves very little energy change.

However, if there is an air gap ahead in the flux circuit and the magnetizing winding is not sitting on that air gap, the iron core itself has to be the seat of a progressive field source linking the winding and the gap. It can only serve in that sense by virtue of the lines of flux in the domains being forced to rotate somewhat from the preferred easy axes of magnetization, with the help of the boundary surfaces around the whole core. This action means that, forcibly, and consequential upon the existence of the air gap, the flux must be carried through the core by that 'yawing' action. It means that substantial energy is needed to force the establishment of those fields within the iron core. More important, however, from the point of view of this invention, it means that the intrinsic magnetic polarization effects in adjacent magnetic domains in the iron cease to be mutually parallel or orthogonal so as to stay directed along axes of easy magnetization. Then, in effect, the magnetizing action is not just that of the magnetizing winding wrapped around the core but becomes also that of adjacent ferromagnetic polarization as the latter act in concert as vacuum-energy powered solenoids and are deflected into one another to develop the additional forward magnetomotive forces.

The consequences of this are that the intrinsic ferromagnetic power source with its thermodynamic ordering action contributes to doing work in building up forces across the air gap. The task, in technological terms, is then to harness that energy as the gap is closed, as by poles coming together in a reluctance motor, and avoid returning that energy as the poles separate, this being possible if the controlling source of primary magnetization is well removed from the pole gap and the demagnetization occurs when the poles are at the closest position.

This energy situation is evident in the Moullin data, because the constant a. c. voltage implies a constant flux amplitude across the air gap if there is no flux leakage in the gap region. A constant flux amplitude implies a constant force between the poles and so the gap width in relation to this force is a measure of the mechanical energy potential of the air gap. The reactive volt-amp power assessment over the quarter-cycle period representing the polarization demand can then be compared with the mechanical energy so made available. As already stated, this is how Moullin deduced the theoretical current curve. In fact, as his data show, he needed less current than the

mechanical energy suggested and so he had in his experiment evidence of the vacuum energy source that passed unnoticed and is only now revealing itself in machines that can serve our energy needs.

In the research leading to this patent application the Moullin experiment has been repeated to verify a condition where a single magnetizing winding serves three air gaps. The Moullin test configuration is shown in Fig. 2, but in repeating the experiment in the research leading to this invention, a search coil was mounted on the bridging member and this was used to compare the ratio of the voltage applied to the magnetizing winding and that induced in the search coil. The same fall-off feature in current demand was observed, and there was clear evidence of substantial excess energy in the air gap. This was in addition to the inductive energy that necessarily had to be locked into the magnetic core to sustain the 'yawing' action of the magnetic flux already mentioned.

It is therefore emphasized that, in priming the flux 'yawing' action, energy is stored inductively in the magnetic core, even though this has been deemed to be the energy of flux leakage outside the core. The air gap energy is also induction energy. Both energies are returned to the source winding when the system is demagnetized, given a fixed air gap. If, however, the air gap closes after or during magnetization, much of that inductive energy goes into the mechanical work output. Note then that the energy released as mechanical work is not just that stored in the air gap but is that stored in sustaining the 'yaw'. Here, then is reason to expect an even stronger contribution to the dynamic machine performance, one that was not embraced by the calculation of the steady-state situation.

Given the above explanation of the energy source, the structural features which are the subject of this invention will now be described.

The 'yawing' action is depicted in Fig. 3, which depicts how magnetic flux navigates a right-angled bend in a magnetic core upon passage through an air gap. By oversimplification it is assumed that the core has a crystal structure that has a preferred axis of magnetization along the broken line path. With no air gap, the current needed by a magnetizing winding has only to provide enough magnetomotive force to overcome the effects of non-magnetic inclusions and impurities in the core substance and very high magnetic perm abilities can apply. However, as soon as the air gap develops, this core substance has to find a way of setting up magnetomotive force in regions extending away from the locality of the magnetizing winding. It cannot do this unless its effect is so powerful that the magnetic flux throughout the magnetic circuit through the core substance is everywhere deflected from alignment with a preferred easy axis of magnetization. Hence the flux vectors depicted by the arrows move out of alignment with the broken line shown.

There is a 'knock-on' effect progressing all the way around the core from the seat of the magnetizing winding and, as already stated, this harnesses the intrinsic ferromagnetic power that, in a system with no air gap, could only be affected by magnetization above the knee of the B-H curve. Magnetic flux rotation occurs above that knee, whereas in an

ideal core the magnetism develops with very high permeability over a range up to that knee, because it needs very little power to displace a magnetic domain wall sideways and promote a 90°(Degree) or a 180°(Degree) flux reversal. Indeed, one can have a magnetic permeability of 10,000 below the knee and 100 above the knee, the latter reducing progressively until the substance saturates magnetically.

In the situation depicted in Figs 2 or 3 the field strength developed by the magnetizing windings **1** on magnetic core **2** has to be higher, the greater the air gap, in order to achieve the same amount of magnetization as measured by the voltage induced in a winding (not shown) on the bridging member **3**. However, by virtue of that air gap there is potential for harnessing energy supplied to that air gap by the intrinsic zero-point field that accounts for the magnetic permeability being over unity and here one can contemplate very substantial excess energy potential, give incorporation in a machine design which departs from convention.

One of the applicants has built an operative test machine which is configured as depicted schematically in Fig. 4. The machine has been proved to deliver substantially more mechanical power output than is supplied as electrical input, as much as a ratio of 7:1 in one version, and it can act regeneratively to produce electrical power.

What is shown in Fig. 4 is a simple model designed to demonstrate the principle of operation. It comprises a rotor in which four permanent magnets **4** are arrayed to form four poles. The magnets are bonded into four sectors of a non-magnetic disc **5** using a high density polyurethane foam filler and the composite disc is then assembled on a brass spindle **6** between a split flange coupling. Not shown in the figure is the structure holding the spindle vertically in bearings or the star wheel commutator assembly attached to the upper shaft of the spindle.

Note that the magnets present north poles at the perimeter of the rotor disc and that the south poles are held together by being firmly set in the bonding material.

A series of four stator poles were formed using magnetic cores from standard electromagnetic relays are were positioned around the rotor disc as shown. The magnetizing windings **7** on these cores are shown to be connected in series and powered through commutator contacts **8** by a d. c. power supply. Two further stator cores formed by similar electromagnetic relay components are depicted by their windings **9** in the intermediate angle positions shown and these are connected in series and connected to a rectifier **10** bridged by a capacitor **11**.

The rotor spindle **6** is coupled with a mechanical drive (not shown) which harnesses the torque developed by the motor thus formed and serves as a means for measuring output mechanical power delivered by the machine.

In operation, assuming that the rotor poles are held initially off-register with the corresponding stator poles and the hold is then released, the strong magnetic field action of the permanent magnets will turn the rotor to bring the stator and rotor poles

into register. A permanent magnet has a strong attraction for soft iron and so this initial impulse of rotation is powered by the potential energy of the magnets.

Now, with the rotor acting as a flywheel and having inertia it will have a tendency to over-shoot the in-register pole position and that will involve a reverse attraction with the result that the rotor will oscillate until damping action brings it to rest. However, if the contacts of the commutating switch are closed as the poles come first into register, the magnetizing windings **7** will receive a current pulse which, assuming the windings are connected in the right sense, tends to demagnetize the four stator cores. This means that, as the stator and rotor poles separate, the reverse attraction by the magnets is eliminated. Indeed, if the demagnetizing current pulses supplied to the windings **4** are strong enough, the stator poles can reverse polarity and that results in a repulsion giving forward drive to the separating rotor poles.

The net result of this action is that the rotor will continue rotating until it passes the dead centre angular position which allows the rotor to be attracted in the forward direction by the stator poles 90° (Degree) forward of those acting originally.

The commutating switch **8** needs only to be closed for a limited period of angular travel following the top dead centre in-register position of the stator and rotor poles. The power supplied through that switch by those pulses will cause the rotor to continue rotating and high speeds will be achieved as the machine develops its full motor function.

Tests on such a machine have shown that more mechanical power can be delivered than is supplied electrically by the source powering the action through the commutating switch. The reason for this is that, whereas the energy in the air gap between rotor and stator poles which is tapped mechanically as the poles come into register is provided by the intrinsic power of the ferromagnet, a demagnetizing winding on the part of the core system coupled across that air gap needs very little power to eliminate the mechanical force acting across that air gap. Imagine such a winding on the bridging member shown in Fig. 2. The action of current in that winding, which sits astride the 'yawing' flux in that bridging member well removed from the source action of the magnetizing windings **1**, is placed to be extremely effective in resisting the magnetizing influence communicated from a distance. Hence very little power is needed to overcome the magnetic coupling transmitted across the air gap.

Although the mutual inductance between two spaced-apart magnetizing windings has a reciprocal action, regardless of which winding is primary and which is secondary, the action in the particular machine situation being described involves the 'solenoidal' contribution represented by the 'yawing' ferromagnetic flux action. The latter is not reciprocal inasmuch as the flux 'yaw' depends on the geometry of the system. A magnetizing winding directing flux directly across an air gap has a different influence on the action in the ferromagnetic core from one directing flux lateral to the air gap and there is no reciprocity in this action.

In any event, the facts of experiment do reveal that, owing to a significant discrepancy in such mutual interaction, more mechanical power is fed into the rotor than is supplied as input from the electrical source.

This has been further demonstrated by using the two stator windings **9** to respond in a generator sense to the passage of the rotor poles. An electrical pulse is induced in each winding by the passage of a rotor pole and this is powered by the inertia of the rotor disc **5**. By connecting the power so generated to charge the capacitor **11** the d. c. power supply can be augmented to enhance the efficiency even further. Indeed, the machine is able to demonstrate the excess power delivery from the ferromagnetic system by virtue of electrical power generation charging a battery at a greater rate than a supply battery is discharged.

This invention is concerned with a practical embodiment of the motor-generator principles just described and aims, in its preferred aspect, to provide a robust and reliable machine in which the tooth stresses in the rotor poles, which are fluctuating stresses communicating high reluctance drive torque, are not absorbed by a ceramic permanent magnet liable to rupture owing to its brittle composition.

Another object is to provide a structure which can be dismantled and reassembled easily to replace the permanent magnets, but an even more important object is that of minimizing the stray leakage flux oscillations from the powerful permanent magnets. Their rotation in the device depicted in Fig. 4 would cause excessive eddy-current induction in nearby metal, including that of the machine itself, and such effects are minimized if the flux changes are confined to paths through steel laminations and if the source flux from the magnets has a symmetry or near symmetry about the axis of rotation.

Thus, the ideal design with this in mind is one where the permanent magnet is a hollow cylinder located on a non-magnetic rotor shaft, but, though that structure is within the scope of this invention, the machine described will utilize several separate permanent magnets approximating, in function, such a cylindrical configuration.

Referring to Fig. 4, it will further be noted that the magnetic flux emerging from the north poles will have to find its way along leakage paths through air to re-enter the south poles. For periods in each cycle of machine operation the flux will be attracted through the stator cores, but the passage through air is essential and so the power of the magnets is not used to full advantage and there are those unwanted eddy-current effects.

To overcome this problem the invention provides for two separate rotor sections and the stator poles become bridging members, which with optimum design, allow the flux from the magnets to find a route around a magnetic circuit with minimal leakage through air as the flux is directed through one or other pairs of air gaps where the torque action is developed.

Reference is now made to Fig. 5 and the sequence of rotor positions shown. Note that the stator pole width can be significantly smaller than that of the rotor poles. Indeed, for operation using the principles of this invention, it is advantageous for the stator to have a much smaller pole width so as to concentrate the effective pole region. A stator pole width of half that of the rotor is appropriate but it may be even smaller and this has the secondary advantage of requiring smaller magnetizing windings and so saving on the loss associated with the current circuit.

The stator has eight pole pieces formed as bridging members **12**, more clearly represented in Fig. 7, which shows a sectional side view through two rotor sections **13** axially spaced on a rotor shaft **14**. There are four permanent magnets **15** positioned between these rotor sections and located in apertures **16** in a disc **17** of a non-magnetic substance of high tensile strength, the latter being shown in Fig. 6. The rotor sections are formed from disc laminations of electrical steel which has seven large teeth, the salient poles. Magnetizing windings **18** mounted on the bridging members **12** constitute the system governing the action of the motor-generator being described.

The control circuitry is not described as design of such circuitry involves ordinary skill possessed by those involved in the electrical engineering art.

It suffices, therefore, to describe the merits of the structural design configuration of the core elements of the machine. These concern principally the magnetic action and, as can be imagined from Fig. 7, the magnetic flux from the magnets enters the rotor laminations by traversing the planar faces of the laminations and being deflected into the plane of the laminations to pass through one or other of the stator pole bridging members, returning by a similar route through the other rotor.

By using eight stator poles and seven rotor poles, the latter having a pole width equal to half the pole pitch in an angular sense, it will be seen from Fig. 5, that there is always a flux passage across the small air gap between stator and rotor poles. However, as one pole combination is in-register the diametrically-opposed pole combinations are out-of-register.

As described by reference to Fig. 4 the operation of the machine involves allowing the magnet to pull stator and rotor poles into register and then, as they separate, pulsing the winding on the relevant stator member to demagnetize that member. In the Fig. 4 system, all the stator magnetizing windings were pulsed together, which is not an optimum way in which to drive a multi-pole machine.

In the machine having the pole structure with one less rotor pole than stator poles (or an equivalent design in which there is one less stator pole than rotor poles) this pulsing action can be distributed in its demand on the power supply, and though this makes the commutation switch circuit more expensive the resulting benefit outweighs that cost.

However, there is a feature of this invention by which that problem **15** can be alleviated if not eliminated.

Suppose that the rotor has the position shown in Fig. 5(a) with the rotor pole denoted R_1 midway between stator poles S_1 and S_2 imagine that this is attracted towards the in-register position with stator pole S_2 . Upon reaching that in-register position, as shown in Fig. 5 (c), suppose that the magnetizing winding of stator pole S_2 is excited by a current pulse which is sustained until the rotor reaches the Fig. 5(e) position. The combination of these two actions will have imparted a forward drive impulse powered by the permanent magnet in the rotor structure and the current pulse which suppresses braking action will have drawn a smaller amount of energy from the electrical power source that supplies it. This is the same process as was described by reference to Fig. 4.

However, now consider the events occurring in the rotor action diametrically opposite that just described. In the Fig 5(a) position rotor pole R_4 has come fully into register with stator pole S_5 and so stator pole S_5 is ready to be demagnetized. However, the magnetic coupling between the rotor and stator poles is then at its strongest. Note, however, that in that Fig. 5(a) position R_5 is beginning its separation from stator pole S_6 and the magnetizing winding of stator pole S_6 must then begin draw power to initiate demagnetization. During that following period of pole separation the power from the magnet is pulling R_1 and S_2 together with much more action than is needed to generate that current pulse needed to demagnetize S_6 . It follows, therefore, that, based on the research findings of the regenerative excitation in the test system of Fig. 4, the series connection of the magnetizing windings on stators S_2 and S_6 will, without needing any commutative switching, provide the regenerative power needed for machine operation.

The complementary action of the two magnetizing windings during the pole closure and pole separation allows the construction of a machine which, given that the zero-point vacuum energy powering the ferromagnet is feeding input power, will run on that source of energy and thereby cool the sustaining field system.

There are various design options in implementing what has just been proposed. Much depends upon the intended use of the machine. If it is intended to deliver mechanical power output the regenerative electrical power action can all be used to power the demagnetization with any surplus contributing to a stronger drive torque by reversing the polarity of the stator poles during pole separation.

If the object is to generate electricity by operating in generator mode then one could design a machine having additional windings on the stator for delivering electrical power output. However, it seems preferable to regard the machine as a motor and maximize its efficiency in that capacity whilst using a mechanical coupling to an alternator of conventional design for the electrical power generation function. In the latter case it would still seem preferable to use the self-excitation feature already described to reduce commutation switching problems.

The question of providing for machine start-up can be addressed by using a separate starter motor powered from an external supply or by providing for current pulsing limited to, say, two stator poles. Thus, for example, with the eight stator pole configuration, the

cross-connected magnetizing windings could be limited to three stator pairs, with two stator magnetizing windings left free for connection to a pulsed external supply source.

If the latter feature were not required, then the stator magnetizing windings would all be connected in pairs on a truly diametrically opposite basis. Thus Fig. 8 shows a rotor-stator configuration having six stator poles interacting with seven rotor poles and stator magnetizing windings linked together in pairs.

The invention, therefore, offers a wide range of implementation possibilities, which, in the light of this disclosure will become obvious to persons skilled in the electrical engineering art, all based, however, on the essential but simple principle that a rotor has a set of poles of common polarity which are attracted into register with a set of stator poles that are suppressed or reversed in polarity magnetically during pole separation. The invention, however, also offers the important feature of minimizing commutation and providing further for a magnetic flux closure that minimizes the leakage flux and fluctuations of leakage flux and so contributes to efficiency and high torque performance as well as durability and reliability of a machine incorporating the invention.

It is noted that although a machine has been described which uses two rotor sections it is possible to build a composite version of the machine having several rotor sections. In the eventuality that the invention finds use in very large motor-generator machines the problem of providing very large magnets can be overcome by a design in which numerous small magnets are assembled. The structural concept described by reference to Fig. 6 in providing locating apertures to house the magnets makes this proposal highly feasible. Furthermore, it is possible to replace the magnets by a steel cylinder and provide a solenoid as part of the stator structure and located between the rotor sections. This would set up an axial magnetic field magnetizing the steel cylinder and so polarizing the rotor. However, the power supplied to that solenoid would detract from the power generated and so such a machine would not be as effective as the use of permanent magnets such as are now available. Nevertheless, should one see significant progress in the development of warm superconductor materials, it may become feasible to harness the self-generating motor-generator features of the invention, with its selfcooling properties, by operating the device in an enclosure at low temperatures and replacing the magnets by a superconductive stator supported solenoid.

CLAIMS

1. An electrodynamic motor-generator machine comprising a stator configured to provide a set of stator poles, a corresponding set of magnetizing windings mounted on the stator pole set, a rotor having two sections each of which has a set of salient pole pieces, the rotor sections being axially spaced along the axis of rotation of the rotor, rotor magnetization means disposed between the two rotor sections arranged to

produce a unidirectional magnetic field which magnetically polarizes the rotor poles, whereby the pole faces of one rotor section all have a north polarity and the pole faces of the other rotor section all have a south polarity and electric circuit connections between an electric current source and the stator magnetizing windings arranged to regulate the operation of the machine by admitting current pulses for a duration determined according to the angular position of the rotor, which pulses have a direction tending to oppose the polarization induced in the stator by the rotor polarization as stator and rotor poles separate from an in-register position, whereby the action of the rotor magnetization means provides a reluctance motor drive force to bring stator and rotor poles into register and the action of the stator magnetization windings opposes the counterpart reluctance braking effect as the poles separate.

2. A motor-generator according to claim 1, wherein the circuit connecting the electric current source and the stator magnetizing windings is designed to deliver current pulses which are of sufficient strength and duration to provide demagnetization of the stator poles as the stator and rotor poles separate from an in-register position.

3. A motor-generator according to claim 1, wherein the circuit connecting the electric current source and the stator magnetizing windings is designed to deliver current pulses which are of sufficient strength and duration to provide a reversal of magnetic flux direction in the stator poles as the stator and rotor poles separate from an in-register position, whereby to draw on power supplied from the electric current source to provide additional forward drive torque.

4. A motor-generator according to claim 1, wherein the electric current source connected to a stator magnetizing winding of a first stator pole comprises, at least partially, the electrical pulses induced in the stator magnetizing winding of a different second stator pole, the stator pole set configuration in relation to the rotor pole set configuration being such that the first stator pole is coming into register with a rotor pole as the second stator pole separates from its in-register position with a rotor pole.

5. A motor-generator according to claim 1, wherein the number of poles in a set of stator poles is different from the number of rotor poles in each rotor section.

6. A motor-generator according to claim 1, wherein the stator configuration provides pole pieces which are common to both rotor sections in the sense that when stator and rotor poles are in-register the stator pole pieces constitute bridging members for magnetic flux closure in a magnetic circuit including that of the rotor magnetization means disposed between the two rotor sections.

7. A motor-generator according to claim 6, wherein the number of poles in a set of stator poles and the number of rotor poles in each section do not share a common integer factor and the number of rotor poles in one rotor section is the same as that in the other rotor section.

8. A motor-generator according to claim 7, wherein the number of poles in a stator set and the number of poles in a rotor section differs by one and the pole faces are of sufficient angular width to assure that the magnetic flux produced by the rotor magnetization means can find a circuital magnetic flux closure route through the bridging path of a stator pole and through corresponding rotor poles for any angular position of the rotor.
9. A motor-generator according to claim 8, wherein each rotor section comprises seven poles.
10. A motor-generator according to claim 7, wherein there are N rotor poles in each rotor section and each has an angular width that is $180/N$ degree of angle.
11. A motor-generator according to claim 7, wherein the stator pole faces have an angular width that is no greater than half the angular width of a rotor pole.
12. A motor-generator according to claim 1, wherein the rotor sections comprise circular steel laminations in which the rotor poles are formed as large teeth at the perimeter, and the rotor magnetization means comprise a magnetic core structure the end faces of which abut two assemblies of 20 such laminations forming the two rotor sections.
13. A motor-generator according to claim 1 in which the rotor magnetization means comprises at least one permanent magnet located with its polarization axis parallel with the rotor axis.
14. A motor-generator according to claim 13, wherein an apertured metal disc that is of a non-magnetizable substance is mounted on a rotor shaft and positioned intermediate the two rotor sections and each aperture provides location for a permanent magnet, whereby the centrifugal forces acting on the permanent magnet as the rotor rotates are absorbed by the stresses set up in the disc.
15. A motor-generator according to claim 1, having a rotor mounted on a shaft that is of a non-magnetizable substance, whereby to minimize magnetic leakage from the rotor magnetizing means.
16. An electrodynamic motor-generator machine comprising a stator configured to provide a set of stator poles, a corresponding set of magnetizing windings mounted on the stator pole set, a rotor having two sections each of which has a set of salient pole pieces, the rotor sections being axially spaced along the axis of rotation of the rotor, rotor magnetization means incorporated in the rotor structure and arranged to polarize the rotor poles, whereby the pole faces of one rotor section all have a north polarity and the pole faces of the other rotor section all have a south polarity and electric circuit connections between an electric current source and the stator magnetizing windings arranged to regulate the operation of the machine by admitting current pulses for a duration determined according to the angular position of the rotor, which pulses have a direction tending to oppose the polarization induced in the stator by the rotor

polarization as stator and rotor poles separate from an in-register position, whereby the action of the rotor magnetization means provides a reluctance motor drive force to bring stator and rotor poles into register and the action of the stator magnetization windings opposes the counterpart reluctance braking effect as the poles separate.

17. A motor- generator according to claim 16, wherein the electric current source connected to a stator magnetizing winding of a first stator pole comprises, at least partially, the electrical pulses induced in the stator magnetizing winding of a different second stator pole, the stator pole set configuration in relation to the rotor pole set configuration being such that the first stator pole is coming into register with a rotor pole as the second stator pole separates from its in-register position with a rotor pole.

AMENDMENTS TO THE CLAIMS HAVE BEEN FILED AS FOLLOWS

1. An electrodynamic motor-generator machine comprising a stator configured to provide a set of stator poles, a corresponding set of magnetizing windings mounted on the stator pole set, a rotor having two sections each of which has a set of salient pole pieces, the rotor sections being axially spaced along the axis of rotation of the rotor, rotor magnetization means disposed between the two rotor sections arranged to produce a unidirectional magnetic field which magnetically polarizes the rotor poles, whereby the pole faces of one rotor section all have a north polarity and the pole faces of the other rotor section all have a south polarity and electric circuit connections between an electric current source and the stator magnetizing windings arranged to regulate the operation of the machine by admitting current pulses for a duration determined according to the angular position of the rotor, which pulses have a direction tending to oppose the polarization induced in the stator by the rotor polarization as stator and rotor poles separate from an in-register position, whereby the action of the rotor magnetization means provides a reluctance motor drive force to bring stator and rotor poles into register and the action of the stator magnetization windings opposes the counterpart reluctance braking effect as the poles separate, the machine being characterized in that the stator comprises separate ferromagnetic bridging members mounted parallel with the rotor axis, the ends of which constitute stator poles and the core sections of which provide cross-section disposed antiparallel with the unidirectional magnetic field polarization axis of the rotor magnetizing means.

2. A motor-generator according to claim 1, wherein the circuit connecting the electric current source and the stator magnetizing winding a is designed to deliver current pulses which are of sufficient strength and duration to provide demagnetization of the stator poles as the stator and rotor poles separate from an in-register position.

3. A motor-generator according to claim 1, wherein the circuit connecting the electric current source and the stator magnetizing windings is designed to deliver current pulses which are of sufficient strength and duration to provide a reversal of magnetic flux

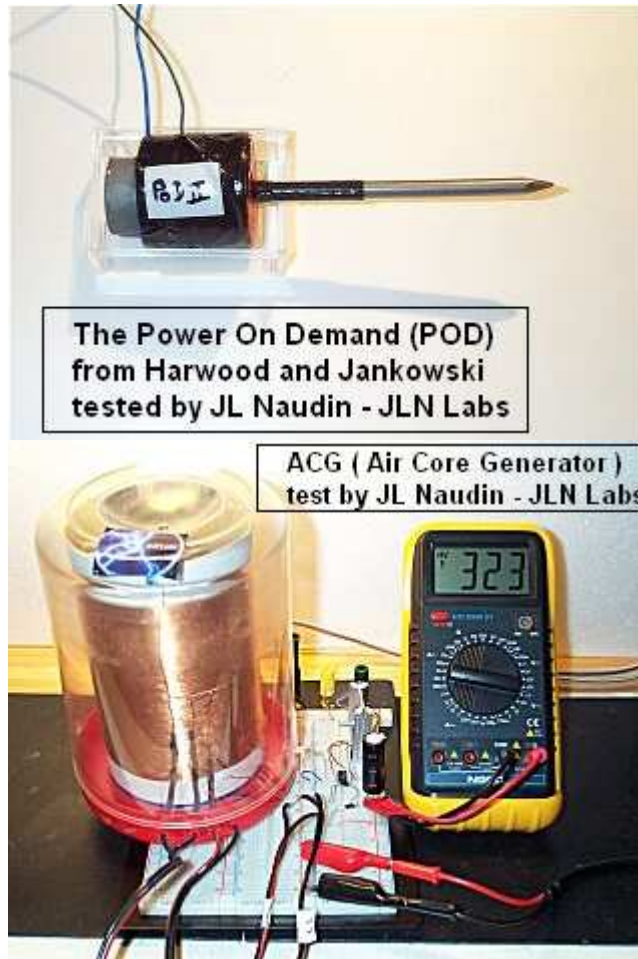
direction in the stator poles as the stator and rotor poles separate from an in- register position, whereby to draw on power supplied from the electric current source to provide additional forward drive torque.

4. A motor-generator according to claim 1, wherein the electric current source connected to a stator magnetizing winding of a first stator pole comprises, at least partially, the electrical pulses induced in the stator magnetizing winding of a different second stator pole, the stator pole set configuration in relation to the rotor pole set configuration being such that the first stator pole is coming into register with a rotor pole as the second stator pole separates from its in-register position with a rotor pole.

5. A motor-generator according to claim 1, wherein the number of poles in a set of stator poles is different from the number of rotor poles in each rotor section.

6. A motor-generator according to claim 1, wherein the stator configuration provides pole pieces which are common to both rotor sections in the sense that when stator and rotor poles are in-register the stator pole pieces constitute bridging members for magnetic flux closure in a magnetic circuit including that of the rotor magnetization means disposed between the two rotor sections.

7. A motor-generator according to claim 6, wherein the number of poles in a set of stator poles and the number of rotor poles in each section do not share a common integer factor and the number of rotor poles in one rotor section is the same as that in the other rotor section.



The Power On Demand (POD/ACG)

Tests by Jean-Louis Naudin

*Created on December 12th, 2002 - **JLN Labs** - Last update January 9th, 2003*

Toutes les informations et schémas sont publiés gratuitement (freeware) et sont destinés à un usage personnel et non commercial

All informations and diagrams are published freely (freeware) and are intended for a private use and a non commercial use.

The Power On Demand (POD/ACG) has been invented by Tim Harwood and John Jankowski. All the diagrams and details for building the POD device has been published and shared free at : <http://www.geocities.com/theadamsmotor/pod2.html>

Today, I have replicated the POD and the ACG devices and conducted some tests and measurements.

You will find below the current tests results :

Date	Model	Tests and Measurements
01-06-03	ACG 1.1	<u>NiMh Battery charging tests</u>
12-15-02	ACG 1.0	<u>Preliminary test and measurements</u>
12-14-02	POD 2	<u>The POD 2 coil have been replaced with a simple inductor...</u>
12-14-02	POD 2	<u>With MosFet and an Opto-Coupler</u>
12-13-02	POD 2	<u>With a BU508 and an Opto-Coupler</u>
12-12-02	POD 2	<u>Capacitor charging tests</u>
12-12-02	POD 2	<u>Basic tests measurements</u>

More tests results are coming soon...

[Direct link to the POD/ACG device dedicated web site :](#)

- [The ACG \(Air Core Generator \) based on the Tesla's patents](#) by Tim Harwood
- [The Tesla Radiant energy, the Quest of Negative Energy](#) by Tim Harwood
- [A solid-state overunity device for \\$50 \(Cop 2.0 \)](#) by John Jankowski & Tim Harwood
- [Link to Joe Arnold's Pod replication web site](#)

[✕ Interesting to read carefully :](#)

- [Step-Up switch mode power supply : Ideal boost converter](#)
- [A diode circuit with a free wheeling diode](#)



ACG v1.1 : Charging Battery tests results

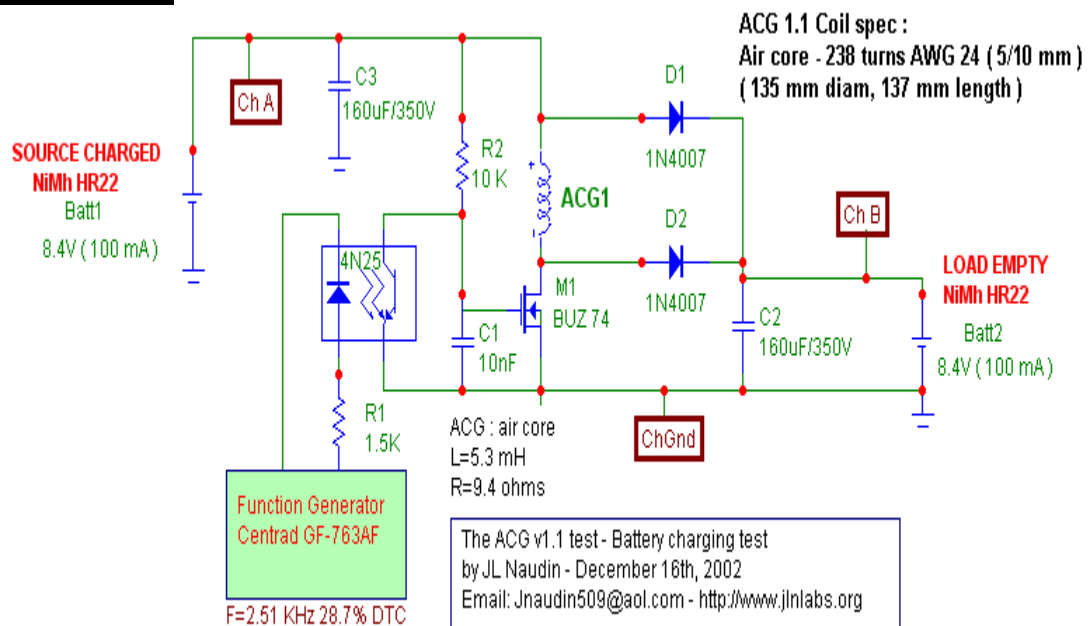
Tests by Jean-Louis Naudin

Created on December 26th, 2002 - **JLN Labs** - Last update January 6th, 2003

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1 - Circuit





- **2 - Tests Results**

ACG v1.1 Battery Charge Test by JL Naudin

Dec 16th, 2002

Email: Jnaudin509@aol.com

<http://www.jlnlabs.org>

Clock freq : 2.51 KHz Duty Cycle : 28.70%

Battery : NiMH 8.4V 150 mH type HR 22

Time	Vbat1	Vbat2	Comment
11:00	9.72	0.94	Empty (open)
11:00	9.62	8.28	SOT
11:05	9.14	9.00	
11:15	9.04	9.52	
11:30	8.91	9.60	
11:45	8.85	9.63	
12:00	8.81	9.65	
12:30	8.77	9.70	
13:30	8.65	9.74	
14:30	8.57	9.76	
15:00	8.53	9.78	
15:30	8.50	9.78	
16:00	8.47	9.79	
16:00	8.35	9.28	EOT
16:00	8.35	9.28	Empty (open)

Epilog :

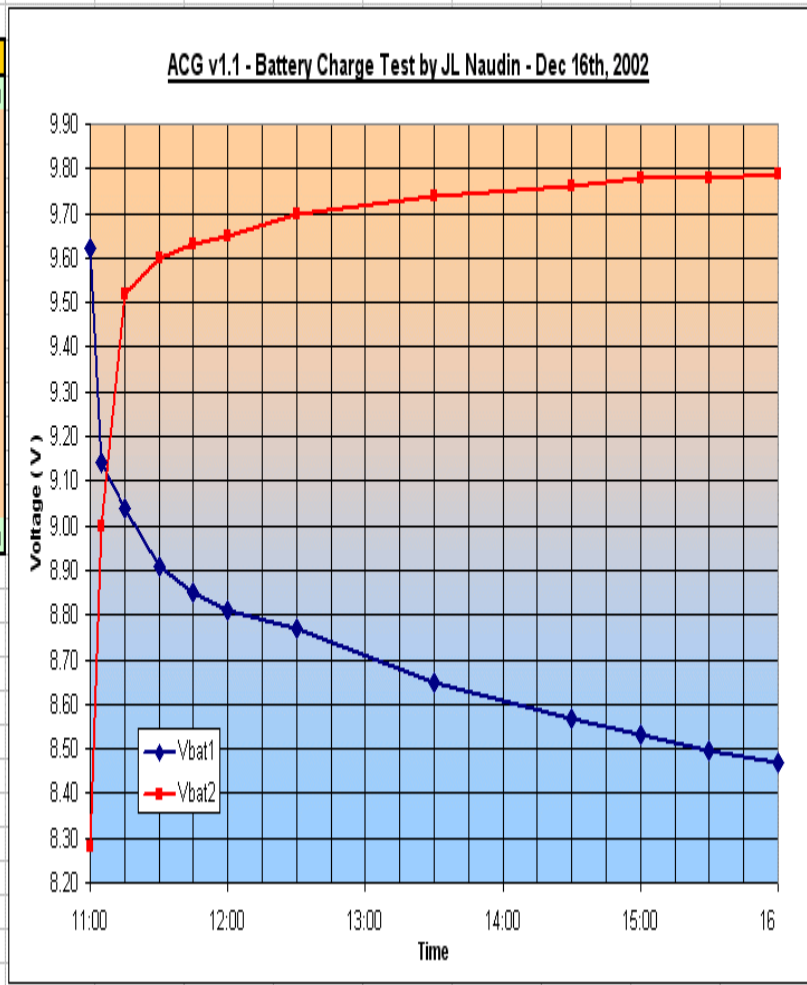
Discharge of the Batteries on a 6V 100mA light bulb

Bat1 disch. : 33 mn End voltage = 8.23 V

Bat2 disch. : 12 mn 45" End voltage = 8.65 V

Comparing to a new charged battery (start at 10.06 V)

Bat disch. : 66 mn 47" End voltage = 7.78 V



-
- **Notes from JL Naudin :** In this ACG v1.1 tests, the charge of a common NiMH battery is not really efficient...



ACG v1 : Preliminary test results

Tests by Jean-Louis Naudin

Created on December 15th, 2002 - JLN Labs - Last update December 15th, 2002

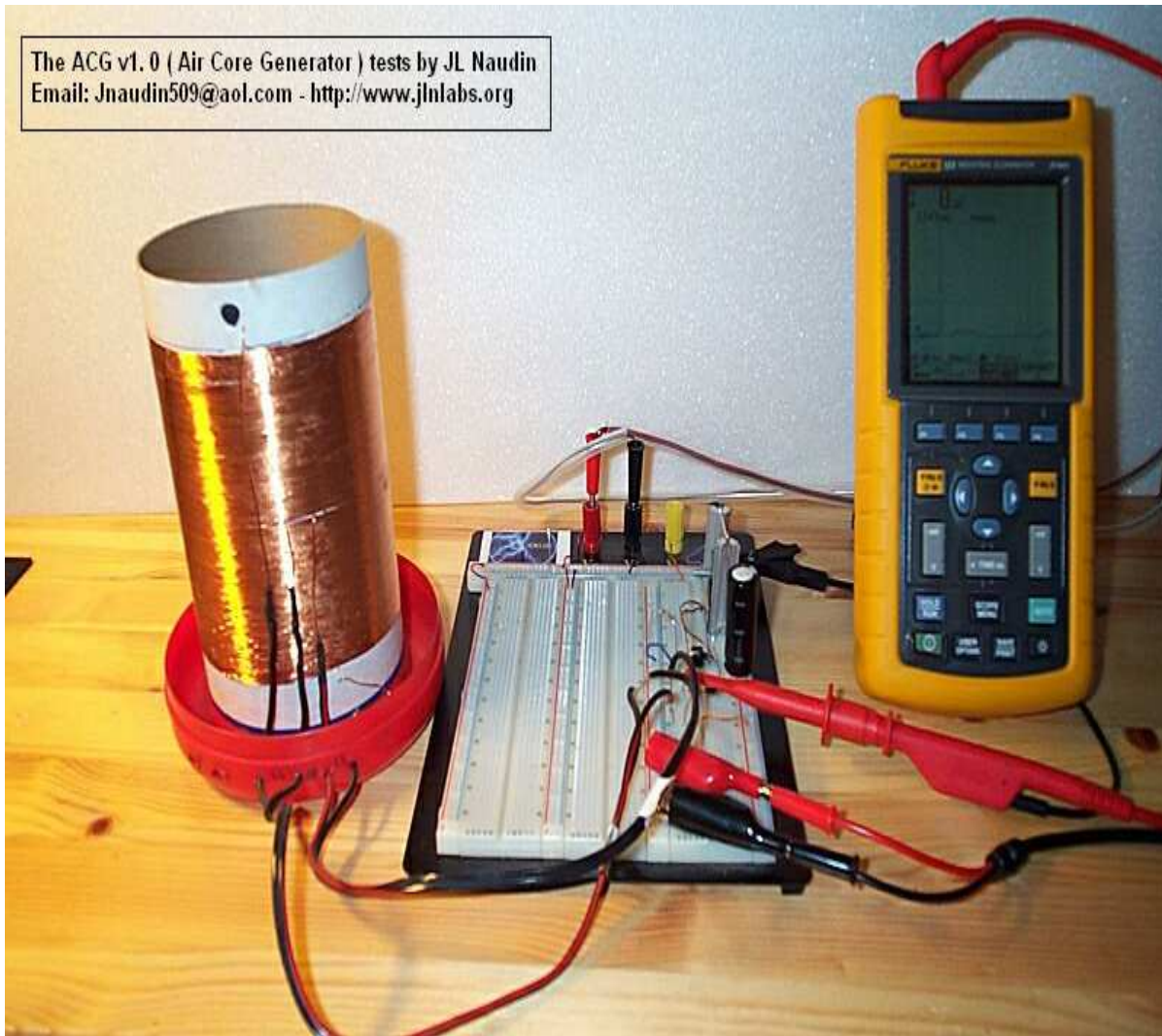
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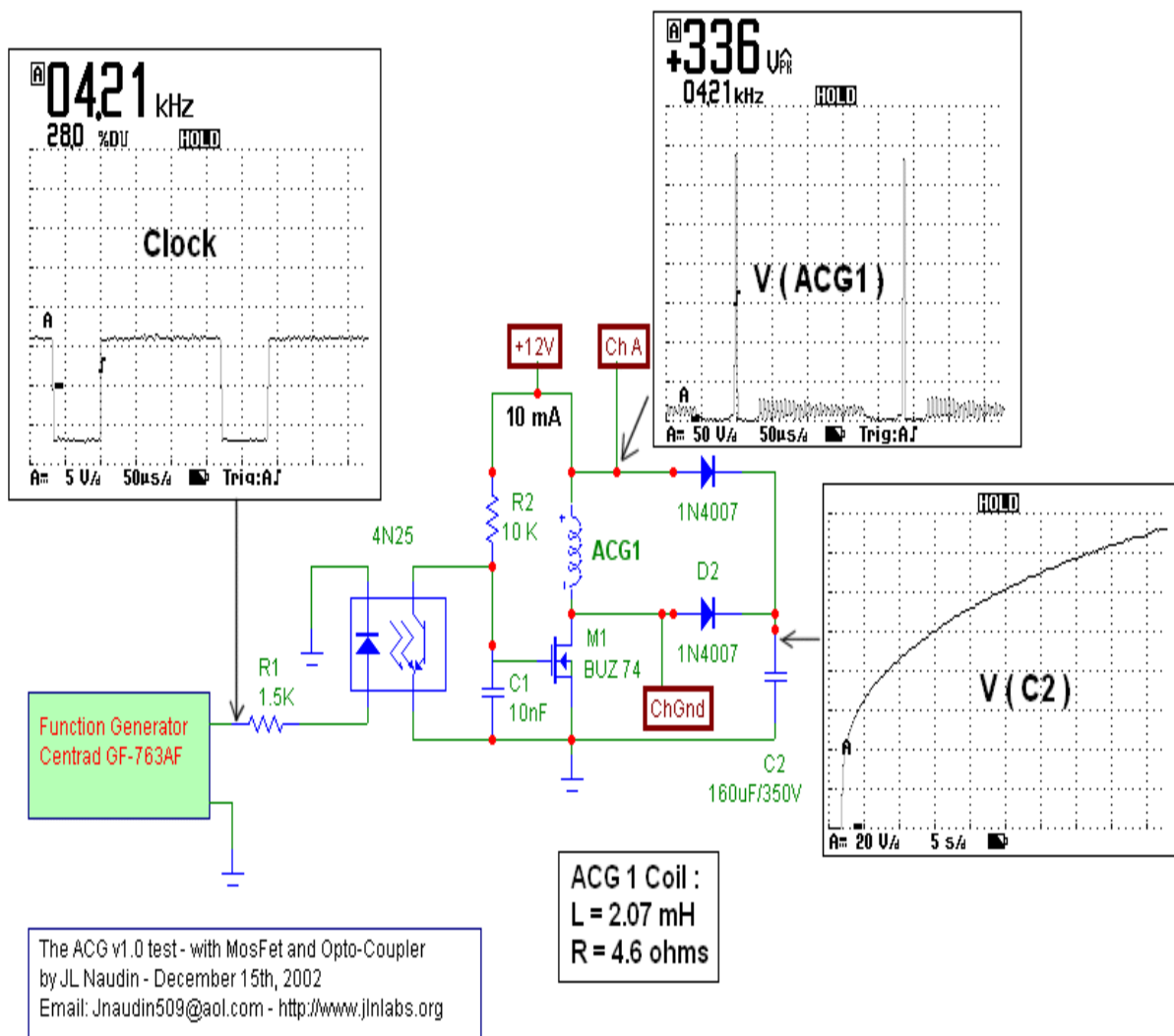
All informations and diagrams are published freely (freeware) and are intended for a private use and a non commercial use.

This a preliminary test with the ACG v1.0 (Air Core Generator), the ACG name has been invented by Joe Arnold. The ACG principle is based on the [Tesla U.S. Patent 577,670](#) from 1897. The coil used is a old air core coil that I have used during my TEP project, the coil is composed of two coils connected in series, the ACG v1.0 total inductance is 2.07 mH (4.6 ohms). The clock pulses are generated with a Centrad GF 763AF function generator set at 4.2 KHz (28% -DTC). A N-Channel MosFet transistor [BUZ 74](#), send positive pulses (+12 V) at 4.2 KHz at 28% +DTC to the ACG coil. The function generator is fully isolated from the ACG driver by a 4N25 opto-coupler. All the mesurements have been done with a fully ungrounded and battery powered digital [oscilloscope Fluke 123](#).

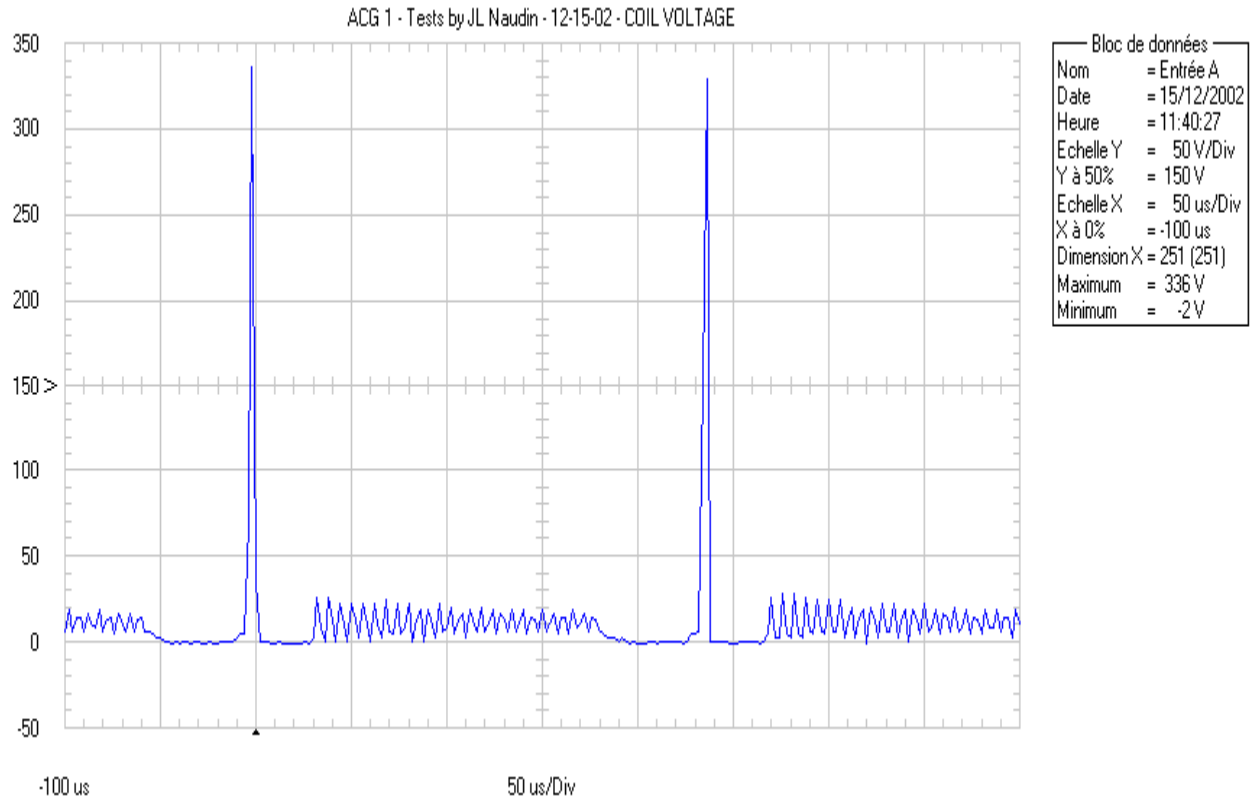
The circuit that I have used for this test is fully based on the electronic diagram that Jean-Michel Cour has sent to me, I have just only adpated some components. I am grateful to Jean-Michel Cour, Joe Arnold and Tim Harwood for their helpful contribution to this projet.

The ACG v1.0 (Air Core Generator) tests by JL Naudin
Email: Jnaudin509@aol.com - <http://www.jlnlabs.org>

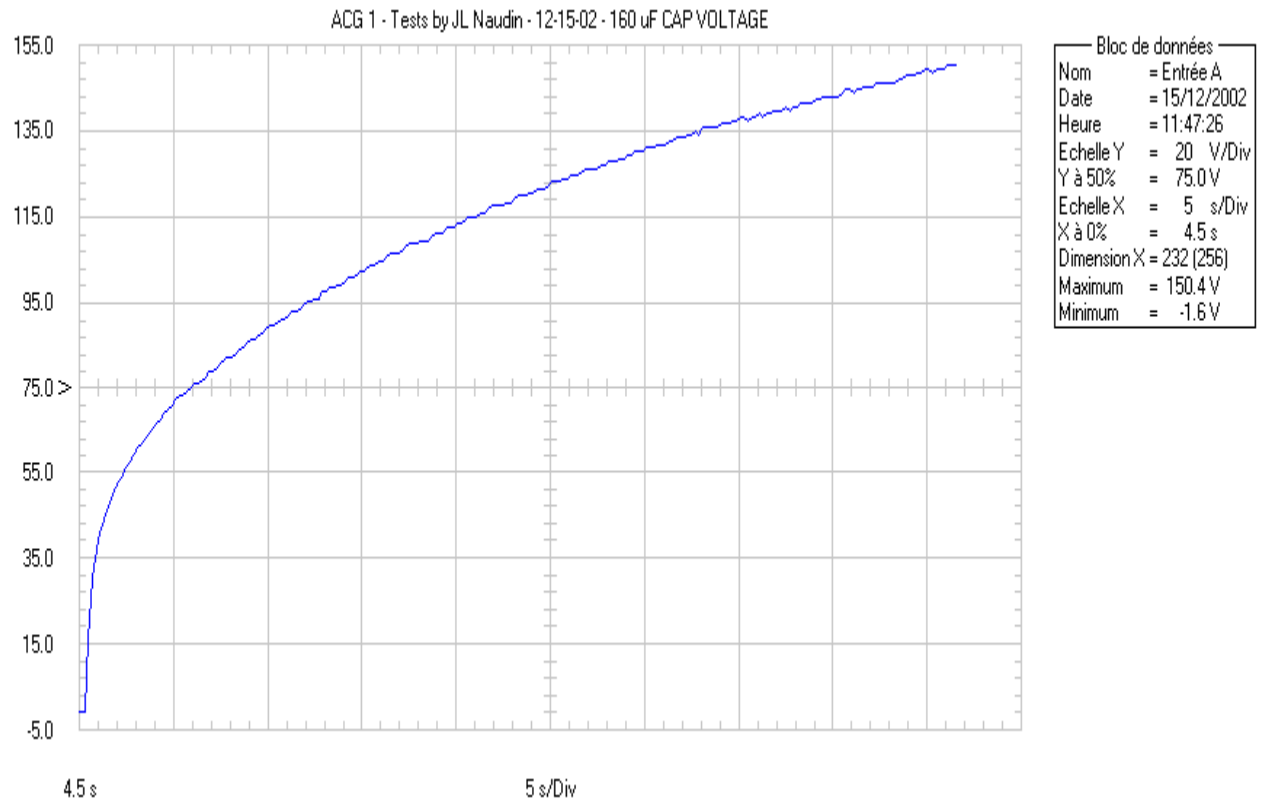




Download the N-Channel MosFet transistor [BUZ 74](#)



Voltage across the ACG coil (clock pulse at 4.2 KHz at 28 % +DTC).
The mesured voltage spikes across the ACG coil are very strong (up to 336 V).
The Power input is weak : 120 mW (12V @ 10 mA)



The voltage spikes across the ACG coil are able to charge a tank capacitor. Above, the Voltage across the capacitor C2 (C=160 μ F / 350 V)



Comment from JL Naudin : The ACG V1.0 circuit works well with a such air core. The voltage measured across the tank capacitor C2 goes up to 320 V (and more) in few seconds. At this moment, I confirms the Jean-Michel Cour and Tim Harwood tests and measurements about the ACG device...

Direct link to the Harwood's ACG web site :

- [The Nikola Tesla Patent US577670](#)
- [The ACG \(Air Core Generator \) based on the Tesla's patents](#) by Tim Harwood
- [The Tesla Radiant energy, the Quest of Negative Energy](#) by Tim Harwood

Interesting to read carefully :

- [Step-Up switch mode power supply : Ideal boost converter](#)

- [A diode circuit with a free wheeling diode](#)



POD 2 circuit with a simple coil

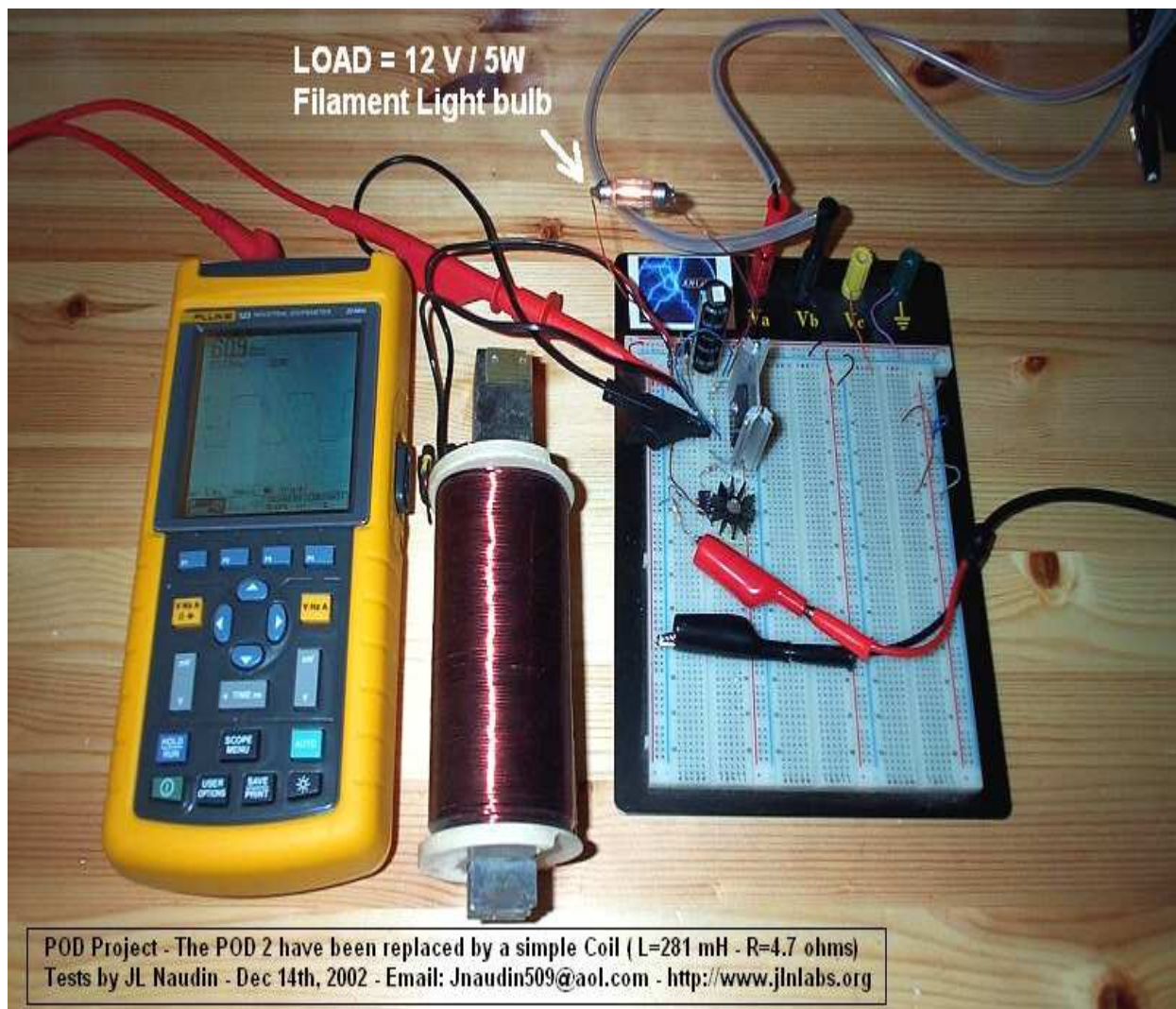
Tests by Jean-Louis Naudin

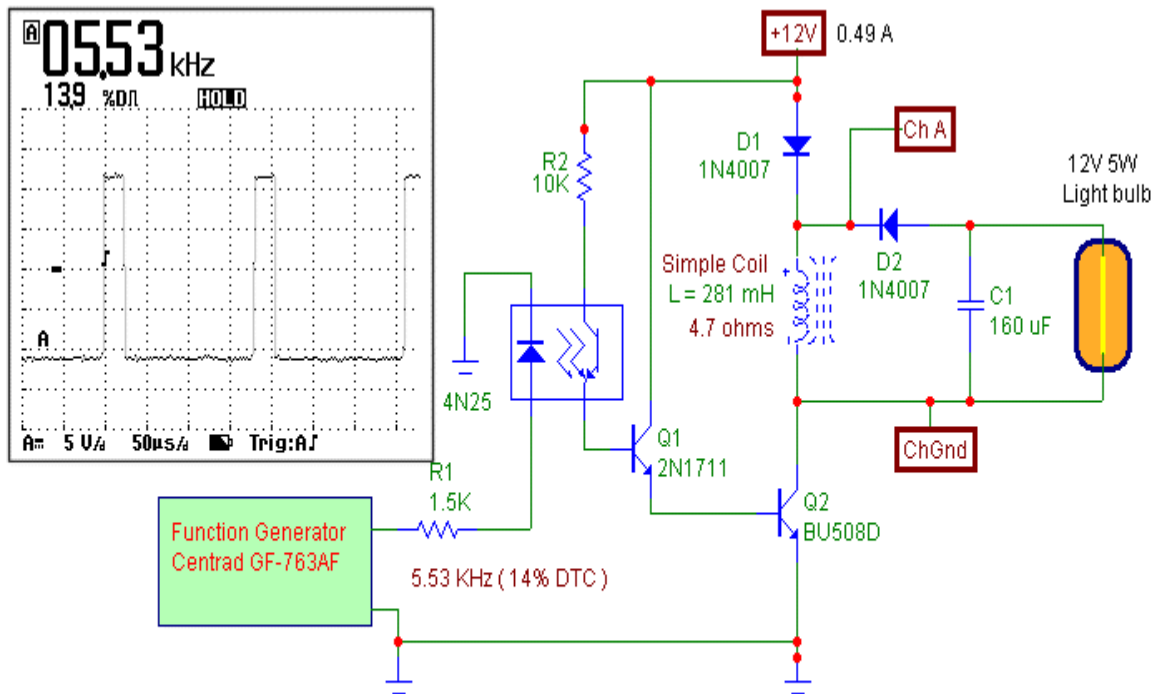
Created on December 14th, 2002 - JLN Labs - Last update December 14th, 2002

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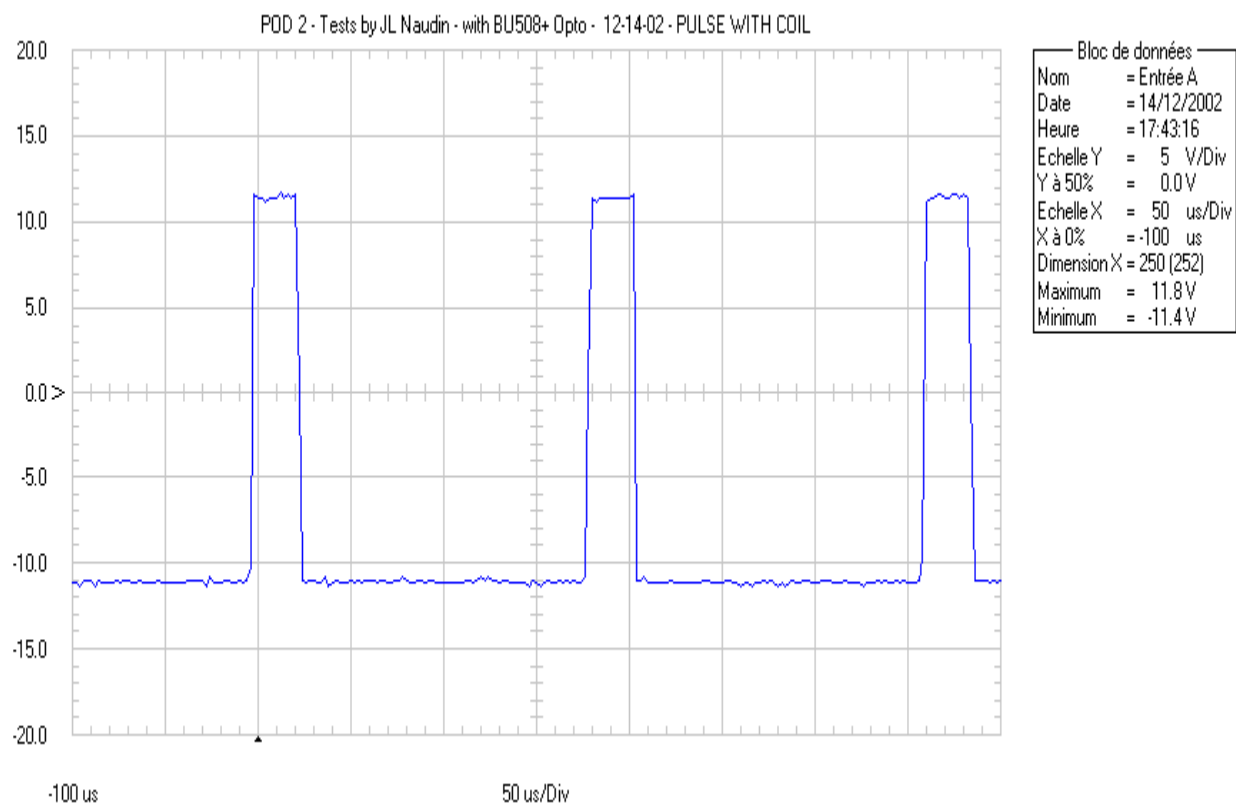
All informations and diagrams are published freely (freeware) and are intended for a private use and a non commercial use.

Here, I have used the same electronic circuit (with the BU508 and the opto-coupler) than with the POD, BUT, the POD 2 coil have been replaced by a simple inductor ($L = 281 \text{ mH}$, $R=4.7 \text{ ohms}$)...

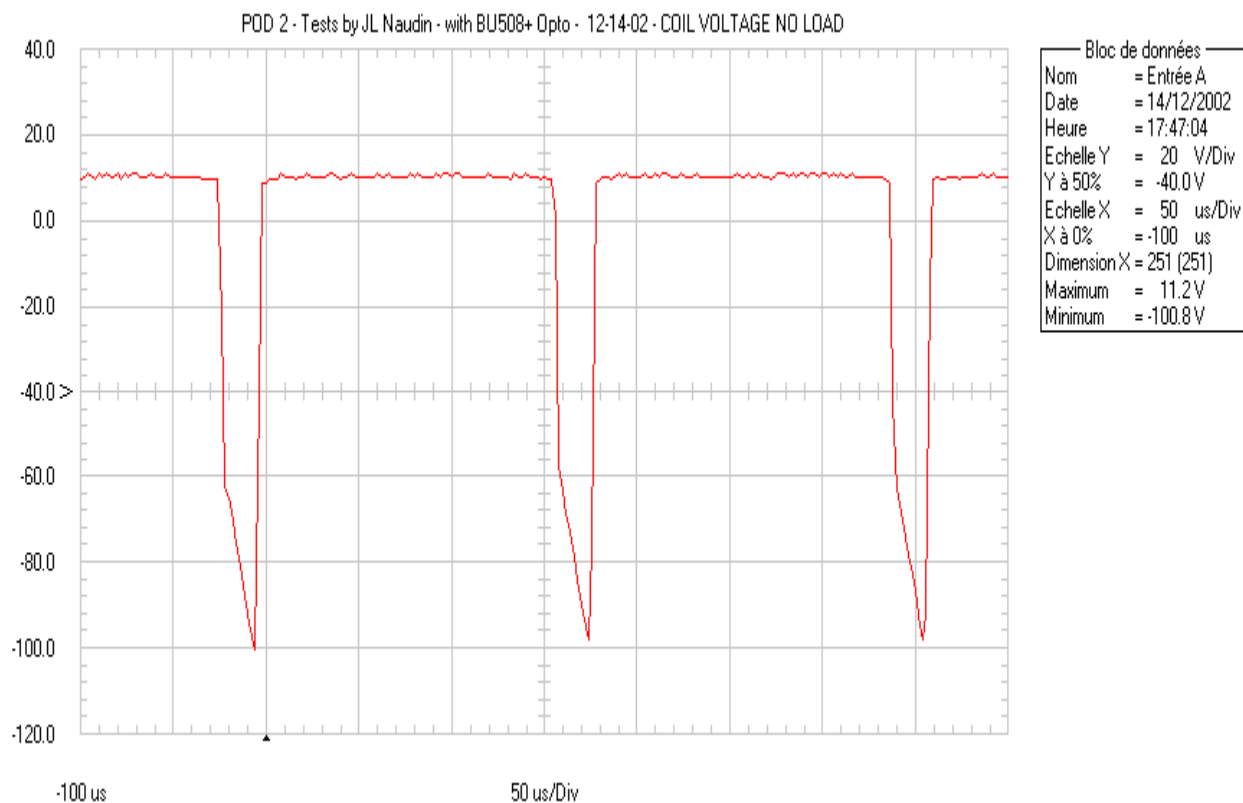




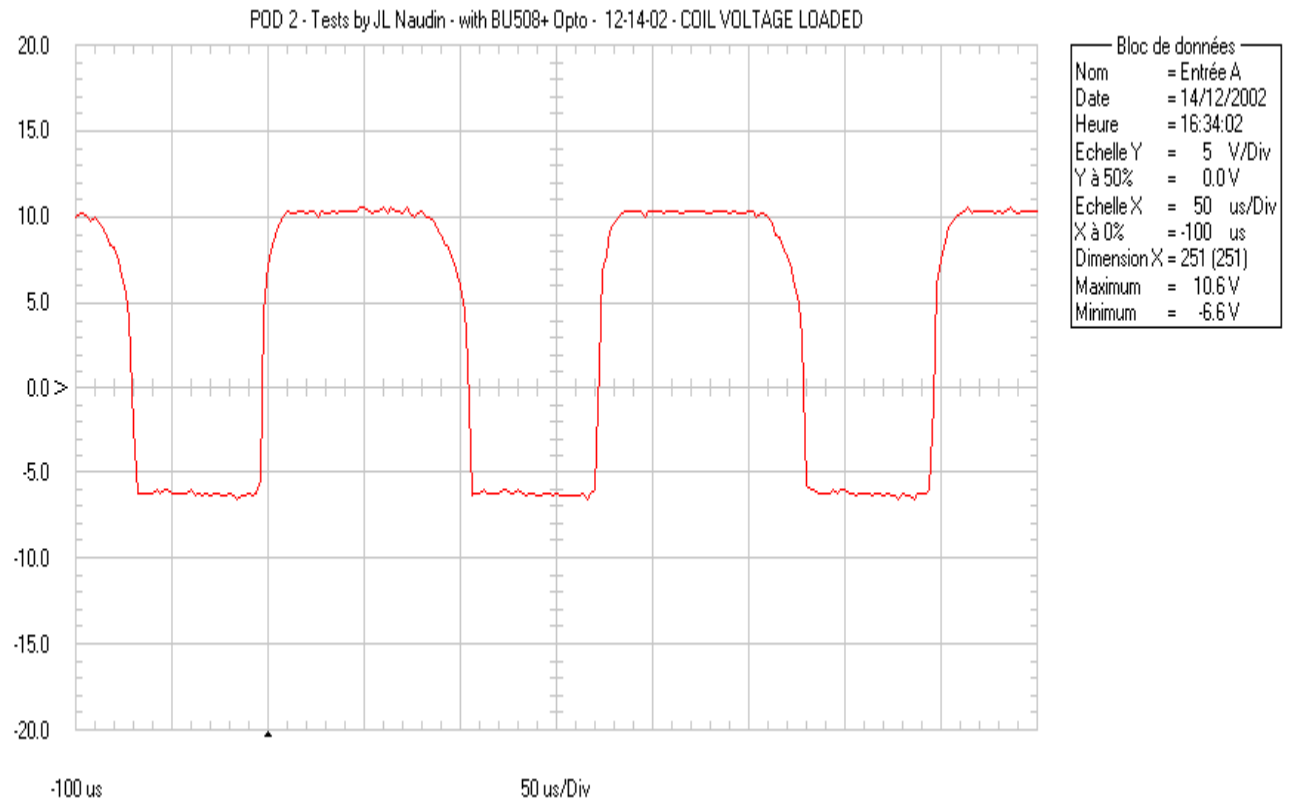
The Hardwood Jankowski's POD 2 - with BU508 and Opto-Coupler
 by JL Naudin - December 14th, 2002
 Email: Jnaudin509@aol.com - <http://www.jlnlabs.org>



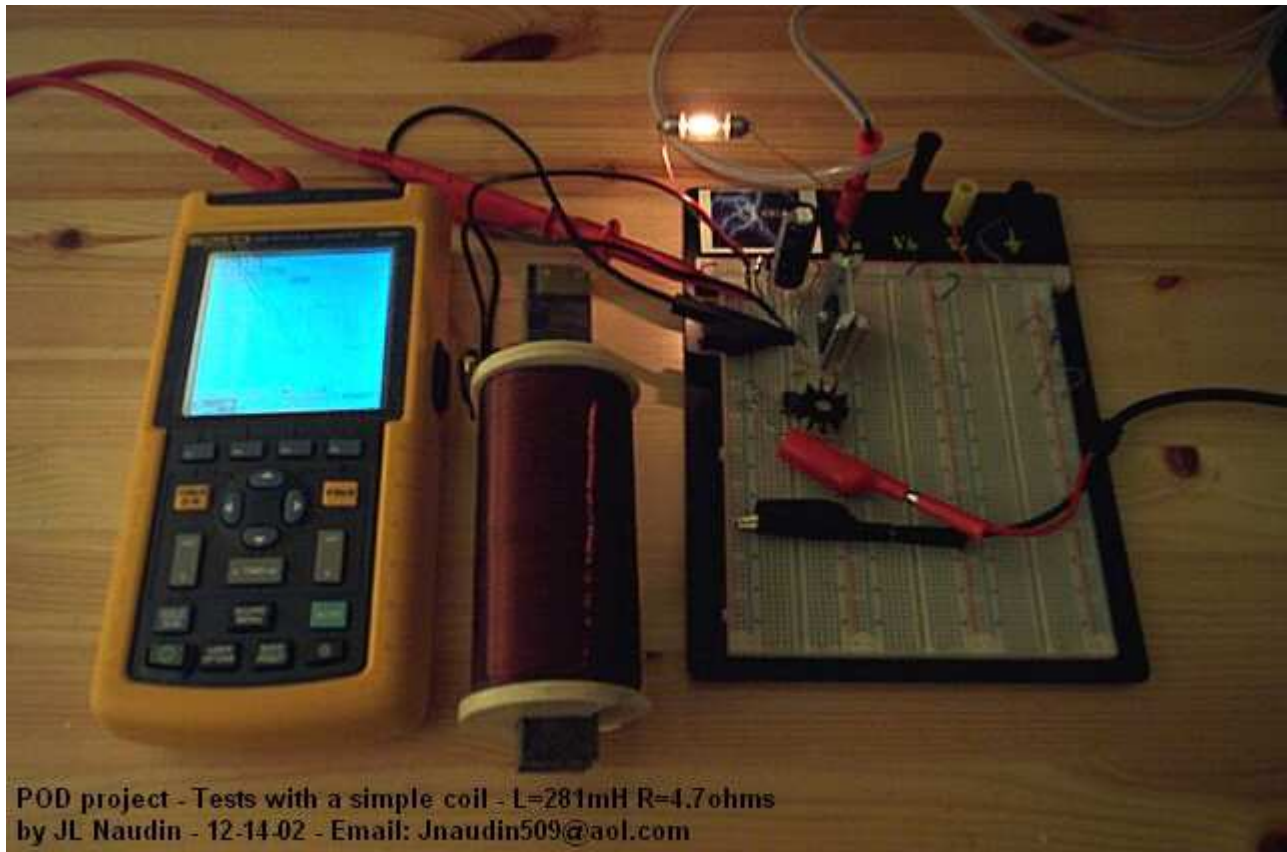
Pulse signal sent to the opto-coupler (5.53 KHz at 14 % +DTC)



Voltage across the COIL WITHOUT LOAD and without the capacitor C1



The Voltage measured across the coil with C1 and the LOAD (12V/5W light bulb)



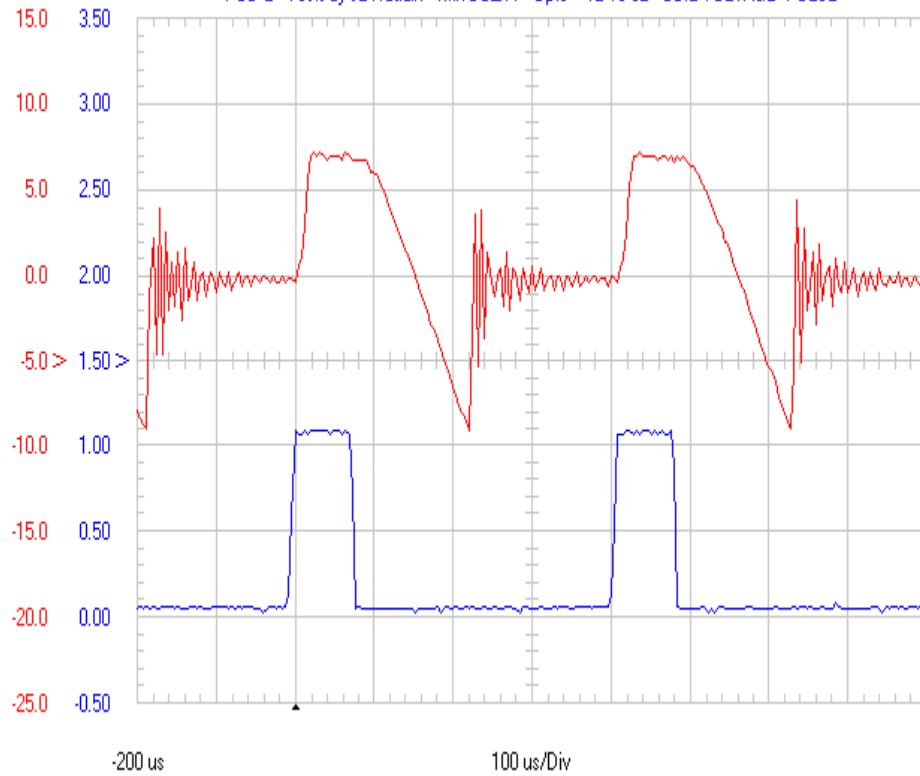
The 12 V/ 5W filament light bulb bright with only the back emf pulses

Comment from JL Naudin : The circuit works well with the POD 2 coil and with a simple inductor... So, does the POD 2 coil is really usefull here ? The circuit can be compared to a simple flyback PWM power supply which uses the inductor as a energy tank. But, may be that I haven't done the current POD 2 replication correctly...

Interesting to read carefully :

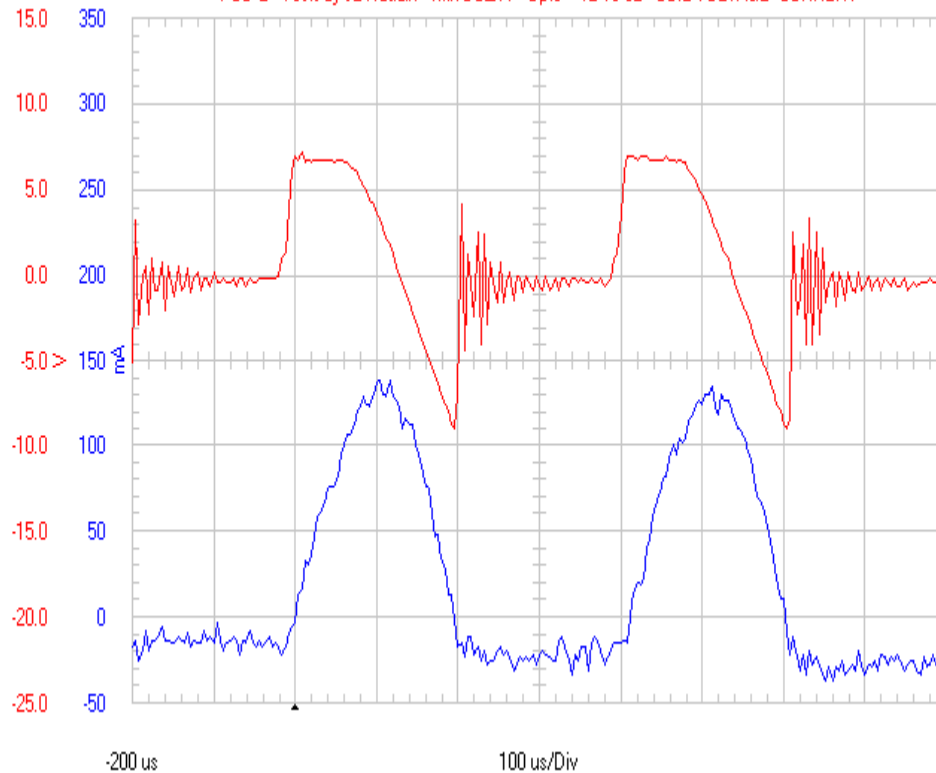
- [Step-Up switch mode power supply : Ideal boost converter](#)
- [A diode circuit with a free wheeling diode](#)

POD 2 - Tests by JL Naudin - with BUZ11+ Opto - 12-13-02 - COIL VOLTAGE+PULSE



Bloc de données		
Nom	= Entrée A	Entrée B
Date	= 13/12/2002	13/12/2002
Heure	= 15:39:59	15:39:59
Echelle Y	= 5 V/Div	500 mV/Div
Y à 50%	= -5.0 V	1.50 V
Echelle X	= 100 us/Div	100 us/Div
X à 0%	= -200 us	-200 us
Dimension X	= 250 (252)	250 (252)
Maximum	= 7.2 V	1.08 V
Minimum	= -9.2 V	0.02 V

POD 2 - Tests by JL Naudin - with BUZ11+ Opto - 12-13-02 - COIL VOLTAGE+CURRENT



Bloc de données		
Nom	= Entrée A	Entrée B
Date	= 13/12/2002	13/12/2002
Heure	= 15:47:14	15:47:14
Echelle Y	= 5 V/Div	50 mA/Div
Y à 50%	= -5.0 V	150 mA
Echelle X	= 100 us/Div	100 us/Div
X à 0%	= -200 us	-200 us
Dimension X	= 250 (252)	250 (252)
Maximum	= 7.2 V	138 mA
Minimum	= -9.0 V	-38 mA



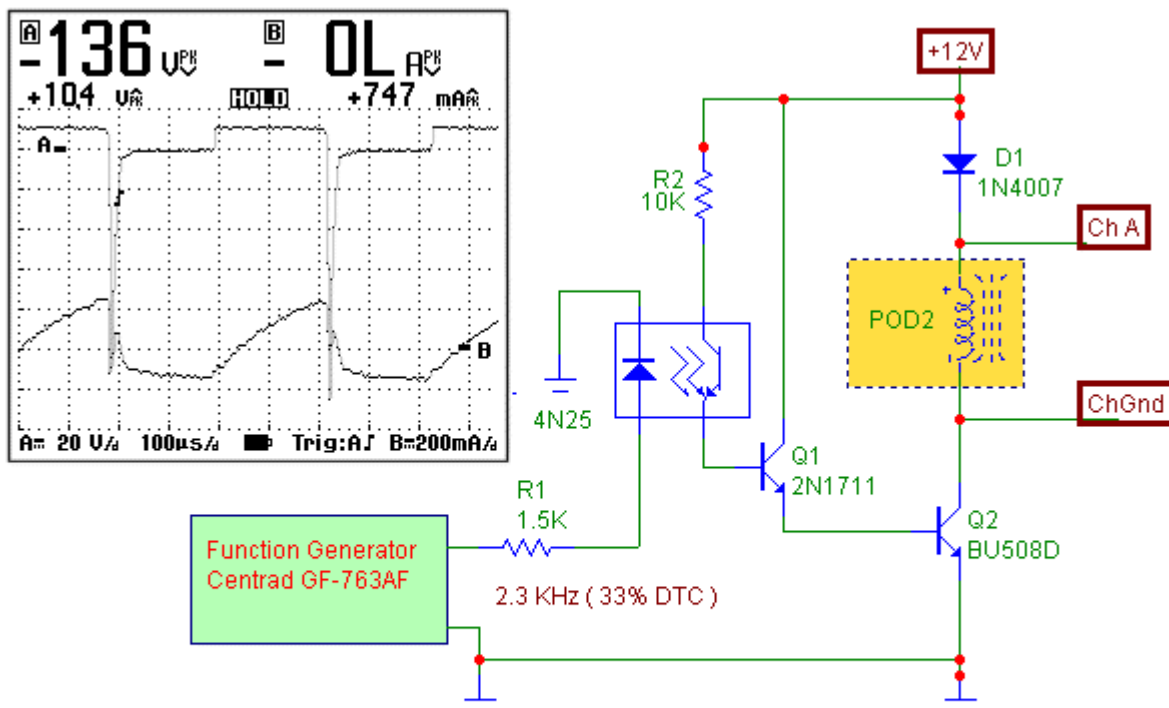
POD 2 : With a BU508 and an Opto-Coupler

Tests by Jean-Louis Naudin

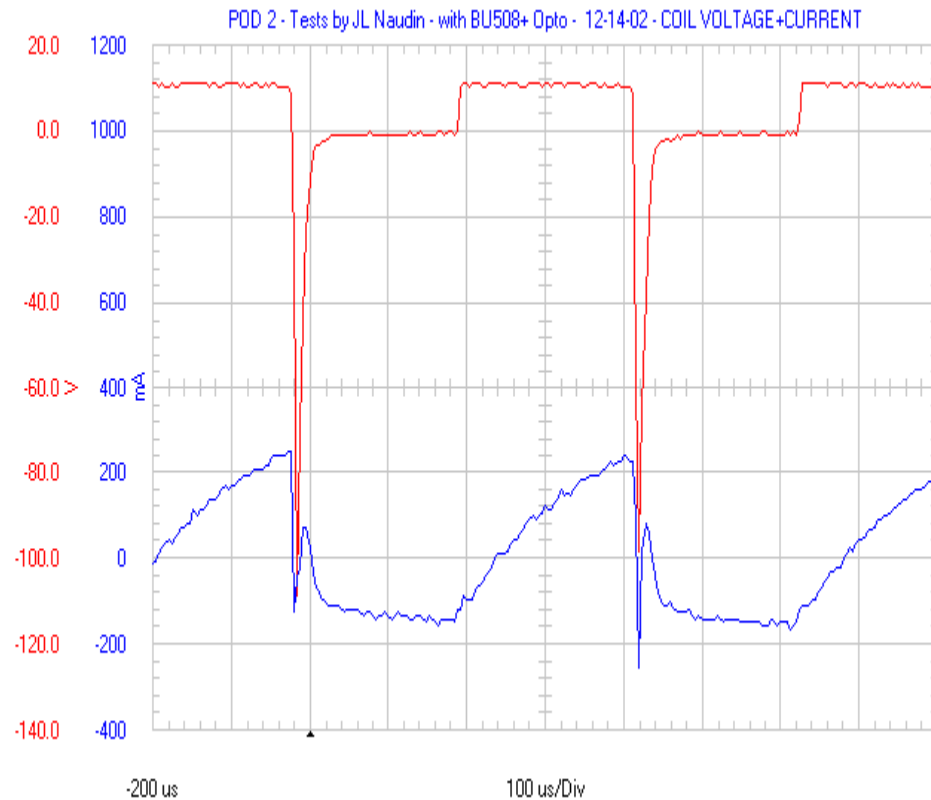
Created on December 14th, 2002 - JLN Labs - Last update December 14th, 2002

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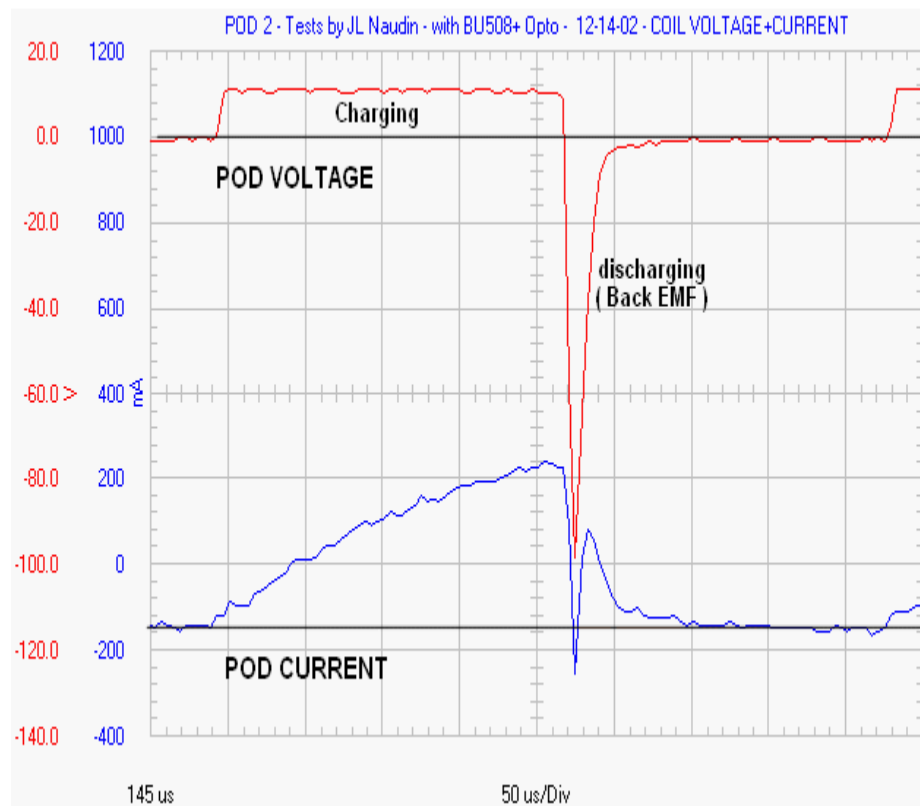
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The Hardwood Jankowski's POD 2 - with BU508 and Opto-Coupler
by JL Naudin - December 14th, 2002
Email: Jlnaudin509@aol.com - <http://www.jlnlabs.org>



Bloc de données		
Nom	= Entrée A	Entrée B
Date	= 14/12/2002	14/12/2002
Heure	= 10:22:05	10:22:05
Echelle Y	= 20 V/Div	200 mA/Div
Y à 50%	= -60.0 V	400 mA
Echelle X	= 100 us/Div	100 us/Div
X à 0%	= -200 us	-200 us
Dimension X	= 250 (252)	250 (252)
Maximum	= 11.2 V	248 mA
Minimum	= -108.8 V	-256 mA



Bloc de données		
Nom	= Entrée A	Entrée B
Date	= 14/12/2002	14/12/2002
Heure	= 10:22:05	10:22:05
Echelle Y	= 20 V/Div	200 mA/Div
Y à 50%	= -60.0 V	400 mA
Echelle X	= 50 us/Div	50 us/Div
X à 0%	= 145 us	145 us
Dimension X	= 125 (252)	125 (252)
Maximum	= 11.2 V	248 mA
Minimum	= -108.8 V	-256 mA



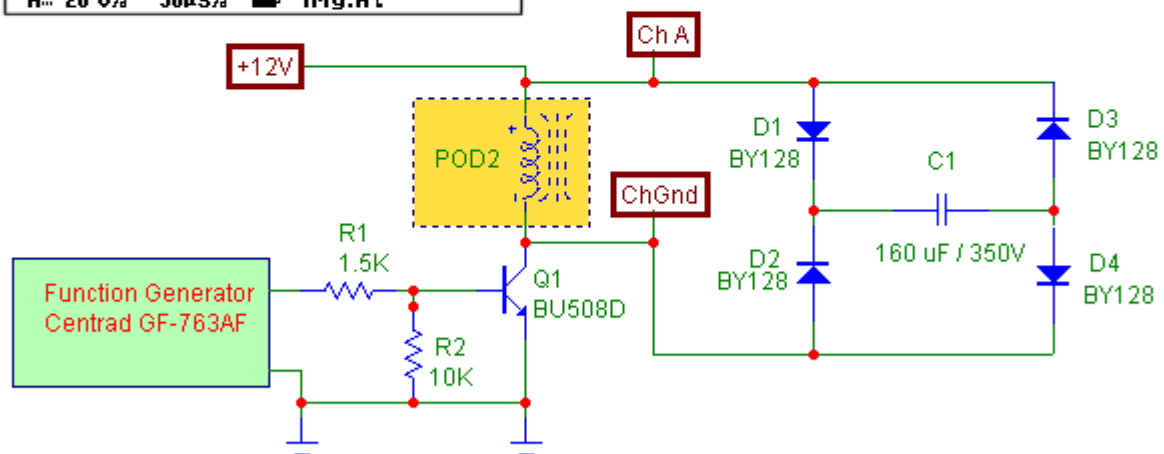
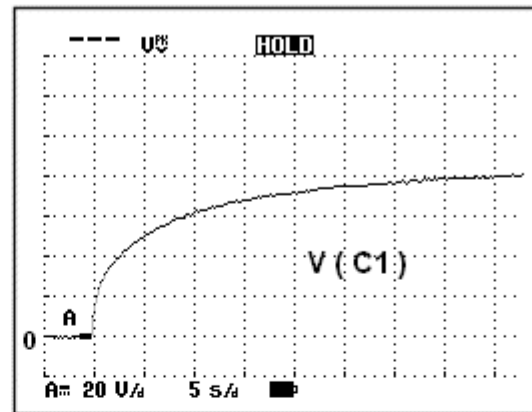
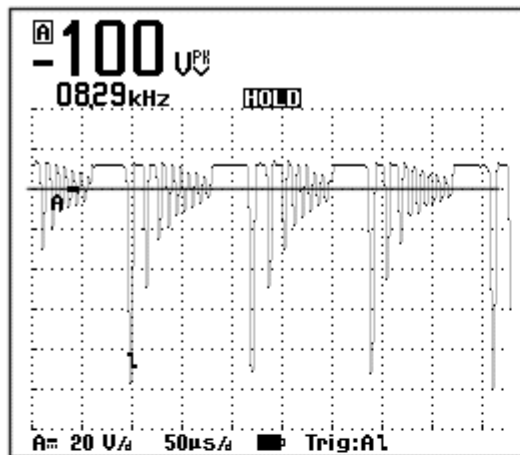
POD 2 : Charging a capacitor

Tests by Jean-Louis Naudin

*Created on December 12th, 2002 - **JLN Labs** - Last update December 12th, 2002*

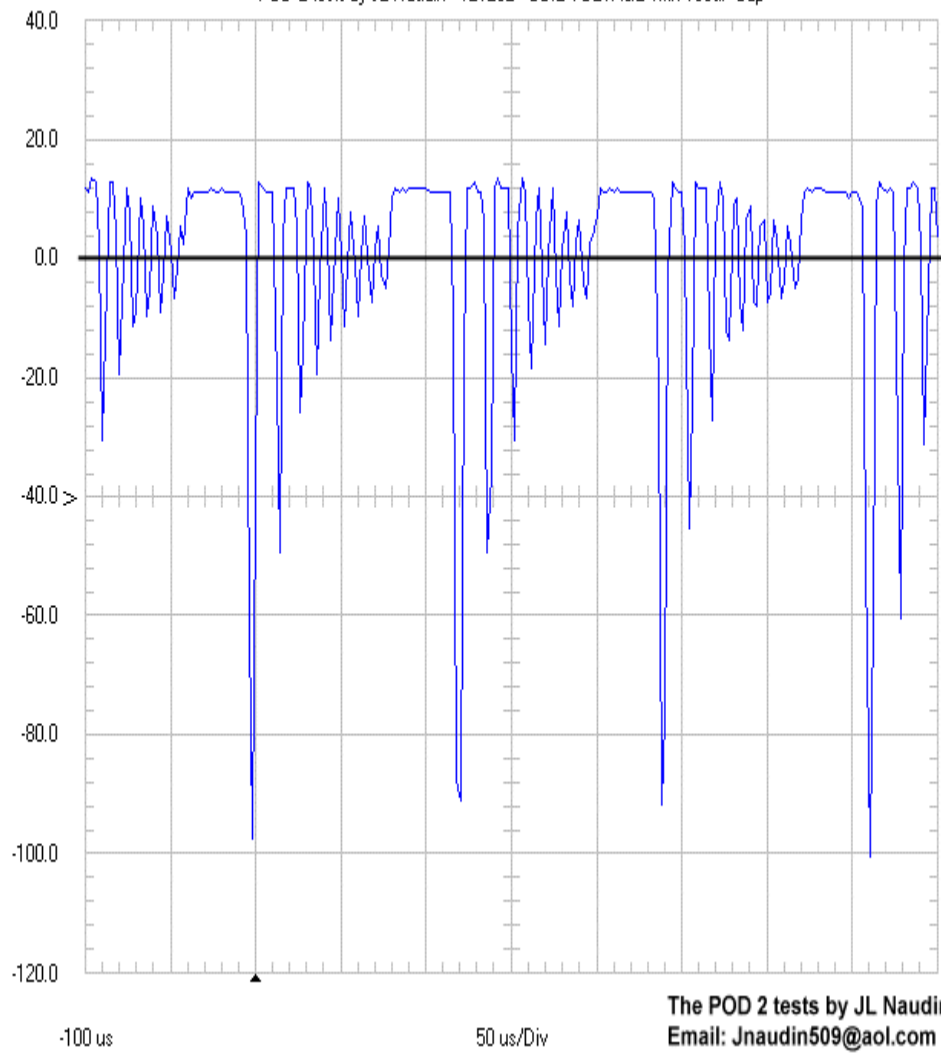
Toutes les informations et schémas sont publiés gratuitement (freeware) et sont destinés à un usage personnel et non commercial

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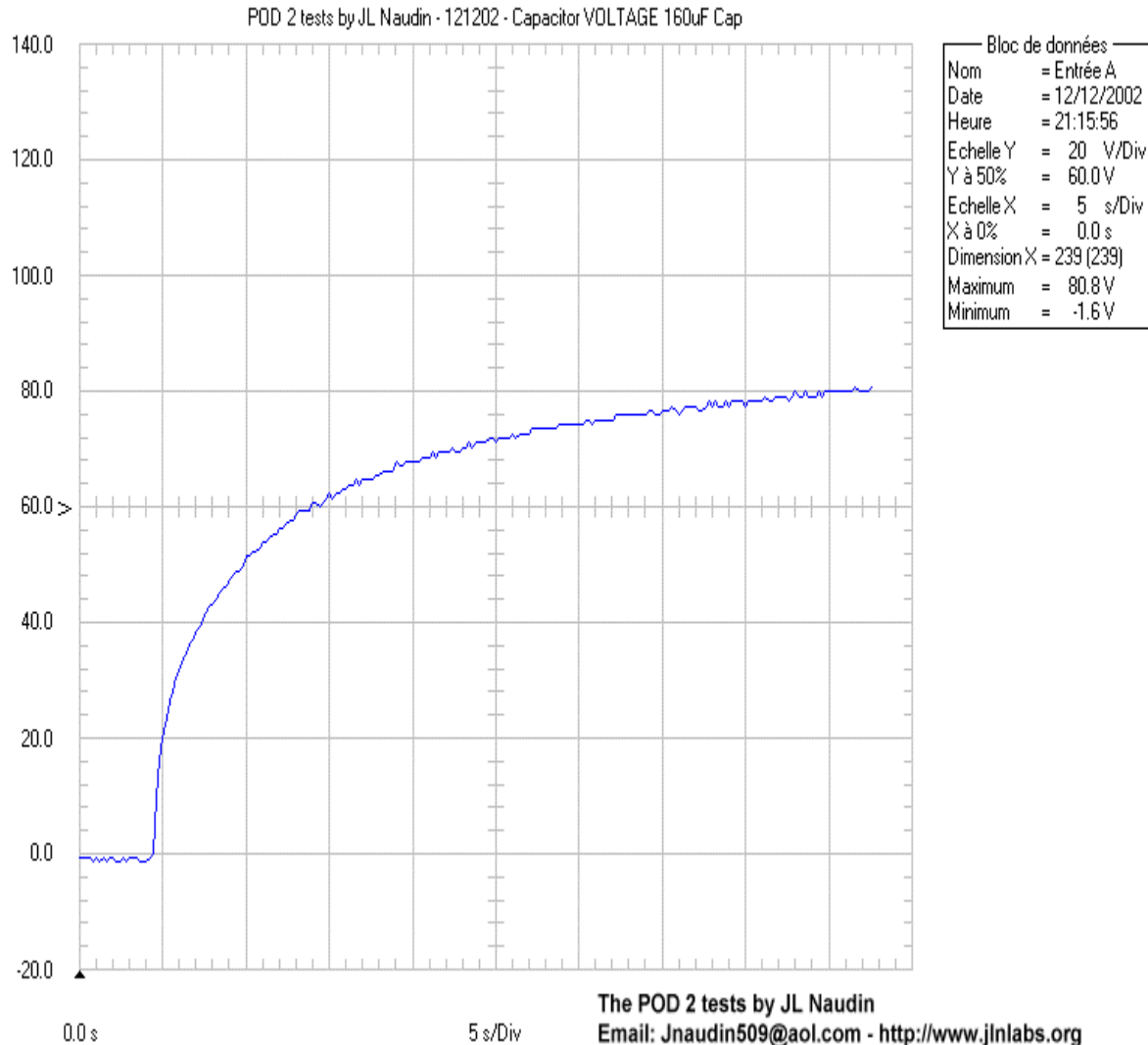


The Harwood Jankowski's POD 2 - Test #2
by JL Naudin - December 12th, 2002
Email: Jnaudin509@aol.com - <http://www.jlnlabs.org>

POD 2 tests by JL Naudin - 121202 - COIL VOLTAGE with 160uF Cap



Bloc de données	
Nom	= Entrée A
Date	= 12/12/2002
Heure	= 21:00:09
Echelle Y	= 20 V/Div
Y à 50%	= -40.0 V
Echelle X	= 50 us/Div
X à 0%	= -100 us
Dimension X	= 251 (251)
Maximum	= 13.6 V
Minimum	= -100.8 V



The voltage measured accross the C1 (160 uF) capacitor goes up to 85 Volts



POD 2 : Basic Tests

Tests by Jean-Louis Naudin

*Created on December 12th, 2002 - **JLN Labs** - Last update December 12th, 2002*

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All informations and diagrams are published freely (freeware) and are intended for a private use and a non commercial use.

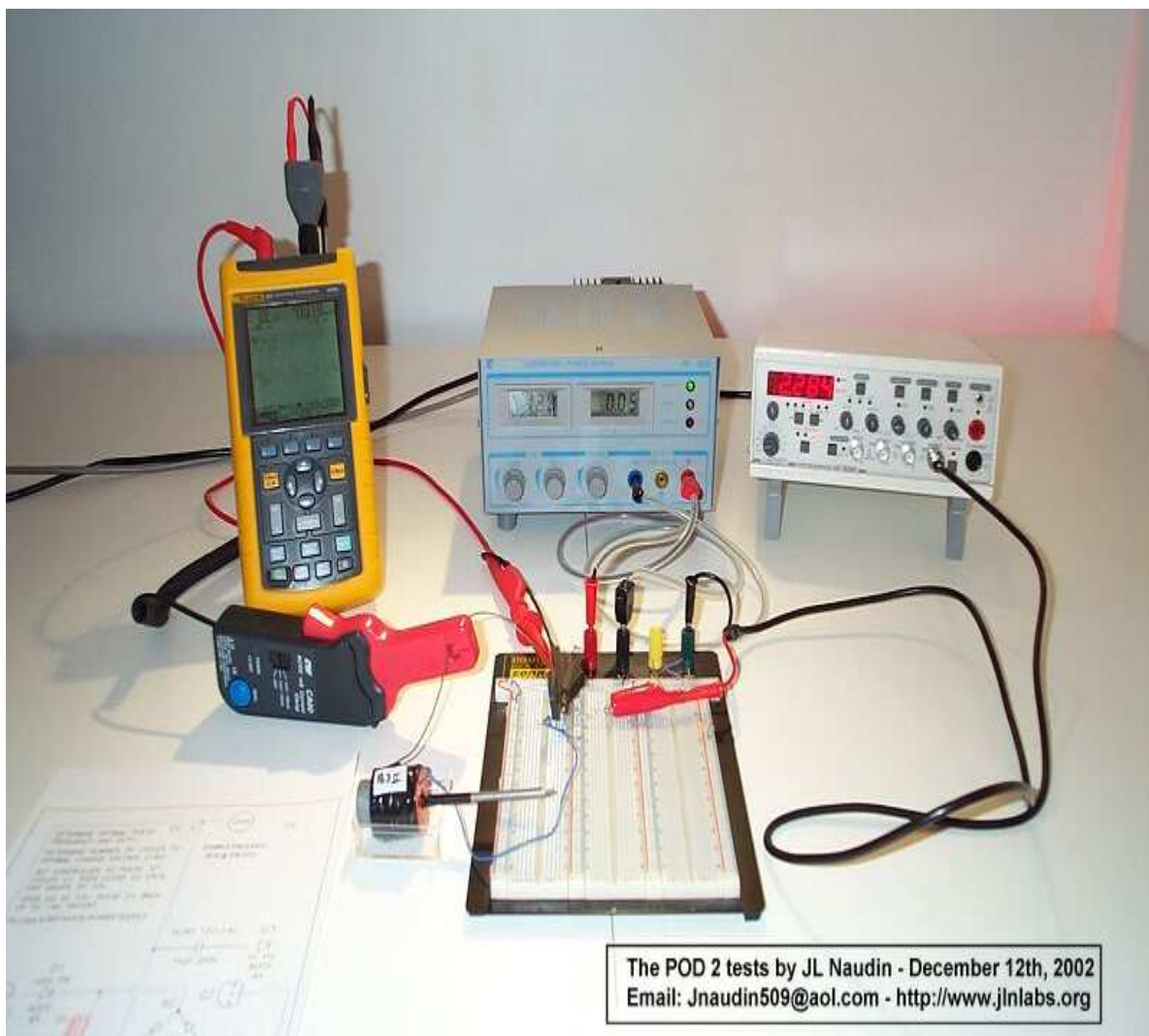
The POD 2 device has been constructed according to the original diagram from Tim Harwood and John Jankowski described at :

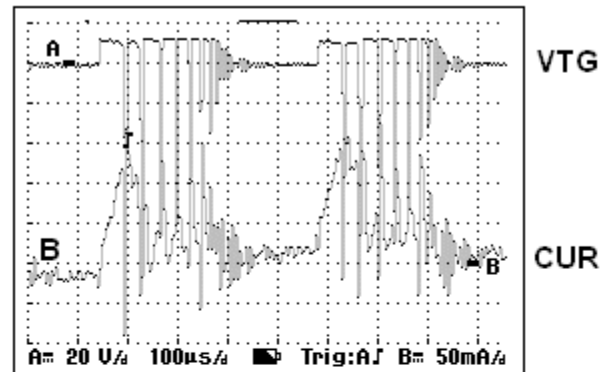
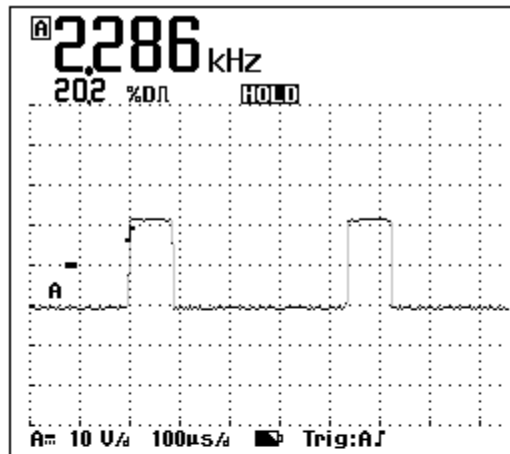
<http://www.geocities.com/theadamsmotor/pod2.html>

$R = 20 \text{ ohms}$
 $L = 4.6 \text{ mH}$

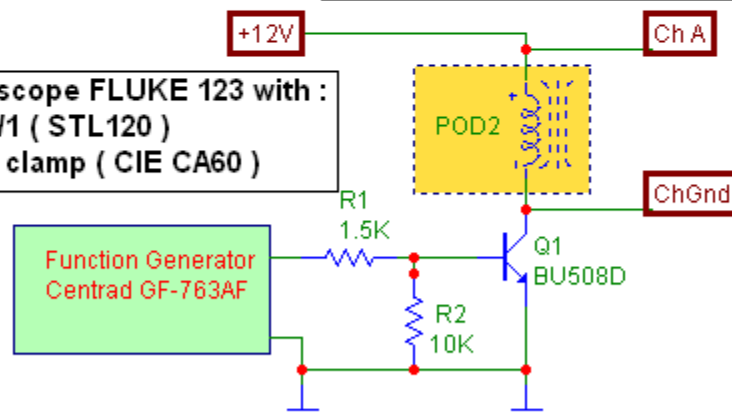


The Harwood-Jankowski's POD 2
build and tested by Jean-Louis Naudin
Email: Jnaudin509@aol.com - <http://www.jlnlabs.org>



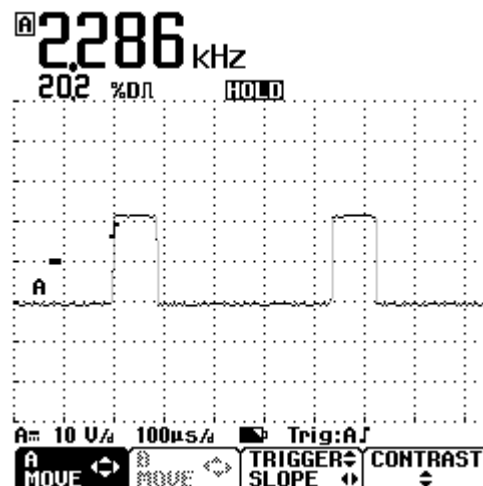


Digital oscilloscope FLUKE 123 with :
Ch A) probe 1/1 (STL120)
Ch B) current clamp (CIE CA60)



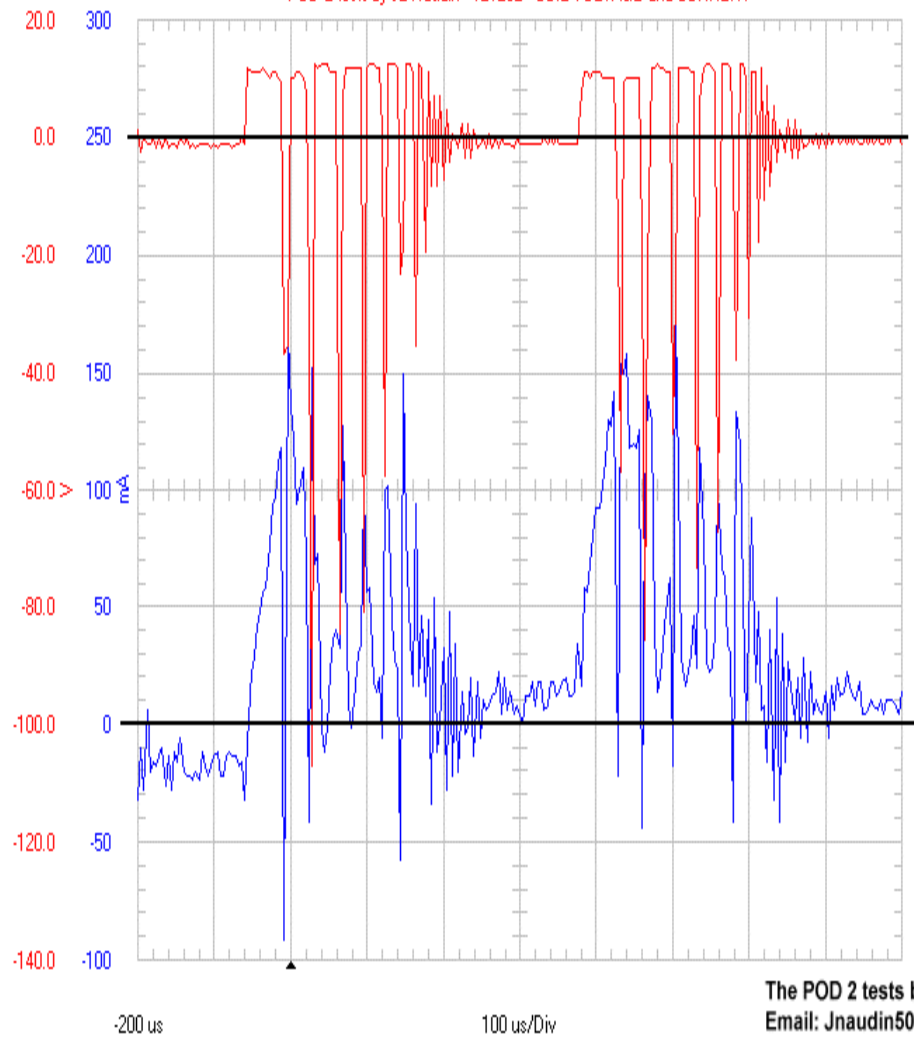
Current clamp
CIE CA60

The Harwood Jankowski's POD 2 - Basic test setup
by JL Naudin - December 12th, 2002
Email: Jnaudin509@aol.com - <http://www.jlnlabs.org>



The function generator has been set at 2.286 kHz (20% Duty Cycle)

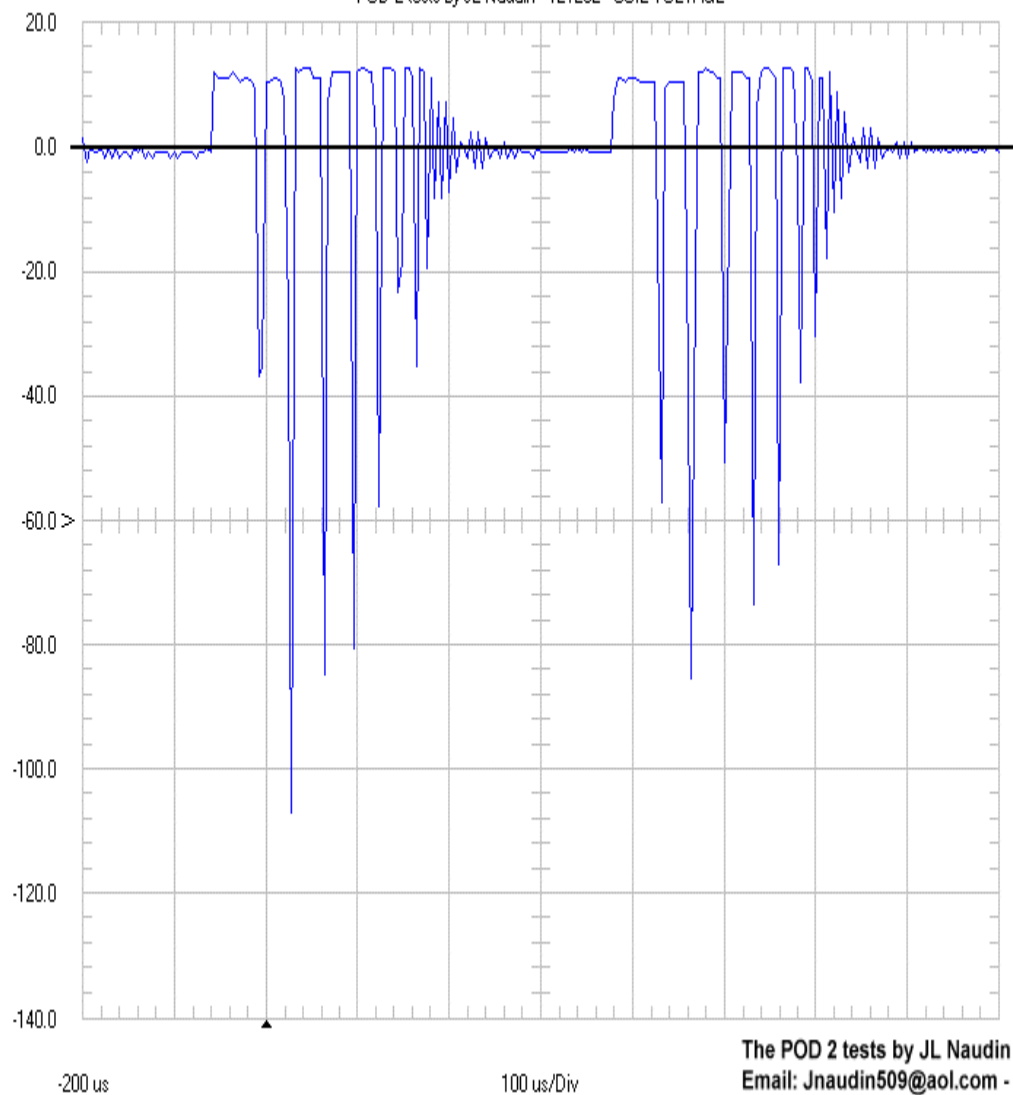
POD 2 tests by JL Naudin - 121202 - COIL VOLTAGE and CURRENT



Bloc de données		
Nom	= Entrée A	Entrée B
Date	= 12/12/2002	12/12/2002
Heure	= 18:41:36	18:41:36
Echelle Y	= 20 V/Div	50 mA/Div
Y à 50%	= -60.0 V	100 mA
Echelle X	= 100 us/Div	100 us/Div
X à 0%	= -200 us	-200 us
Dimension X	= 250 (252)	250 (252)
Maximum	= 12.8 V	174 mA
Minimum	= -107.2 V	-92 mA

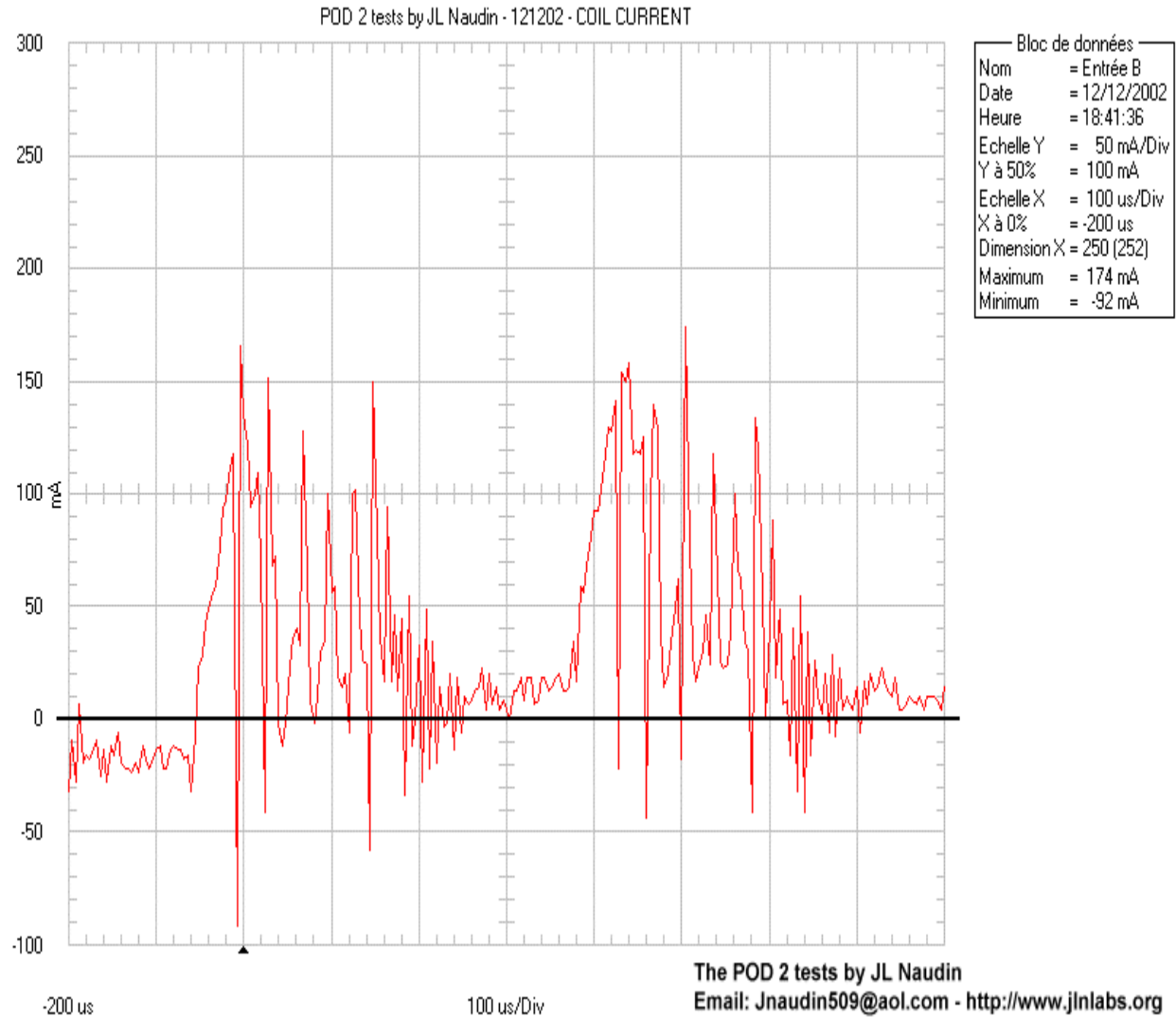
The POD 2 tests by JL Naudin
 Email: Jnaudin509@aol.com - <http://www.jlnlabs.org>

POD 2 tests by JL Naudin - 121202 - COIL VOLTAGE



Bloc de données	
Nom	= Entrée A
Date	= 12/12/2002
Heure	= 18:41:36
Echelle Y	= 20 V/Div
Y à 50%	= -60.0 V
Echelle X	= 100 us/Div
X à 0%	= -200 us
Dimension X	= 250 (252)
Maximum	= 12.8 V
Minimum	= -107.2 V

The POD 2 tests by JL Naudin
 Email: Jnaudin509@aol.com - <http://www.jlnlabs.org>



Subject:	Self running regenerating machine
Date :	Sat Apr 7, 2001 10:58 pm
From:	AL Francoeur < AL.F@telus.net >

Greetings to All

This is a one time last post only.

This post is an update on the status of our motor generator systems, first of all I would like to say, it's takes a great effort building these machines at this scale, don't under estimate the amount

of time, work and money we have put into all this for the last 21 years. At this moment we are this >< close to having it. I have been writing this email post for over 4 weeks now because I have had little time to spend on the computer. Some people might say I have to many inventions, I say, oh well - I can't help it, I keep getting more ideas.

Our machine is now able to run closed loop, with an open system, with extended run time per charge, with the electrical energy from the output coils going directly into the battery/motor as it is running. Yes it is a self runner!!!, it has been for almost three months.

Tests to produce an abundance of heat.

I am testing the machine so as the output coils are connected to regenerate the 12 volt battery as the motor is turning the rotors. I am using a nice brand new permanent magnet 1/4 hp 24 volt dc motor that is running on 12 volts to turn the 110 pound 3 balanced rotors, or the 35 pound 1 rotor version. The 24 volt DC motor set up is temporary, and is being used for testing of the regenerating dc impulse coil circuits before the brushless-motor-dc-impulse system replaces the dc motor. The high efficient brushless-motor-impulse system will replace the dc motor, after I complete a series of test that involve using the dc drive motor and the impulse-regenerating-transient-overshoot-circuits together. I completely rebuilt my present controller and installed 6 new 70 amp power mosfet drivers and new hall sensors to replace the damage ones, it has been working really well ever since. I have 75 of these high amp mosfet switches and 30 hall sensors as spares if I need them, as such they will also be used for the regenerating impulse circuits for the switch. The machine is almost virtually silent when it is running.

The regenerating output coils at this moment are producing AC to DC power (during full duty time) with no noticeable ripple on the scope. The generated dc energy is going back into the battery, in which the motor uses immediately to produce the torque needed to rotate the rotors, the generated dc power is again going back into the battery/motor. The result is that the battery supplies less power to the motor when I run the machine with the regenerating DC current going into the battery. The motor is a conventional 1/4 hp dc permanent magnet motor that during one of many switch mode test, it consumes 15 amps at 12 volts from the battery, while the regenerating coils (In full duty cycle mode) puts back 10 amps at 12 volts, which now supplies 10 of the 15 amps that the battery supplies to the motor. The battery gives 5 amps and the regenerating coils gives 10 amps to the motor. This effect can be changed depending on how many open isolated regenerating banks of coils are activated.

At this point, the battery supplies 5 amps to the motor, and the regenerating coils provide the other 10 amps to the battery/motor that make up the 15 amps total the motor is using to turn the rotors, during this switch mode. So the motor is doing the work of a 15 amp draw while only getting 5 amps from the battery. The motor gets hot after a while from using 15 amps, while only getting 5 amps from the battery and 10 amps from the regenerating coils. It produces an excessively large amount of heat in the dc motor that is (useable output energy to heat your home, etc., on a large scale) with only a small amperage supply from the battery. Hell, sounds good so far! Overunity that has manifested as high heat output!

Cooling tube coils wound around the motor, with water flowing through the tube coils to cool the motor, will produce hot water at the same time. Sounds like a good high efficient electrical heat pump marriage to me! Hot water, and electric power at the same time. The draw back of using the brushless motor controller impulse system is that it will not get as hot as the dc motor does, thus not much heat (from tube cooling) for producing hot water is available. In this case, the electric power generated out of the machine will make all your hot water needs, due to the increased efficiency and cooler running of the motor-impulse system.

Ongoing testing to increase the run time during the regenerating mode will include.

The dc motor will also be used for testing of the regenerating impulse circuits, these circuits will turn the output regenerating coils on and off at time intervals during the attraction duty cycle. The back emf will be switched off just past the magnets 12 o'clock position on each of the multiple isolated phase coil banks that I connect this circuit to... The rotor at this point will spin like a free wheeling flywheel while producing its own power during the attraction duty cycle, there will be no load on the isolated coil banks when the magnet leaves each isolated coil bank. The high spike transient over shoot will be gated into 6 large fared caps, it then will be used for the high energy explosive electrical discharges that will drive the isolated motor impulse coils, and create what has been termed, (the radiant event or electrical shock wave in the conductor). This will turn the rotors with an extra secondary kick in the ass at every (rapid multiple) pulse duty time, with rapid multiple very short releases of high energy potential discharges that take place one rapid discharge after another at the moment of the closure of the switch. The shock wave effect of energy that manifest at the instant of the closer of a switch will be reproduced in multiple unidirectional rapid successions on a buss bar that will be directed to power the new impulse motor system. The dc test motor will be remove during these test so it will not get damaged. Refer to this site to learn more, [Free Energy Website - Edwin Gray, Nikola Tesla, and Dr Peter Lindemann](#) , cold electricity.

Interesting effects are shown when one stands back and watch the rotors turn with the output coils delivering their ac to dc electrical energy directly into the battery/motor, even at this stage. It's very interesting to see the entropy and enthalpy change while the machine is running. The whole machine becomes 100% solidstate with no physical contact on the rotors, the bearing losses will be zero with the installation of a magnetic levitation bearing suspension system, or air bearings, in which becomes an option made available on the machine. This in turn will allow the machine to be run in a vacuum environment to rid the windage losses, and mimic a spinning satellite in orbit in a safe controlled environment.

On another of the many switch mode configurations that this machine can do.

When I switch on all 6 isolated banks of regenerating coils to charge the battery, the motor will draw 25 amps at 12 volts, at this switch mode the battery is supplying only the original 10 amps at 12 volts. The other 15 amps that the motor demands under full load comes from the regenerating coils that causes the load in the first place. It's a conventional dc motor with an unconventional generator on the other end, this test is to see how much heat we can generate in the dc motor for a small given amount of power. I am using the motor in this test to see how

much heat I can generate in the conventional dc motor.

(The machine can house upto 18 banks of isolated open coil systems in the present form)

The amorphous coils remain cool to the touch where as the conventional dc motor gets very hot with higher amps going through it, after running for a while. The machine also has a much longer running time when the coils are regenerating the battery, as compared to running an outside equal load with the same amp draw, in that case the battery drains much faster.

This explains the observation of the high heat build up in the motor side (pressure side) of the circuit while being cooler on the generator side (amorphous side) of the circuit. After hours of run time the battery begins to drain, when this happens the battery begins to show tangible temperature changes from one side of the battery to the other. **The whole negative side of the battery remains cool to the touch, while the whole positive side of the battery gets warmer to the touch, the effect is repeatable every time and only happens when the regenerating coils are connected to charge the battery as it is running.** It seems to be aprox 20 degrees or more difference, depending on how many regenerating coils are activated. There must be exothermic reactions and endothermic reactions going on inside the battery/machine that is causing this temperature difference. I can change the load on the machine from the flick of a switch, which in turn dumps it's energy back into the battery pack, or outside load. Doing this changes the efficeincy ratio of the machine depending on how many banks of regenerating coils I activate, and it also changes the temperature difference on each side of the battery. I will be winding 4 bifillar coils on amorphous cores so as to observe the difference in performance.

High amperage Mosfet switches will be connected to the output of the regenerating coils to control the on/off duty time during the attraction phase of each isolated generator bank, hall sensors are being used for the timing-switch-control of the mosfets. I am looking back at more of Tesla's work to harness these high energy unidirectional discharges using high voltage lightning discharges with gaps. Transmission coils and receiving coils will be specially constructed so as to deal with the radiant event that takes place on the conductor. Please refer to Tesla's wireless transmission of electricity technology to understand more of this if you need to.

I have had many inquiries for an update of the Interference Disc Generator.

The Interference Disc Generator will be undergoing a complete over haul with new upgrades in order to realise it's full potential, it will include a new set of high strength Interference amorphous discs, and 12 new horse shoe shape neodymium grade 45 magnets. The Interference Disc generator will be tested at very high rpms without the worry of magnets flying out and rotor destruction, as you know the coils and magnets are both stationary in this design. I have many amorphous coils for the Interference Disc machine and It will be tested on line with my other present large motor/generator developments to compare its efficiency with my other systems. If you move the flux field with out moving the magnet or the coil, you have greatly simplified the machine with less electronics. [THE INTERFERENCE DISK ELECTRIC GENERATOR BY ALAN L FRANCOEUR](#) , [GENERAL DESCRIPTION OF THE INTERFERENCE DISC GENERATOR](#) , or check out the energy21 site.

Tesla did not have the electronics that we have today, and he still achieved the results he was looking for. So why do we need all the fancy electronics that have to be protected from the high energy transient spikes to achieve the radiant event? So get back to simplicity as nature intended, we don't need the micro chips at all to get our high energy switching, look deep into Sir Frances Bitter degaussing system, there are some clues for you there. You can also refer to the Gary Wesley permanent magnet motor from 1876, in which I have replicated.

Zero Input Magnetic Impulsion motor

The Zero Input Magnetic Impulsion motor is not ready for testing as of yet but will be soon. I have been first working to complete the electrical impulse systems on the present large machine. Most of the parts are built for the Impulsion permanent magnet motor with only a few parts remaining, machine shops are not cheap these days. **It is my ace of spades or trump card with no impulse electronics, if I installed an impulse system on it, it will turn to fast and I don't want magnets flying out.** Nothing more will be posted on it for a patent will be applied for.

Vapor Carb system

The vapor fuel management system will help clean up your internal combustion engine and give your automobile better gas mileage with the atomizing of the fuel, it's as simple as that. The engine then uses this atomized gasoline fuel (as if it were propane or natural gas vapor), to run the motor with efficiency improvements (measurable on gas analyzer and on the road) as compared with a motor not equipped with the vapor system. My system works with no plasma effect at all and it is NOT a geet carb, it cracks the gasoline fuel using high temperature engine waste heat, nothing more. I built my first vapor system back in the summer of 1980. The price of gasoline will be going much higher (\$1.00 per liter in Canada) very soon, how bad will you want this vapor carb technology then?

We have realized a variety of power systems to fit a multiple of energy applications that also include the gasoline fuel vapor management system, all with a very low working budget as compared to some others.

This is my last Post and I am leaving all groups for good reason, in which I will not talk about.

I am listed on many energy groups that I posted this update on, and this will be my last email post from now on. I have had to many people come here and make me promises that they just do not keep. Because of this, all public demonstrations are over..... I don't need the emotional ups and downs that comes about as a result of all the promises of funding that have been made to me. Perhaps they become afraid to get involved or fear the large undertaking that this development is going to need. From now on, any future demonstrations will be by invitation only in order for me to weed out the crowd. I am working to form the right working team after I incorporate my business (Magnetic Energy Systems) and begin the licencing, copyrights and patent process..

If you email me to pick my brain for more information, don't waste your time or my time. I will

only engage in negotiations with those who has the interest and funds to invest, absolutely NO middle men at all.

I gave to you all (people all over the world) the Interference Disc generator for free, with out payments of royalties or compensation to the inventor. It is my gift to help you on your quest to be off the grid, for the machine also has clues if you look for it... I see no one replicating the device as of yet, Oh well.., its your loss not mine, your missing out on a good one. If you need to know more about it, read about the late Eklin generators and the Gary Wesley magnet motor from 1876 [Gary Magnetic Motor](#) , or [Gary Magnetic Motor](#) , in which I have successfully replicated with very little funds, mostly sweat from the construction and tuning process for I had most of the materials here already.

Sometimes an inventor must hold back on key information for good reason, I have a family to think about. My email address will be no longer in aprox two weeks, to rid the spammers and all you hackers that are trying to break into our system, as such, I do not store any valuable information on this computer.

Good luck and regards to you All

Working for a better cleaner world with high efficient energy devices.

AL Francoeur
Research/Inventor
Magnetic Energy Systems
BC, Canada

PowerPedia:Radiant Energy

(Redirected from [Radiant energy](#))

See also: [Directory:Radiant Energy](#)

Radiant energy is the [energy](#) of electromagnetic waves. Radiant [energy](#) exists in a range of wavelengths that extends from Extremely Low Frequency (ELF) to gamma rays. The term is most commonly used in the fields of radiometry, solar energy, heating and lighting, but is also used less frequently in other fields (such as telecommunications). The quantity of radiant energy may be calculated by integrating radiant flux (or power) with respect to time and, like all forms of energy, its SI unit is the joule. In applications involving transmission of power from one location to another, "radiant energy" is sometimes used to refer to the electromagnetic waves themselves, rather than their energy (a property of the waves).

Radiant energy is one of the energy sources that can be used to power an open system. Such an open system can be man-made (such as a solar energy collector), or natural, such as the Earth's atmosphere. In geophysics, transparent greenhouse gases trap the sun's radiant energy (at certain wavelengths), allowing it to penetrate deep into the atmosphere or all the way to the Earth's surface, where they are re-emitted as longer wavelength radiation (chiefly infrared radiation). Radiant energy is produced in the sun as a result of nuclear fusion.

Radiant energy, as well as convective and conductive energy, is used for heating homes. It can be generated electrically by infrared lamps, or can be absorbed from sunlight and used to heat water. Since radiant energy is really just electromagnetic radiation under another name, it is the basis of a wide range of communication technologies using radiofrequency and microwave radiation.

One of the earliest wireless telephones to be based on radiant energy was invented by Nikola Tesla. The device used transmitters and receivers whose resonances were tuned to the same frequency, allowing communication between them. In 1916, he recounted (see Anderson's book, below) an experiment he had done in 1896. He recalled that "Whenever I received the effects of a transmitter, one of the simplest ways [to detect the wireless transmissions] was to apply a magnetic field to currents generated in a conductor, and when I did so, the low frequency gave audible notes."

The United States Patent Offices has a classification of radiant energy for patent applications (Class 250, a residual class for methods and apparatus involving radiant energy). This class provides for all methods and apparatus for using, generating, controlling or detecting radiant energy, combinations including such methods or apparatus, subcombinations of same and accessories therefore not classifiable elsewhere by the patent office.

Terminology

Quantity - Symbol - SI - unit - Abbr. - Notes

Radiant energy Q joule J energy

Radiant flux Φ watt W radiant energy per unit time, also called radiant power

Radiant intensity I watt per steradian $W \cdot sr^{-1}$ power per unit solid angle

Radiance L watt per steradian per square metre $W \cdot sr^{-1} \cdot m^{-2}$ power per unit solid angle per unit projected source area. Sometimes confusingly called "intensity".

Irradiance E watt per square metre $W \cdot m^{-2}$ power incident on a surface.
Sometimes confusingly called "intensity".

Radiant emittance / Radiant exitance M watt per square metre $W \cdot m^{-2}$ power emitted from a surface. Sometimes confusingly called "intensity".

Spectral radiance L_λ or L_ν watt per steradian per metre³ or watt per steradian per square metre per Hertz $W \cdot sr^{-1} \cdot m^{-3}$ or $W \cdot sr^{-1} \cdot m^{-2} \cdot Hz^{-1}$
commonly measured in $W \cdot sr^{-1} \cdot m^{-2} \cdot nm^{-1}$

Spectral irradiance E_λ or E_ν watt per metre³ or watt per square metre per hertz $W \cdot m^{-3}$ or $W \cdot m^{-2} \cdot Hz^{-1}$ commonly measured in $W \cdot m^{-2} \cdot nm^{-1}$

Radio spectrum

ELF	SLF	ULF	VLF	LF	MF	HF	VHF	UHF	SHF	EHF
3 Hz	30 Hz	300 Hz	3 kHz	30 kHz	300 kHz	3 MHz	30 MHz	300 MHz	3 GHz	30 GHz
30 Hz	300 Hz	3 kHz	30 kHz	300 kHz	3 MHz	30 MHz	300 MHz	3 GHz	30 GHz	300 GHz

extremely low frequency ELF

super low frequency SLF

ultra low frequency ULF

very low frequency VLF

low frequency LF

mediumwave MF

high frequency HF

very high frequency VHF

ultra high frequency UHF

Microwave SHF

extremely high frequency EHF

Resources and external articles

Nikola Tesla

"Radiant Energy -- [Wireless Transformer of High Power Lines?](#)". Pure energy systems.

Oliver Nichelson, "[Tesla's Fuelless Generator](#); Nikola Tesla's later energy generation designs".

[Bruce Perreault](#), "[Nikola Tesla's Radiant Energy System](#)".

[Bruce Perreault](#), "[New Generation of Radiant Energy Devices](#)".

Radiant Energy: [Unraveling Tesla's Greatest Secret](#), Part 1. Educate-Yourself, The Freedom of Knowledge, The Power of Thought.

"[Tesla's Radiant Energy Patents](#)". Twelve Star Publishing : Sourceworks.

Emmett Butler, "[Radiant Energy Aerial Capture \(REAC\) & Transformation Device](#)". 10/07/04.

Gerry Vassilatos, "[RADIANT ELECTRICITY \(From Page 32: Secrets of Cold War Technology \)](#)".

T. Henry Moray

Thomas Henry Moray, "[The Sea of Energy](#)". Rex Research. [From the original The Sea of Energy in Which the Earth Floats]

Thomas Bearden, "[Moray Radiant energy Device](#)".

Regulations

"[Radiant energy](#)". FS-1037C.

Patents

[U.S. Patent 685957](#) ([G.patent](#); [PDF](#)) - Apparatus for the utilization of radiant energy - N. Tesla

[U.S. Patent 685958](#) ([G.patent](#); [PDF](#)) - Method of utilizing of radiant energy - N. Tesla

[U.S. Patent 3971938](#) ([G.patent](#); [PDF](#)) - Method of generating electricity from radiant energy called variable polarizability capacity generator - L. R. O'Hare

Other

Caverly, Donald Philip, "*Primer of electronics and radiant energy*" New York, McGraw-Hill, 1952.

Hardis, Jonathan E., "[Visibility of Radiant Energy](#)". (PDF)

"[Radiant Energy](#)". Lighting Design Knowledgebase. (Term of radiometry)

Anderson, Leland I. (editor), *Nikola Tesla On His Work With Alternating Currents and Their Application to Wireless Telegraphy, Telephony and Transmission of Power*, 2002, [ISBN 1893817016](#)

[Clear Tech Inc.](#) - Dr. Peter Lindemann's site about how Nikola Tesla discovered the effect, back in 1889, and named it "Radiant Energy."

Peter A. Lindemann, D.Sc., "*The Free Energy Secrets of Cold Electricity*".
(Video)

Peter A. Lindemann, D.Sc., "*The Free Energy Secrets of Cold Electricity*".
(Book)

Dr. Lindemann, "*The Radiant News*". - back-issues for sale

Adapted from the Wikipedia article, "[Radiant energy](#)", used under the *GNU Free Documentation License*.

See also

[OS:Keppean Scalar Motor](#)

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Categories: [Galactic](#) | [Radiant Energy](#)

Radiant Energy

(Term of *radiometry*)

The energy transported by electromagnetic radiation. When this radiation hits an object in its path, then it may get absorbed partly or completely and transformed into some other form. For example, this is the case with the microwave radiation (electromagnetic radiation near ca. 5 GHz) when it is absorbed by the water in your food, and transformed into thermal energy (heat).

The special case we are interested in is of course the energy transported by electromagnetic radiation within the spectral band visible to the human eye. We usually measure the output of a light source in radiant energy weighted by the spectral response curve of the human eye per time unit, its *luminous flux*.

Standard unit for radiant energy is **Joule (j)**.

References:

[radiometry](#)

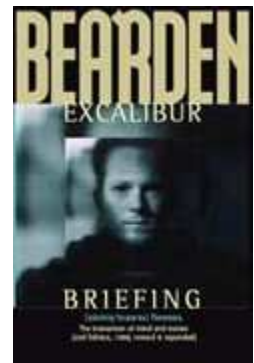
[luminous flux](#)

English

German

radiant energy

[The Tom Bearden
Website](#)



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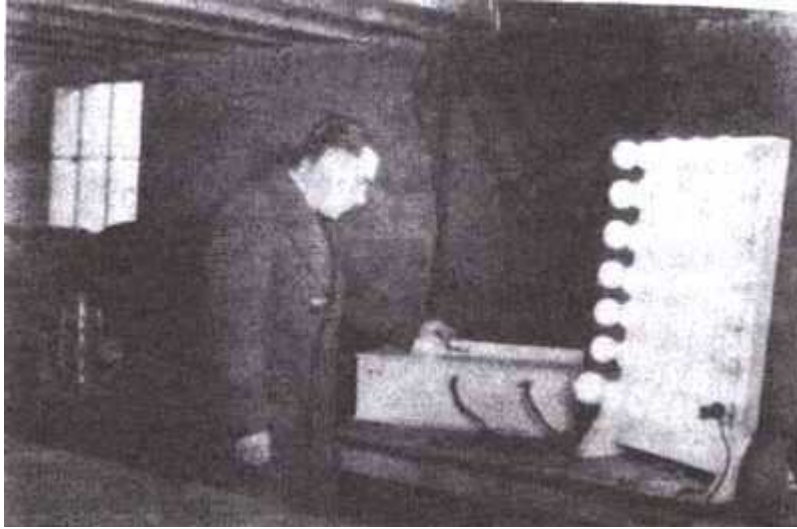
**T. Henry Moray makes some final adjustments in tuning his radiant energy
device to tap zero-point vacuum energy**

THE MORAY RADIANT ENERGY DEVICE

In the early 1900's, [Dr. T. Henry Moray](#) of Salt Lake City produced his first device to tap energy from the metafrequency oscillations of empty space itself. Eventually Moray was able to produce a free energy device weighing sixty pounds and producing 50,000 watts of electricity for several hours. Ironically, although he demonstrated his device repeatedly to scientists and engineers, Moray was unable to obtain funding to develop the device further into a useable power station that would furnish electrical power on a mass scale.

As a boy, Moray had been deeply inspired by the greatest electrical genius of all time, Nikola Tesla. His imagination was especially fired by Tesla's claims to have knowledge of an energy source greater than ordinary electricity, and by Tesla's emphasis on frequencies as the stuff of the universe. When Moray finished high school in Salt Lake City, he went abroad to study, and took resident examinations for his doctorate in electrical engineering from the University of Uppsala, Sweden, during the period 1912-14. Returning home, his diploma and credentials were interrupted by World War I, and the University mailed him these items in 1918 after the war.

Shortly thereafter, Moray produced his first elementary device that delivered measureable electrical power, and he continued to work diligently on energy devices when he had time. In the 1920's and 1930's he steadily improved his devices, particularly his detector tube, the only real secret of the device according to Moray himself. In his book, *The Sea of Energy in Which the Earth Floats*, Moray presents documented evidence that he invented the first transistor-type valve in 1925, far ahead of the of officially recognized discovery of the transistor. In his free energy detector tube Moray apparently used, inside the tube itself, a variation of this transistor idea—a small rounded pellet of a mixture of triboluminescent zinc, a semiconductor material, and a radioactive or fissile material. His patent application (for which a patent has never been granted) was filed on July 13, 1931, long before the advent of the Bell Laboratories' transistor.



Here the Moray radiant energy device is providing free power to 35 100-watt lamps and a 1200-watt iron.

In test after test Moray demonstrated his radiant energy device to electrical engineering professors, congressmen, dignitaries, and a host of other visitors to his laboratory. Once he even took the device several miles out in the country, away from all power lines, to prove that he was not simply tuning in to energy being clandestinely radiated from some other part of his laboratory. Several times he allowed independent investigators to completely disassemble his device and reassemble it, then reactivate it themselves. In all tests, he was successful in demonstrating that the device could produce energy output without any appreciable energy input. According to exhaustive documentation, no one was ever able to prove that the device was fraudulent or that Moray had not accomplished exactly what he claimed. On the other hand, the records are full of signed statements from physicists, electrical engineers, and scientists who came to the Moray laboratory as doubting Thomases and left with the complete conviction that Moray had indeed succeeded in tapping a universal source of energy that could produce free electrical power.

But in the face of all of this, the U.S. Patent Office refused to grant Moray a patent, first, because his device used a cold cathode in the tubes (the patent examiner asserted it was common knowledge that a heated cathode was necessary to obtain electrons) and, second, because he failed to identify the source of the energy. All sorts of irrelevant patents and devices were also presented as being infringed upon or duplicated by Moray's work. Each of these objections was patiently answered and nullified by Moray; nonetheless, the patent has still not been issued to this day, although

the Morays still keep the patent application current.

One of Moray's efforts to develop the machine involved an association with the Rural Electrification Agency for a short time before World War II. At that time, the R.E.A. was apparently infiltrated by Communist sympathizers and high level officials of a decidedly pinkish tinge. These officials continually urged Moray to turn over all details of his device to the Soviet Union, and even arranged the visit of high-level Soviet scientists to the Moray laboratory to see the device in operation. On the initiative of the Communist-infiltrated R.E.A., one person—let us call him "Z"—spent about two months in Moray's laboratory, and succeeded in worming his way into Moray's full confidence. Moray eventually disclosed most of the details of the construction of his special valve to "Z"—the only person in whom Moray ever completely confided.

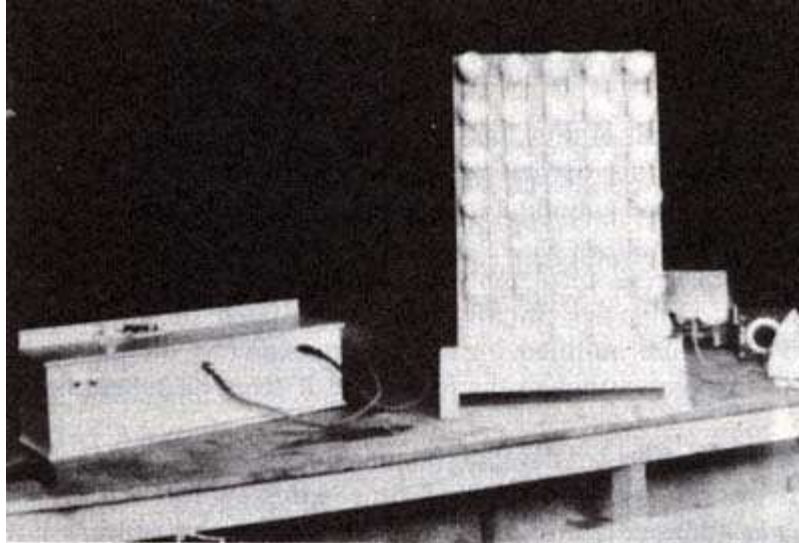
There is strong reason to believe that "Z" was a Soviet agent, and that this is where the Soviets first obtained the impetus to develop the [hyperspace amplifiers later used in their psychotronic weapons.](#)

However, Moray became quite alarmed at the continued attempts of his R.E.A. contacts to get the device into the hands of the Russians. He eventually concluded that he had become involved with a governmental group filled with radicals and reactionaries. Moray became concerned that fifth column activity was actually directed against him in an attempt to steal his device. Quotes from the *Salt Lake Tribune* of December 2, 1941, attributed to Representative Thomas D. Winter, imply that Moray's suspicions of the R.E.A. were well founded, since Representative Winter called for a full-scale investigation of the R.E.A. on the grounds of Communist infiltration. Indeed, Moray was wounded by gunshot in his own laboratory on March 2, 1940, which seems to suggest that his fears and suspicions were based on fact. Moray severed his association with the R.E.A. in February 1941.

However, his basic unit had been destroyed by a hammer-slinging witness in 1939; it is not clear whether or not this was the work of "Z" or of someone else. According to his son, John Moray, the man who broke his unit, as well as other interested groups, wanted complete disclosure of the materials and construction — nothing more or less. John Moray, who operates the Research Institute in Salt Lake City, has been trying to continue his father's work since the basic unit was destroyed. Dr. Moray himself died in May 1974.

According to John Moray, highly energetic cosmic rays from space are tapped by the machine, which is in subharmonic resonance with

this high-frequency energy level, and it converts this energy level into a usable form of electricity. However, John Moray's use of the term "cosmic ray" is not necessarily the same as that of modern physics, but in fact is the same as the present concept of "zero-point" energy of vacuum. T. Henry Moray envisioned all space filled with tremendously high frequency vibrations carrying vast and incalculable amounts of pure raw energy. He envisioned the dynamic Universe as a turbulent source of great energy, just as the ocean waves carry energy throughout the earth. This was also the vision of Tesla, and after him of Clifford and Einstein, who turned the attention of general relativity to the problem of the nature of the vacuum itself. Clifford and Einstein founded a branch of physics that has come to be known as quantum geometrodynamics, the study of energetic change that occurs in little pieces, including the concept that very small lengths of space, or pure vacuum, themselves oscillate at great frequency and with great energy. In Moray's day relativity was still a strange and unproven branch of physics, suspected and rejected by most of the physicists of the day, and quantum physics was still in the process of being worked out. There was no theory whatsoever predicting that empty space itself not only contained prodigious quantities of energy, but in fact *was* prodigious quantities of energy. But slowly, over the decades, the picture has changed, and the modern followers of quantum [geometrodynamics](#) assert the truth of Tesla's original vision. Today we know that one cubic centimeter of pure vacuum contains enough energy to condense into $10^{80} - 10^{120}$ grams of matter! Thus the major part of Moray's thesis—that vacuum itself contains unlimited energy—is vindicated today. In this sense empty space is like a gigantic, restless ocean, and Moray's free energy "tapping" device is no more mysterious than the water wheel. In other words, his thesis that the energy is there to be tapped is correct; it only awaits a practical method to tap it in order to solve the energy problems of mankind forever.



Once tuned in, the power continues and is free for the taking.

Moray thus is vindicated as a man ahead of his time, who simply built a device before any theory existed to explain its operation. Moray met with constant opposition, and his life and that of his family was anything but pleasant. Certain pressure groups constantly tried to force him into selling for almost nothing, or to disclose the secrets of his valve's construction. He was often attacked and he was sometimes shot at on the city streets. In fact, his life was threatened so often that he was forced to install bulletproof glass in his automobile. His laboratory was broken into, some of his components and papers were stolen, and his dogs were continually being killed. Moray was shot in his own laboratory, and he himself always carried a gun. Because he was harassed ceaselessly, over the years he became understandably suspicious and close-mouthed about his work. He sometimes greeted visitors at his desk with a loaded pistol lying on the desk within easy reach, and occasionally confirmed that he would not hesitate to shoot if he were attacked or threatened. One of his: greatest fears was that big interests would take up his invention and simply shelve it to keep it from benefiting the public. When large companies made him offers, he always demanded written guarantees that the device would be put into production and sold to everyone, once it was developed.

Moray also realized the potential of his devise as a weapon. He was fully aware that the only difference between a controlled energy device and an explosion is the rate of release of the energy. According to John Moray, his father received an offer to go to Japan in 1938 because he had built a deathray which operated off the device. According to John, a representative of the Japanese government came to the laboratory and offered a position to Moray,

but he refused. Allegedly Moray had managed to rig the device so that it projected a ray of energy in a beam, and could kill mice instantly at over fifty feet. When radiated by the beam, the mice were carbonized immediately. They appeared frozen, but nothing was left except their shells, and they simply fell apart when touched.

In one experiment Moray ran his device for 157 hours without any connection to external power sources, and produced over fifty kilowatts of power during the test. He also found that an additional fifty kilowatts could be added by simply providing another tap further back in the circuit. When he shut the device off from this test, he had proven once and for all that the device was generating electrical energy from free and natural sources without batteries or external power. During this test nothing in the machine heated up; instead, all parts of the circuit ran absolutely cold. This alone is totally unexplainable by ordinary electromagnetic theory, and it strongly implies the truth of Moray's assertion that the device simply collects the energy in each of its stages in a subharmonically resonant manner, in synchronization with the extremely high frequency cosmic oscillations. In other words, since the parts of the machine ran cold, it is clear that the energy was being simultaneously collected at each stage rather than being processed through the individual stages in serial order, since serial processing in the conventional electrical sense would lead to resistance heating of the circuit elements.

Moray's device used twenty-nine stages of his special detector valves, which were difficult to produce, costing about five hundred dollars each. Only about one in four proved suitable for operation. He also had difficulty in obtaining sufficiently pure materials to make his special mixture for the pellet that enabled tube operation in a one-way gating fashion. Moray explained that his device was based on the discovery of a mixture that would act as a one-way gate for the high frequency oscillations of space, so that the energy could go through the material more readily in one direction than another. Thus it was like a one-way gate valve to an ocean wave; the energy "water" could flow in in each valve, but was prevented from flowing back out. The assemblage of multiple stages thus provided a series of collectors which contained enough energy to be useful. Theoretically there was no limit to the number of collectors that could be added, and so there appeared to be no limit to the energy that such a device could produce.

Thomas Henry MORAY

Radiant Energy Receiver
***The Sea of Energy* [Excerpts]**

Excerpts of technical factoids from:

The Sea of Energy

[From the original *The Sea of Energy* in *Which the Earth Floats* -- 1978

Edition: Cosray Research Institute, Salt Lake City, UT]

by

Thomas Henry Moray



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Introduction

[4th Edition]

RADIANT ENERGY --- The term Moray has used to describe that source of energy coming from the cosmos to earth and radiating from the earth back from whence it came. This is the energy the Moray device captures and could be described as those particles of energy pervading all space. In

the evolution of energy and the evolution of matter these particles of matter and energy (one and the same) manifest under certain conditions as pure energy and under others as pure matter. Radiant Energy from the cosmos, like radiant particles of matter, being composed of an infinitesimal quantity whose behaviors are described by mathematical equations similar to those used for describing electrical waves, keeping in mind to differentiate between wavelength and frequency. Radiant Energy is particles of energy, just as light is wavelengths and particles are comparable to the electron and magneton: a ring of negative electricity traveling in a vortex with the speed of light, streams of energy quanta, each quantum having energy and momentum where the electron revolves around the proton at a distance equal to the electron radius.

To summarize: Radiant Energy as herein used is that energy existing in the luminiferous medium of the universe, kinetic and exercised in wave transmission and rendered sensible by conversion of its energy into a detectable frequency. In the final analysis, Radiant Energy is a means of using the energy released by the fissionable reactions taking place in the stellar crucibles of the universe.

The Early Years

[p. 20] "I started my experiments with the taking of electricity from the ground, as I termed it, during the summer of 1909. By fall of 1910 I had sufficient power to operate a small electrical device, and I made a demonstration of my idea to two friends... This demonstration in the early stages consisted of operating a miniature arc light... It soon became evident that the energy was not static and that the static of the universe would be of no assistance to me in obtaining the power I was seeking...

During the Christmas Holidays of 1911, I began to fully realize that the energy I was working with was not of a static nature, but of an oscillating nature. Further I realized that the energy was not coming out of the earth, but instead was coming to the earth from some outside source. These electrical oscillations in the form of waves were not simple oscillations, but were surgings --- like the waves of the sea --- coming to the earth continually, more in the daytime than at night, but always coming in vibrations from the reservoir of colossal energy out there in space. By this time I was able to obtain enough power to light the old 16-candlepower carbon lamp for about one half capacity, and I did not seem to make any further improvement until the spring of 1925."

[p. 21] In 1912 he was called to go on a mission for the Church of Jesus Christ of Latter-Day Saints, and under a visitor's visa was allowed to enter Sweden during the Exhibition of 1912 in Stockholm...

In his notebook, dated November 1, 1913, Henry included a memo that he had obtained material from a railroad car at Abisco, Sweden the previous summer, and material from the side of a hill. He made electric tests of these materials, taking them home to try each as a detector for his energy machine. Tests indicated that this soft, white stone-like substance might make a good "valve-like detector"*.

[* This "valve-like detector" is what led Henry to do research in semi-conductive materials, and from this soft white stone he developed his first Moray valve and the Moray valve that was used in some of the early Radiant Energy devices]

[p. 22] "Silver wire used on stone makes a rectifier."

Chapter 2

Radiant Energy In Earnest

[p. 31] Henry Moray demonstrated that energy was available by its actions on a resistive load, such as a flat-iron or a space heater, and by lighting

lights. A resistive load is directly proportional to the amount of energy delivered to it. In heating a heater or lighting a light, the number of watts produced can be calculated as equal to the number of watts consumed. This energy is fed into a load to give either heat/light, or power. A motor can be operated but must be designed for high frequency. The Radiant Energy device operation is shown in Figure 54, in which he used an antenna and a ground connected to his solid state RE device...

He was able to show that none of the energy came from within his device. Internally the device was electrically dead when it had not been connected and tuned to the antenna. When his device was set up, he could connect it to an antenna and ground, and by priming it first and then tuning it as he primed it, the device would draw electrical energy. This high frequency electrical energy produced up to 250,000 volts and it lighted a brighter light than witnesses had ever before seen. Heavy loads could be connected to the device without dimming the lights that were already connected to it. This device worked many miles from any known source of electrical energy. Such as transmission lines or radio. The device produced up to 50,000 watts of power and worked for long periods of time....

He assumed at first that this energy was electromagnetic in origin; however, he never claimed that it was electromagnetic in nature. He assumed at first that this energy came from the earth. But later he believed

it was from the universe. Finally he began to believe that it was present throughout all space, intermolecular space as well as terrestrial and celestial space. He did not necessarily understand how his detectors operated, only that if he very carefully built the device according to his calculations, it worked. He was able to demonstrate the existence of an energy that today, though it has not been identified or proven, has been theorized by many researchers...

[p. 32] As early as 1904, Nicola Tesla, experimenting with AC currents of high potential and high frequency, said: "Ere many generations pass, our machinery will be driven by a power obtainable at any point in the universe... Throughout space there is energy. Is this energy static or kinetic? If static, our hopes are in vain; if kinetic --- and this we know it is for certain --- then it is a mere question of time when men will succeed in attaching their machinery to the very wheelwork of nature."

[p. 35] The following is [excerpted from] a booklet printed about 1932, entitled "Brief History of Moray Radiant Device":

The largest instrument being about 6 inches high and circular in shape and about 8 inches in diameter... We went out on the roof of the chicken coop carrying the device on a small drafting board, erected an antenna upon the roof of the coop, the antenna being about 100 feet from the house. We

pulled the main line switches in the house before going out upon the roof. Mr Judd had me move the drafting board from place to place and I also had him examine the inside of the coop for hidden equipment. I then put the machine together in his presence and the device was then started. Mr Judd timed me to see how long it would take to bring in the light. I was able to light-watt type CGE lamp to full capacity and also to heat to the sizzling point an old style Hotpoint electric flat iron which consumed 655 watts. Mr Judd asked me to take off the antenna. The light went out. It was connected again and the light reappeared. We drove a new ground at a spot selected by Mr Judd, made a connection over to a new ground and the light burned dim but came brighter and brighter as the new ground was driven deeper and deeper.....

[p. 36] Whenever the ground or antenna is left disconnected too long the device becomes electrically dead and must be retuned in order to obtain the energy.....

[p. 37] Dr Eyring found no fault with the demonstration and the worst that he could say about it was that it might be induction, but that if I would take the device out in the mountains away from all power lines, a distance of 3 or 4 miles, and it would then operate he would then acknowledge that it could not be induction and that his theory was wrong and mine right...

At last they decided to go up Emigration Canyon, as there are no power lines in that canyon... All three gentlemen were very well satisfied and pleased with what they saw...

[p. 40] "The antenna wire was put up without any aid or instructions whatever from Mr Moray, except that he suggested that the wire be stretched tighter to prevent so much sag at the center. This was done and the wire then appeared to clear the ground by about 7 or 8 feet at its lowest point.

The ground pipe was of 1/2-inch water pipe consisting of two sections. The lower section was pointed at the end to make its driving into the creek bed easy. It was about 6 feet long and after being driven down about 5 feet the second section, which was about 4 feet long, was screwed on with a wrench and the pipe further driven down until it struck a hard object... I judge about 7 feet of pipe was in the ground.

The antenna wire was insulated from the poles with two glass insulators about 6 inches long and having holes in both ends. A piece of wire about 2 feet long connected each insulator with the pole. The lead-in wire was fastened to the antenna wire at a point about 10 or 15 feet from the east pole. I helped Mr Moray solder the connection[s]... I stepped the distance between the two antenna poles and estimated it to be 87 feet...

Mr Moray's equipment, aside from the antenna and ground wires, consisted of a brown box about the size of a butter box, another unpainted box slightly smaller, a fiber board box about 6" x 4" x 4", which Mr Moray referred to as containing the tubes. And a metal baseboard about 14" x 4" x 1" containing what appeared to be a magnet at one end, a switch near the middle and a receptacle for an electric light globe at the other end. There were also several posts for connecting wires on the baseboard...

When all of the wires connections were made and everything was in readiness Mr Moray began tuning in... Before tuning in he placed the key on the post: he said it would be in contact with while the light burns but no light appeared. The tuning in consisted of stroking the end of a magnet across two metal projections protruding from what I referred to above as being a magnet. After tuning in for slightly more than 10 minutes the key was put on the operating post and the light appeared immediately... Mr Moray put the key on the operating post two or three times before during the tuning in operation but no light appeared... We allowed the light to burn for 15 minutes..... The brilliancy of the light, a 100-watt globe... was about 75% as bright as a 100-watt globe connected to an ordinary house socket in my opinion. It was an even light, without fluctuations of any kind.

While the light was burning Mr Moray disconnected the antenna lead-in wire from the apparatus and the light went out. He connected it again and

the light appeared. He also disconnected the ground wire and the light went out. He then connected it and the light appeared again."

[p. 42] [In another demonstration], I [T. Moray] opened the device and let them see everything except one small part that I was able to place my hand over and hide in my fist. This part I cut off and put in my vest pocket. Everything else I let them examine to their hearts' content. "If that part is able to make such power itself it's some device and worth selling. Such a battery would be worthwhile", were some of the remarks passed...

[p. 48] On several occasions Dr Moray would disconnect the antenna wire momentarily, but not long enough to lose the light. In disconnecting and connecting the antenna wire a flash of electricity could always be seen at the connecting point...

[p. 49] Salt Lake City, Utah, October 10, 1928 ~ To Whom It May Concern:
Below is a report of my observation of the Moray cosmic energy device.

The aerial used is about 200 feet long and is about 80 feet above the ground: the wire is a copper cable approximately a fourth inch in diameter, and well insulated. The ground is the water pipe in the basement of Dr Moray's home.

The device was assembled in a trunk through the sides of which were holes for the connections to ground and to the antenna and for observation; the said holes were about one-half inch in diameter. There were two boxes about 10 by 20 by 4 inches, one on top of the other; both were closed and the covers fastened with screws. On the upper box was lying an insulating panel about an inch thick by 15 inches long and 3 inches wide; it is of slate or hard rubber or some material of similar appearance. On this were two binding posts that were connectible by means of a small switch; also mounted on this panel is a body about 2-1/2-inches square, wrapped in friction tape, from which protrude two poles about 1/4-inch in diameter, apparently of soft iron. A double receptacle for light globes was connected in the circuit. In one of which was a 20-watt globe, and in the other a 100 watt globe...

Dr Moray then took a magnet, which was a very broad, short limbed U, and began to stroke one pole of it on the poles in the taped body: Mr Jensen placed his fingers on the binding posts several times, and at last received a rather vigorous shock; Mr Moray then threw the switch and the globes lighted...

As a further proof that the conversion of the energy was due to the mechanism in the box, Dr Moray hit the table on which the trunk was

standing, a moderate blow with a hammer whereupon the light flickered and went off, due to the detector being shaken out of adjustment.

The boxes in which the mechanism had been hosed during the test were opened and the contents examined; there were condensers, the detector, a transformer, and two tubes in them but nothing else. Nothing that in the least resembled a battery.

It is to be noted that after a total run of 158 hours the device supplied 635 watts; inasmuch as a horsepower is but 746 watts this equals 0.878 of a horsepower or slightly more than 7/8 horsepower. This alone is sufficient to dispose of any suggestion of a battery...

[p. 54] To All Whom It May Concern (June 25, 1929): It is now more than 2 years since I first became acquainted with Dr T. H. Moray and the work he is carrying on, and in tat time he has demonstrated inventive ability of an exceptional order.

Perhaps the most wonderful of his inventions is a device whereby he is able to draw electric power from an antenna. This energy is not derived by induction from power lines, as has been suggested by some, nor is it derived from radio stations, as has been demonstrated by taking the apparatus more than 26 miles from the nearest power line and over a hundred miles from the nearest radio station and showing that it operates

just as well as anywhere else. This device was subjected to an endurance test in which it was operated continuously for a week, and at the end of that time a 100-watt lamp was lighted simultaneously with the heating of a 575 watt standard Hotpoint flat iron, making a total of 675 watts; it is very evident that no batteries could sustain such a drain as this.

He has also invented a very sensitive sound detector whereby it is possible to hear conversations carried on in an ordinary tone of voice at a distance of several blocks.

He has also worked out numerous radio hookups which eliminate many of the parts now considered necessary for good reception, yet there is no diminution in quality or volume; in fact, there is a notable elimination of interference from static when some of these are used.

He has devised a means by which he is able to measure with some degree of accuracy the energy evolved during mental activity; that is, he gets definite, variable deflections of the needle of a sensitive galvanometer which appeared to be related to the vigor of mental activity.

There are a great many other equally remarkable things that he has done, such as reducing old rubber from truck tires to the state of a viscous fluid which is readily vulcanizable without the addition of smoke sheet as is

necessary with other processes; also a high frequency therapeutic device, and numerous other devices which show great ingenuity.

Signed, Murray O. Hayes, PhD.

[p.55] You asked some questions at that time that I could not answer on account of my lack of knowledge, both of science and the detail construction of the machine of Dr Moray's that we were talking about. There was one thing in particular that you asked about and that I know I did not make clear in my answer, and that was in regard to the setup of the six 100-watt lamps. You asked if they were set up in multiple or series, and this question was especially brought up as we were referring to the very small wire, which is a No. 50, which I stated was used in connection with the operation of said lamps. Since my return to Salt Lake, I have gone over this matter and find that the 6 lamps are set up in parallel and the small wire is used as the current enters the tube prior to and connecting with the step-down transformer, this taking the terrific high voltage to the transformer. In other words, I am trying to say to you that this is a terrific high voltage, and we are using the word "terrific" because it has been demonstrated that this is an exceedingly high voltage because it will [jump] through an arc flash at least 6 inches and in excess.

Another thing that you asked me about was the measuring of the voltage or amperage, and I know I did not answer to your satisfaction. However, I must now state that "the frequency is so high that I have no instrument in my laboratory that is able to measure the amperage or the voltage at this frequency"

Dr Murray Hayes has examined most carefully and knows the construction of Dr Moray's machine, knows the theory in detail, has practically prepared the papers for patent applications...

Chapter 3

Frienemies

[p. 65] Dr Milton Marshall was attempting to identify the material that he called his "Swedish Stone". When he described the action of his germanium mixture to the two physicists [Carl Eyring and Harvey Fletcher], they knew that the entire composition of the Swedish Stone had no been properly identified...

[p. 66] Dr Moray... described the radio detector he had developed... He compared it to what was commonly known as the crystal of a crystal set.

However, his detector was superior since it could drive a loudspeaker without the use of a battery...

He used the most easily demonstrated device, the germanium diode, that worked on the same principle as the radium to illustrate how he thought the Radiant Energy Detector worked... Henry originally built the radio simply for that purpose --- to show how he was able to pick up signals with a solid-state device sufficiently strong that they would drive a loudspeaker, which was something unheard of in that day... His circuit did not have batteries, as it was very similar to the old crystal-set circuitry. Figure 17, sub-figure 3, shows how the original germanium valve was used and how it worked in the radio circuit.

The earliest drawings and descriptions of the Moray Valve are found in a sworn certificate dated November 14, 1927, where he describes a germanium compound using the words "pure germanium" (Figure 14). [Re-purified 5 times]

In 1937, in order to protect his interest in the germanium valve, he wrote an affidavit and had this affidavit witnessed (Figure 15). This affidavit refers to certain drawings and descriptions found in patent application 550611... I have made copies of the patent application that applied to the description found (Figure 8 & 9, patent application 550611, enclosed) (Figure 16).

The Radiant Energy Detector, even today with the advanced state of the art of semi-conductors, is considered by our research organization to be proprietary and still of great value. Parts of the certificate (Figure 15) have been removed to protect these interests. It must be noted that the detector described in Figure 15 is also superior to most germanium semi-conductors known today because of some of the doping material used. That this bipolar device is truly a transistor was verified by examination of the complete notes by Warren Simmonds, PhD, of Salt Lake City.

[p. 106] The reader must realize that I use the word "tubes" loosely. Basically my father's "tubes" were solid-state devices.

[p. 111] The device was housed in a wooden box something like 12" by 18", with an antenna and a ground going into it. Wires leading out of the box led to a bank of some forty 100-watt light globes and to an electric iron. My uncle touched a switch at the top of the box with a hand electrostatic plate and the globes all lighted brilliantly. We all noted that the bulbs burned cold except each had a hot spot about the size of a dime on the top slightly off center. I also recall that I could turn the lights on and off by approaching and retreating to and from the device, either with my whole body or my hand. If my memory is clear, the machine had to be tuned with a dial to be placed in this condition. [Chester M. Todd, March 19, 1971]

[p. 114] David Gardner Affidavit: The gentleman who had invited me to the demonstration mentioned a contrivance that Dr Moray had also invented with which he could pick up sounds without them being broadcast from a radio sending station. He said that he had heard a demonstration of this device. I asked if I might hear it also; he called Dr Moray over and asked if I might see a demonstration of the "sound pickup device", and I was granted the privilege.

There was an old radio box of conventional design with two headphones plugged into the box. Dr Moray tuned the device by turning the knob in front. He handed me one set of headphones and one set to my nephew Mr Clark Gardner; he then arranged for three people to walk out of the house into the street and carry on a conversation to which we were tuned... I was sure I was listening to these three men. I remember distinctly it was raining at the time and I could hear the patter of the rain on the pavement as they walked. I remember them saying they had better hurry back into the house lest they get wet.

In the course of their return, I wondered if I might hear other people talking, and despite the advice of Dr Moray not to fool around with the tuning device, I moved the knob slowly and heard very distinctly the sounds of a railroad station: the whistle of a train, and a porter or the station master at

his station saying, "All aboard". The nearest station to the receiving set would have been a minimum of 5 miles...

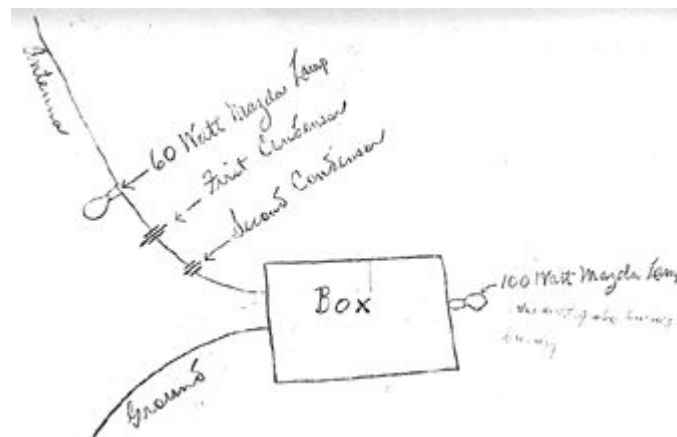
I know that the people on the street had no transmitting device or any other instrument with them. They would not believe me when I told them what I had heard, but they said I was repeating their conversation.

[p. 122] Later, after he had examined the transformer of the device, he stated that with the amount of amperage he had seen taken from the device was positive proof that the current developed by or in the machine was different than in any in use today. Because the transformer would have burned up with normal current, yet the transformer showed no signs of even ever having been warm. He was informed by Dr Hayes that the transformer had been in use under the same type of strain for many tests in the past...

It was Dr Knudsen's fault that the detector burned out because of the excessive inductive kickback he subjected the device to by throwing the main switch in and out so fast and often that this continual breaking of the circuit built up an inductive kickback, which would "blow" any electrical circuit...

[p. 126] Letter from E. G. Jensen (March 21, 1938) ~

Number 1 condenser (Figure 52) consisted of two small sheets of about 30 gauge aluminum separated by but making contact with a piece of one-quarter inch thick plate glass. The plate glass was larger than the aluminum sheets and overlapped them. Number 2 condenser... had the capacity of 0.025 mfd. It was a commercial condenser... manufactured by Igred Condenser & Mfg. Co.



With the 60 watt Mazda Lamp and the two condensers attached to the antenna and the antenna and ground attached to the box containing your Radiant Energy equipment in the manner shown in the sketch, the 100-watt Mazda Lamp on the secondary or output side was lighted. Unscrewing the 60-watt Mazda lamp from its socket caused the 100-watt amp to go out, but it immediately lighted when the 60-watt lamp was screwed in its socket. The 60-watt lamp did not light under any condition or hookup. Shorting the antenna and ground by placing a wire across them, caused the 100-watt lamp to go out. Similar shorting with the hands also caused the 100-watt

lamp to go out. No electricity could be felt when shorting with the hands. If either the ground or the antenna wires were disconnected from the box, the 100-watt lamp would go out. Neither of the condensers or the 60-watt lamp on the primary side of the box were necessary but were simply put on to show that the high frequency power will jump or pass through the condensers...

Chapter 5

Patents

[p. 161] The original patent application was first filed in 1931. This application was rejected on a number of bases. First (Figure 17), "Because no means was provided for causing the cathode to emit an appreciable number of electrons, the current produced in the cathode by the antenna will not heat the cathode to a temperature at which an appreciable number of electrons per second are emitted" (In other words, according to Thomas E. Robinson, Commissioner of Patents, a solid state device, a transistor, cannot possible work). Second, because "No natural source of electric wave energy is known to the Examiner and proof of the existence of such a source is required". In other words, it was not enough for Moray to

demonstrate the effect of the energy source; he also had to identify it, which he could not do...

[p. 186] In 1942, shortly after *World War II* began for the United States, Henry Moray attempted to rebuild a Radiant Energy Device, using the remaining bit of what was known as the "Swedish Stone". This material, which was the heart of his original RE detector, he had never been able to duplicate, and the shortage of this material limited the amount of power he could draw. Consequently, in the large unit, he developed a second detector that forced him into extensive research involving nuclear materials and radioactive reactions. He became deeply involved in the study of synthetic radioactivity as described by Gustave LeBon in his book, *The Evolution of Matter*

[p. 188] The years slipped by and from time to time Henry and I would discuss his notes and go over the drawings. He spent most of his time [ca. 1950] working on what he called the "counter-balance" to eliminate the need for an antenna...

[p. 190] In fact, we have recently been informed that none of the original patent applications that Henry made are any longer available at the US Patent Office. Although their file jackets are there, the contents and applications themselves are gone...

Chapter 7

The Sea of Energy in Which the Earth Floats*

[* Nature of World & of Man, Chicago Inst. of Technology]

by

Dr T. Henry Moray. S. Sc.

[This was the original Chapter 1 in a book called Beyond the Light Rays, which is out-of -print and no longer available. The last known copy was stolen from Dr moray's laboratory...]

A New Era In Energy: Power from the Cosmos and the Earth.

Dr Nikola Tesla said over 60 years ago: "Ere many generations pass, our machinery will be driven by a power obtainable at any point if the univers..... throughout space there is energy. Is this energy static or kinetic? If static our hopes are in vain; if kinetic --- and this we know it is, for certain --- then it is a mere question of time when men will succeed in attaching their machinery to the very wheelwork of nature."**

[** Nikola Tesla: Experiments with Alternating Currents of High Potential & High Frequency, 1904]

Nikola Tesla was not referring to atomic or nuclear energy, but to the energy which is continually bombarding the earth from outer space.

Enough energy is coming to the earth to light over 1.5 million (1,693,600) 100-watt lamps for every human being on the earth today. No fuel of any kind need be taken as a dead load as this energy can be "picked-up" directly by ocean liners, railroads, airplanes, automobiles, or any form of transportation. Heat, light and power can be made available for use in all kinds of buildings and for all kinds of machinery. An example would be to pump water onto the desert lands, the power source being only a fraction of the weight of any steam plant or any kind of engine in use today and all this at a fraction of the current cost.

A wild dream? No! It's a proven practical reality, as hundreds of people know who have witnessed the Moray Radiant Energy invention --- powered from the cosmos. This is cosmic energy. ***

[*** Dr Moray was not referring to Cosmic Rays. One must read further and contemplate his hypothesis regarding energy from within the atom.]

The total energy involved in "cosmic" radiations is very large. The mechanism of its generation involves a basic relationship with the total structure and action of the universe. Today it is believed that cosmic radiation consists primarily of protons and some heavier nuclei. At times

this cosmic energy packs a wallop of around 100 quadrillion volts. Coming continuously with slight variations in time, the radiations have a uniformly directional isotropy.

The earth is, therefore, surrounded in an atmosphere of radiation with cosmic rays coming continually to the earth from all directions, although there may be a slight deflection of the weaker rays by the earth's magnetic field. There is every indication that our sun is not the source of any appreciable amount of this radiation. The origin, therefore, is from the universe as a whole. The total energy of cosmic radiation is more than the entire luminous output of all the stars and nebulae of the universe combined. Unlimited power is being delivered to everyone's doorstep.

The Moray Radiant Energy discovery, using radiations from the cosmos as its power source, gives the greatest amount of energy per pound of equipment of any system known to man. Electrical power through an electric motor or an electric jet far exceeds any form of energy in any engine in the delivery of power. There is no dead center of lost motion in an electric motor nor loss of push in an electric jet. Also, the starting torque is much higher in the electrically powered engine than in the combustion engine.

Harnessing cosmic energy is the most practical method yet discovered by man. Furthermore, it is possible to utilize this vast source of energy from the universe without a prime mover at any point on the earth --- on the ground, in the air, on the water, under the water, or even underground. If one considers that an electrical generator is not in the true sense a generator --- as electricity is not made by the generator --- but is merely an electrical pump, the Moray Radiant Energy device may then be referred to as a cosmic ray pump: that is, a high speed electron oscillator serving as a detector of cosmic radiations which causes a pumping action or surging within its circuitry.

To account for the propagation of heat and light --- two of the forms of Radiant Energy --- man has postulated the existence of a medium filling all space. But, the transference of the energy of radiant heat and light is not the only evidence in favor of the existence of such a medium. Electric, magnetic, and electromagnetic phenomena and gravitation itself point in the same direction.

Attractions and repulsion take place between electrified bodies, magnets, and circuits conveying electric currents. Large masses may be set in motion in this manner, acquiring kinetic energy. If an electric current is started in any circuit, corresponding induced currents spring up in all very closely neighboring conductors. To originate a current in any conductor requires

the expenditure of energy. How, then, is the energy propagated from the circuit to the conductors? If we believe in the continuity of the propagation of energy --- that is, if we believe that when it disappears at one place and reappears at another it must have passed through the intervening space and, therefore, have existed there somehow in the meantime --- we are forced to postulate a vehicle for its conveyance from place to place.

When a particle is electrified, what one must first observe is that a certain amount of energy has been spent; work has been done. The result is an electrified state of the particle. The process of electrifying a conductor is, therefore, the storing of energy in some way in or around the conductor in some medium. The work is spent in altering the state of the medium, and when the particle is discharged, the medium returns to its original state, and the store of energy is disengaged. Similarly, a supply of energy is required to maintain an electric current, and the phenomenon arising from the current are manifestations of the presence of this energy in the medium around the circuit. It used to be that an electrified particle or body was supposed to have something called "electricity" residing upon it which caused electrical phenomena. An electric current was regarded as a flow of electricity traveling along a wire (for example), and the energy which appeared at any part of a circuit (if considered at all) was supposed to have been conveyed along the wire by the current. But, the existence of

induction and electromagnetic interactions between bodies situated at a distance from each other leads one to look upon the medium around the conductors as playing a very important part in the development of these electrical phenomena. In fact, it is the storehouse of the energy.

It is upon this basis that Maxwell founded his theory of electricity and magnetism, and determined the distribution of the energy in the various parts of an electric field in terms of electric and magnetic forces*. The medium around an electrified body is charged with energy and not of an imaginary electric fluid distributed over the electrified body or conductor. When we speak of the charge of an electrified conductor we are referring to the charge of energy in the medium around it, and when we talk of the electric flow or current in the circuit we are referring to the only flow we know of, namely, the flow of energy through the electric field within the wire.

[* Atomic Physics, Physics Staff University of Pittsburgh, 2nd Edition, Ch. VIII, John Wiley & Sons]

The work in producing the electrification of a conductor is spent on the medium and stored there, probably as energy of motion. To denote this we shall say that the medium around the conductor is polarized, this word being employed to denote that its state or some of its properties have been altered in some manner and to a certain extent depending on the intensity

of the charge. If the charge is negative the polarization is in the opposite sense, the two being related, perhaps, like right-handed and left-handed twists or rotations.

Now consider the case of a body charged alternately, positively and negatively in rapid succession. The positive charge means a positive polarization of the medium, which begins at the conductor and travels out through space. When the body is discharged the medium is once more set free and resumes its former condition. The negative charge now induces a modification of the medium or polarization in the opposite sense. The result of alternate charges of opposite sign is that the medium at any point becomes polarized alternately in opposite directions, while waves of opposite polarizations are propagated through space, each carrying energy derived from the source or agent supplying the electrification. Here, then, we have a periodic disturbance of some kind occurring at each point, accompanied by waves of energy traveling outwards from the conductor.

The phenomenon of interference leads to the conclusion that light is the result of periodic disturbances or vibrations of the medium, but as to the nature of these vibrations, as to the exact nature of the periodic changes or what it is that changes them, we possess no knowledge. We know that alternating electric charges are accompanied by corresponding changes of state or vibrations of the medium, and if the charge is varied periodically

and with sufficient rapidity, we have a vibration at each point analogous to, perhaps identical with, that which occurs in the propagation of light --- a combination of wave and particle properties. This then is the electromagnetic theory of the luminous vibration.

In the older elastic-solid theory, the light vibrations were supposed to be actual oscillations of the elements or molecules of the medium about their positions of rest, such as takes place when waves of transverse disturbance are propagated through an elastic solid. Such limitation is unwarranted to some extent, but one cannot afford to entirely disregard the particle theory of light either. A combination of the theories has merit. We know that the change, disturbance, vibration, polarization, or whatever we wish to term it, is periodic and transverse to the direction of propagation. The electromagnetic theory teaches us nothing further as to its nature, but rather asserts that whatever the change may be, it is the same in kind as that which occurs in the medium when the charge of an electrified body is altered or reversed. It reduces light and heat waves to the same category as waves of electrical polarization. The only quality of the latter required to constitute the former is sufficient rapidity of alteration. These speculations were given the strongest confirmation by experiments of Prof. Hertz many years ago.

When a resilient substance is subjected to strain and then set free, one of two things may happen. The substance may slowly recover from the strain and gradually attain its natural state, or the elastic recoil may carry it past its position of equilibrium and cause it to execute a series of oscillations.

Something of the same sort may also occur when an electrified capacitor is discharged. In ordinary language, there may be a continuous flow of electricity in one direction until the discharge is completed, or an oscillating discharge may occur. That is, the first flow may be succeeded by a backrush, as if the first discharge had overrun itself and something like recoil had set in. The capacitor thus becomes more or less charged again in the opposite sense, and a second discharge occurs, accompanied by a second backrush, the oscillation going on until all the energy is either completely radiated or used up in heating the conductors or performing other work.

When capacitors are filled with energy captured by the Moray Radiant Energy device and then discharged through a circuit of proper impedance, reactance and inductance, thereby synchronizing the oscillation of the device with those of the universe*, electrical inertia is set up. In the reversal of the current, the capacitors are charged, discharged and recharged slowly until the energy stored in them is radiated in kinetic energy through

the device, and this energy can be kept alive indefinitely by establishing resonance with the oscillations of the universe.

[* Very often Dr Moray interchanged the word universe with matter.]

Considering oscillations from a mechanical, electrical and mathematical point of view, we find that electrical resistance is the same as mechanical friction and current is comparable to mechanical velocity. Inertia and inductance may then be considered analogous terms. In mechanics the greater the inertia of a body, the longer it will stay in motion. In the Radiant Energy device's resistance-inductance-capacity (REC or RLC) circuit, the greater the electrical inductance, the longer the current continues to flow once it is established by synchronization with cosmic surges.

Expressed mathematically, the equations are the same for electrical or mechanical phenomena. That is, $R < \sqrt{4L / C}$, where R is the resistance in ohms, L is the inductance in henries, and C is the capacitance in farads. When this is true, an oscillatory discharge will occur and a very powerful inductance inertia will assert itself. For low values of R, the frequency of the oscillations can be shown by $f = 1/2 \pi \sqrt{CL}$. The rapidity of the oscillations' frequencies are governed by the capacitance and inductance.

In the vibrational forces of the universe, we find the key to the source of all energy. How we can utilize this energy for modern industry without being limited to mechanical prime movers is the question. And, the answer may in an energy generator, balanced so as to oscillate in synchronization with the oscillations of the universe.

Dr Ross Gunn, a civilian scientist for the US Navy, stated years ago that the earth is a huge generator, generating over 200 million amperes of electric current continuously. For example, the aurora borealis is considered to be a very large definite electrical phenomenon produced by the passage of electric charges through the rarified gases of the higher atmosphere. The earth has since been shown, by Dr Gunn and others, to have a negative charge amounting to 400,00 coulombs. Yet, six feet above the ground the air is charged with more than 200 volts --- positive with respect to the ground.

It is known that air conducts electricity away from charged objects. This being true, how does the earth, a charged object and exposed as it is to the surrounding atmosphere, maintain its charge? If the air conducts electricity, the earth's charge must be constantly passing into the atmosphere. And it has been calculated that the earth has a continuous discharge into the atmosphere of 1800 amperes. At this rate, the earth

would lose 90% of its charge into the air in one hour, yet the earth's charge does not diminish. Where does the earth's source of energy come from?

The conversion of matter to energy in the stars is accepted, and, reasoning from what occurs in radioactive disintegration during which energy waves are radiated, one may conclude that energy waves of very high frequency are sent out from the stars (one of which is our sun). Now, of course, the conversion of energy into matter must equally be accepted.

It has been found that ionization, which could be the medium for the flow of energy, increases with altitudes instead of decreasing. Since the source of energy is the universe, the generation of energy by rotary action and by all prime movers is an effect and not a cause. Oscillatory energy action, be it in a Leyden jar or another man-made capacitor, or in what we may call natural capacitors, behaves the same. The oscillations will continue until they have reach their cycle of height and then there will be a backrush returning to where the oscillations originated. Every oscillation, whether large or small, is completed during the same interval of time. These oscillations all prove the same great fact, that they are governed by the same cycle of time, completed during the same interval of time. Waves of energy have a regular beat note, coming and going as the waves of the sea, but in a very definite mathematical order --- coming to the earth from every direction with a definite rhythm.

Energy has a definite elastic or resilient rigidity and density, which is subject to displacement and strain. When strain is removed, the medium will spring back to its old position and beyond, surging back and forth, and will continue to oscillate until the original pressure is used up. If the internal impedance is too great, there will be no oscillations, but it will merely slide back in a dead beat to its unrestrained state.

By cutting down resistance to a minimum and synchronizing the resilient ionic actions of the Moray device with the wave actions of the universe, periods of oscillation can be made to come quicker and quicker until inertia asserts itself, thus lengthening out the time of final recovery. This is done by carrying the recoil beyond the natural oscillations and prolonging the vibrations by capturing the in oscillatory action. When the recovery becomes distinctly oscillatory, a harmonic pattern is initiated and the oscillations continue, resonance thereby being established with the universe.

In the universe we see the same laws being obeyed as in our laboratories. As one traces down to the almost infinitesimal constituents of the atom, one finds that matter does not exist at all as the realistic substance which we have supposed it to be. There at the very foundation, it consists of nothing more than energy charges emitted at various wavelengths or frequencies. It is becoming more and more certain that the apparent complexity of

nature is due to our lack of knowledge. And, as the picture unfolds, it promises a marvelous simplicity.

One of the most marvelous relationships that has ever been revealed in the entire science of physics is that between light and electricity and the existence of electronics in atoms of matter. Knowing what we do at the present time with regard to the structure of atoms, this relationship is not quite so surprising. However, considering the total absence of this knowledge about a half century ago, the discovery that light, and radiation in general, are vibratory phenomena was revolutionary.

Speaking of radiation, Radiant here means proceeding from a center in straight lines in every direction. Energy is internal and inherent. "Energy is defined as a condition of matter in virtue of which any definite portion may affect changes in any other definite portion". This was written in 1892, and discoveries since confirm it. Energy then is a state of matter, or rather, the result of a particular state or condition in which matter may be when any observed phase of energy appears.

In addition to possessing kinetic energy, the atom is capable of absorbing energy internally. This internal energy is associated with the configuration of the particles of which the atom is composed. Under ordinary conditions an atom is in what is known as a state of equilibrium in which there is

neither a giving off nor absorbing of energy. But, the internal energy of the atom can be altered. When the internal energy of the atom exceeds that of its normal state it is said to be excited. Excitations may be caused in several ways, e.g., the collision of an atom with rapidly moving positive or negative particles or the breaking of lines of force in an electromagnetic generator. Kinetic energy is released when excitation causes a particle to give up some or all of its kinetic energy to the atom during collisions. This is taking place in the universe all the time.

The electric motor and generator would never have been discovered if a dielectric (insulation) had not been discovered. If one discovers a dielectric valve for the energy of the universe, one has the answer to harnessing the energy of the universe! A limiting case of excitation is ionization, wherein energy is absorbed by the atom sufficiently to allow a loosely bound electron to leave the atom, against the electrostatic forces which tend to hold it within the atom. An atom which has given up one or more electrons is said to be ionized. It is possible that ionization, i.e., excitation, may take place in successive steps through absorption of quanta energy. The return of an ionized atom to a state of lower energy is associated with electromagnetic radiation. Also, from the process of ionization, electrical energy may become associated with the vibrational forces of the universe coming into the earth as cosmic radiation. The higher the frequency, the

greater the ionization or excitation, a form of energy which is kinetic in nature. There are tremendous energies coming to the earth from outer space. These energies are only different manifestations of the energies we see in operation all around us. In most cases we are not even aware of their existence. "They penetrate everything including our own bodies. Every one of us is alive by virtue of these energies. Every part and particle of the universe is alive with them. The generators that now furnish our electric power do not create or originate any power or electricity; they merely direct, pump, the existing energy or electricity."*

[* Advances of Science, Watson Davis, 1934]

As in musical notes of high and low "C", the vibrational rates (frequencies) are different, but all "C" notes are essentially the same (harmonically related). This is the foundation upon which much of my investigation of vibratory phenomena is based.

It has been agreed that all forms of matter are vibrating at a particular rate of frequency. And, so it is with the various forms of energy ---heat and light, magnetism and electricity. These are but forms of vibratory motion connected with and being generated from the same source, the universe. Matter vibrates at a particular rate, according to its character, and may be transmitted into other substance by lowering or raising its rate of frequency.

If the frequency is raised high enough, the molecules will separate and the atoms become free. Raising the frequency still higher, the atoms resolve themselves into their original components. Matter then becomes a form of energy. Frequencies may be developed which will balance the force of gravity to a point of neutralization. One can then go beyond the force of gravitation. Understanding the principles of vibration is truly understanding energy.

In gamma rays, we find potentials which are equivalent to as much as 1,000,000 volts, yet their wave lengths are not the shortest known. In octaves still higher lie rays which are known as cosmic rays. Who can draw a definite line and say how much higher other octaves exist than those known as the cosmic rays? Our starting point from the discovery of these different waves was electrical conductivity of the air, and it has been found that this conductivity is just as strong by night as by day. Radiations emitted by the sun can scarcely be the sole cause of this energy. All space is saturated with vibration, energies, which are no doubt electrical in character. The relation of matter to energy and energy to matter then becomes the potential of the universe --- one continuous series of oscillations.

Atoms maintain an equilibrium by oscillations, rotations, attractions and repulsions, but this does not interfere with a transformation of equilibrium,

which, when the transformations of equilibrium are rapid enough, become energy, i.e., matter is turning into energy and energy into matter.

There can be no generation of electrical current and no kinetic energy if there is no disturbance of equilibrium, i.e., change of potential or change of energy levels. When one thinks of the oxygen and nitrogen molecules of the air all about us moving with the speed of bullets and striking us and everything else at this speed, one can form some idea of the agitation taking place here and in the universe.

The oscillations from outer space are emitting electromagnetic waves of many wavelengths and frequencies. The Moray device is so constructed that the frequency is very much lower on the secondary side than on the primary side, and almost complete resonance is established. I am convinced that the energies from the universe are active radiations produced by the evolution of matter into energy and energy into matter.*

[* At this point Dr Moray observed the discoveries of the early agents to be paralleling some of his own ideas. Then he went on to quote several past releases of the day (1960)]

Dr Anderson's cloud chamber at California Institute of Technology in which the positron was discovered has furnished much information about cosmic ray energies. He found that some positrons are born of cosmic rays

smashing into matter. The cosmic ray energies deduced from the tracks left in the Anderson cloud chamber range from 100 volts to 3 billion volts. The Lemaitre-Vallarts theory together with Dr Johnson's asymmetry measurements, give definite values for the energy of half of the cosmic radiation, and shows it continuously distributed between 5 billion and 50 billion volts.

The figure of 100 billion volts is a result of Dr W. Kolhorster's measurement of penetrating radiation in the depths of the Strassfurt salt mines. He found that the minimum energy of these rays had a penetration which was greater than ever before demonstrated. Dr Axel Corlin of Sweden's Lund Observatory found radiation that still had energy after passing through somewhat greater depths and, therefore, the voltage figures can be made even higher. Energies of 100 billion volts or more are indicated by the great bursts set off by cosmic ray collisions, called the stosse, which have been observed particularly in Germany. The Moray RE devices have worked equally well in deep mines, under water or high in the mountains and in an airplane.

It is about 100 years since science began to consider light, heat, magnetism, galvanism, and electricity as natural forces. In the early part of the 19th century school books termed these things "imponderable substances". The corpuscle theory of light was taught, the sun was

supposed to provide an endless supply of those corpuscles. After the corpuscle theory faded, scientists turned to the wave theory, but even that was based on a crude concept of movement of the ultimate principles or atoms, of matter. The electron theory has superceded the earlier ones now, and while the electron theory explains the observed and theoretical "facts" better than the previous concepts did, could it be that, as the greater light of knowledge leads us on, the electron theory in turn will fall short of providing "absolute" knowledge? The Einstein Theory may stand in need of revision or amendment; or, in time, it may join the theories of corpuscles and waves on the back shelf.

Chapter 8

Reactions By Means Of Electron Excitation

[p. 209] A specific case in which the electric field performs the double function of molecular excitation and the creation of intermolecular and atomic ions is being given by the system used by the inventor.

It is a system utilizing the principles of the wire corona with a concentric cylinder at different pressures. The system is modified in conformity to the concept that chemical reactions must take place when the oppositely

charged molecular ions from an appropriate activated catalyst are accelerated against one another in the wire corona. It consists of a cylinder made of a suitable catalyst from which positive ions are emitted. The reactants (gases) streaming through the chamber parallel to the length of the wire attain the polarity of the negative molecular ions by the high electric field close to the wire. As these negative molecular ions are accelerated at the right angles to the wire in the direction of the electric field toward the positively charged catalyst cylinder, they are met by an avalanche of onrushing atomic ions from the catalyst. A certain amount of reaction takes place in that instant, 10^{-8} seconds. However, some of the negative molecular ions outside the mean free path of the positive atomic ions are free to rush headlong toward the positive cylindrical field where they are neutralized, and instantly given a positive charge by the avalanche of outrushing positive ions. These positive molecular ions are accelerated back into the field and collide against the negative molecular ions coming from the direction of the negative electrode corona. This melee continues until the reaction has come to a point where the individual participants are either all gone or the mixture is outside of the electric field: backrush oscillations.

The Moray apparatus combined with other equipment, consists of a combination of specially constructed tubes which we will refer to as valves,

"pressure transmitters", interceptors and oscillators. The valves are not rectifiers in the sense that they operate as radio valves in changing AC or HF to DC. They have an actual valve action in stopping the "flow" of energy which may be thought of as oscillatory action similar to the waves of the sea, without rectification, from returning to the outer circuit, much as a retaining wall could stop the waves of the sea from returning. The other modalities and "tubes" of the device are equally unique in their performance. Although no new laws of energy are being advanced or claimed as having been discovered, the application in the method of utilization of the energy throughout space is unique in that "generation" is accomplished by oscillatory utilization rather than by the conventional prime mover. These detector tubes have a synchronized pull with the specially developed oscillators of high faradic capacity and provide a means through which oscillating energy may pass to specially constructed valve oscillators whose relation to the first stage valve is such as to permit oscillations to come in from but not return to the outer circuit with an automatic variable relation to the oscillations from the universe, and capable of setting up within their circuits initial oscillations which coincide with the oscillations of the universe.

Special provision is provided to stop RE tubes from becoming blocked in their dissipation of the charges created by the oscillations that continually

accumulate based on the oscillatory capacity backrush effect common to capacitors and herein applied in vacuum tubes. This action of these devices has the effect of enlarging and prolonging the time of charge and discharge of the capacitors and the capacity energy in the circuit to an appreciable interval in perfect harmony with the natural energy wave through the interceptor's valves and oscillators in the circuit which set up in the circuit electrical pulsations corresponding to the energy waves captured by the interceptor and again kept from returning to the second outer circuit by "multi-walled" valves. The final tubes act as energy pressure transmitters with a means to prevent "shunting" condensation by a special form of "getter". This stops condensation accumulating at the base of the tubes which would block their ionic action.

One must "split" the energy discharge band into lines of variation (call this what you will), lines of energy or lines of light beyond the "light rays". The oscillations, therefore, do not become simple oscillations but through the action of the universe set up an energy flow which might be referred to as the assertion of inertia. When inertia sets in, the action will continue because of the oscillations of the cosmos, otherwise one would have a complete dissipation of energy and no oscillations. The oscillation will vibrate during the same period of time regardless of the potential, but the

rate of vibration of the device depends on the "capacity" of its modalities, i.e., condensers, etc...

[p. 212] Put together in pure energy resonance certain energy responding apparatus which synchronize with the resonance of certain vibrations in the universe, and what do you have? Useable energy from the universe. This energy may come to the planets as oscillations similar to the oscillations and tides of the sea. The RE tubes received this energy in surges which may last only a few microseconds by the pressure and current in those surges are so strong that sufficient energy is delivered to the equipment in resonance to be useable in multiples of flashes and in a magnitude which competes with the light of day. Remember resonance and pressure can do a lot to amplify energy. Also remember that the vibrations going out from the sources in the universe must also return to their sources. Nothing is lost. There is only a lowering of potential like water over the wheel.

The RE tubes present no new laws of physics. They simply expand the application of known laws thereby obtaining results not at first deemed possible. This is the history of science. RE tubes possess greater ability to obtain "saturation" and thus charge the accompanying capacitors or condensers at a more steady rate. When a certain voltage is reached, ionization occurs in the gases of the discharged tube and causes the condensers of the valve circuit to discharge into other condensers of the

valve circuit to discharge into other condensers of the oscillators and the other modalities of the circuit.

When ionization in the preceding tubes is no longer possible because of the reduced voltage, the process starts all over again. The first valve passes vibrations of energy into an oscillatory circuit; ionization sets in, a discharge occurs, and energy passes through another valve into other oscillators. The process is repeated from the first stage on to the second stage, on to the third and so on, much like a bucket brigade. That is why I asked years ago, "Cannot a steady flow of water be obtained from the waves of the sea or energy from the vibrations of the cosmos?"...

When a vibration of any kind strikes a boundary between two media of different vibratory impedances at an angle of less than 90 degrees, a transformation of the vibratory rate may be changed into another vibratory rate. The RE device therefore will continue to capture energy by resonance, or call it what you will, as long as the "keep alive" vibration of the cosmos continues to oscillate the various stages of the valves and oscillators in the circuit. Simple, is it not? Just a case of the trapping of energy which is everywhere present in the primary circuit and causing it to oscillate through the secondary circuits through a blocked circuit of no return.

Our experiments have proved that there is an energy which exists in the universe which, by proper development of equipment, can be made available for commercial use...

Chapter 10

Capture of Energy by Resonance

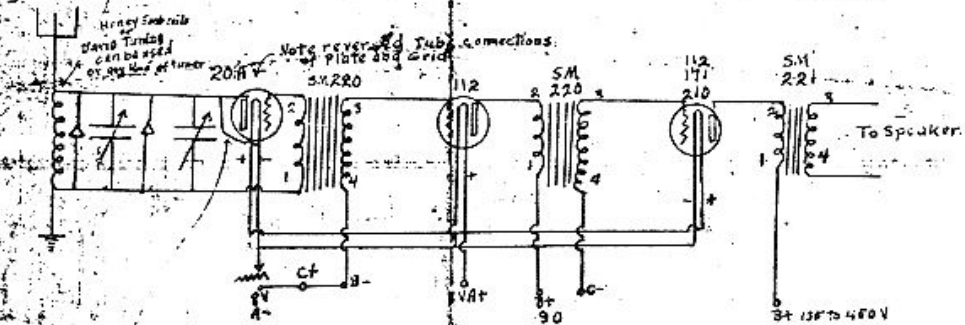
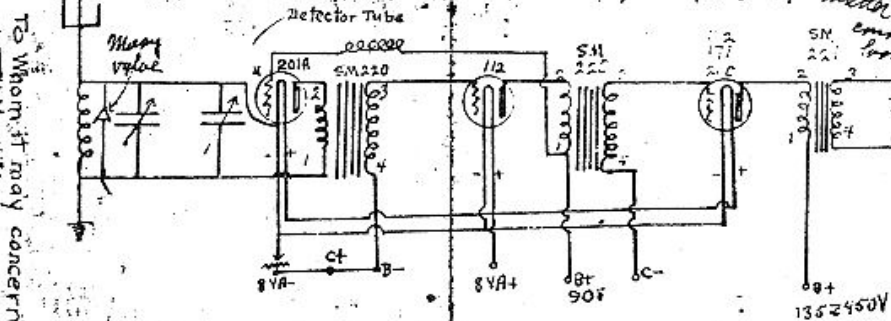
[p. 241] Such an energy transformer or converter has been built. It has been operated, at full load continuously with no expenditure of fuels of any type, without a mechanical prime mover, kept alive by the oscillations of the energies from the cosmos; an energy converter, or transformer, which would be capable of converting the high frequency, high level energy of the cosmic radiation into current of usable frequency and voltage.

Basically the theory of operation is as follows: Oscillations are started in the first stage or circuit of the device by exciting it with an external energy source. The circuit is "tuned" until the oscillations are sustained by harmonic coupling to the cosmic wave frequencies. The reinforcing action of the harmonic coupling increases the amplitude of the oscillations until the peak pulses "spill" over into the next stage through a special detector or valve which prevents the return or feedback of energy from succeeding

circuits. These "pulses" drive this stage, which oscillates at a lower frequency and is again reinforced by harmonic coupling with the ever present cosmic waves. The second stage drives a third stage, and additional stages are coupled until a suitable power level at a useable frequency and voltage is obtained by means of special transformers (See schematic drawing of RE device).

more than one Moray valve may be used. They may be used as rectifiers or oscillators. The stone of this valve or stones are made of purified germanium mixed with various substances. I have used Moray lead as keeping valve at slightly raised temperature which will improve its performance.

One must be used in close proximity with the rectifier as for much of the matter added increases conductivity and germanium is a good conductor of electricity as is silicon and selenium.



Shunt Plate to A as shown. Can use By Pass condenser in shunt if desired.

D.C. Tubes may be use to make it a light socket Radio if desired.

Either hook up can have more tubes added. Say Two R.F. Amplification. One or Two Audio F. Amplification. Tuning is very Broad. Have not worked on tuning of these sets as my shortest antenna is 300' long by 90' high and takes tuning which average one would not. Its not the form of amplification I set any claim to But the method of amplification is only known with the detecting. These De.ectors will work with almost any kind of Amplification.

The use of the grid as one of the output terminals to be used as the other terminal to speaker or power. Or even to the plate. Or even to the plate through R.F. coil or tuner. To the or Terminal of A Battery.

T.H.M. Nov 12 1927

J. H. Moray
2484 St 5th East
Salt Lake City
Nov 14 1927
This is a very simple and efficient
circuit for a radio receiver
using a Moray valve.
The Moray valve is a
very sensitive valve
and can be used
as a detector or
as a rectifier.
The circuit is
very simple and
efficient.
The Moray valve
is a very sensitive
valve and can be
used as a detector
or as a rectifier.
The circuit is
very simple and
efficient.

[The handwriting at the top of the drawing states: "More than one Moray valve may be used. They may be used as rectifiers or oscillators. The stone of this valve or stones are made of purified germanium mixed with

various substances as explained elsewhere. Care must be used in alloying germanium with other substances as too much other matter added increases conductivity and germanium loses its properties as ...

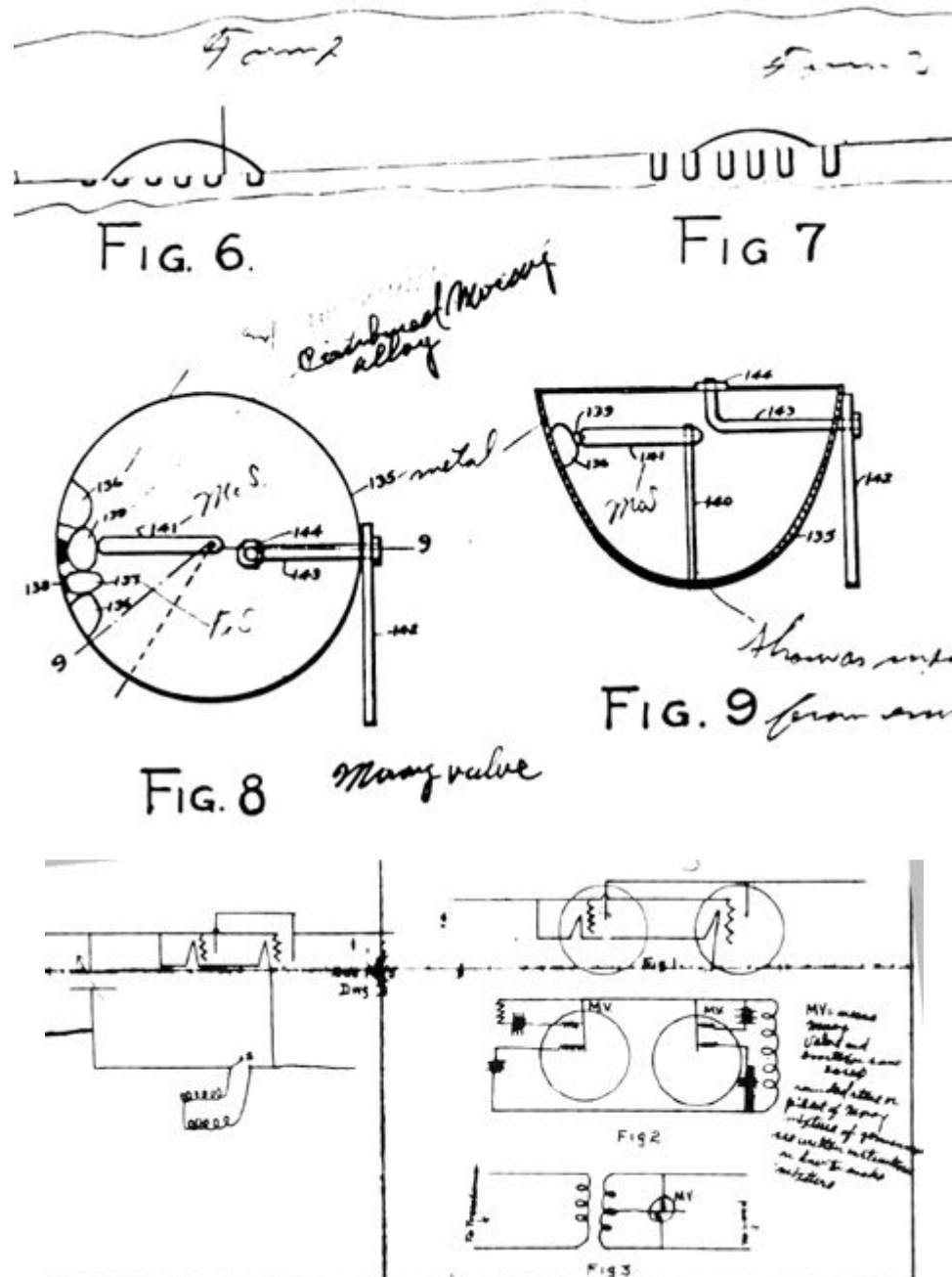
"Have used "Moray lead"... as keeping valve at slightly raised temperature..."

The other notes concern conventional electronics (amplifiers, &c). The second page of these notes includes the following details: "The Moray Valve and circuit (shown in the drawing figures 1, 2, and 3) were there described in more detail. The valve was a metal envelope 135 to which bismuth was attached at 136 by fusing... [Molybdenum ?] sulfide being separated from case 135 at point 132. Portions of Germanium were used at point 130 [?] between 136, 137 and 138". These elements and compounds are discernable in the otherwise nearly illegible handwriting: Germanium, Iron Sulfide (FeS), Molybdenum Sulfide (MoS), Bismuth, and Uranium.

The reference to "Moray lead" is connected with Moray's US Patent # 2,460,707 ("Electrotherapeutic Apparatus"), which states:

"The invention has been described in the foregoing with sole reference to its use for therapeutic purposes. It should be noted, however, that inorganic matter may also be treated to advantage pursuant to the method and with the apparatus of the invention. It has been found that metals, for example

lead, have changed physical properties after treatment in accordance with the above..."]



[The text that accompanies this drawing states: "The Moray germanium mixture gives certain unique results in functioning as a valve and as a

booster (amplifier). Made in form of rounded stones or pellets compressed under high pressure and fused. Combination contains bismuth, iron sulfide, pure germanium metal, [...], triboluminescent [...] fastened to envelope with pure tin in place of solder (Bismuth pellet fused to side). Germanium mostly [...] float between other pellets but making firm but needlepoint-like contact. have used silver too, which has some of the properties of germanium. Germanium works best when impurities are introduced..."]

Once the machine is in operation and delivering power, it does not require any continuance of the excitation forces necessary to start it. The oscillations are sustained as long as it remains properly tuned and the external circuit is completed through a suitable load.

The special tubes which appear to be the key to the success of this device are ionic cold cathode tubes which require no external power sources..

[p. 244] The following guidelines delineate what one must do to duplicate Dr Moray's Radiant Energy Device:

(1) When the primary side of the device is disconnected, a spark equivalent to 225,000 volts must be drawn between the two disconnected terminals.

(2) By disconnecting the antenna and re-connecting immediately, the lights must stay on. If the lights are allowed to die, however, re-connecting the antenna will not reestablish the connection and the unit becomes completely electrically dead.

(3) The energy produced must be high frequency.

(4) The device must be operable at a distance of more than 50 miles from power lines or radio stations.

(5) The light of a 100 watt lamp must be whiter and brighter than the ordinary 100 watt lamp without burning out after 157 hours of operation.

(6) When a heavy load is connected to the device while in operation, after already draining as much as 4 kilowatts, the present load must not decrease nor the lights flicker.

(7) A duplicate shunt test, like that made by Lovesy, with number 50 wire must be successful.

(8) Small number 30 wire should be used for all circuits.

(9) At least 10,000 watts and up to 50,000 watts of power must be produced in a box not weighing more than 60 pounds.

(10) As the ground wire is driven deeper, the amount of power must increase.

(11) None of the components of the device must heat.

(12) No moving parts may be included.

(13) The device must be absolutely silent.

(14) By tuning the circuit by the use of variable capacitors, the lights must come on.

(15) A resistive load of 600 watts must be brought to full heat in less than 2-1/2 minutes.

(16) After 158 hours of operation, the unit must still be running and no parts of the device be heated.

(17) The test performed by Dr Knudson must be duplicated.

(18) Smell of ozone should be present during the operation.

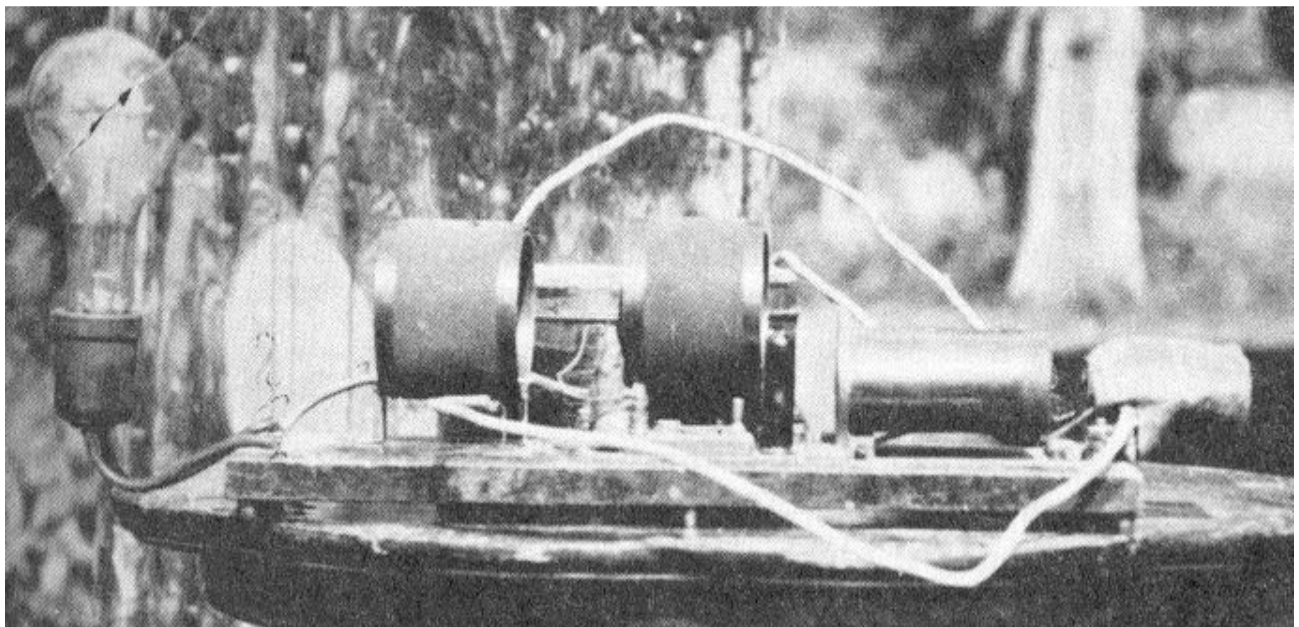
(19) No heated cathodes or bias power supply must appear.

(20) All of the above must be present at the same time.

The fact remains that Henry Moray demonstrated under the above conditions on numerous occasions, up to 50,000 watts of power. The

device always sat on a table where it was easily examined by anyone coming into the room, so that it could be seen that the only wires entering the device were the antenna and the ground...

Early Model RER:



Moray's Semiconductor:

(Photo Credit: Bruce Perrault/Nuenergy.com)



One of Moray's High Power Capacitor Discharge Tubes:

(Photo Credit: Bruce Perrault: Nuenergy.com)

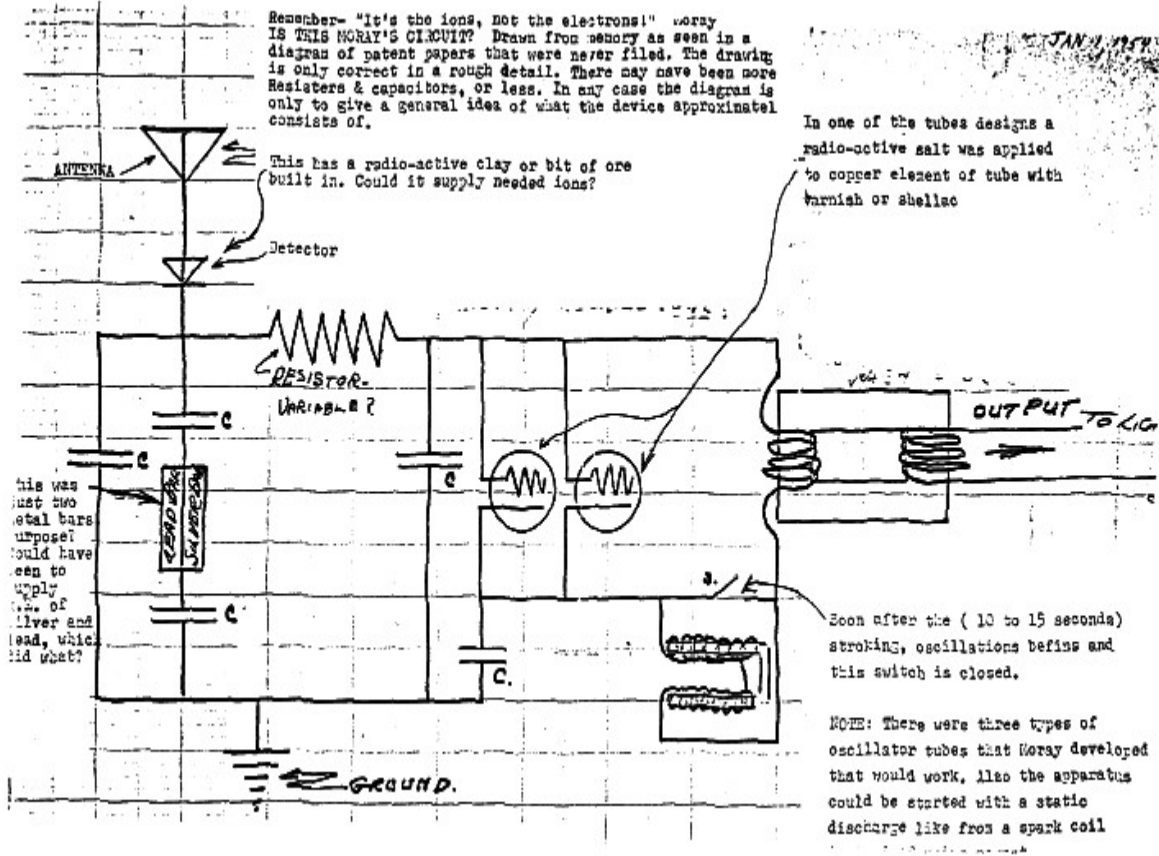


One of Moray's many demonstrations:

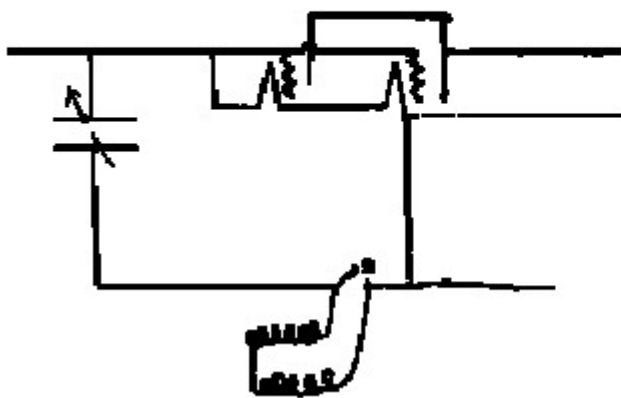


Excerpts from Moray's Patent Application Drawings (from Bruce Perreault)

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C



D



*Radiant Energy Aerial Capture (REAC)
& Transformation Device
posted 10/07/04 - courtesy [Emmett Butler](#)*

Warning: The use of longer wire or coax in excess of 500 feet or higher than head height can produce lethal results!!!!

**This file is for information and entertainment.
If you choose to experiment with this design or with high voltage,
you do so entirely at your own risk!**

On giving credit to where it is due, various different people and their experiments, from;

[Bill Beaty's Weird Science](#),
[JLNaudins Lab](#),
to a South African researcher on aerial balloon experiments,
[John Bedini](#),
[Tom Bearden](#)

and culminating in this, Wiley Almond through CUAE4YW, Mitch and others...

This is a very simple device that could be found by scavenging parts and buying a few others and is quite cheap and effective. How this works as I see it in my simplistic version and John Bedini's more technical version;

1. The long wire acts as an antennae and a capacitor and as it builds up charge, it discharges a spark that jumps the gap, is then stepped down by the coil, and then pulsed to the battery through the use of the capacitor. This is my simple view of the device.

2. John Bedinis' more technical version, as per his October 8th post to the KeelyNet Interact discussion list;

The long wire captures radiant energy, as the charge builds up and jumps the gap, spark (longitudinal waves) it is then stepped down in the coil, (for those who do not know it the coil in your car was invented by Tesla and is a small Tesla coil,) it is then charging the battery where it is transformed via a square or PWM wave at low frequency and is the reactive power that charges your battery. It works and as far as I am concerned is all that matters.

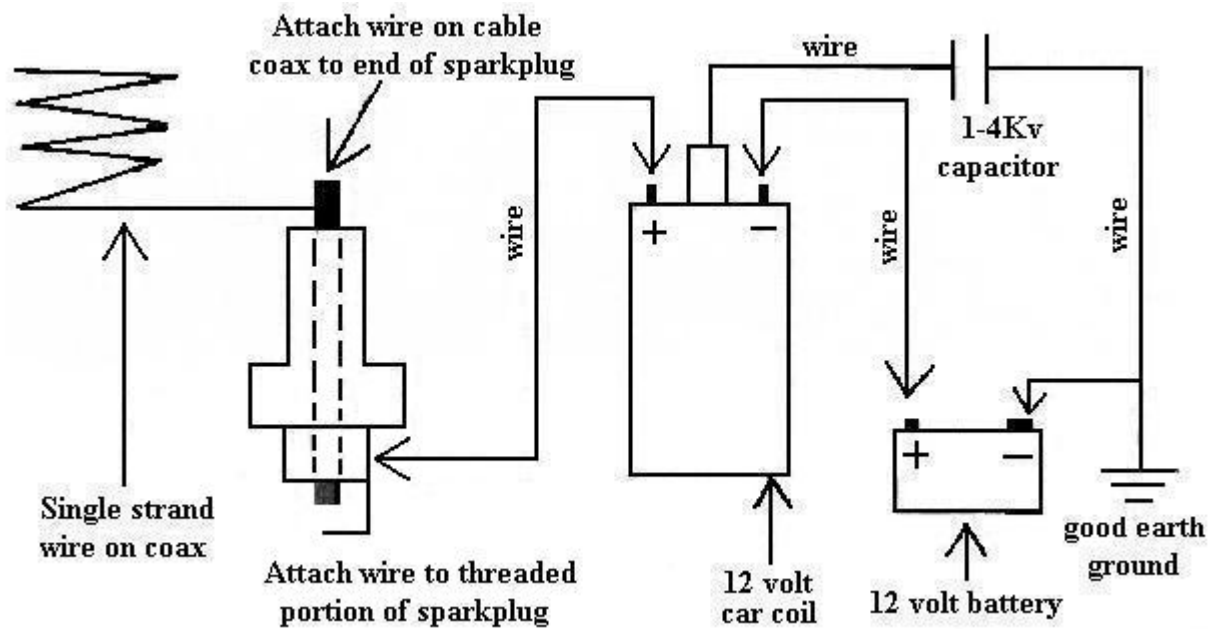
On Using Coax Cable:

The end of the coax is taped off and the end that is attached to the spark plug the wires are twisted together. According to John Bedini, as he explained to me when you cut one end off and twist the other two ends together, what you have is a high dielectric absorber antennae, the positively charged particles from the atmosphere get trapped in between the skin and the inner wire making a condenser of sorts.

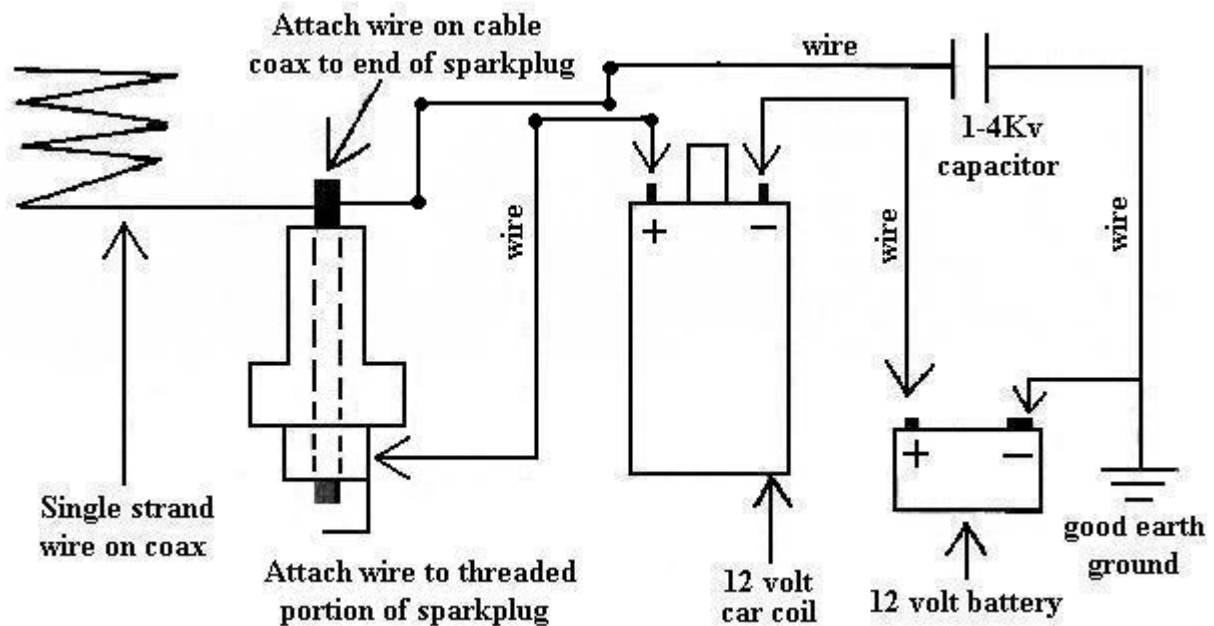
As he explained it there are two things going on:

The rate of charge in the wire that is oscillating in nature at one frequency and the discharge frequency in sharp DC transient pulse to the battery that is at its own rate. If you look at the pulse rate it would almost look like a triangle wave flattened off and would follow the gravitational wave frequency of about 8KHZ.

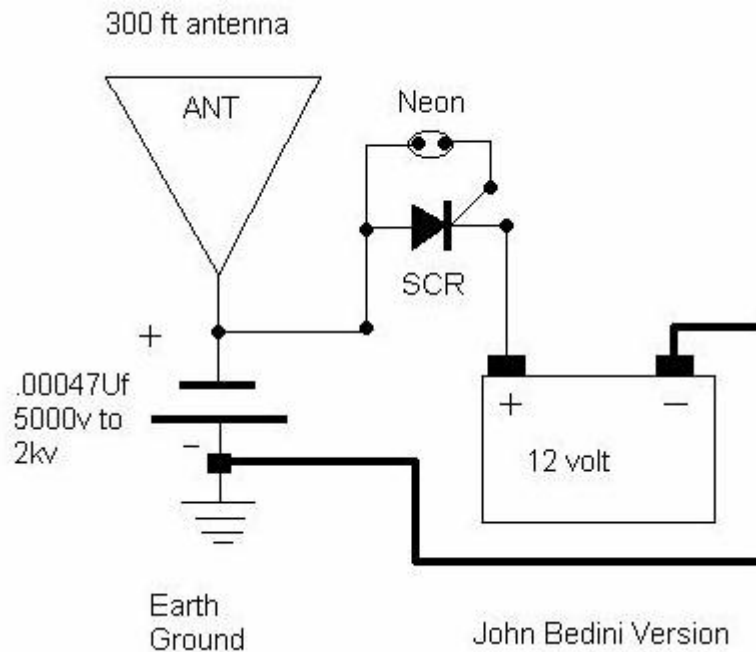
Original Circuit



Bedini Correction



Bedini Airpower Circuit



Setup:

1. Using either regular insulated wire or coax, waterproof the end, the wire or coax may be laid out in any fashion as long as it is insulated from any potential ground and to itself.
2. Attach the wire (coax twist the ends together first) and attach it to the end of the spark plug.
3. Attach a wire to the threaded portion of the spark plug (the end that goes in to your motor) and attach it to the positive (+) of your 12 volt car coil.
4. Attach a wire to the negative (-) of the 12 volt car coil and attach it to the (+) positive terminal of a 12 volt battery, I prefer deep cycle batteries, but for basic experimentation purposes I don't think it will matter.
5. Attach a wire from the taller center of your car coil to a 1-4Kv capacitor (a few picofarad will do) and then a wire from the other leg of the capacitor to a good earth ground and to the negative (-) terminal of the battery.

(*** NOTE: I use the coil plug wire with just the coil connector, under the rubber boot with wire soldered to it for a good snug fit.) Have fun and enjoy!!!!!!

Radiant Energy: Unraveling Tesla's Greatest Secret Part 1

By Ken Adachi <Editor@educate-yourself.org>
<http://educate-yourself.org/fe/radiantenergystory.shtml>
June 1, 2001

[The story you are about to read is derived from a carefully researched paper presented by Dr. Peter Lindemann before a private audience in Irvine, California on September 12, 2000. The lecture was titled "The Free Energy Secrets of Cold Electricity" . It detailed the story of Radiant Energy and its successful application by Edwin Gray in an over unity motor design which Gray debuted in 1973. The real detective work (& credit) in uncovering Tesla's discovery of Radiant energy came from author Gerry Vassilatos in his recent book, "Secrets of Cold War Technology" without which Lindemann could not have solved the enigma of Gray's Radiant circuit design. This lecture delivered the goods. The secret of Tesla's Radiant Energy has finally been revealed in manifold detail and only awaits the industry of those who care to study and understand it. Part1 presents a general overview of Tesla's discovery and the political, intrigues that led to its subsequent suppression. Part 2 will detail the nuts and bolts of how Tesla produced Radiant Energy with block diagrams, schematics, and drawings from Tesla's original patents to illustrate all of the necessary elements and parameters required. Additional details on Gray's modern adaptation of Tesla's Radiant circuitry and a brief look at Eric Dollard, the only man to successfully recreate Tesla's Colorado Springs Magnifying transmitter and reproduce the pure steaming white rays of Radiant energy in 1986 exactly as described by Tesla in his Colorado journals. Ken Adachi]



Of all the great inventions and discoveries of Nikola Tesla, nothing stood out with greater potential benefit to the whole of humanity than his discovery of **Radiant Energy** in 1889. The series of observations that led to the discovery of Radiant energy initially grew out of experiments that Tesla had conducted in an attempt to duplicate the results that Heinrich Hertz had claimed to achieve in affirming the existence of electromagnetic waves, the discovery of which Hertz announced in 1887. While replicating Hertz's experiments, Tesla experimented with violently abrupt DC electrical discharges and discovered a new force in the process. Only after conducting

exhaustive experimental trials for the next three years, did Tesla announce this stupendous discovery in a paper published in December, 1892, entitled “The Dissipation of Electricity”. Incredibly, most academicians of the day completely missed the mark in understanding the true significance of his paper. Noted scientists such as Sir Oliver Lodge, mistakenly thought that Tesla was referring to high frequency AC electricity in the operation of the Tesla Transformer, a huge blunder that remains to this day in the misnaming and misinterpretation of the Tesla Coil.

The transformer that Tesla referred to in the 1892 paper did not operate on magnetic/electric field induction created by alternating currents. It operated in an entirely new domain of physics based on abrupt discharges of electrostatic potentials and the subsequent release of kinetic Radiant Energy from the omnipresent ether. Tesla was now operating under entirely new rules which he referred to as “dynamic” electro-static forces and had, by now, completely abandoned any further interest in the AC waveform. The genesis of the Lodge misunderstanding, however, began a few years earlier with the publication of certain mathematical formulas by a brilliant Scotsman named James Clerk Maxwell.

Maxwell’s Equations

Using mathematical models, James Clerk Maxwell had earlier suggested that two different types of electrical disturbances could possibly exist in Nature. One type was a **longitudinal electric wave** which required alternating concentrations of densified and rarefied pulsations of electrostatic fields that moved along a single vector (today, we refer to these as standing waves or scalar waves). Maxwell ultimately rejected this idea because he was convinced that this type of wave propagation was impossible to achieve, but his assumption was erroneous and would later portend formidable consequences for Tesla and the world at large.

Maxwell’s second wave postulation was that of a **transverse electromagnetic wave** that exhibited a rapid alternation of electric fields along a fixed axis that radiated away from its point of origin at the speed of light and was detectable at great distances. Maxwell had more faith in the existence of this type of wave and encouraged experimenters to look in this direction. It was the discovery of this type of wave that Hertz had laid claim to, but Tesla was meticulous and fastidious in replicating Hertz’s experimental parameters and he could not obtain the results claimed by Hertz.

Tesla discovered a fundamental flaw in Hertz’s experiment: Hertz had failed to take into account the presence of air in his experiments. Hertz had mistakenly identified electrostatic inductions or electrified shockwaves as true electromagnetic waves. Tesla was saddened to bring this news to the distinguished academician, but felt scientific honesty was paramount if progress was to be achieved. Tesla visited Hertz in Germany and personally demonstrated the experimental error to him. Hertz agreed with Tesla and had planned to withdraw his claim, but reputations, political agendas, national pride, and above all, powerful financial interests, intervened in that decision and set the stage for a major rift in the ‘accepted’ theories that soon became transformed into the fundamental “laws” of the electric sciences that have held sway in industry and the halls of academia to the present day.

Tesla’s introduction to the phenomena of Radiant Energy began with early observations by linesmen working for Thomas Edison, Tesla’s former employer

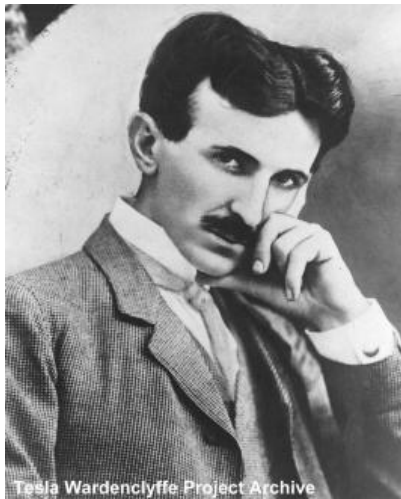
DC Anomalies

Before Tesla's invention of the Polyphase AC generator became the industry standard and overtook Thomas Edison's use of DC generators, the DC electrical system was the only system available to deliver electricity to America's homes and factories. Due to the resistance offered by long transmission lines, Edison had to produce very high DC voltages from his generators in order to deliver enough voltage and current to its final destination. He also had to provide additional 'pumping' stations along the way to boost the sagging voltage which dwindled from line losses. A curious anomaly occurred in the very first instant of throwing the power switch at the generating station: Purple/blue colored spikes radiated in all directions along the axis of the power lines for just a moment. In addition, a stinging, ray-like shocking sensation was felt by those who stood near the transmission lines. In some cases, when very large DC voltages surged from the generators, the "stinging" sensation was so great that occasionally a blue spike jumped from the line and grounded itself through a workman, killing him in the process.

Tesla realized almost immediately that electrons were not responsible for such a phenomena because The blue spike phenomena ceased as soon as the current started flowing in the lines. Something else was happening just before the electrons had a chance to move along the wire. At the time, no one seemed to be very interested in discovering why these dramatic elevations in static electrical potential were taking place, but rather, engineering design efforts were focused on eliminating and quenching this strange anomaly which was considered by everyone to be a nuisance-except Tesla. Tesla viewed it as a powerful, yet unknown form of energy which needed to be understood and harnessed if possible. The phenomena only exhibited itself in the first moment of switch closure, before the electrons could begin moving. There seemed to be a "bunching" or "choking" effect at play, but only briefly. Once the electrons began their movement within the wire, all would return to normal. What was this strange energy that was trying to liberate itself so forcefully at the moment of switch closure? .

Tesla, Genius Out of Time

In the later quarter of the 19th century, Tesla was alone in his opposition to the fundamental views of the nature of electrical forces as described by three of the biggest names in electric science: James Clerk Maxwell, Herman Von Helmholtz, and Heinrich Hertz. Tesla possessed a broader vision of the cosmos because his keen sense of awareness and especially his natural



Tesla Wardenclyffe Project Archive

intuitive insights gave him a deeper understanding of the role that the **ether** (or **aether**) played in the manifestations of all electrical phenomena while his contemporaries focused their attention exclusively on the electromagnetic component (assuming that no other component could be involved). This lack of etheric insight by his contemporaries (with the exception of Sir William Crookes) and the heated controversy that the mere mention of the ether had engendered was to cause Tesla ridicule and sarcasm from men of inferior intellect for decades. The ether controversy largely dissipated in the academic arena after the publication of Einstein's Theory of Relativity (1905) and the Michaelson-Morley Experiment which essentially declared that the ether 'theory' was dead, but Tesla's insights and deductions

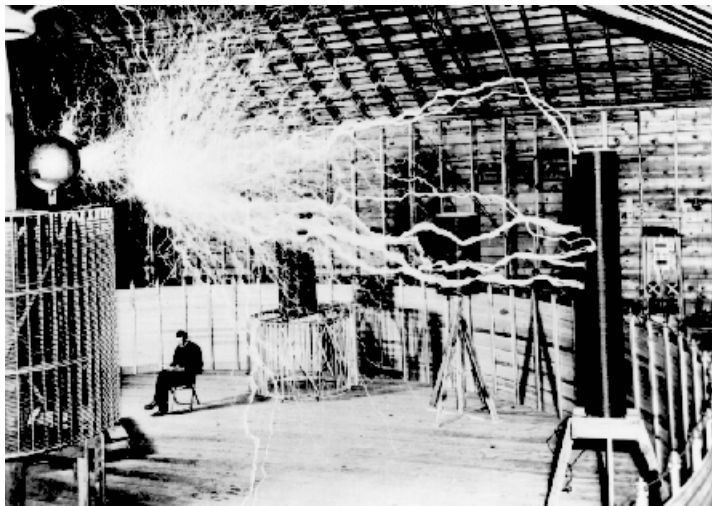
concerning the role of the ether were correct all along.

The ether existed then and it exists now, despite the lock step denials by mainstream science, past or present. Rudolf Steiner, another man of genius, affirmed that the ether was composed of four fractions which he described as 1) the Light Ether, 2) the Warmth Ether, 3) the Chemical Ether, and 4) the Life Ether, a combination of the first three. Tesla's New York and Colorado experiments confirmed for him that Radiant energy was bound up within the elusive ether, but could be made manifest by the creation of an abrupt disruption in the equilibrium of the ether fractions using one way, high magnitude pulses of short duration.

This was the key that unlocked Radiant Energy.

“See the excitement coming!”

These were the words that Tesla used at the end of his pivotal 1892 December lecture, “The Dissipation of Electricity”. He was brimming over with buoyancy and optimism for the future. In the 1890's, Tesla conducted a large number of experiments which confirmed his theory and refined his understanding of the special conditions required for Radiant energy to express itself.



He later expanded his New York work with the large scale experimental trials conducted at Colorado Springs, Colorado in 1899. Tesla, the humanitarian, wanted more than anything to share this enormous discovery with his fellow man. Tesla spoke of practical applications of radiant energy that were so wide reaching that they could have created a profound and immense leap into the future for all of mankind in practically every sector of daily life:

Unlimited electricity could be made available anywhere and at any time, by merely pushing a rod into the ground and turning on the electrical appliance. Homes, farms, offices, factories, villages, libraries, museums, street lights, etc., could have all their lighting needs met by merely hanging ordinary light bulbs or fluorescent tubes anywhere desired- without the need for wiring -and produce brilliant white light 24 hours a day. Motor energy for any imagined use such as industrial applications, transportation, tractors, trucks, trains, boats, automobiles, air ships or planes could be powered freely-anywhere on the planet from a single Magnifying Transmitter. This new form of energy even had the ability to elevate human consciousness to levels of vastly improved comprehension and mental clarity. Undreamed of therapeutic applications to improve human health and to eliminate disease conditions could have been achieved fully 100 years ago had Tesla been allowed to complete his commercial development of Radiant Energy. But powerful barons of industry, chiefly in the person of John Pierpont Morgan, colluded to deny him the financial backing he needed and in doing so, effectively denied mankind one of Nature's most abundant and inexhaustible gifts of free energy.

The Magnifying Transmitter

The closest Tesla came to a world wide industrial application of his Radiant Energy dream was the construction of his huge Magnifying Transmitter at Shoreham, Long Island, a site which he named Wardenclyffe. Following his return to New York City from Colorado Springs in 1899, Tesla was jubilant and full of enthusiasm to implement his plan for the commercial application



Tesla Wardenclyffe Project Archive

of Radiant energy. He turned to JP Morgan for a substantial portion of the funding to finance the huge project at Wardenclyffe. Morgan was chiefly concerned with turning a profit from overseas radio transmissions since Marconi was fast locking up the market and Morgan, ever the aggressor, wanted a share of the market. When Tesla told him that the transmitter could transmit “intelligence” to

the world, Morgan assumed that he meant ordinary radio communications, but Tesla was not referring to ordinary radio transmissions. He was talking about something much bigger, but avoided revealing all to Morgan during this early phase of the

Wardenclyffe project. Some considerable time later, Tesla eventually felt compelled to tell Morgan the larger possibilities offered by the Magnifying Transmitter when he needed more funding to complete the project. Tesla thought that Morgan would be overwhelmed by his expanded explanation of the true capacities

of the transmitter and would be anxious to complete the work, but Tesla’s assumption had backfired and Morgan refused to lay out any more money for the transmitter. Sadly, the enormous benefits that could have been made available to society by Tesla’s Magnifying Transmitter project, died then and there.

Morgan & Westinghouse

Morgan had already orchestrated circumstances in Tesla’s life in order to force Tesla to be dependent on him for financial backing. During an earlier period, when Tesla himself had millions from his Polyphase AC generator royalty payments and other earnings, Morgan wanted to woo Tesla with a deal that effectively gave Morgan majority control over his patent rights and projects, but Tesla turned him down, telling Morgan that he had enough money of his own to fund his projects. While returning to his hotel from that very meeting with Morgan, however, Tesla was told that his laboratory had been burned to the ground. It represented a tremendous loss to Tesla and it shook him deeply. Everyone, of course, felt convinced that Morgan was behind the arson. In order to save face, Morgan was embarrassed by Tesla into putting up the money to pay for the rebuilding of a new lab as an act of “philanthropy”. From that time forward, however, other financial backers were not to be found. Morgan was powerful enough to black list Tesla among the Eastern Establishment elites that previously had hobnobbed and feted with Tesla as if he was one of their own. Black listing and ostracization by officialdom and financiers lifted somewhat after Morgan’s death, but generally continued to haunt Tesla for the rest of his life.

Before the turn of the century, Tesla also willingly gave up millions, perhaps billions, in royalty earnings to George Westinghouse in an unprecedented act of friendship. Westinghouse had believed in the superiority of Tesla’s AC system and provided the money to build Tesla’s big AC generators at Niagra Falls, NY. Tesla was paid millions up front for his patents, but was also

due to receive royalty earnings for every kilowatt of power produced. When Westinghouse ran into financial difficulties at a later date, Tesla tore up his royalty contract in order to save Westinghouse from financial ruin. Had he not done that, Tesla would have had enough money from royalties to keep him ensconced in great wealth for the rest of his life.

The story is frequently told that when Morgan found out from Tesla that the true purpose of the Wardencllyffe transmitter was to provide free electricity to the world, he abruptly pulled the funding. That's not completely accurate. The economic conditions were recessionary at the time and the stock market had taken a considerable dip that year. Morgan wasn't interested in risking any more capital in perilous times on a project he couldn't fully fathom and wasn't completely convinced of. Tesla held land ownership of the Wardencllyffe site and tower, but no further work was done after 1910. In 1914, Tesla was deeply in debt and signed over the deed of Wardencllyffe Station to pay off years of back rent due to the owners of the New Yorker Hotel where he was living (he occupied two penthouse suites in the hotel). In 1917, the hotel owners had the tower demolished and its parts sold for salvage. Despite the loss of Wardencllyffe, Tesla continued to refine his understanding of Radiant Energy and miniaturize the equipment needed to produce it. He eventually was able to reduce the equipment down to the size of a suit case.

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Next time, Part 2: The nuts and bolts of producing Radiant Energy and Gray's Radiant design circuitry.

Australian and European readers interested in obtaining the video tape of Dr. Lindemann's 2 hour and 50 minute lecture, "The Free Energy Secrets of Cold Electricity" can send \$29.95 (US\$) for VHS or \$33.95 for PAL plus \$11 air shipping. A 150 page companion book of the same title which includes the complete narrative, enlarged views of the slides, diagrams, schematics, photographs and patents demonstrated during the lecture, along with complete copies of the Gray and Tesla patents and additional materials not included in the lecture is also available for \$29.95 plus \$11 air shipment. Book and video together, add \$15 air shipping. Make US checks or money orders payable to:

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New Generation of Radiant Energy Devices



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Reprinted from:
Exotic Research Report (V2N2, Apr/May/Jun 1998)



Nikola Tesla's Viewpoint

Brooklyn Eagle
(July 10, 1932)

I have harnessed the cosmic rays and caused them to operate a motive device. Cosmic ray investigation is a subject that is very close to me. I was the first to discover these rays and I naturally feel toward them as I would toward my own flesh and blood. I have advanced a theory of the cosmic rays and at every step of my investigations I have found it completely justified.

The attractive features of the cosmic rays is their constancy. They shower down on us throughout the whole 24 hours, and if a plant is developed to use their power it will not require devices for storing energy as would be necessary with devices using wind, tide or sunlight.

Historical Background

The quest for radiant energy is not new. In fact, the *Father of the 20th Century... Nikola Tesla* experimented quite intensively with radiant energy and even devised a device to capture *cosmic rays*. Later, Tesla's work was greatly expanded by the research and inventions of *T. Henry Moray*.

T. Henry Moray not only developed a super radiant energy receiver, but a strong case could be made that he was the original inventor of the transistor. The Moray Valve - patented in 1932 - is a semiconductive device that regulated voltage and current flows. The Moray Valve was a germanium based device whereas the transistor was silicon based (*silicon* is similar but *less* efficient than germanium for switching electrical currents).

Moray's first cousin, Fletcher, knew all about the valve since 1925 when Moray developed it. Coincidentally Fletcher worked for Bell Labs. It should be no surprise that Bell Labs was looking at semiconductive materials for switching currents.

Concurrently with the development of radiant energy receivers was attempts to artificially induce radiant energy. Much of this work was done by Lord Rutherford. In 1932 the first artificially accelerated decay transformation took place at the Cavendish Laboratory using the unstable metal.... lithium.

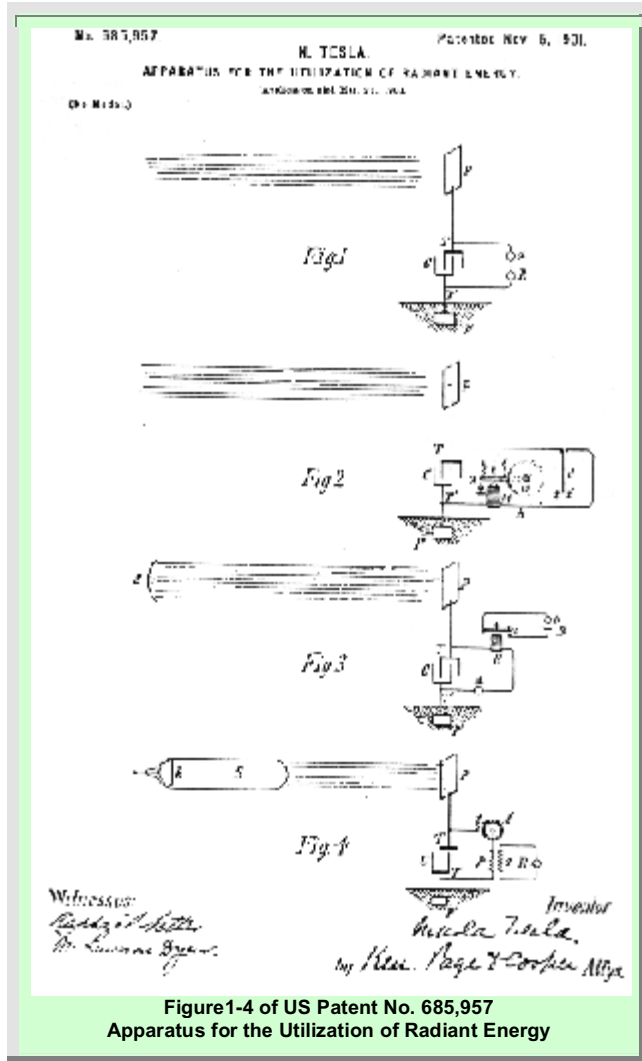
More recently, I published a brief article in the *Extraordinary Science* (Oct/Nov/Dec1994) in the "Mail Call" column that "Cold Fusion" was a result of a special type of hydrogen reaction due to certain catalysts. I also submitted a paper on August 16th, 1994 stating that there was a thermoelectric effect (or "Peltier effect") involved.

At the Tesla conference in April of this year I announced a totally unsuspected source of energy and how to harness it. More information will be released at this year's Exotic Research conference in Phoenix, AZ.

My conference presentations and published writings point to the fact that I have rediscovered T.H. Moray's suppressed technology. I will attempt to make clear in the coming days that an unconventional process to cause a clean nuclear reaction can be created and harnessed. I will soon show that a truly unique nuclear reaction can be converted to electrical power through alpha fusion and thermoelectric effects. These two discoveries are revolutionary to both nuclear fusion reactor and energy conversion technologies of present day science, respectively.

All of my investigations seem to point to the conclusion that they are small particles, each carrying so small a charge that we are justified in calling them neutrons. They move with great velocity, exceeding that of light.

More than 25 years ago I began my efforts to harness the cosmic rays and I can now state that I have succeeded in operating a motive device by means of them. I will tell you in the most general way, the cosmic ray ionizes the air, setting free many charges ions and electrons. These charges are captured in a condenser which is made to discharge through the circuit of the motor. I have hopes of building my motor on a large scale, but circumstances have not been favorable to carrying out my plan.



Nikola Tesla's Radiant Energy System

Nikola Tesla was one of the most prolific inventors in the world's history. His endeavors ranged from energy production to medical devices. In 1901 Nikola Tesla was one the first to identify "radiant energy." Tesla said that the source of this energy is our Sun. He concluded that the Sun emits small particles, each carrying so small of a charge, that they move with great velocity, exceeding that of light. Tesla further stated that these particles are the neutron particles. Tesla believed that these neutron particles were responsible for all radioactive reactions. Radiant matter is in tune with these neutron particles. Radiant matter is simply a re-transmitter of energy from one state to another.

Figure 1 of US Patent No. 685,957 is a diagram of Tesla's first radiant energy receiver. It stored static electricity obtained from the air and converted it to a usable form. Tesla's invention is a simple version of T. H. Moray's device. Moray's device used a unique rectifier (RE-valve) to efficiently capture the static electricity from the surrounding air.

Moray's *oscillator tubes* utilized this high-voltage energy to generate an internal *secondary* "cold" nuclear reaction.

Stick an antenna up in the air-the higher the better-and wire it to one side of a capacitor. Connect the other side of the capacitor to a good earth ground. The potential difference between air and earth will then charge the capacitor. By connecting across the capacitor some sort of switching device so that the capacitor can be discharged at periodic intervals, you will have an oscillating electric output. Moray expanded on Tesla's idea to use high-voltage to create ionic oscillation.

Tesla was fascinated by radiant energy and its free-energy possibilities. He called the Crooke's radiometer, a device which has vanes that spin in a vacuum when exposed to radiant energy "a beautiful invention." He believed that it would become possible to harness energy directly by "connecting to the very wheel work of nature." On his 76th birthday at his yearly ritual press conference, Tesla announced a "cosmic-ray motor" when asked if it was more powerful than the Crooke's radiometer, he answered, "thousands of times more powerful."

The **New York American** (November 1st, 1933 issue) announced Tesla's invention in an article:

Device to Harness Cosmic Energy Claimed by Tesla

...This new power for the driving of the world's machinery will be derived from the energy which operates the universe, the cosmic energy, whose central source for the earth is the sun and which is everywhere present in unlimited quantities....

Tesla's free-energy concept was patented in 1901 as an "Apparatus for the Utilization of Radiant Energy." The patent refers to "the sun, as well as other sources of radiant energy, like cosmic rays," The fact that the device works at night is explained in terms of the night-time availability of cosmic rays. Tesla also refers to the ground as "a vast reservoir of negative electricity."

**Tesla 'Harnesses'
Cosmic Energy**

**Inventor announces discovery to
displace fuel in driving machinery.
Calls Sun main source.**

A principle by which power for driving machinery of the world may be developed from the cosmic energy which operates the universe, has been discovered by Nikola Tesla, noted physicist and inventor of scientific devices, he announced today.

This principle, which taps a source of power described as "everywhere present in unlimited quantities" and which may be transmitted by wire or wireless from central plants to any part of the globe, will eliminate the need of coal, oil, gas or any other of the common fuels, he said. Dr. Tesla in a statement today at his hotel indicated the time was not far

How Tesla's Radiant Energy Receiver Worked

From the electric potential that exists between the elevated plate (plus) and the ground (minus), energy builds up in the capacitor, and, after "a suitable time interval," the accumulated energy will "manifest itself in a powerful discharge" that can do work. The capacitor, says Tesla, should be "of considerable electrostatic capacity," and its dielectric made of "the best quality mica, for it has to withstand potentials that could rupture a weaker dielectric."

Tesla gives various options for the switching device. One is a rotary switch that resembles a Tesla circuit controller, another is an electrostatic device consisting of two very light, membranous conductors suspended in a vacuum. These sense the energy build-up in the capacitor—one charging positive, the other negative—and, at a certain charge level, are attracted, touch, and thus fire the capacitor. Tesla also mentions another switching device consisting of a minute air gap or weak dielectric film that breaks down suddenly when a certain potential is reached.

Tesla received two patents for this radiant energy device:

US Patent No 685,957 - Apparatus for the Utilization of Radiant Energy

US Patent No 685,958 - Method of Utilizing Radiant Energy

Both patents were filed on March 21, 1901 and granted November 5, 1901. In these patents he explains:

The sun, as well as other sources of radiant energy throw off minute particles of matter positively electrified, which, impinging upon the upper plate, communicate continuously an electrical charge to the same. The opposite terminal of the condenser being connected to ground, which may be considered as a vast reservoir of negative electricity, a feeble current flows continuously into the condenser and inasmuch as the particles are ...charged to a very high potential, this charging of the condenser may continue, as I have actually observed, almost indefinitely, even to the point of rupturing the dielectric.

The Earth's Electrostatic Charge

Tesla's intent was to condense the energy trapped between the earth and its upper atmosphere and to transform it into an electric current. He pictured the sun as an immense ball of electricity, positively charged with a potential of some 200 billion volts. The earth, on the other hand, is charged with negative electricity. The tremendous electrical force between these two bodies constituted, at least in part, what he called cosmic energy. It varied from night to day and from season to season but it is always present.

distant when the principle would be ready for practical commercial development. Asked whether the sudden introduction of his principle would upset the present economic system, Dr. Tesla replied, "It is badly upset already." He added that now as never before was the time ripe for the development of new resources.

While in its present form, the theory calls for the development of energy in central plants requiring vast machinery. Dr. Tesla said he might be able to work out a plan for its use by individuals. The central source of cosmic energy for the earth is the Sun, Dr. Tesla said, but "night will not interrupt the flow of new power supply."

--from *Philadelphia Public Ledger*, November 2, 1933

The positive particles are stopped at the ionosphere and between it and the negative charges in the ground, a distance of 60 miles, there is a large difference of voltage - something on the order of 360,000 volts. With the gases of the atmosphere acting as an insulator between these two opposite stores of electrical charges, the region between the ground and the edge of space traps a great deal of energy. Despite the large size of the planet, it is electrically like a capacitor which keeps positive and negative charges apart by using the air as a non-conducting material as an insulator.

It has been calculated that the earth's ambient state contains 1.6×10^{11} joules or 4.5 megawatt-hours of electrical energy. In order to utilize this high-voltage energy you must do two things - make an energy sink and then devise a way of making the "sink" oscillate.

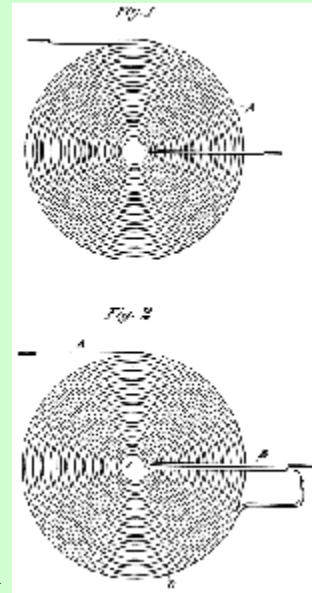
Zero Point Energy?

Such a "sink" has to be at a lower energy state than the surrounding medium and, for the energy to continually flow into it, the energy must be continually pumped out of it. Additionally, this "sink" must maintain a lower energy state while meeting the power requirements of the load attached to it. Electrical energy-watt-seconds-is a product of volts x amps x seconds. Because the period of oscillation does not change, either voltage or current has to be the variable in this system's energy equation. Bifilar wound coils are used in the system because a bifilar wound coil maximizes the voltage difference between its turns, the current is then minimized.

A coil in our system, then, will be set into oscillation at its resonant frequency by an external power source. During the "zero-point" portion of its cycle the coil will appear as one plate of a capacitor. As the voltage across the coil increases, the amount of charge it can siphon will increase. The energy that is taken into the coil through the small energy window (zero-point), call it what you will, appears to be the key to the success of this system.

**United States
Patent Number
512,340
COIL FOR
ELECTROMAGNETS
Nikola Tesla,
Inventor**

Figure 1 is a standard pancake coil (many Tesla coil builders are familiar with this style). Figure 2 is a **bifilar coil**, the crux of the patent is where Tesla winds a dual wire and then connects the ends in a series (an interesting experiment for coil builders).



Tesla explains that a standard coil of 1000 turns with a potential of 100 volts across it will have a difference of .1 volt between turns. A similar **bifilar coil** will have a potential of 50 volts between turns. In that the stored energy is a function of the square of the voltages, the energy in the bifilar will be $50^2 / .1^2 = 2500 / .01 = 250,000$ times greater than the standard coil!

It is at this zero-point where energy is condensed into positive and negative components of current. When energy escapes from the "sink" the magnetic field collapses and a strong magnetic quake is created in it's wake. A properly tuned system can capture and convert radiant energy in such a prescribed arrangement.

Direct Conversion of the Atom's Energy

The radiant energy system is a self-oscillating capacitive system. Once it is set into oscillation, very little power is expended in keeping it going. Because it is an electrostatic oscillating system, only a small amount of charge moves through the system per cycle (low current). If the charge is used at a low rate, the energy stored in the system will be turned into heat at a slow rate enabling the oscillations to continue for a long period of time.

Tesla's US Patent No. 512,340- "Coil for Electromagnets"- is a very special coil design because, unlike an ordinary coil made by turning wire on a tube form, this one uses two wires laid next to each other on a form but with the end of the first one connected to the beginning of the second one. In this patent Tesla explains that the double coil will store many times the energy of a conventional coil.

Measurements of two coils of the same size and with the same number of turns, one with a single, the other with a bifilar winding, show differences in voltage gain. These bifilar coils can be explained solely on the basis of their electrical activity. A bifilar coil is capable of holding more charge than a single wound coil. When operated at resonance, the distributed capacitance of the bifilar coil is able to overcome the counter electromotive force (emf) normal to coils - inductive reactance.

Because of the electrical activity, a bifilar coil does not work against itself in the form of a counter - emf, the potential across the coil quickly builds to a high value. The difference between the turns becomes great enough that the energy is practically all potential, at this point, the system becomes an electrostatic oscillator.

Minimal work is done in my radiant energy system due to the absence of wasted displacement currents. As small heat losses occur, oscillations are maintained by surplus charge generated by atomic catalytic reactions, energy is siphoned from the kinetic moments of these charges.

Very low energy expenditure allows power delivery to an electrical load over an extended time period without an external fuel supply. After an initial input of energy from an outside source, the radiant energy electrical generator will operate as a very efficient device.

First Artificial Accelerated Decay Transformation

On April 28, 1932, at a meeting of the Royal Society, Lord Rutherford announced that two of the workers in Cavendish Laboratory, J.D. Cockcroft and E. T. S. Walton, had

successfully demonstrated the release of excess radioactive energy from lithium elements and other light elements by protons entirely artificially generated by high electric potentials. The most surprising feature at the time was the relatively low voltage necessary. The generator installed had a peak voltage of about 750,000 volts, but artificial decay started at only one-sixth of this, 125,000 volts.

Indeed, later Rutherford, using deuterons (atoms of the hydrogen isotope of mass 2) instead of protons, pushed back the starting point to some 20,000 to 40,000 volts, which is well within the range of quite a small x-ray induction coil. The protons were generated in a long vertical hydrogen vacuum-tube, specially designed to withstand the high voltage, and with a window of the thinnest possible mica leaf at the end, through which they emerged to impinge on the target element being bombarded. The protons were estimated to have a velocity of one-thirtieth of that of light, and their range in air was only 1 cm. The bombarded substance was examined by the scintillations produced in zinc sulfide, through a screen thick enough to absorb the protons.

At 125,000 volts, bright scintillations, in every respect identical with those produced by the fastest normal alpha-rays of radioactive thorium, began to appear, and, as the voltage was increased, their number rapidly increased, but not their range or the brightness of the scintillations. At 400,000 volts, several hundred a minute were counted.

Radioactive Lithium Decay is Clean!

The proton, however, has only one-sixtieth of the kinetic energy of the alpha-particles produced. This showed that they merely pulled the trigger, and released energy could be produced from radioactive lithium. The scintillations were proved to be due to veritable alpha-particles of some 8.76Mev, which is practically the same as those of the radioactive thorium range 8.6 cm. in air, and somewhat faster than those from radium of 7 cm.

Though the term "fission" has since come into special use to denote the new type of disintegration which radioactive uranium and radioactive thorium undergo in certain circumstances, this artificial disintegration of isotopic lithium is pure and simple.

It is said that lithium of mass number 7 reacts with a proton of mass number one, momentarily to produce the unstable beryllium isotope of mass number 8, which splits into equal parts, giving two alpha-particles or helium elements. In this "fission" to "fusion" reaction, from 7 grams of lithium and one of hydrogen to 8 grams of helium, approximately, there is a loss of 0.0181 gram, equivalent to 17.1 Mev, due to the Aston fraction of hydrogen and lithium being so much greater than that of helium. This is in good accord with each of the two elements that results from the fission reaction, each split particles receiving some 8.76 Mev.

It is also said, some of the unstable beryllium elements produced from lithium, emit, during the fission cycle, a gamma-photon of no less than 17 Mev, which at the time was an unprecedented energy for these rays, the subsequent fission into two helium elements then occurring with relatively little energy. By using deuterons instead of protons, the

lithium isotope of mass 6, acts much like that of mass 7 with protons, but the energy released is even greater, namely, 22 Mev.

Energy Evolved from Isotopic *Lithium*

It is noteworthy that about 43 Mev is released per fission to fusion reaction. This may seem small compared to the 200 Mev released in the fission of a heavy isotope like uranium-235.

However, the released energy per mass of fuel is actually greater for the lithium reaction. Weight for weight, 43 Mev energy is some ten times the given out in the complete disintegration of radioactive uranium and thorium into lead and helium, in their natural radioactive change, and is twice as great as in their artificial decay in a nuclear reactor; but radioactive thorium less than 1 per cent of its mass undergoes accelerated decay ("fission").

The bottom line here is that the disintegration of isotopic lithium by either protons or deuterons, affords, weight for weight, more energy than any other possible nuclear change. Additionally, the disintegration of radioactive uranium or radioactive thorium produces deadly radioisotopic toxic by-products that nobody seems to know where to properly dispose of them. The disintegration of isotopic lithium yields pure helium as its by-product, this gas finds further use in other areas.

Lithium is the lightest metal, in fact, the lightest of all solids. It is actually lighter than cork and will float on water or oil. Whereas a cubic foot of aluminum weighs 169 pounds, a cubic foot of lithium weighs 33 pounds. Lithium is a very unstable metal and will easily combine with gases, especially tritium. Weight for weight radioactive lithium will yield two times more energy than radioactive uranium.

Peltier Effect Enhancement

When an electrical source is used to send current through two dissimilar metals, called a thermocouple, heat can be absorbed at the colder junction and given off at the hotter junction. This is called the "Peltier effect." It can be used either for cooling with the cold junction or for producing heat at the hot junction.

The heat energy given off at the hot junction is equal to the total heat absorbed by the cold junction along with all of the electric energy supplied to it. Thus, more heat energy is given off than the total electric energy supplied to the device.

In principle, many thermocouples in series, with cold junctions outside and hot junctions inside, could be used to pump heat from the lower temperatures outside to higher temperatures inside a building, theoretically the heat energy supplied could be greater than the electric energy supplied.

Unfortunately the effect is so small in most materials that too many couples are required for practical applications. Furthermore, the conduction of heat from hot to cold junctions severely limits the applicability of the Peltier effect, especially with metallic junctions. The discovery of thermoelectric semi-conductive materials has resulted in materials with sufficiently large Peltier effects for a number of practical applications. Recent research in what is now being called "cold fusion" hints to a way to produce greater levels of Peltier effects.

In the cold fusion cell the electrolyte serves as a junction between two dissimilar electrical conductors. Thus, the electrolyte becomes hotter than the electrical energy supplied. This heat is pumped from its ambient environment. This heat causes the catalytic cathode material to produce excess hydrogen. The electrolyte limits the conduction of heat from hot to cold junctions, resulting in an enhanced Peltier effect. The advantage here is the reduced thermal conductivity, for greater thermoelectric efficiency is obtained with a higher ratio of electrical to thermal conductivity.

Use catalytic metals like platinum, nickel or palladium for the electrode thermoelectric materials and you get an interesting catalytic effect. Now add a suitable electrolyte and what you have built is a breakthrough device that utilizes thermodynamic principles with catalytic properties.

Radiant Energy Devices

Clearly, when Tesla refers to his radiant energy device, he is not talking about an atomic reactor. He is directly converting ionized particles generated by radiant matter. It is not nuclear energy as we know it today. Radiant Energy is directly converted to electrical power! Tesla believed that the Sun generates highly charged particles and that radiant matter is a re-transmitter of energy. It is this transfer of energy that could be used for practical purposes.

Radiant Energy as herein used is that energy existing in the luminiferous of the Universe, kinetic and exercised in wave transmission and rendered sensible by conversion of its energy into a detectable frequency, the phenomenon of the transducer combined with fusion. Radiant energy devices are means of using the energy released by the fusion reactions taking place in the stellar crucibles of the universe.

I have designed an apparatus and method that will optimize reactions that are similar to what is explained in the above treatise. I designed special capture capacitors to take advantage of the released energy of nuclear reactions. The use of radiant energy to generate electrical power is no longer out of reach!

Inventors Beware!

It is my intent of this treatise and through my other writings to explain the many facets of "radiant energy" and how it is possible to draw power from it. I have notarized papers and

articles predating similar claims made by others. The Moray lead formula is just one example. I advise all inventors who want proper public credit to do the same.

By reviewing history it is understandable why some inventions are not commercialized. It is economics, not science, that is the main factor. It will be remembered that alternating current was opposed by powerful financiers in Tesla's time.

Michael Pupin, noted in his autobiography:

...captains of industry... who were afraid that they would have to scrap some of their direct current apparatus and the plants for manufacturing it, if the alternating current system received any support. A most un-American attitude... but ignorance and false notions prevailed in the early nineties, because the captains of electrical industries paid small attention to highly trained scientists.

Once again, we face Tesla's battle with the organized opposition! __BP

NIKOLA TESLA'S RADIANT ENERGY SYSTEM

by Bruce A. Perreault

Brooklyn Eagle July 10, 1932 Nikola Tesla states:

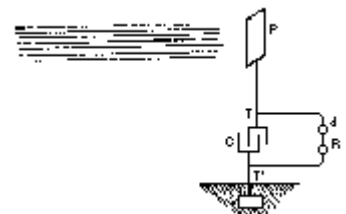
I have harnessed the cosmic rays and caused them to operate a motive device. Cosmic ray investigation is a subject that is very close to me. I was the first to discover these rays and I naturally feel toward them as I would toward my own flesh and blood. I have advanced a theory of the cosmic rays and at every step of my investigations I have found it completely justified. The attractive features of the cosmic rays is their constancy. They shower down on us throughout the whole 24 hours, and if a plant is developed to use their power it will not require devices for storing energy as would be necessary with devices using wind, tide or sunlight. All of my investigations seem to point to the conclusion that they are small particles, each carrying so small a charge that we are justified in calling them *neutrons*. They move with great velocity, exceeding that of light. More than 25 years ago I began my efforts to harness the cosmic rays and I can now state that I have succeeded in operating a motive device by means of them. I will tell you in the most general way, the cosmic ray ionizes the air, setting free many charges ions and electrons. These charges are captured in a condenser which is made to discharge through the circuit of the motor. I have hopes of building my motor on a large scale, but circumstances have not been favorable to carrying out my plan.

New York American November 1st, 1933

Device to Harness Cosmic Energy Claimed by Tesla:

"This new power for the driving of the world's machinery will be derived from the energy which operates the universe, the cosmic energy, whose central source for the earth is the sun and which is everywhere present in unlimited quantities."

This is a diagram of Tesla's first radiant energy receiver. It stored static electricity obtained from the air and converted it to a usable form. Tesla's invention is a simple version of T.H. Moray's device. Moray's device used a unique rectifier (RE-valve) to efficiently *capture* the static electricity from the surrounding air.



Moray's *oscillator tubes* (magnetron transducers) utilized this high-voltage energy to generate an internal secondary "cold" fusion reaction.

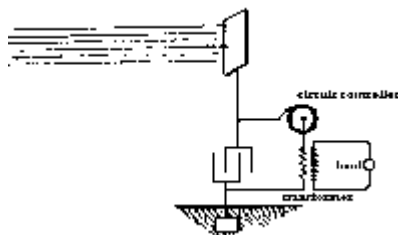
Stick an antenna up in the air, the higher the better, and wire it to one side of a capacitor, the other going to a good earth ground, and the potential difference will then charge the capacitor. Connect across the capacitor some sort of switching device so that it can be discharged at rhythmic intervals, and you have an oscillating electric output. T.H. Moray simply expanded on Tesla's idea to use high-voltage to create ionic oscillation.

Tesla's free-energy concept was patented in 1901 as an "Apparatus for the Utilization of Radiant Energy." The patent refers to "the sun, as well as other sources of radiant energy, like cosmic rays," that the device works at night is explained in terms of the night-time availability of cosmic rays. Tesla also refers to the ground as "a vast reservoir of negative electricity."

Tesla was fascinated by radiant energy and its free-energy possibilities. He called the Crooke's radiometer, a device which has vanes that spin in a vacuum when exposed to radiant energy "a beautiful invention." He believed that it would become possible to harness energy directly by "connecting to the very wheel-work of nature." On his 76th birthday at his yearly ritual press conference, Tesla announced a "cosmic-ray motor" when asked if it was more powerful than the Crooke's radiometer, he answered, "thousands of times more powerful."

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How his radiant energy receiver worked



From the electric Potential that exists between the elevated plate (plus) and the ground (minus), energy builds up in the capacitor, and, after "a suitable time interval," the accumulated energy will "manifest itself in a powerful discharge" that can do work. The capacitor, says Tesla, should be "of considerable electrostatic capacity," and its dielectric made of "the best quality mica, for it has to withstand potentials that could rupture a weaker dielectric."

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Tesla received two patents for this radiant energy device; U.S. Patent No. 685,957 - Apparatus for the Utilization of Radiant Energy and U.S. Patent No. 685,958 - Method of Utilizing Radiant Energy. Both these patents were filed on March 21, 1901 and granted on November 5, 1901. In these patents he explains:

"The sun, as well as other sources of radiant energy throw off minute particles of matter positively electrified, which, impinging upon the upper plate, communicate continuously an electrical charge to the same. The opposite terminal of the condenser being connected to ground, which may be considered as a vast reservoir of negative

electricity, a feeble current flows continuously into the condenser and inasmuch as the particles are ...charged to a very high potential, this charging of the condenser may continue, as I have actually observed, almost indefinitely, even to the point of rupturing the dielectric."

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The positive particles are stopped at the ionosphere and between it and the negative charges in the ground, a distance of 60 miles, there is a large difference of voltage - something on the order of 360,000 volts. With the gases of the atmosphere acting as an insulator between these two opposite stores of electrical charges, the region between the ground and the edge of space traps a great deal of energy. Despite the large size of the planet, it is electrically like a capacitor which keeps positive and negative charges apart by using the air as a non-conducting material as an insulator.

The earth has a charge of 96,500 coulombs. With a potential of 360,000 volts, the earth constitutes a capacitor of .25 farads (farads = coulombs/volts). If the formula for calculating the energy stored in a capacitor ($E = 1/2 CV^2$) is applied to the earth, it turns out that the ambient medium contains 1.6×10^{11} joules or 4.5 megawatt-hours of electrical energy. In order to utilize this high-voltage energy you must do two things -- make an energy sink and then devise a way of making the "sink" oscillate.

"Zero-Point Energy?"

Such a "sink" has to be at a lower energy state than the surrounding medium and, for the energy to continually flow into it, the energy must be continually *pumped* out of it. Additionally, this "sink" must maintain a lower energy state while meeting the power requirements of the load attached to it. Electrical energy, watt-seconds, is a product of volts x amps x seconds. Because the period of oscillation does not change, either voltage or current has to be the variable in this system's energy equation. Bifilar wound coils are used in the system because a bifilar wound coil maximizes the voltage difference between its turns, the current is then minimized.

A coil in our system, then, will be set into oscillation at its resonant frequency by an external power source. During the "zero-point" portion of its cycle the coil will appear as one plate of a capacitor. As the voltage across the coil increases, the amount of charge it can *siphon* will increase. The energy that is taken into the coil through the small energy window (*zero-point*), call it what you will, appears to be the key to the success of this system. It is at this *zero-point* where energy is condensed into positive and negative components of current. When energy escapes from the "sink" the magnetic field collapses and a strong magnetic quake is created in its wake. A properly tuned system can *capture* and convert *radiant energy* in such a prescribed arrangement.

Energy Directly from the Atom

The radiant energy system is a self-oscillating capacitive system. Once it is set into oscillation, very little power is expended in keeping it going. Because it is an electrostatic oscillating system, only a small amount of charge moves through the system per cycle, that is, the coulomb per seconds = amps are low. If the charge is used at a low rate, the energy stored in the system will be turned into heat at a slow rate enabling the oscillations to continue for a long period of time.

Tesla's "COIL FOR ELECTRO MAGNETS," patent #512,340 is a very special coil design because, unlike an ordinary coil made by turning wire on a tube form, this one uses two wires laid next to each other on a form but with the end of the first one connected to the beginning of the second one. In this patent Tesla explains that the double coil will store many times the energy of a conventional coil.[1] Measurements of two coils of the same size and with

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"...captains of industry...who were afraid that they would have to scrap some of their direct current apparatus and the plants for manufacturing it, if the alternating current system received any support. A most un-American attitude...but ignorance and false notions prevailed in the early nineties, because the captains of electrical industries paid small attention to highly trained scientists."[2]

Philadelphia Public Ledger November 2, 1933 Tesla 'Harnesses' Cosmic Energy

Inventor announces discovery to displace fuel in driving machinery. Calls Sun main source. A principle by which power for driving machinery of the world may be developed from the cosmic energy which operates the universe, has been discovered by Nikola Tesla, noted physicist and inventor of scientific devices, he announced today. This principle, which taps a source of power described as "everywhere present in unlimited quantities" and which may be transmitted by wire or wireless from central plants to any part of the globe, will eliminate the need of coal, oil, gas or any other of the common fuels, he said. Dr. Tesla in a statement today at his hotel indicated the time was not far distant when the principle would be ready for practical commercial development. Asked whether the sudden introduction of his principle would upset the present economic system, Dr. Tesla replied, "It is badly upset already." He added that now as never before was the time ripe for the development of new resources. While in its present form, the theory calls for the development of energy in central plants requiring vast machinery. Dr. Tesla said he might be able to work out a plan for its use by individuals. The central source of cosmic energy for the earth is the Sun, Dr. Tesla said, but "night will not interrupt the flow of new power supply."

Clearly Tesla is not talking about an *atomic reactor*. He is directly converting *ionized particles* generated by radiant matter. It is not nuclear energy as we know it today. Radiant Energy is directly converted to electrical power! Tesla believed that the Sun generates highly charged particles and that radiant matter is a re-transmitter of energy, it is this transfer of energy that could be used for practical purposes.

References

[1] Nikola Tesla, U.S. Patent #512,340, "COIL FOR ELECTRO MAGNETS," he explains that a standard coil of 1000 turns with a potential of 100 volts across it will have a difference of .1 volt between turns. A similar bifilar coil will have a potential of 50 volts between turns. In that the stored energy is a function of the square of the voltages the energy in the bifilar will be $50^2/.12 = 2500/.01 = 250,000$ times greater than the standard coil.

[2] Michael Pupin, *From Immigrant to Inventor*, Charles Scribner's Sons, N.Y., pages 285-286, 1923.

Tesla's Fuelless Generator

In the 1880's, Nikola Tesla invented the alternating current system we use today. By the 1890's, he was working on a new type of electrical generator that would not "consume any fuel."

This paper documents where in his writings the description of this new generator is found, a theory of how a fuelless generator could work and a suggestion as to how Tesla's new device might have operated.

NIKOLA TESLA'S LATER ENERGY GENERATION DESIGNS

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ABSTRACT

Ten years after patenting a successful method for producing alternating current, Nikola Tesla claimed the invention of an electrical generator that would not "consume any fuel." Such a generator would be its own prime mover. Two of Tesla's devices representing different stages in the development of such a generator are identified.

INTRODUCTION

While in college Nikola Tesla claimed it should be possible to operate an electrical motor without sparking brushes. He was told by the professor that such a motor would require perpetual motion and was therefore impossible. In the 1880's he patented the alternating current generator, motor, and transformer.

During the 1890's he intensively investigated other methods of power generation including a charged particle collector patented in 1901. When the *New York Times* in June of 1902 carried a story about an inventor who claimed an electrical generator not requiring a prime mover in the form of an external fuel supply, Tesla wrote a friend that he had already invented such a device.

Fuelless electrical generation raises the same objection of perpetual motion as did the generator in use today when it was first proposed. Research Nikola Tesla carried out during his second creative period and the resulting devices that were the basis for his assertion of fuelless electrical

generation will be examined. Whether Tesla's fuelless generator was a "perpetual motion scheme" of the sort his teacher warned him against, or a creative application of recognized natural phenomena will be discussed.

TESLA'S STATEMENTS

In *The Brooklyn Eagle*, Tesla announced, on July 10th, 1931, that "I have harnessed the cosmic rays and caused them to operate a motive device." Later on in the same article he said that "More than 25 years ago I began my efforts to harness the cosmic rays and I can now state that I have succeeded." In 1933, he made the same assertion in an article for the *New York American*, November 1st, under the lead in "Device to Harness Cosmic Energy Claimed by Tesla." Here he said:

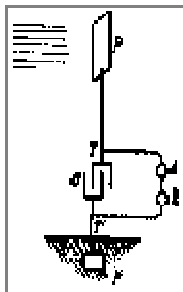
This new power for the driving of the world's machinery will be derived from the energy which operates the universe, the cosmic energy, whose central source for the earth is the sun and which is everywhere present in unlimited quantities.

Dating back "more than 25 years ago" from 1933 would mean that the device Tesla was speaking about must have been built before 1908. More precise information is available through his correspondence in the Columbia University Library's collection. Writing on June 10th, 1902 to his friend Robert U. Johnson, editor of *Century Magazine*, Tesla included a clipping from the previous day's *New York Herald* about a Clemente Figueras, a "woods and forest engineer" in Las Palmas, capital of the Canary Islands, who had invented a device for generating electricity without

burning fuel. What became of Figueras and his fuelless generator is not known, but this announcement in the paper prompted Tesla, in his letter to Johnson, to claim he had already developed such a device and had revealed the underlying physical laws.

IDENTIFYING THE INVENTION

The device that, at first, seems to best fit this description is found in Tesla's patent for an "Apparatus for the Utilization of Radiant Energy," number 685,957, that was filed for on March 21, 1901 and granted on November 5, 1901. The concept behind the older technical language is a simple one. An insulated metal plate is put as high as possible into the air. Another metal plate is put into the ground. A wire is run from the metal plate to one side of a capacitor and a second wire goes from the ground plate to the other side of the capacitor. Then:



The sun, as well as other sources of radiant energy, throw off minute particles of matter positively electrified, which, impinging upon [the upper] plate, communicate continuously an electrical charge to the same. The opposite terminal of the condenser being connected to ground, which may be considered as a vast reservoir of negative electricity, a feeble current flows continuously into the condenser and inasmuch as the particles are ... charged to a very high

1. Particle

Collector

potential, this charging of the condenser may continue, as I have actually observed, almost indefinitely, even to the point of rupturing the dielectric⁽¹⁾.

This seems like a very straightforward design and would seem to fulfill his claim for having developed a fuelless generator powered by cosmic rays, but in 1900 Tesla wrote what he considered his most important article in which he describes a self-activating machine that would draw power from the ambient medium, a fuelless generator, that is different from his Radiant Energy Device. Entitled "The Problem of Increasing Human Energy - Through the Use of the Sun," it was published by his friend Robert Johnson in *The Century Illustrated Monthly Magazine* for June 1900 soon after Tesla returned from Colorado Springs where he had carried out an intensive series of experiments from June 1899 until January of 1900.

The exact title of the chapter where he discusses this device is worth giving in its entirety:

A DEPARTURE FROM KNOWN METHODS - POSSIBILITY OF A "SELF ACTING"
ENGINE OR MACHINE, INANIMATE, YET CAPABLE, LIKE AN LIVING BEING, OF
DERIVING ENERGY FROM THE MEDIUM - THE IDEAL WAY OF OBTAINING MOTIVE
POWER

Tesla stated he first started thinking about the idea when he read a statement by Lord Kelvin who said it was impossible to build a mechanism capable of abstracting heat from the surrounding medium and to operate by that heat. As a thought experiment Tesla envisioned a very long bundle of metal rods, extending from the earth to outer space. The earth is warmer than outer space so heat would be conducted up the bars along with an electric current. Then, all that would be needed is a very long power cord to connect the two ends of the metal bars to a motor. The motor would continue running until the earth was cooled to the temperature of outer space. "This would be an inanimate engine which, to all evidence, would be cooling a portion of the medium below the temperature of the surrounding, and operating by the heat abstracted⁽²⁾," that is, it would produce energy directly from the environment without "the consumption of any material."

Tesla goes on in the article to describe how he worked on the development of such an energy device, and here it takes a bit of detective work to focus on which of his inventions he meant. He wrote that he first started thinking about deriving energy directly from the environment when he was in Paris during 1883, but that he was unable to do much with the idea for several years due to the commercial introduction of his alternating current generators and motors. It was not "until 1889 when I again took up the idea of the self-acting machine⁽³⁾."

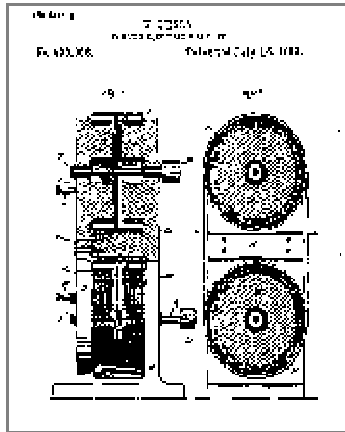
THE TURBINE

He quickly came to realize that an ordinary electrical machine, like his generator, would not be able to directly extract energy from the cosmos and turned his efforts to what he called a "turbine" design.

The best known turbine, that is, water pump, associated with Tesla is his patent for such a device, #1,061,206, which was filed for in 1909 and granted in 1913. The unique point about this water pump is that instead of using some form of paddle wheels inside a box to move the water,

he discovered that more water could be moved faster by using a set of flat metal disks. The turbine is, in itself, fascinating and may yet prove to be another important overlooked invention, but what is of concern regarding the electrical design is the general shape of the turbine - metal disks turning inside a supporting box.

This same shape turns up in another patent, this one for a "Dynamo-Electric Machine." This patent was filed and granted in the same year that Tesla said he returned to work on the "self-activating" machine, in 1889. The dynamo consists of metal disks that are rotated between magnets to produce an electric current.



Compared to his alternating current generator, this "dynamo" represents something of a curious throwback to the days of Faraday's early experiments with a copper disk and a magnet. Tesla makes some improvement over the Faraday setup by using magnets that completely cover the spinning metal disks and he also adds a flange to the outside of the disks so current can be taken off more easily - all of which makes for a better generator than Faraday's. On the surface, though, it is hard to see why Tesla patented such an anachronistic machine at this point in his work.

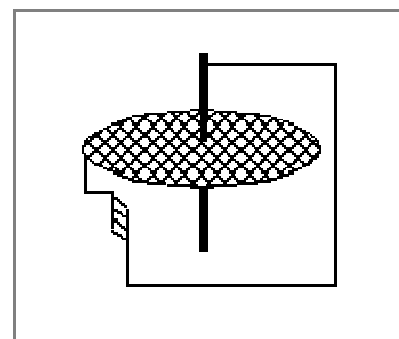
The next piece of the puzzle is found in an article Tesla wrote for *The Electrical Engineer* in 1891 entitled "Notes on a Unipolar

2. Dynamo Electric Machine Dynamo." Here Tesla presents an in-depth analysis of the Faraday disk generator, explains why it was an inefficient generator, describes his improved variations on the Faraday machine, and, at the bottom of the third page of the article, states that he has devised a generator in which "the current, once started, may then be sufficient to maintain itself and even increase in strength⁽⁴⁾." Then, at the close of the article, he states that "several machines ... were constructed by the writer two years ago ..."⁽⁵⁾ Two years before the writing of that article was 1889. All the evidence points to the turbine-shaped Unipolar Dynamo as being Tesla's first design for a machine that can continue to produce electricity after being disconnected from an outside source of power.

SELF-SUSTAINING CURRENT

Before going into the details of this invention it would be worthwhile to have an idea of how any generator, even in theory, could be capable of producing a self-sustaining current. This has been clearly explained by Walter M. Elsasser in a *Scientific American* article (May 1958) titled "The Earth as a Dynamo."

Elsasser models the earth-dynamo, conveniently for this explanation, on the Faraday generator of a metal disk spinning over a bar magnet placed at the edge of the disk. He notes, also, that the bar magnet could be replaced by an electromagnet which



3. Faraday Generator with electromagnet

could get its power from the spinning disk by attaching one end of the electromagnet's wire to the outside of the disk and the other end of the wire to the metal rod running through the center of the disk.

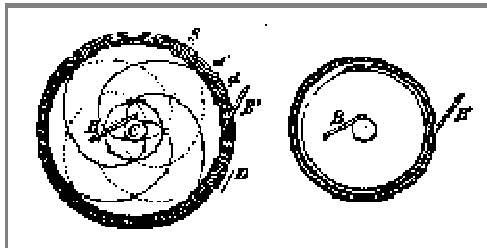
Elsasser then points out that an ordinary disk generator "could not maintain a current for very long because the current induced in the disk is so weak that it would soon be dissipated by the resistance of the conductor [the disk]." This conventional arrangement would not be an answer to "how currents could be built up and perpetuated to maintain the earth's magnetic field." He does, though, propose three options in the dynamo model that would explain the earth's persistent magnetism.

If we had a material that could conduct electricity a thousand times better than copper, the system would indeed yield a self-sustaining current. We could also make it work by spinning the disk very fast... a third way we could make such a dynamo self-sustaining ... is to increase the size of the system: theory says that the bigger we make such a dynamo, the better it will function. If we could build a coil-and-disk apparatus of this kind of scale of many miles, we would have no difficulty in making the currents self-sustaining⁽⁶⁾.

Tesla did not have a material a thousand times more conductive than copper, neither was he able to spin a disk at the ultra-high speeds needed to produce such a current, nor did he plan on using a piece of rotating metal several miles in diameter. What he did was to use energy that is usually wasted in a generator and turn it into a source of power.

UNIPOLAR DYNAMO

Tesla's design varied from that of Faraday in two major ways. First, he used a magnet that was bigger in diameter than the disk so that the magnet completely covered the disk. Second, he divided the disk into sections with spiral curves radiating out from the center to the outside edge.



4. Tesla's Unipolar Generator

In the Faraday unipolar generator "the current," as Tesla noted, "set up will therefore not wholly pass through the external circuit ... and ... by far the greater portion of the current generated will not appear externally..."⁽⁷⁾ By having the magnet completely cover the disk, Tesla made use of the whole disk surface in current generation instead of only a small section directly adjacent to the bar magnet, as happened in the Faraday device. This not only

increases the amount of current generated, but, by making the current travel from the center to the outside edge, makes all of that current accessible to the external circuit.

More importantly, these modifications on the Faraday design eliminated one of the biggest problems in any physical system - the reaction to every action. It is this reaction that works to cancel out whatever effort goes into causing the original action. In an electrical system if there are two turns of wire wound next to each other and a current is sent through the wire, the current

passing through the first loop will set up a magnetic field that will work against the current passing through the second loop.

The spiral divisions in the disk cause the current to travel the full radius of the disk or, as in his alternative version of the generator, to make a full trip around the outside edge of the disk. Because the current is flowing in a large circle at the rim of the disk, the magnetic field created by the current not only does not work against the field magnet above the circular plate, as in conventional generators, but it actually reinforces the magnet. So as the disk cuts the magnetic lines to produce a current, the current coming off of the disk strengthens the magnet, allowing it to produce even more current.

Like conventional direct current generators, the unipolar dynamo also functions as a motor if current is put into the disk while under the magnet, and this seems to be the last element that could make the device self-sustaining, that is, capable of generating a current after being disconnected from an outside source of movement like falling water or steam.

Rotation is started by, say, a motor powered by line current. Both a generator and a motor disk are mounted in the magnetic enclosure. As the disks gain speed, current is produced which, in turn, reinforces the magnets, which cause more current to be generated. That current is, likely, first directed to the motor disk which increases the speed of the system. At a certain point the speed of the two disks is great enough that the magnetic field created by the current has the strength to keep the dynamo/motor going by itself.

What process might have kept the unipolar dynamo operating after the powered start-up is speculation at this point, however two features of the generator are significant. First, when a resistive load, like a light bulb is added to the circuit, it lowers the voltage at the center of the disk. This lower voltage at the center means that there is a greater difference in voltage between the center and the outside edge of the disk than there was before the light bulb was added. As the difference between the center and the outside increases, the dynamo works harder and makes more current. Second, yet more important, the dynamo takes either very little, or no energy to keep going because the current coming off the generator is doing double duty. The current makes the bulb glow, but on its way from the generator to the filament in the bulb, it travels a path that adds to the momentum of the dynamo and, therefore, consumes energy at a very low rate. The process continues, it would seem, until heat losses in the filament equal the rotational energy of the generator's flywheel.

In terms of Elsasser's criteria for a self-sustaining generator, the Tesla unipolar dynamo comes closest to satisfying the condition of a better electrical conductor. It is not that a new material is used, but a new geometry is applied so that the current does not create its own opposing forces. This is similar, but not equivalent, to having a better conductor.

Whether or not the dynamo is in fact a "fuelless" generator it appears to be an ingenious feat of engineering that takes one of the basic principles of nature, an equal and opposite action for every action, and turns it, by the use of a novel circuit geometry, into a reaction that is additive to the original action. Instead of the opposite reaction slowing down the system that created it, the reaction adds energy to the system.

Tesla, however, was not satisfied with his mechanical self-sustaining generator. The dynamo would provide the energy to run a single machine, but his vision was to light cities and in the 1900 *Century* magazine article he elaborated on the theory of such a machine.

Imagine, he suggested, an enclosed cylinder with a small hole in it near the bottom. Let us say that this cylinder, he added, contains very little energy but that it is placed in an environment that has a lot of energy. In this case, energy would flow from the outside environment, the high energy source, through the small opening at the bottom of the cylinder, and into the cylinder where there is less energy. Also suppose that as the energy passing into the cylinder is converted into another form of energy as, for example, heat is converted into mechanical energy in a steam engine. If it were possible to artificially produce such a "sink" for the energy of the ambient medium then "we should be enabled to get at any point of the globe a continuous supply of energy, day and night⁽⁸⁾."

He continued, in the article, to elaborate on his energy pump but changed the image slightly. On the surface of the earth we are at a high energy level and can imagine ourselves at the bottom of a lake with the water surrounding us equal to the energy in the surrounding medium. If a "sink" for the energy is to be created in the cylinder, it is necessary to replace the water that would flow into the tank with something much lighter than water. This could be done by pumping the water out of the cylinder, but when the water flowed back in, we would only be able to perform the same amount of work with the inflowing water as we did when it was first pumped out. "Consequently nothing would be gained in this double operation of first raising the water and then letting it fall down."

Energy, though, can be converted into different forms as it passes from a higher to a lower state. He said, "assume that the water, in its passage into the tank, is converted into something else, which may be taken out of it without using any, or by using very little power⁽⁹⁾." For example, if the energy of the ambient medium is taken to be the water, oxygen and hydrogen making up the water are the other forms of energy into which it could change as it entered the cylinder.

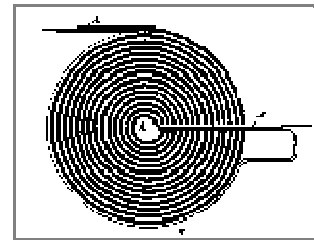
Corresponding to this ideal case, all the water flowing into the tank would be decomposed into oxygen and hydrogen ...and the result would be that the water would continually flow in, and yet the tank would remain entirely empty, the gases formed escaping. We would thus produce, by expending initially a certain amount of work to create a sink for...the water to flow in, a condition enabling us to get any amount of energy without further effort⁽¹⁰⁾.

Tesla recognized that no energy conversion system would be perfect, some water would always get into the tank, but "there will be less to pump out than flows in, or, in other words, less energy will be needed to maintain the initial condition than is developed [by the incoming water], and this is to say that some energy will be gained from the medium⁽¹¹⁾."

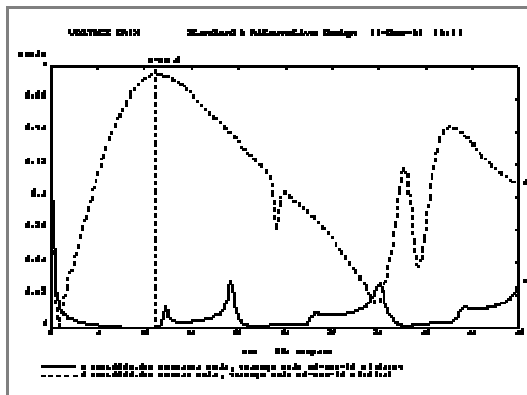
He found that this pumping could be done with a piston "not connected to anything else, but was perfectly free to vibrate at an enormous rate⁽¹²⁾." This he was able to do with his "mechanical oscillator," a steam-driven engine used for producing high frequency currents. The faster the pump would work, the more efficient it would be at extracting energy from the cosmos. Research along this line culminated in the oscillator demonstrated at the Chicago World's Fair in 1893. It

was not until much later, in the 1900 article, he revealed: "On that occasion I exposed the principles of the mechanical oscillator, but the original purpose of this machine is explained here for the first time [\(13\)](#)."

It was also in 1893 that Tesla applied for a patent on an electrical coil that is the most likely candidate for a non-mechanical successor of his energy extractor. This is his "Coil for Electro-magnets," patent #512,340. It is another curious design because, unlike an ordinary coil made by turning wire on a tube form, this one uses two wires laid next to each other on a form but with the end of the first one connected to the beginning of the second one.



5. Coil for Electro-Magnets



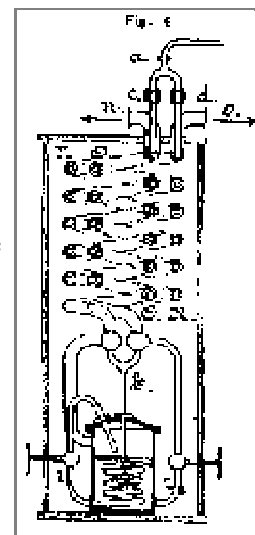
6. Voltage gain comparison

In the patent Tesla explains that this double coil will store many times the energy of a conventional coil [\(14\)](#). Preliminary measurements of two helices of the same size and with the same number of turns, one with a single, the other with a bifilar winding, show differences in voltage gain [\(15\)](#). In figure 6, the upper curve is from the Tesla design, the lower was produced by the single wound coil. The patent, however, gives no hint of what might have been its more unusual capability.

In the *Century* article Tesla compares extracting energy from the environment to the work of other scientists who were, at that time, learning to condense atmospheric gases into liquids. In particular he cited the work of a Dr. Karl Linde who had discovered what Tesla described as a "self-cooling" method for liquefying air. As Tesla said, "This was the only experimental proof which I was still wanting that energy was obtainable from the medium in the manner contemplated by me [\(16\)](#)."

What ties the Linde work with Tesla's electromagnet coil is that both of them used a double path for the material they were working with. Linde had a compressor to pump the air to a high pressure, let the pressure fall as it traveled through a tube, and then used that cooled air to reduce the temperature of the incoming air by having it travel back up the first tube through a second tube enclosing the first [\(17\)](#). The already cooled air added to the cooling process of the machine and quickly condensed the gases to a liquid.

Tesla's intent was to condense the energy trapped between the earth and its upper atmosphere and to turn it into an electric current. He pictured the sun as an immense ball of electricity, positively charged with a potential of some 200 billion volts. The earth, on the other hand, is charged with negative electricity. The tremendous electrical force between these two bodies



7. Linde's condenser

constituted, at least in part, what he called cosmic energy. It varied from night to day and from season to season but it is always present.

The positive particles are stopped at the ionosphere and between it and the negative charges in the ground, a distance of 60 miles, there is a large difference of voltage - something on the order of 360,000 volts. With the gases of the atmosphere acting as an insulator between these two opposite stores of electrical charges, the region between the ground and the edge of space traps a great deal of energy. Despite the large size of the planet, it is electrically like a capacitor which keeps positive and negative charges apart by using a non-conducting material as an insulator.

The earth has a charge of 90,000 coulombs. With a potential of 360,000 volts, the earth constitutes a capacitor of .25 farads (farads = coulombs/volts)⁽¹⁸⁾. If the formula for calculating the energy stored in a capacitor ($E = 1/2 CV^2$) is applied to the earth, it turns out that the ambient medium contains 1.6×10^{11} joules or 4.5 megawatt-hours of electrical energy.

In order to tap this energy storehouse Tesla had to accomplish two things - make a "cold sink" in the ambient energy and devise a way of making the "sink" self-pumping. Explaining how this process might have worked requires, again, speculation.

Such a "sink" would have to be at a lower energy state than the surrounding medium and, for the energy to continually flow into it, the "sink" would have to maintain the lower energy state while meeting the power requirements of the load attached to it. Electrical energy, watt-seconds, is a product of volts x amps x seconds. Because the period of oscillation does not change, either voltage or current has to be the variable in the coil's energy equation.

In that the double wound coil maximizes the voltage difference between its turns, it is probable that it is the current that is minimized to produce a low energy state in the coil. For the coil to be initially "empty" and at low energy would mean it operated at high voltage with a small amount of charge⁽¹⁹⁾.

The coil, then, would be set into oscillation at its resonant frequency by an external power source. During a portion of its cycle the coil will appear to the earth's electric field as one plate of a capacitor. As the voltage across the coil increases, the amount of charge it can "sink" from the earth's higher energy field will increase.

The energy taken into the coil - through the "small opening" which appears to be the atomic structure of the conductor according to the physics of Tesla's time - is "condensed" into positive and negative components of current, a lower energy state relative to the originating field.

The current is equivalent to the water converted to gases in Tesla's description of the self-acting engine. The current would "escape" from the "sink" into whatever load was connected across the coil. The movement of current into the load would produce a strong magnetic field (the stated intention of the patent) which, when it collapsed, would, again, produce a high potential, low charge "sink" to couple with the earth's electric field.

Because the inflowing energy performs a double function similar to the unipolar generator, supplying current to the load and aiding the pumping function, the system's energy expenditure in moving charge is low, allowing the system to gain more energy from the medium than it expends in its operation. The coil needs no extra energy from an outside source to pump the energy it has extracted.

Energy would come directly from the sun.

A more modern view of such a device, should it prove to operate in this theoretical manner, would be to describe it as a self-oscillating capacitive system. Once the device is set into oscillation, very little power is expended in driving the load. Because it is an electrostatic oscillating system, only a small amount of charge moves through the load per cycle, that is, the coulomb per seconds = amps are low. If the charge is used at a low rate, the energy stored in the capacitive system will be turned into heat at a slow rate enabling the oscillations to continue for a long period of time.

With his prominent position in the world of science at the time, it is curious why Tesla's invention was not commercialized or at least publicized more. Economics, not science, appear to have been the main factor. The adoption of alternating current was opposed by powerful financiers of the period. Michael Pupin, another leading electrical researcher at the turn of the century, noted in his autobiography:

...captains of industry...were afraid that they would have to scrap some of their direct current apparatus and the plants for manufacturing it, if the alternating current system received any support ... ignorance and false notions prevailed in the early nineties, because the captains of industry paid small attention to highly trained scientists [\(20\)](#) [\(21\)](#).

Tesla's patents for electrical generators and motors were granted in the late 1880's. During the 1890's the large electric power industry, in the form of Westinghouse and General Electric, came into being. With tens of millions of dollars invested in plants and equipment, the industry was not about to abandon a very profitable ten year old technology for yet another new one.

Tesla saw that profits could be made from the self-acting generator, but somewhere along the line he had pointed out to him the negative impact the device would have. At the end of the section in *Century* where he described his new generator he wrote:

I worked for a long time fully convinced that the practical realization of the method of obtaining energy from the sun would be of incalculable industrial value, but the continued study of the subject revealed the fact that while it will be commercially profitable if my expectations are well founded, it will not be so to an extraordinary degree [\(22\)](#).

Years later, in 1933, he was more pointed in his remarks about the introduction of his fuelless generator. In the Philadelphia *Public Ledger* of November 2nd, is an interview with Tesla under the headline "Tesla 'Harnesses' Cosmic Energy." In it he was "Asked whether the sudden introduction of his principle would upset the present economic system, Dr. Tesla replied, 'It is

badly upset already.' He added that now as never before was the time ripe for the development of new resources."

It has been nearly a century since Nikola Tesla claimed a radically new method for producing electricity. The need for the development of new resources is greater now than at the end of the last century. Perhaps these overlooked inventions will make his vision of "increasing human energy through the use of the sun's energy" become a reality.

Acknowledgment

Thanks to Mr. John Ratzlaff of Millbrae, California for generously sharing a variety of Tesla material that helped make this paper possible.

References

1. Nikola Tesla, U.S. Patent #685,957, "Apparatus for the Utilization of Radiant Energy," reproduced in *Nikola Tesla: Lectures * Patents * Articles* (hereafter *LPA*), Tesla Museum, Beograd, 1956, reprinted by Health Research, Mokelumne Hill, CA., p. P-344, 1973.
2. Nikola Tesla, "The Problem of Increasing Human Energy - Through Use of the Sun's Energy," *The Century Illustrated Magazine*, reprinted in *LPA*, p. A-140.
3. Reference 2, p. A-142.
4. Nikola Tesla, "Notes on a Unipolar Generator," *The Electrical Engineer*, N.Y., Sept. 2, 1891, reprinted in *LPA*, p. A-24.
5. Reference 4, p. A-26.
6. W.M. Elsasser, "The Earth as a Dynamo," *Scientific American*, p. 44-48, May 1958.
7. Reference 4, p. A-23.
8. Reference 2, p. A-140.
9. Reference 2, p. A-141.
10. Reference 2, p. A-141.
11. Reference 2, p. A-141.
12. Reference 2, p. A-142.
13. Reference 2, p. A-142.

14. Nikola Tesla, U.S. Patent #512,340, "Coil for Electro-Magnets," reprinted in *LPA*, pp. P-428-429. He explains that a standard coil of 1000 turns with a potential of 100 volts across it will have a difference of .1 volt between turns. A similar bifilar coil will have a potential of 50 volts between turns. In that the stored energy is a function of the square of the voltages the energy in the bifilar will be $50^2/.1^2 = 2500/.01 = 250,000$ times greater than the standard coil.

15. Measurements were made by M. King and O. Nicholson at Eyring, Inc., with a HP 3577A network analyzer on 3 inch diameter coils with 43 turns each of number 20 wire.

16. Reference 2, p. A-143.

17. Carl Linde, "Process and Apparatus for Attaining Lowest Temperatures for Liquefying Gases, and for Mechanically Separating Gas Mixtures," *The Engineer*, pp. 485-6, Nov. 13, 1896 and p. 509, Nov. 20, 1896.

18. "The Amateur Scientist," *Scientific American*, p. 160, May 1957.

19. This resembles the electrostatic oscillator in Tesla's wireless transmission system: Oliver Nicholson, "The Underwater Communication System of Nikola Tesla," 1991.

20. Michael Pupin, *From Immigrant to Inventor*, Charles Scribner's Sons, N.Y., pp. 285-286, 1930.

21. Reference 2, p. A-143.

22. For others who followed Tesla with inventions to extract energy from the ambient medium see: Christopher Bird and Oliver Nicholson, "Nikola Tesla: Great Scientist, Forgotten Genius," *New Age*, p. 36 ff, Feb. 1977.

For further information on this page, contact via E-mail: onichelson@post.harvard.edu

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Radiant Energy -- Wireless Transformer of High Power Lines?

Les Hendershot & Floyd Sweet family of "free energy" devices may be tapping into local high-power lines, not aetheric energy, using a resonant antennae principle. Alternatively, the high-power lines could be serving as an antennae amplifier for aetheric energy.

Update, Jan. 7, 2005

[Curtain Lifted on Kipper Tricks](#) - Wes Crosiar says he knows how Marcus Kipper has been getting his

alleged over unity technology to work. Microwave transmitter in back yard pumps added energy into demo device. Gadget in car does same thing when demonstrating out in the desert. Says Les Hendershot and Floyd Sweet devices are probably of similar ilk.

by [Sterling D. Allan](#)

Feb. 19, 2004

Pure Energy Systems News Service

SOMEWHERE IN REMOTE CALIFORNIA

A researcher who thought he had successfully tapped into the holy grail of aetheric energy now thinks the source of the energy he is deriving is most likely being picked up radiantly from local high-power lines.



A month ago, Craig West* successfully built for himself a device that outputs four kilowatts with much less than that required for excitation of the device. The device even continued output with the excitation source removed in a closed loop. Though to outward appearances, the device seemed "self-powered," West knew that the energy had to be coming from somewhere.

His hope, of course, was that he had been able to tap into "the vast sea of energy that surrounds us," spoken of by inventors such as Nikola Tesla and T. Henry Moray. He was on the high of his life.

He is quick to mention that the design is not his. He learned it from a gentleman in Arizona, who demonstrated to him a one million Watt output before the wires in the coil disintegrated.

With his success, West had investors with 30 million dollars lined up; 10 million up front for a demo, and the remaining 20 million to tell them how it works.

The device worked fine, with repeatable results when he operated it in Arizona where he built it. But when he returned to his remote home in California that is operated by solar energy, far away from civilization, let alone any power lines, the device no longer output more than what went in. Nothing but the location of the device had changed.

The location in Arizona where he built the device is in the vicinity of high power lines, which traipse the landscape throughout Arizona. West also said that he saw a report on the web about Arizona installing new super conducting, under-ground, high-power lines that convey power from Arizona to Mexico.

An Electrical Engineer who was in on the interview with West, mentioned that it is known that if a barbed wire fence, of about a mile in length, with insulators, is run parallel to a high power line

that a "one-turn transformer" can be created, inductively coupling some of the power of the high-power lines.

Then, as this story was being composed, a story broke in the UK in which an Artist-Physicist, Richard Box, lit 1300 fluorescent lights from " 'spare' electricity just floating around in the air around the electric pylons which dot our countryside." (*Evening Post*, UK, Feb. 19, 2004)



(Front Page, *Evening Post*, UK; Feb. 19, 2004) [\[link\]](#)
[click for full-size, full res image](#)

West thinks that the device he built, patterned after that of his associate in Arizona, is somehow serving as a wireless transformer. "Other technologies may in fact be tapping into aetheric energy, but at this point it looks as though this particular family of designs does not." An obvious example would be the radiant energy experiments done by Nikola Tesla, in which no high-power lines were present.

While this pops his bubble of thinking he had learned to tap aetheric energy, he nevertheless realizes that there are a wide range of practical applications that the power companies would find of great use.

Running electricity to a home remote from the grid is prohibitively expensive. Every few hundred feet can cost thousands of dollars.

This device would enable homes that are within a few miles of high power lines to be able to wirelessly tap into those lines.

The exact efficiencies over a given distance are not yet characterized. West is not yet even certain that this is indeed what is happening with his device. He plans to pursue a series of experiments to document and characterize this phenomenon. When the weather clears, and he can get enough money for a tank of gas, he will be making his way to the vicinity of a high

power line to see how his device performs. He will then measure the effect at different distances from the line, as well as nearby a transformer station.

Another alternative energy researcher, Larry Rand, citing the work of Dr. [Tom Bearden](#) and [John Bedini](#), urges West to not be so hasty to presume that the high-power line effect is due to his device tapping into the electricity being transmitted by those lines. "Perhaps in this case the power company lines and the device form somewhat of a resonant condition that allows some of the same 'power' from the universe that goes into the power company lines, to enter the device."

"According to conventional physics, there should be little power collected from the power company's transmission lines, unless huge coils are used, in fairly close proximity," says Rand.

Rand even goes so far as to suggest that what is actually happening is that the power grid's method of generating electricity absorbs the lines of aetheric energy away from areas where they would otherwise flow, thus inadvertently robbing everyone in the power line vicinity from equal access to this free energy source from the universe.

Taking this a step further, Electrical Engineer, [Ken Rauen](#), points out that "aetheric energy flow that is redirected means natural energy flows are disrupted." He then asks, "what are the full ramifications on the environment and biological health?"

Inventor [Hector D. Perez Torres](#) of Advanced Research Knowledge asserts that "power company lines act as a sink for natural-occurring RF radiant energy waves in low to very low frequencies (LF/VLF) from 10 kHz to 535 kHz." He said the Power distribution entities know of some interactions between naturally occurring VLF frequencies emitted from the earth, and that "they invert lines at intervals and place filters and suppressors in line" to counteract these effects. "Utility companies expend millions in filtering geodesic 'noise' that affects their systems, like in solar storms."

If it is actually a case of tapping into the electricity in the transmission lines, and not aetheric energy being amplified by the lines, what West is most concerned about is that people will make these devices with the specific intent of stealing power from the grid, similar to unscrupulous pirating devices in the wireless world of entertainment.

"They are not that difficult to build. It took me 30 minutes to figure it out."

In the same breath, he hopes that the power community will not just run off with his technology for its use as a wireless transformer, and leave him out of the loop. They could benefit tremendously from his knowledge in coming up with ways to detect such devices from a signature frequency output, to be able to intercept individuals tapping power without proper authorization to do so.

Torres postulates that "if we use this power we do not steal power from them but help them suppress the ELF signal improving their transmission."

While it may not turn out to be the holy grail of free energy, it could be a great tool in energy

distribution, and could even have applications in wirelessly powering appliances.

West is not alone in having created such a device. There are dozens, if not hundreds of individuals around the planet who have built similar devices that operate on the same basic principles. The pioneers in this field are Lester Hendershot, inventor of the "Power Capture Unit" (1920's); and the late Floyd "Sparky" Sweet, inventor of the Vacuum Triode Amplifier (VTA) or Space Quantum Modulator (1986).

Dr. Tom Bearden, a pillar in the free energy community, when describing the phenomenon of aetheric energy being all around us, uses the analogy of birds sitting on top of high-voltage lines, completely unaffected and oblivious to the power running under them. West is now suggesting that at least some of Bearden's devices may be doing just that -- tapping remotely into the power of the high-voltage lines.

Tom Cullen, Director of Education at Pure Energy Systems, said "Bearden and Moray have taken great measures to understand the true source of energy in their experiments."

According to Marc Wiseman, Director of Information Technology at Pure Energy Systems, West is not the first to postulated that the extra electricity in these particular designs may actually be derived from the power grid -- the very source that the others in this field are hoping to replace. "The ability of power lines to act as a coupling device for some distance away is not a new idea."

Wiseman, cites the work of [K. Meyl](#) of Germany, who postulates mathematical models to show that scalar energy and transverse energy can have an interplay between each other. Based on this model, Wiseman extrapolates the idea that the scalar energy surrounding high-power lines could flip over into transverse energy whereby it could be conveyed over long distances away from the lines.

"Very little is known about Extremely Low Frequencies" such as the 60 Hz range of the power lines, because the wavelengths are so large. One wavelength is approximately the width of the United States.

The irony of this belated realization is that one of the prophets of free energy, Nikola Tesla, is revered for his invention of radiant energy technology whereby electricity can be conveyed to remote locations without the use of wires.

"What we seem to have here is a bunch of people who are unwittingly misleading people with the promise of free energy using these devices, when the very source of their energy may be the power grid," says West. Even with Rand's alternative explanation, the aether-focusing properties of the grid are a determining component to the function of this design.

West referred to an inventor in Bullhead City, Earl Davenport, who has a set-up very similar to his, and speculated that his "over unity," as purportedly confirmed by Walter Rosenthal, is a function of high-power lines nearby. Across the River, not ten miles away, in Laughlin Nevada, is a large power plant, with high power lines extending from it in all directions.

[Joseph Newman's motor](#) is another possible variation of this wireless transformer phenomenon, according to West. It has a super long wire, with decent capacitance. "Some people build it and claim it works well, others build it and it doesn't work so well. It just may be the story of 'location, location, location.'"

"John Bedini's motor is an even more likely candidate for this phenomenon," says West.

The high-power-line model is not the only possible explanation given by West. He gives at least six other possible causes of the variations in results, such as naturally occurring ley lines that occur at certain distances across the earth. A possible imminent pole shift of the earth's magnetic field could also be introducing sporadic field parameters. Oil pumping at high velocity under ground has been shown to create electromagnetic fields as well. West also includes in his list the possibility of occult magic at work in which the practitioners are able to create an illusion that defies reality.

Whatever the cause, he has seen variations in the performance of his device that go beyond the variables of the device itself, and he is determined to discover what those outside parameters are.

Steve Elswick of Tesla Tech and editor of [ExtraOrdinary Technology](#) magazine, has been selling plans to this technology in a variation called the Kipper motor. West encourages Elswick to notify his buyers of this effect if it is shown to indeed be a result of this high-power-line phenomenon.

In a three-way interview with West, Elswick confirmed that he was also witness to the over unity effect demonstrated by Kipper. Elswick also points out that there is not a place in the U.S. that does not have background RF from high-power lines. Based on what he knows of the device and its various manifestations, Elswick does not think this device functions because a wireless transformer effect.

As a micro version of this phenomenon of high-power wire-less transmission, West envisions a scenario in which a con man sets up a microwave oven in one room with its door open as a transmitter, and a "receiver" device is set up in the adjoining room, apparently operating as an "over unity device."

West prefers to not divulge the full set of details about how the device works, lest people begin to make the device in order to steal power.

His device, built of off-the-shelf components, consists of

- a deep cycle 12-volt battery
- a simple 6 - 90 Volt DC motor from a treadmill
- an alternator that has been modified, replacing either the rotor or stator windings with permanent Neodymium magnets
- a bridge with 600-Volt, 35-Amp diode to rectify the alternator output to DC
- a coil (this is the trick) wound with 12-gauge insulated wire

"The gauge of the wire is what determines the power level attainable. The thicker the wire, the

more the power."

Regarding the coil, he said, "There is probably not a coil you could name that I am not aware of, but this coil is something I had never seen before."

"If the switch is placed after the coil, you can turn it off, but the device keeps going. There is no visible arc across the switch gap of one inch, yet the current is still running. But if you place the switch before the alternator, it successfully shuts the device down."

"Once the device is running, you can pull the battery out, and loop it back to itself, and it keeps running."

The battery is what West speculates is a key factor in the equation of enabling the proper LCR (inductance, capacitance, resistance) combination to obtain a frequency that enables the device to remotely tap into high-power-lines.

"A battery is a huge capacitor -- of the Farad range," says West.

"The resonance does not have to be exactly 60 cycles. It can be a close multiple. The closer the resonance, the greater will be the interlock."

The wavelength of 60 Hz is over three thousand miles long; but the half, and quarter, and eighth and smaller harmonic fractions of that wavelength also provide a corresponding resonance.

The high-power transmission lines from Arizona to California carry in the range of 500,000 volts, though 200,000 to 400,000 is more typical of high-power lines.

It is not likely that the Utilities have missed a few volts here and there due to these rogue scientists who think they are pulling the power out of thin air, or the aether that surrounds us. If West's discovery is proven out, the ramifications will be disappointing to the Free Energy enthusiasts, but will also lend them some credence for ingenuity which can be put to use in wireless transformer applications. Not all of their devices are driven by this phenomenon. Perhaps science will begin paying closer attention to them -- if anything to guard their power. The scrutiny could do both sides some good. At a minimum, any free energy claim must be proven to be independent of the existing power grid.

If the effect is due to the high-power transmission lines amplifying aetheric energy, as Rand suggests, cooperation with the power companies will be required to scientifically prove this point. Voicing a sentiment often found in the free energy community who see themselves as being at odds with those who meter and charge for power, Elswick said such an attempt at corroboration "would be a death wish."

Torres points out that an argument could be made that "if a power company is radiating energy of this magnitude they may be violating current FCC law." He also cites the growing body of evidence showing deleterious health consequences found in those who live nearby high-power lines -- a class action suit waiting to happen.

If the effect is a result of the high-power lines redirecting the natural flow of aetheric energy to everyone equally, that presents yet another controversy sure to generate some heat of its own. Calvin Young, an Avionics Engineer, formerly with Boeing, goes so far as to say that the power grid is actually damaging the earth by disrupting the natural flow of aetheric energy.

Torres summarizes, "The main issue is that the power company has nothing to do with a phenomena that existed prior to them. Damming the water does not give them ownership over the rain."

While the grid may have its side effects, the benefits it has brought to mankind are everywhere around us.

This discovery of a probable link between this family of radiant energy devices and their vicinity to high-power transmission lines is likely to open a new chapter in the book of free energy. Its reverberations will be felt for decades to come. It might be raining on the parade, but of such rain comes daffodils.

*Craig West is a pseudonym to shield the true identity of the scientist per his request.

See also

- [The Resonant Coil Project](#) - "What young Tesla had not yet fully realized, was that under some conditions, a resonating magnetic field can produce standing waves which can trap and transform -- another subtle form of not-yet-understood energy."
- [Kipper Motor Plans](#) - by Steve Elswick.
- [Kipper Motor Plans Posted](#) - GreaterThings archive of Elswick's posting, Oct. 22, 2004.
- [Google > Kipper+motor](#)

Coincident In the News

- [A Spooky Show to Spark Debate](#) (*Evening Post*, UK; Feb. 19, 2004) - UK Artist-Physicist Richard Box lights 1300 fluorescent lights from " 'spare' electricity just floating around in the air around the electric pylons which dot our countryside."

Lester Hendershot

- [Google > "Lester Hendershot"](#)
- <http://www.rexresearch.com/feg/feg1.htm#hendershot>

Floyd Sweet

- [Google > "Floyd Sweet"](#)

Others

- [Tom Bearden](#)
- [John Bedini](#)
- [Ken Rauen](#)
- [Hector D. Perez Torres](#)
- [K. Meyl](#)

Feedback

I doubt it is from the high-power lines

From: [Steven R. Elswick](#)

To: '[Sterling D. Allan](#)'

Sent: Thursday, February 19, 2004 5:47 PM

Subject: Radiant Energy vs Radiated Energy

Dear Sterling,

It has been brought to my attention that others have now observed effects similar to those that I observed in 2000 when I helped build the Kipper motor. Your article "Radiant Energy -- Wireless Transformer of High Power Lines?" announces the successful tapping of the same source of energy as well as its inherent instability. [...] (For those wishing to build the original version of the Kipper Motor, plans have been made available to members of TeslaTech, see <http://www.teslatech.info>). It is quite refreshing to read that others have observed the transient anomalous effects that I observed.

Unfortunately, they have focused on the possibility of the device leaching energy from high voltage transmission power lines. Personally, I discount this as a remote possibility, not a probability.

Traditionally such schemes to "steal" power from the power companies required that the "antenna" be located fairly close to the powerlines to gain a parasitic electromagnetic effect. The example stated in the article used a loop of wire ONE MILE long to inductively couple to the transmission lines! The Kipper device uses wire only 6 feet long (conductive to frequencies in the 41Mhz-164Mhz range) ... Furthermore, the device I had was located at least 4-miles from the nearest high-voltage lines. For devices located at Kipper's place, one would be looking at 10-miles or more to the nearest high voltage lines. As I was unable to resurrect my device at its original location, or at other locations with high tension wires located even closer and in greater numbers, I highly doubt they were the cause.

To the contraire, I would look more towards Tesla's cosmic rays or the natural aetheric flux (zpe) as the source of energy. In the plans I have made available to my members. I have expounded to a much greater degree on this.

However, should the power companies want to use the power line theory to justify a crackdown on free energy researchers, then two issues need to be addressed:

- 1) a radical revision of current accepted electromagnetic doctrine which addresses the inverse square rule
- 2) the explosion of soft tissue cancer which is “enhanced” by electromagnetic fields

Currently, utility companies are fighting tooth and nail the concept that cancer rates are clustered around power lines. If this long range effect really occurs, then power companies could conceivably be liable for elevated cancer rates!

Finally, last but not least, Tesla has written much about this type of energy which he observed... and this is long before there very many power stations cluttering up the electromagnetic spectrum. If the space energy receivers and Kipper-type of devices are inadvertently picking up manmade radiated power, it would be microwave and broadcast radio/TV, which cannot be considered stealing. However, I do not believe that the power densities of manmade radiation would be sufficient for the results I observed. On the other hand, Tesla quite openly and frequently stated that cosmic energy fell on the earth in quantities sufficient to supply all of mankind's needs!

Steve Elswick
Publisher/Editor - ExtraOrdinary Technology
520-463-1994 - <http://www.teslatech.info>

Military has had radiant conveyance for years

From: [andy pears](#)

To: pes_ee@yahoogroups.com

Sent: Thursday, February 19, 2004 6:18 PM

Subject: Re: [pes_ee] Wiseman on high-power wireless transformers

My friend at Westlands helicopters UK was talking to me recently about the use of wireless transmission of electricity to ground units on the battlefield.

He confirmed that this has been the case during conflict for many years. The reason why we don't have it available mainstream is that it can't be metered in this form.

Andy.

Ramifications for Continued ELF Research

From: mwiseman1@cox.net

To: PES_admin@yahoogroups.com

Sent: Thursday, February 19, 2004 6:16 PM

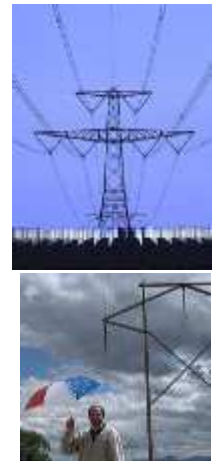
Subject: [PES_admin] Headlines & Alan Francoeur needs better computer

Sterling:

To summarize; our telecom, power lines, as you know, are known to produce low frequency fields whose effects on living creatures is not fully understood. The behavior, transmission and reception, of ELF (extremely low frequency) is not well understood either. It has been known that power lines can induce current in nearby devices. Power lines have been observed to also affect lightening. What has not been known is the radiant nature of the ELF from the power lines. Perhaps this latest story will draw attention and accelerate development of ELF technology. Great efforts have been made in attempting to use ELF for submarine communications, perhaps now we have clues for devising technology better than HARP with less impact on the environment. The work of Dr. K. Meyl of Germany comes to mind as one who worked out the mathematical relationships between scalar and transverse propagation. My thought is that the ELF, unlike frequencies we normally associate with radio phenomena, may involve such transformations, but in a manner different than what we are accustomed with radio phenomena.

Related Stories

- [Pylon Ambient Energy Lights Fluorescent Bulbs](#) - Hundreds in UK flock each night to see artistic display of 1300 fluorescent bulbs lit by overhead high-power lines. Lights ebb as a person walks near them. Tubes give a shock when held while jumping off the ground. (*PESN*; March 6, 2004)
- [Shocking Experience Walking Under High-Power Lines with Umbrella](#) - Discovered: umbrella tines act as an antenna, turning the umbrella holder into a mini transformer. Moist weather seems to accentuate the effect. (*PESN*; June 14, 2005)



See also

- [PESN Featured News](#)

Secrets of Cold War Technology

By Gerry Vassilatos, BSRA

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From Page 32:

RADIANT ELECTRICITY

Through successive experimental arrangements, Tesla discovered several facts concerning the production of his effect. First, the cause was undoubtedly found in the abruptness of charging. It was in the switch closure, the very instant of "closure and break", which thrust the effect out into space. The effect was definitely related to time, IMPULSE time. Second, Tesla found that it was imperative that the charging process occurred in a single impulse. No reversal of current was permissible, else the effect would not manifest. In this, Tesla made succinct remarks describing the role of capacity in the spark-radiative circuit. He found that the effect was powerfully strengthened by placing a capacitor between the disrupter and the dynamo. While providing a tremendous power to the effect, the dielectric of the capacitor also served to protect the dynamo windings. Not yet sure of the process at work in this phenomenon, Tesla sought the empirical understanding required for its amplification and utilization. He had already realized the significance of this unexpected effect. The idea of bringing this strange and wondrous new phenomenon to its full potential already suggested drilling new possibilities in his mind. He completely abandoned research and development of alternating current systems after this event intimating that a new technology was about to unfold.

The effect could also be greatly intensified to new and more powerful levels by raising the voltage, quickening the switch "make-break" rate, and shortening the actual time of switch closure. Thus far, Tesla employed rotating contact switches to produce his unidirectional impulses. When these mechanical impulse systems failed to achieve the greatest possible effects, Tesla sought a more "automatic" and powerful means. He found this "automatic switch" in special electrical arc dischargers. The high voltage output of a DC generator was applied to twin conductors through his new arc mechanism, a very powerful permanent magnet sitting crosswise to the discharge path. The discharge arc was automatically and continually "blown out" by this magnetic field.

Imperative toward obtaining the desired rare effect, the capacitor and its connected wire lines had to be so chosen as to receive and discharge the acquired electrostatic charge in unidirectional staccato fashion. The true Tesla circuit very much resembles a pulse jet, where no back pressure ever stops the onrushing flow. Electrostatic charge rises to a maximum, and is discharged much more quickly. The constant application of high voltage dynamo pressure to the circuit insures that continual successions of "charge-rapid discharge" are obtained. It is then and only then that the Tesla Effect is observed. Pulses literally flow through the apparatus from the dynamo. The capacitor, disrupter, and its attached wire lines, behave as the flutter valve.

[Note that the circuit CONTAINS an electromagnet. Hans Coler. Methernitha. Sparky Sweet. Etc.]

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Tesla found that impulse duration alone defined the effect of each succinct spectrum. These effects were completely distinctive, endowed with strange additional qualities never purely experienced in Nature. Moreover, Tesla observed distinct color changes in the discharge space when each impulse range had been reached or crossed. Never before seen discharge colorations did not remain a mystery for long. Trains of impulses, each exceeding 0.1 millisecond duration, produced pain and mechanical pressures. In this radiant field, objects visibly vibrated and even moved as the force field drove them along. Thin wires, exposed to sudden bursts of the radiant field, exploded into vapor. Pain and physical movements ceased when impulses of 100 microseconds or less were produced. These latter features suggested weapon systems of frightful potentials.

With impulses of 1.0 microsecond duration, strong physiological heat was sensed. Further decreases in impulse brought spontaneous illuminations capable of filling rooms and vacuum globes with white light. At these impulse frequencies, Tesla was able to stimulate the appearance of effects which are normally admixed among the electromagnetic energies inherent in sunlight. Shorter impulses produced cool room penetrating breezes, with an accompanying uplift in mood and awareness. There were no limits in this progression toward impulses of diminished duration. None of these impulse energies could be duplicated through the use of high frequency harmonic alternations, those which Sir Oliver Lodge popularized, and which later was embodied in Marconi Wave Radio. Few could reproduce these effects because so few understood the absolute necessity of observing those parameters set by Tesla. These facts have been elucidated by Eric Dollard, who also successfully obtained the strange and distinct effects claimed by Tesla.

TRANSFORMER

By 1890, after a period of intense experimentation and design development, Tesla summarized the components necessary for the practical deployment of a radiant electrical power distribution system. Tesla had already discovered the wonderful fact that impulse durations of 100 microseconds or less could not be sensed and would do no physiological harm. He planned to use these in his power broadcast. Furthermore, shocking waves of 100 microsecond duration passed through all matter, a fitting form of electrical energy to broadcast throughout the stone, steel, and glass of a power-needy city. Tesla would not expect distortions with specially adjusted energy fields, vectors which permeated matter without interactive effects.

Tesla made a most startling discovery the same year, when placing a long single-turn copper helix near his magnetic disrupter. The coil, some two feet in length, did not behave as did solid copper pipes and other objects. The thin-

[Defines the pulse-width operating region.]

From Page 36:

walled coil became ensheathed in an envelope of white sparks. Undulating from the crown of this coil were very long and fluidic silvery white streamers, soft discharges which appeared to have been considerably raised in voltage. These effects were greatly intensified when the helical coil was placed within the disrupter wire circle. Inside this "shockzone", the helical coil was surrounded in a blast which hugged into its surface, and rode up the coil to its open end. It seemed as though the shockwave actually pulled away from surrounding space to cling to the coil surface, a strange attractive preference. The shockwave flowed over the coil at right angles to the windings, an unbelievable effect. The sheer length of discharges leaping from the helix crown was incomprehensible. With the disrupter discharge jumping I inch in its magnetic housing, the white flinmering discharges rose from the helix to a measured length of over two feet. This discharge equalled the very length of the coil itself'. It was an unexpected and unheard transformation.

Here was an action more nearly "electrostatic" in nature, although he knew that academes would not comprehend this term when used in this situation. Electrostatic energy did not fluctuate as did his shockwaves. The explosive shockwave had characteristics unlike any other electrical machine in existence. Yet Tesla stated that the shockwave, during the brief instant in which it made its explosive appearance, more nearly resembled an electrostatic field than any other known electrical manifestation. just as in electrostatic friction machines, where current and magnetism are negligible, a very energetic field component fills space in radiating lines. This 'dielectric" field normally launches through space in a slow growth as charges are gathered. Here was a case where a DC generator provided the high voltage. This voltage charged an insulated hoop of copper, growing to its maximum value. If all values in the circuit were properly balanced, in the manner prescribed by Tesla, a sudden charge collapse would then occur. This collapse was necessarily very much shorter than the interval required to charge the hoop. The collapse comes when the magnetic disrupter extinguishes the arc. If the circuit is properly structured, no backrush alternations ever occur.

This unidirectional succession of charge-discharge impulses causes a very strange field to expand outward, one which vaguely resembles a "Stuttering" or 'staccato" electrostatic field. But these terms did not satisfactorily describe the conditions actually measured around the apparatus, a powerful radiant effect exceeding all expectable electrostatic values. Actual calculation of these discharge ratios proved impossible. Implementing the standard magneto-inductive transformer rule, Tesla was unable to account for the enormous voltage multiplication effect. Conventional relationships failing, Tesla hypothesized that the effect was due entirely to radiant transformation rules, obviously requiring empirical determination. Subsequent measurements of discharge lengths and helix attributes provided the necessary new mathematical relationship.

He had discovered a new induction law, one where radiant shockwaves

[OK - so read that last large paragraph again. Think about the Methernitha Swiss M-L Converter and the Newman Motor!!!]

From Page 37:

actually auto-intensified when encountering segmented objects. The segmentation was the key to releasing the action. Radiant shockwaves encountered an helix and "flashed over" the outer skin, from end to end. This shockwave did not pass through the windings of the coil at all, treating the coil surface as an aerodynamic plane. The shockwave pulse auto-intensified exactly as gas pressures continually increase when passing through Venturi tubes. A consistent increase in electrical pressure was measured along the coil surface. Indeed, Tesla stated that voltages could often be increased at an amazing 10,000 volts per inch of axial coil surface. This meant that a 24 inch coil could absorb radiant shockwaves which initially measured 10,000 volts, with a subsequent maximum rise to 240,000 volts! Such transformations of voltage were unheard with apparatus of this volume and simplicity. Tesla further discovered that the output voltages were mathematically related to the resistance of turns in the helix. Higher resistance meant higher voltage maxima.

He began referring to his disrupter line as his special "primary", and to the helical coil placed within the shockzone, as his special "secondary". But he never intended anyone to equate these terms with those referring to magnetoelectric transformers. This discovery was indeed completely different from magneto-induction. There was a real and measurable reason why he could make this outlandish statement. There was an attribute which completely baffled Tesla for a time. Tesla measured a zero current

condition in these long copper secondary coils. He determined that the current which should have appeared was completely absent. Pure voltage was rising with each inch of coil surface. Tesla constantly referred to his "electrostatic induction laws", a principle which few comprehended. Tesla called the combined disrupter and secondary helix a "Transformer".

Tesla Transformers are not magnetoelectric devices, they use radiant shockwaves, and produce pure voltage without current. No university High Frequency Coil must ever be called a "Tesla Coil", since the devices usually employed in demonstration halls are the direct result of apparatus perfected by Sir Oliver Lodge and not by Nikola Tesla. The Tesla Transformer is an impulse apparatus, and cannot be as easily constructed except by strict conformity with parameters which Tesla enunciated. Tesla Transformers produce extraordinary white impulse discharges of extreme length and pressure, which exceed the alternating violet spark displays of Lodge Coils. This is illustrated by noting the manner in which Tesla Transformers are actually constructed. While looking and seeming the same, each system actually performs very different functions. Lodge Coils are alternators. Tesla Transformers are unidirectional impulses.

The most efficient Tesla Transformations were obtained only when the disruptive radiating wire line equalled the mass of the helical coil.

[Voltage multiplication in the inner coil!]

From Page 39:

examining the white flames, Tesla realized why there was no measurable "electrical current" at the crown of these activated coils. The normal heavy charge carriers, electrons, could not travel as quickly as the radiant pulse itself. Choked in the metallic lattice of the coil, electrons became immobile. No electron current moved through the coil at all. The radiant pulse which moved over the coil surface, was therefore not electronic in nature.

Additionally, Tesla discovered an amazing phenomenon which removed all doubt concerning the true nature of energetic carriers at work in his apparatus. Tesla arranged a very heavy U-shaped copper bus-bar, connecting both legs directly to his disrupter primary. Across the legs of this U-shaped busbar were placed several incandescent lamps. The arrangement was a very evident short circuit. The lamps were illuminated to a brilliant cold white light, while being shorted by a heavy copper shunt. Uncharacteristic of particulate current electricity, the bright but cold lamps

revealed that another energetic current was indeed flowing through the "short-circuits".

Those who observed this experiment did not expect it to perform any function save the incineration of the disrupter circuit and possibly of the dynamo itself. Instead of this, witnesses beheld a marvel. The lamps lit to an uncommon brightness. In this simple demonstration, Tesla was illustrating but one of his many evidences. Electronic charges would prefer the least resistant circuit rejecting the incandescent bulbs for the copper path. The current in this situation chose to conform with a contradictory principle. Perhaps this was true because the currents were not electrical. Tesla repeatedly used this demonstration to evidence the "fractionation" of currents electronic, from currents neutral.

LUNUNIFEROUS ETHER

A single question remained, the answer to which would provide him with the essential information needed to create a new technology. What so separated or 'fractioned' the diverse mobile carriers in his Transformer? It was the geometric configuration of the coil which inadvertently separated each component. Electrons were blocked from flowing through the wire length, while the radiant pulse was released over the coil surface as a gaseous pulse. Electrons should have drifted through the wire but, during each impulse period, were blocked by the line resistance. Thus, the gaseous mobile carriers were released to flow outside the wire, a pulse which travelled along the outer coil surface from end to end.

Here then was evidence that electrical discharges were indeed composed of several simultaneous mobile species. Tesla now comprehended why his first high frequency alternating currents never evidenced these powerful actions. It was the abruptness, the violence of the impulsive discharge, which gave free

[Page 41 talks about the identification and use of two elements much lighter than Hydrogen that were originally placed into the Periodic Table. The idea is that the aether could be made of these elements. Toby recalls how these are predicted and shown in the Walter Russell 2-D Table of the Elements, in his papers. Right-On. Russell also used ice-cream cone (or conic) shaped coils. So did Tesla - keep reading...]

From Pages 42-43:

He often exposed himself to the very shortest of aether impulse radiance, discovering the mind-elevating effects grew with time. AEtheric energy demonstrated growth characteristics which Tesla noted with amazement. It is impossible to comprehend Teslian Technology apart from the controversial topic concerning the aether. Many analysts will reject the concept without first seeking out and discovering the proofs which have been established by experimenters such as Eric Dollard. Nevertheless, the overwhelming evidence proves that Tesla had indeed been first to identify the gases which Dr. Mendeleev had so long predicted. Tesla addressed the notion that aether streams were being pulled through his Transformers, drawn in at higher natural pressure, and accelerated in the sharp electrical discharge. As electrical systems, Tesla apparatus cannot completely be understood or explained. One must view Teslian Technology as an aether gas technology, one capable of being explained only through gas-dynamic analogues.

It was now easy to understand how such projected rays, aether gas streams under high pressure, could penetrate metals and insulators alike. These powerful rays often could penetrate certain materials with inexplicable efficiency. Electricity did not perform these wonders. Tesla also now understood why these discharge streams produced their smoothly hissing sounds, visibly appearing like gas jets under high pressure. Ether gas under pressure. But what of the other characteristics of this gaseous component? Here was a new world of forces and dynamics vaguely glimpsed by researchers such as Luigi Galvani who, in order to release the more vitalizing components observed in metals which were aerially disposed or grounded, persistently sought the elimination of electronic charge. Tesla was completely mystified. He had successfully released the mystery current, normally suppressed and bound in electronic charge carriers. Unidirectional impulsive discharges of high voltage and abrupt durations released them. What other potentials would aether gas technology release?

BROADCAST POWER

The original cylindrical coils were quickly replaced with cone shaped coils. With these bizarre geometries, Tesla was able to focus the gas-dynamic component, which now rose up like a jet of hissing white light from the coil tip. Tesla recognized that these discharges, while spectacular and awe inspiring, actually represented lost power. A power broadcast station had to evenly disperse the energetic radiance in all directions. Flame-like discharges caused the available power to undulate in space. This would produce unpredictable power drops at great distances. Consumers would not receive a reliable and consistent stream of energy. If his Power Transformer was to operate with highest broadcast efficiency, these flame-

like discharges necessarily had to be suppressed. But suppressing these excessive ether jets proved problematic.

TESLA RADIANT ENERGY: SHOCKWAVES

"... while endeavoring toward his own means for identifying electrical waves, Tesla was blessed with an accidental observation which forever changed the course of his experimental investigations. Indeed, it was an accident which forever changed the course of his life and destiny. In his own attempts to achieve where he felt Hertz had failed, Tesla developed a powerful method by which he hoped to generate and detect real electromagnetic waves. Part of this apparatus required the implementation of a very powerful capacitor bank. This capacitor "battery" was charged to very high voltages, and subsequently discharged through short copper bus-bars. The explosive bursts thus obtained produced several coincident phenomena which deeply impressed Tesla, far exceeding the power of any electrical display he had ever seen. These proved to hold an essential secret which he was determined to uncover.

The abrupt sparks, which he termed "disruptive discharges", were found capable of exploding wires into vapor. They propelled very sharp shockwaves, which struck him with great force across the whole front of his body. Of this surprising physical effect, Tesla was exceedingly intrigued. Rather like gunshots of extraordinary power than electrical sparks, Tesla was completely absorbed in this new study. Electrical impulses produced effects commonly associated only with lightning. The explosive effects reminded him of similar occurrences observed with high voltage DC generators. A familiar experience among workers and engineers, the simple closing of a switch on a high voltage dynamo often brought a stinging shock, the assumed result of residual static charging.

This hazardous condition only occurred with the sudden application of high voltage DC. This crown of deadly static charge stood straight out of highly electrified conductors, often seeking ground paths which included workmen and switchboard operators. In long cables, this instantaneous charge effect produced a hedge of bluish needles, pointing straight away from the line into the surrounding space. The hazardous condition appeared briefly, at the very instant of switch closure. The bluish sparking crown vanished a few milliseconds later, along with the life of any unfortunate who happened to have been so "struck". After the brief effect passed, systems behaved as designed. Such phenomena vanished as charges

slowly saturated the lines and systems. After this brief surge, currents flowed smoothly and evenly as designed.

The effect was a nuisance in small systems. But in large regional power systems where voltages were excessive, it proved deadly. Men were killed by the effect, which spread its deadly electrostatic crown of sparks throughout component systems. Though generators were rated at a few thousand volts, such mysterious surges represented hundreds of thousands, even millions of volts. The problem was eliminated through the use of highly insulated, heavily grounded relay switches. Former engineering studies considered only those features of power systems which accommodated the steady state supply and consumption of power. It seemed as though large systems required both surge and normal operative design considerations. Accommodating the dangerous initial "supercharge" was a new feature. This engineering study became the prime focus of power companies for years afterward, safety devices and surge protectors being the subject of a great many patents and texts.

Tesla knew that the strange supercharging effect was only observed at the very instant in which dynamos were applied to wire lines, just as in his explosive capacitor discharges. Though the two instances were completely different, they both produced the very same effects. The instantaneous surge supplied by dynamos briefly appeared super-concentrated in long lines. Tesla calculated that this electrostatic concentration was several orders in magnitude greater than any voltage which the dynamo could supply. The actual supply was somehow being amplified or transformed. But how?...

The high voltage of the dynamo exerted such an intense unidirectional pressure on the densified charges that alternations were impossible. The only possible backrushes were oscillations. In this case, charges surged and stopped in a long series until the supercharge was wasted away. All parameters which forced such oscillations actually limited the supercharge from manifesting its total energetic supply, a condition Tesla strove to eliminate. Indeed he spent an excessive time developing various means to block every "backrush" and other complex current echo which might forced the supercharge to prematurely waste its dense energy. Here was an effect demanding a single unidirectional super pulse. With both the oscillations and alternations eliminated, new and strange effects began making their appearance. These powerful and penetrating phenomena were never observed when working with high frequency alternations...

The sudden quick closure of the switch now brought a penetrating shockwave throughout the laboratory, one which could be felt both as a sharp pressure and a penetrating electrical irritation. A "sting". Face and hands were especially sensitive to the explosive shockwaves, which also produced a curious "stinging" effect at close range. Tesla believed that

material particles approaching the vapor state were literally thrust out of the wires in all directions. In order to better study these effects, he poised himself behind a glass shield and resumed the study. Despite the shield, both shockwaves and stinging effects were felt by the now mystified Tesla. This anomaly provoked a curiosity of the very deepest kind, for such a thing was never before observed. More powerful and penetrating than the mere electrostatic charging of metals, this phenomenon literally propelled high voltage charge out into the surrounding space where it was felt as a stinging sensation. The stings lasting for a small fraction of a second, the instant of switch closure. But Tesla believed that these strange effects were a simple effect of ionized shockwaves in the air, rather like a strongly ionized thunderclap.

Tesla devised a new series of experiments to measure the shockwave pressure from a greater distance. He required an automatic "trip switch". With this properly arranged, a more controlled and repetitious triggering of the effect was possible. In addition, this arrangement permitted distant observations which might cast more light on the shield-permeating phenomenon. Controlling the speed of the high voltage dynamo controlled the voltage. With these components properly adjusted, Tesla was able to walk around his large gallery spaces and make observations. Wishing also to avoid the continuous pressure barrage and its stinging sparks, Tesla shielded himself with several materials. The arrangement of rapidly interrupted high voltage direct currents resulted in the radiation of stinging rays which could be felt at great distances from their super-sparking source. In fact, Tesla felt the stings right through the shields! Whatever had been released from the wires during the instant of switch closure, successfully penetrated the shields of glass and of copper. It made no difference, the effect permeated each substance as if the shield were not there at all. Here was an electrical effect which communicated directly through space without material connections. Radiant electricity!...

RADIANT ELECTRICITY

Through successive experimental arrangements, Tesla discovered several facts concerning the production of his effect. First, the cause was undoubtedly found in the abruptness of charging. It was in the switch closure, the very instant of "closure and break", which thrust the effect out into space. The effect was definitely related to time, IMPULSE time. Second, Tesla found that it was imperative that the charging process occurred in a single impulse. No reversal of current was permissible, else the effect would not manifest. In this, Tesla made succinct remarks describing the role of capacity in the spark-radiative circuit. He found that the effect was powerfully strengthened by placing a capacitor between the disrupter and the dynamo. While providing a tremendous power to the effect, the dielectric of the capacitor also served to protect the dynamo windings. Not yet sure of the process at work in this phenomenon, Tesla sought the

empirical understanding required for its amplification and utilization. He had already realized the significance of this unexpected effect. The idea of bringing this strange and wondrous new phenomenon to its full potential already suggested thrilling new possibilities in his mind. He completely abandoned research and development of alternating current systems after this event, intimating that a new technology was about to unfold.

The effect could also be greatly intensified to new and more powerful levels by raising the voltage, quickening the switch "make-break" rate, and shortening the actual time of switch closure. Thus far, Tesla employed rotating contact switches to produce his unidirectional impulses. When these mechanical impulse systems failed to achieve the greatest possible effects, Tesla sought a more "automatic" and powerful means. He found this "automatic switch" in special electrical arc dischargers. The high voltage output of a DC generator was applied to twin conductors through his new arc mechanism, a very powerful permanent magnet sitting crosswise to the discharge path. The discharge arc was automatically and continually "blown out" by this magnetic field...

By properly adjusting the inherent circuit parameters, Tesla learned how to produce an extremely rapid series of unidirectional impulses on demand. When the impulses were short, abrupt, and precise in their successions, Tesla found that the shocking effect could permeate very large volumes of space with apparently no loss of intensity. He also found that the shocking effect penetrated sizable metal shields and most insulators with ease. Developing a means for controlling the number of impulses per second, as well as the intermittent time intervals between each successive impulse, he began discovering a new realm of effects. Each impulse duration gave its own peculiar effects. Able to feel the stinging shocks, though shielded at a distance of nearly fifty feet from his apparatus, Tesla recognized at once that a new potential for electrical power transmission had been revealed to him. Tesla was first to understand that electrical shock waves represented a new means for transforming the world... Tesla found it impossible to measure a diminution in radiant force at several hundred yards...

Also, Tesla wished to determine the effect of gradually decreased impulse durations required greatest skill and precaution. Tesla knew that he would be exposing himself to mortal danger. Controlling the rapidity of current blowout in the magnetic DC arc, Tesla released a new spectrum of light-like energies throughout his large gallery space. These energetic species were like no other which the world has since seen. Tesla found that impulse duration alone defined the effect of each succinct spectrum. These effects were completely distinctive, endowed with strange additional qualities never purely experienced in Nature. Moreover, Tesla observed distinct color changes in the discharge space when each impulse range had been reached or crossed. Never before seen discharge colorations did not remain a mystery for long. Trains of impulses, each exceeding 0.1 millisecond

duration, produced pain and mechanical pressures. In this radiant field, objects visibly vibrated and even moved as the force field drove them along. Thin wires, exposed to sudden bursts of the radiant field, exploded into vapor. Pain and physical movements ceased when impulses of 100 microseconds or less were produced. These latter features suggested weapon systems of frightful potentials.

With impulses of 1.0 microsecond duration, strong physiological heat was sensed. Further decreases in impulse brought spontaneous illuminations capable of filling rooms and vacuum globes with white light. At these impulse frequencies, Tesla was able to stimulate the appearance of effects which are normally admixed among the electromagnetic energies inherent in sunlight. Shorter impulses produced cool room penetrating breezes, with an accompanying uplift in mood and awareness. There were no limits in this progression toward impulses of diminished duration. None of these impulse energies could be duplicated through the use of high frequency harmonic alternations, those which Sir Oliver Lodge popularized, and which later was embodied in Marconi Wave Radio. Few could reproduce these effects because so few understood the absolute necessity of observing those parameters set by Tesla. These facts have been elucidated by Eric Dollard, who also successfully obtained the strange and distinct effects claimed by Tesla."

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