Analysis Current Driven Power Amplification

A Higher Realm, or Natural Order, of Relationship Balance

My Challenge; To Allow a Better World

"**Analysis_Power_Amplification**," is the original, 34 page Analysis of My Circuits, my research, my data, my conclusions, and my supporting files. This 2023 file is a 60 page update of the 2012 version and is now titled, "**Analysis Current Driven Power Amplification**". This 2023 file updates previous obscurities by introducing more information and consistency and, therefore, clarity.
These concepts and findings predate my comprehension of Transient Phases, even though these **Secondary Principles** were, unknowingly, actually rooted in the mysteries of a Transient Phase.

If this information is ever published, it is my intention and desire to do so on my own. However, circumstances which might prohibit a completion of my intentions or desires, must be seriously considered to circumvent unseen world powers, which oppose the world's benefit if those benefits compromise their position to profit from the status quo. For this reason, my decision to publish this concept may be deemed more productive than seeking a Patent. At least five honorable individuals have secured versions of the "**Voltage Driven Current Amplifier**;" its concepts, schematics, and other Technical Notes and Data. These personalized CD's carry five File types which depict My Circuits' development, operation, and Technical Data in Electronic simulation and real life. These individuals were instructed to not Copy, Load, Save, or Share any piece of this concept with anyone until after my enumerated qualification is met. Therefore, this concept will either be sold, developed, or released by me; or legitimately distributed by any of the honorable individuals after the enumerated qualifications are met.

This new update from 2024 includes:

I "**Analysis Current Driven Power Amplification.pdf**"
Including: My Challenge, Table of Contents, My Concept Summary, Applicable Terms, A Beginning, The Long Awaited Introduction, A Brief History, Brief Overview of Operation, **E Equals I Times R**, The Realm of the Total Story, and schematics and technical Data.

II **Video Presentations**
A "**My_Concept_A_Part_01_EEqualsIxR.exe**"
B "**My_Concept_A_Part_02_SpecialMotor.exe**"
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III **My Concept's Support**
A **Daniel Davis' Magnetism Manual.pdf**, 1842
1 Carl Friedrich Gauss, Joseph Henry, Michael Faraday, James Clerk Maxwell
B "**Clemente Figuera Patents.pdf**," 1908
C **Nikola Tesla's Self-charging Electric Car**, 1931
D "**MAGNETIC CURRENT Edward-Leedskalnin Mod.pdf**," 1945
E **John Bedini's Energy Research**, 1984
F "**Bedini Generator Analysis2.xls**," 2010, Later, **Bedini Transient Phase Simulation**
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Sincerely,
Edmund A Cook

Current Driven Power Amplifier

"A Higher Realm, or Natural Order, of Relationship Balance."

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My Concept's Summary

Energy demands have existed since the dawn of human experience. Most of what we now know did not come in one package, but has accumulated over time, and are results of sequentially building experiences. The goal of Science is to define our operating boundaries, giving us parameters wherein we may make the most of currently known resources, as we discover new concepts and ways to use nature's limited resources even more Efficiently. Occasionally, simple things get overlooked, or lost within what appears to be a bigger picture for what is termed real and true, whether intentionally or unintentionally. Political bias implements patents, taxes, programs, and funds for research with no regard for pure science. Were bias perceptions of energy Efficiency further misguided by financial influences? A very simple implementation of My Concept resolves elusive mysteries, and may fuel a previously unimagined industrial age.
These concepts and findings predate my comprehension of Transient Phases, even though these Secondary Principles were, unknowingly, actually rooted in the mysteries of a Transient Phase.

Description

Energy, Watts, Horse Power (HP), or "Output" are terms describing how much work is done per unit of time. How much work is a specific amount of energy capable of producing? The correct answer is rooted in the **Efficiency** of the particular mechanism. We blindly accept the boundaries and limits which Governments, Researchers, Scientists, and Engineers have established on that particular energy's availability and **Efficiency**. An entity invests capital and makes 1,000 Watts, and whoever uses the 1,000 Watts then pays for the energy and its taxes. Yet, any legitimate challenges to these boundaries are obscured, invalidated, and ignored as if they are some silly, misguided, dream. And no one will ever be held accountable for what is truly wrong. Numerous individuals claim to have achieved much higher work **Efficiencies**, even ten-fold increases for a specific amount of energy. A correctly constructed design can definitely produce more work than is established by their boundaries for **Efficiency**.

The term, **Free Energy**, is a misconstrued concept of **Efficiency**. How would our economy change if **Efficiency** scales for the energy we expect to produce 2 HP were **dramatically** shifted, and that level of energy could produce 20 HP or more, and also recharge its power source? It matters not if anyone thinks my claims are plausible, or even believes such things do, or ever could exist. The bottom line: my presented claims are true. There are actually **Dynamic** and obscure **Principles** supporting My Concept's greater **Efficiency** achievements. I have validated this **Dynamic** nature and the **Ratios** both defy established boundaries and also obey known Law. These **Principles** are now known and are easily both replicated and scaled. Where and how the energy in Lightning originates are expounded by My Concept. Tesla merely demonstrated results of the **Principles**, but did not isolate formulas. I have discovered My Concept's **Dynamic EIR** (component Resistance) is not static, and, thus, the formulas for Tesla and others have evaded detection. My Concept adheres to known Law. I demonstrate **Dynamic Principles**, which defy the boundaries once recognized as limits of the Law, and also formulas.

Market

The only groups or individuals that will hold no interest in society benefiting from this technology are the government and those who use government to control markets for personal profit. The overall Market encompassing this technology's use is huge, as the implementation is neither technical, or expensive. Imagine owning cars that function independently of either fossil fuels or grid-charging, or grasp cities functioning independent of traditional power delivery superstructure; Contemplate the industrialization which would transpire with much cheaper production costs; Consider cost benefit ratios for manufacturing, mass transit, delivery services, air travel, railroads, and space. The impact is large and has few bounds.

Medium

My Concept and its subsequent processes remain a trade secret as seeking a Patent at this time, from my perspective, would be anti-climactic. My sole desire is to sell this entire concept to someone with integrity and the will and resources for bringing these benefits to the world

Applicable Terms

"A-DC" (**A**lternating **D**irect **EIR C**urrent) describes a "**Higher Realm's** Energy," and is a natural result of unique Relationships imposed by My Circuit's influential design (lightning). **Diode Process** Efficiencies allow perceptions "beyond the established scientific box." (SEE Admittance, **Cook Effect**, **EIR-A**, **Split Paths**)

"Admittance**"** (Y), a once obscure **ratio** for the ease with which **C**urrent flows, is 1 / Impedance. Within classical applications, Impedance rises with frequency increases, and **R** does not fall with increases in **V**oltage. These classical relationships are of no consequence in **EIR's Higher Realm**. My Circuit's natural **Efficiencies** nullify **Counter-EMF**. Impedance (Z), Resistance (**EIR**), and Admittance (Y) are more balanced, if not equal. This **Voltage Driven** Admittance is now a **Dynamic Higher Realm's Ratio**. (SEE **A-DC**, **Consistent Watts**, **Cook Effect**, **Diode Process**, **Edmunds**, **EIR**, **EIR-A**, **Higher Realm, Hole-Current Potential**)

"Consistent Watts" refer to the nature of My Circuit to draw **EIR-A** independently of classical **R**esistance, and the greater **EIR-A Magnetic Field Flux / W** may be expressed in Kilowatts (**KW**). (SEE Admittance, **Cook Effect**, **Chart #1**, **#2**, **Diode Process**, **Oscilloscope #1**, **#2**, **#3**, **#4**, **and Spreadsheet #1 - #4**)

"Cook Effect" identifies the overall exponential **EIR-A** increases facilitated by the **Diode Process**.
(SEE **A-DC**, Admittance, **EIR**, **EIR-A**, **Hole-Current Potential**, **Spreadsheet #1 - #4**, **Chart #1**, **#2**)

"Diode Process" results of a Diode's structure, the **Hole-Current Potential** (**Voltage Driven** Admittance), Diode location in My Circuit, and the **Main Sources** and **Oscillator's** influence. All allow the **Cook Effect**. This "**Process**," like Tesla's sparks, effectively negates **Counter-EMF**, allowing more energy to be manifest.
(SEE Admittance, **Cook Effect**, **Diode Process, EIR, EIR-A**, **Hole-Current Potential**)

"Edmunds" are the unit name by which the **Effectively Inverting Resistance** (**EIR)** of My Circuit is measured.
(SEE **A-DC**, **Cook Effect**, **Diode Process**, **EIR**)

"EIR" (the **Effectively Inverting Resistance**) distinguishes how the **Main Sources** electrical Relationships of **Hole-Current Potential**, Transformer Primary, or special motor vary from classical **r**elationships.
(SEE Admittance, **Diode Process**, **Cook Effect**, **Edmunds**, **EIR-A**, **Spreadsheet #1 - #4**, **Chart #1, #2**)

"EIR-A" (**EIR Amps**) rise exponentially as a low **V**oltage energizes an **Effectively Inverting Resistance** (**EIR**) and the **Hole-Current Potential** in My Circuit, which differ from classical **V / R** values and allow greater **Magnetic Field Flux/W Ratios**. **I**nstantaneous **W**atts are **((EIR-A^2 * R) / 2)**. The "dividing by 2" is canceled because there are two cycles. (derived from **Watts (P) = I * V** and, replacing **V** with **I * EIR**, we now have **P = EIR-A^2 * R**.) A blue **R** is classical **R**esistance in a **NEW Realm of Ratios**.
(SEE Admittance, **A-DC**, **Consistent Watts**, **Diode Process**, **Hole-Current Potential**)

"Higher Realm" identifies **New** Relationships which do not defy established Physical Laws. Note the "**New**" versus "established" conflict. Strangely, the **EIR** of the **Diode Process** is supported by both experiences in real life and Software Simulation Data. The **Hole-Current Potential** (**Voltage Driven** Admittance) "harnesses" Lightning through a lower than expected **V**oltage, varying Admittance's Higher Relationships through either small **V**oltage changes, or Diode characteristics. Levels of the **Voltage Driven** Admittance (**C**urrent or **EIR-A**) can easily be extended beyond a Diode's electrical capacity. The main focus is the **Magnetic Field Flux/W Ratio.**
(SEE Admittance, Cook Effect, **Diode Process**, EIR, EIR-A, Hole-Current Potential, Split Paths, **Transient Phase**)

"Hole-Current Potential" reflects the specific characteristics of Diodes', which allow greater **EIR-Amps** **a**t a low **V**oltage, and are central to the **Cook Effect**.
(SEE Admittance, **Cook Effect**, **Diode Process**, **EIR**, **EIR-A**, **Higher Realm**)

"Split Paths" are a visual of "**Splitting the Positives**," as described by John Bedini. (SEE **A-DC**)

"Transient Phase" is the **Primary Principle** of a Natural Electron stage where magic occurs when an Instantaneous **V**oltage is introduced in a non-magnetic material. This is the same stage where Tesla learned how to build a Circuit that mimics Lightning, and the **Secondary Principle** Diodes are **Switch #1**.

"Virtual Ground" is the Transformer's Center-Tap, and may also be connected to the **Oscillator's** Center-Tap.

A Beginning

It is very interesting to read stories and articles about Nikola Tesla. See **Appendix A1**: **Historical Clarity**. Even though Tesla could not isolate the **Operational Principles** of his self-charging electric car, there are numerous interpretations offering perspectives for how Tesla accomplished such a phenomenal feat. They cannot be faulted for trying, yet, if they suspect that Tesla (or others) used conventional concepts in a traditional manner, they will never see anything near what Tesla unexpectedly realized, witnessed, demonstrated, and shared instructions about.

Anyone who has witnessed a Lightning storm or Wimshurst Machine understands that we are surrounded by a **Sea of Energy**. Lightning flashes in very rapid succession still begs the question, "Where does this Energy come from?" Tesla examined this phenomenon intently and experienced an unexpected. Some critical, non-traditional **Principles** of nature had been misunderstood, and, after correcting his previous anticipations, the perceptions of his course were **Dynamically** altered. The facts Tesla easily harnessed immense amounts of Energy from the ether and had no formulas are the most critical issues. Logically, the focal point is a process to discover "how do we access this **Sea of Energy**;" taking the discussion back to lightning, the Wimshurst, Tesla's "sparks" (or Spikes), and more **Efficient** uses of **Nature's Dynamics**. The **Principles** of re-creating and controlling Lightning may have been complicated by follies of Science and human nature. The elusive **Transient Phase** carries the mysteries they sought.

Even though Tesla couldn't find formulas, his results could be replicated. "The difference between genius and stupidity is, genius has limits." Tesla humbly acknowledged his research had not yet isolated formulas. His public presentation was given with the hope others would embrace what he knew, and the elusive formulas could then be deciphered. The historical record shows his hopes were dashed.

A major thesis about Tesla's discovery has three inseparable qualifications;

1 The description of the components, their small number, and ease of assembly;
2 the contrasting amounts of Energy entering and exiting his circuit were unexpected;
3 and the reality Tesla had no grasp on formulas.

Let's isolate what we know and then analyze a realistic possibility.

A 1931 Pierce Arrow Convertible
A **specially built**, **80 HP** (60,000 Watt) 1800 RPM, brushless (universal), **fan cooled Motor**.
Two very thick cables trailed the electric Motor, and entered the car through the dash.
Battery, which did not have the capacity to operate a traditional 80 HP motor.
The Motor's Power Source was "Tesla's Circuit, or Power Receiver box."
A 6 foot antennae, mounted at the rear of the car. **(... an oscillator)**
12 (Schottky) **Diodes**, wire, and a **few Capacitors**. (... accessible parts)
A 24 L * 12 W * 6 inch H box housed the "Power Receiver's" Circuit.
Two 1/4 inch rods, three inches in length were used to turn the Power Receiver Circuit ON.
There was a mysterious "Ground," and adjustments were made.
The two 1/4 inch rods were pushed in the box near the dash and, **"we now have power."**
The car was driven to speeds of 90 mph.
In reply to 'where the Energy came from,' Tesla said, "From the ethers all around us."
Several suggested Tesla was either mad, or in league with sinister forces.
Incensed, he removed his mysterious box, destroyed it and returned to New York.
His path to and knowledge of the unexpected **Principles** died with him.

Using similar components, My Circuit exhibits the **Higher Realm Relationships** Tesla described and demonstrated while, unknowingly, witnessing the **Primary and Secondary Principles** of **EIR** and the absence of **Counter-EMF**. The ultimate focus here is my personal research on My Circuit exceeds every qualification and characteristic of Tesla's self-charging car and, too, **Efficiently** maintains an unconventional flow of **EIR-A** at low **V**oltage, which taps the **Sea of Energy**, and I have the formulas.

The Long Awaited Introduction

Now, with all the fluff out of the way, what are the conditions wherein Lightning is so spontaneously generated? Secondly, is it possible to replicate these naturally occurring conditions? And, thirdly, when replicating such conditions, are there also **Efficient** ways to control, capture and continue the Energy?

There are things in nature which evade scientific comprehension or explanation. It is fascinating and could well be a frustration to have educated people, after hearing of what I had witnessed My Circuit was doing, tell me such things were impossible. Even more bizarre is their acceptance that Nikola Tesla had accomplished similar things. So their conclusions are, "Tesla could do it, but you cannot, nor can I." Yet myself and others have witnessed My Circuit consistently respond in ways which defy known expectations and **Principles**.

An ever present potential to create Lightning is manifest when cold and warm fronts collide. In the same way, a Wimshurst Machine organizes Electrons (or charged particles), and amplifies the accumulating organization. There are similarities between Lightning and the Wimshurst, in that two polarizing charges are subjected to natural circumstances which organize a very small **V**oltage and amplify an ever-present Energy. For anyone who has witnessed lightning, a Wimshurst, or Tesla's sparks, the amount of Energy present is breathtaking.

The deeper question is, "Where does their Energy come from?" It takes 20,000 Volts to jump one inch. It does not take much time for a small Wimshurst to gather the Energy sufficient to jump a 3 inch gap, and the amount of time for Lightning to be regenerated can be very miniscule. It is not difficult to imagine or comprehend we are sitting in a **Sea of Energy**, nor is it implausible to tap and capture **this Sea's Energy**. If someone truly believes accomplishing such a thing is impossible, does their belief preclude anyone from demonstrating that the someone is correct about Tesla and wrong about everyone else?

Tesla demonstrated an unknown Energy source and offered detailed instructions to replicate his successes. However. academia wanted formulas, not instructions. When Tesla demonstrated his self-charging car, those who scoffed, once again, overpowered revolutionary, non-traditional **Principles**, and impressions isolating Tesla as a madman deepened, negating his sincere intentions to build an even better world.

I could go on about John Bedini's "**Switch #1**" and others' amazing contributions. They may have deeper grasps than Tesla, but I do not believe any have witnessed the simplicities I have isolated and recorded in my research of **Dynamic Principles**. Who considered circumstances (lightning, or a Wimshurst) where a small **V**oltage delivers a large **C**urrent? **Voltage Driven** Admittance potentials allow **Dynamic EIR-A** responses to **V**oltage increases while, at the same time, a **Dynamic EIR** decreases. Finally, who'd expect the product of **New C**urrent (**EIR-A**) and **New** Resistance (**EIR**) is still equal with the **New V**oltage?

I have actually seen these **Dynamic Principles** defy established boundaries of Law while obeying Law. Yes, My Circuit Efficiently channels the **Sea of Energy**. Yes, formulas still calculate the balanced and consistent **Free Energy**. Imagine 0.1 **V**olt increases doubling **EIR-A**. These **Dynamic** Diode **EIR** characteristics and low **V**olts manifest a **Higher Magnetic Field Flux/W Ratio**. It is not difficult to grasp that subsequent losses with a low **V**oltage and an exponential **EIR-A** are miniscule.

The piece missing, disallowing a complete set of calculation, is: how are the specific characteristics of a Diode's nature and structure mathematically translated into a particular **Hole-Current Potential** (**EIR-A**), or **Dynamic EIR** at each specific **V**oltage? I believe this calculation will be a simple process for one who has more specific knowledge for Diodes' characteristics and their nature in **Dynamically** balancing **EIR** with **Voltage Driven** Admittance. The low **V**oltage **Efficiencies** in My Circuit simply minimizes **Counter-EMF**.

Circumstances for this Energy perspective can easily be demonstrated, controlled, captured, and sustained. A focus on what can be is far more productive than blindly accepting this is impossible. The simplicities of this **Dynamic** process cannot be negated by academia, nor silenced by the status quo if I sell My Concept, release the accompanying Data in a prototype, or publish this Data for the majority in the world to benefit. A viable, self-sustaining Energy that powers a car, or other even larger applications, is here.

Each characteristic described in this **Secondary Principle's Presentation** is real and valid, even though I was not, yet, familiar with the **Primary Principle** at its roots. This **Secondary Principle** stands on its own. However, there is a very strange Realm when the **Efficiencies** of both Realms are united. When the **Primary Principle** of a **Transient Phase** is introduced, **Efficiency** becomes even more **Dynamic.**

A Brief History

My Original Tupperware Circuit (**Appendix E**) and those which followed are **V**oltage Amplifiers, and capable of multiplying any Input AC **V**oltage by ~4 times. See **Appendices C - G.** They differ from a Transformer in that a Load can pull its required **C**urrent from the Circuit's **Source** at the higher **V**oltage. I ran my 120 Volt, 8 Amp vacuum on 30 Volts. This Circuit could also function as a DC Power Factor Meter, because a Secondary Transformer was not added until Series 8 (S8).

Beginning with S8, my Original Circuit initiated a new twist, introducing My Circuit. I discovered the **Effectively Inverting Resistance** (**EIR**) was inherent of My Circuit's design, as was an unexplained exponential **EIR Current**. And more than one "Diode" in series on each Branch (or Leg) restricted **EIR-A**. **EIR** reflects the conditions of the **Hole-Current Potential** (**Voltage Driven** Admittance), where a Diode's AMP range, characteristics, and structure allow the **Diode Process** and sustain the **Cook Effect**. There are unique anomalies concerning Diode structure, characteristics, and placement in My Circuit. Note: the **Dynamic** Diode responses vastly vary to small **Source** **V**oltage increases.

The years of research were congealing around an overall vision with a very solid thesis. Focus explored Negative Resistance and **P**ower Out increases were analyzed. A **Higher Realm** question invited scrutiny for my Data being a sham of **P**ower Factor Phase Shifts, or situational anomalies with no merit in reality. Oscilloscope **P**ower strokes are balanced and also match **V**oltage and **EIR-A**. Even Battery polarity was subject to analysis, and subsequent Battery and **Coil** alignments were introducing Efficiencies never before imagined. Particular Diode characteristics and configurations, too, brought more light to the discussion. Streamlining the **Oscillator** blocked **Oscillator EIR-A** feedback, which could reach **EIR-A's** levels and overheat the **Oscillator**. Without the four caps the **Oscillator** was non-functional. The **Oscillator's** influence in S10 with only two caps could be quite profound, yet, this Series, potentially, could produce more **Magnetic Flux Energy/EIR-W** than classically achieved. Blocking diodes of S11 and S12 also changed the beginning slope of the **EIR-AV Curve**. The slopes were sharper, but S10 maintains a point where the **Dynamic** flood-gates of **EIR-A** (Admittance) are released. One of many questions, "Can S10's feedback (the cause of my destroyed appliances) be more advantageous at lower **Oscillator** **V**oltages?" All these characteristics were not, at the time, even recognized as **One Dimensional**.

S10 seems the master prototype. The thesis; there can be more **Magnetic Flux Energy/EIR-W** than with traditional sources' Magnetic Flux Energy/W: a **Current Driven Power Amplifier** in a **Sea of Energy**.

An **Oscillator** at less than 2 **V** and **Main Sources** at less than 3 **V** provide an exponential **EIR C**urrent response as My Circuit's **Effectively Inverting Resistance** enhances the **Diode Process**, allowing the **Cook Effect**. These **New** Relationships and **Ratios,** can be calculated. Tesla's mysterious referencing of a **Sea of Energy** and his discoveries which harness "lightning" seem more than a pipe dream. Even if my initial **Sources'** were 0.3 Volts higher, the **Principles** wouldn't have been seen, as the 6 Amp Diode's **EIR** could not endure the level of **EIR-A**, nor sustain the **Cook Effect**; these are ultimate **Diode Process** responses if **EIR-A** remains within Diodes' **C**urrent capacity and **EIR-A** are sustained at the **V**oltage. After changing to different Diodes for a greater **Hole-Current Potential**, or Admittance, the **P**ower Out was mysteriously **Higher** while using the same circuit and **Sources**. It is indeed mysterious that **EIR** is a **Dynamic Inverse function of EIR-V** and, whereas My Circuit minimizes **Counter-EMF**, the subsequent losses from small **V**oltages and exponential **EIR-A** are miniscule. These elusive **Dynamics** identify why Tesla had such a difficult task reconciling his results with known formulas.

Diode characteristics, precipitating various **Hole-Current Potentials** (Admittance) at specific **V**oltages are responsible for the **EIR-A** of this **Higher Realm** (**Voltage Driven** Admittance). The fact several Diodes' characteristic **EIR-A** responses' in real life also match simulation Data, supports both my Energy concept and my theory for Lightning creation. I believe this **Sea of Energy** will be demonstrated soon, and provide powerful clues for where and how the Energy in My Circuit, a Wimshurst, or Lightning originates.

http://www.eternaltruth.net

Brief Overview of Operation

Impedance stands as the Reactance (**R**esistance) of an AC circuit. Tesla identified the earth's Resonance as ~ 8 Hz. He also described positive stratospheric charges relative to the earth as Ground. Here, within a mix of AC and DC, a **Higher Realm** for balanced natural **Ratios** is introduced, and we may now see these **Higher**, **Voltage Driven** Admittance **Relationships**, and how they are calculated for each Diode and controlled. It is fascinating to consider My Circuit as replicating the natural **Diode Process**, Admittance, and the **Hole-Current Potential** exhibited by lightning. There are many similarities and My Circuit functions **Efficiently** over a wide Hz. Simply, My Circuit minimize **Counter-EMF**. (see **Transient Phase**)

We are familiar with traditional circuit component relationships of **C**urrent, **V**oltage, and **R**esistance. While these still apply to My Circuit, there is also another **Realm** of **Relationships** taking precedence. For instance, each 1/10 of a **Source** Volt rise in a conventional circuit does not conceivably raise the **C**urrent exponentially. It is, therefore, necessary to introduce **EIR Ratios**, which change our focus.

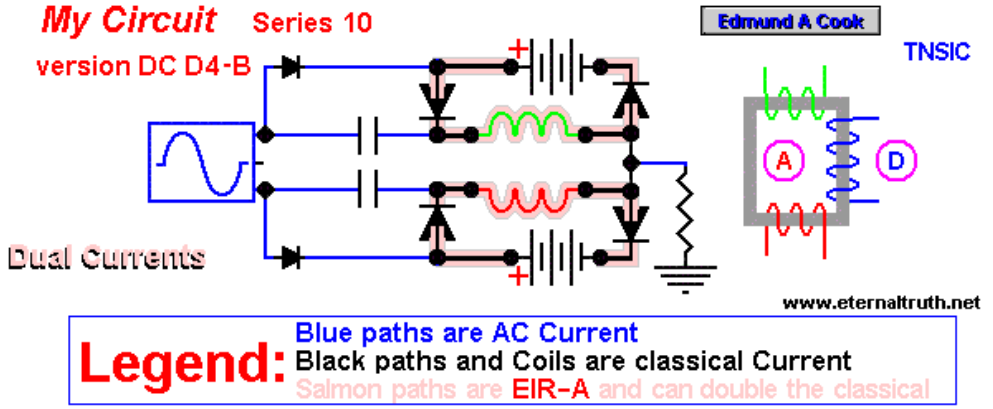
When within a specific range of low **V**oltage, the level of **EIR-A** (or **C**urrent) and **EIR's** response to small **V**oltage increases are major **Ratio** features which transpire differently in My Circuit. My Data reflects **Magnetic Field Flux/W Ratio** anomalies that are outside of classically established Law. When all the natural **Realm of Ratios** are given precedence within My Circuit, the traditional Laws are not negated and these **New Relationship Ratios** represent an obscure, exponential, **Higher EIR-A** potential. A **Diode's** Admittance characteristics, in combination with a low **V**oltage in My Circuit, allow a natural balance where **EIR-A** can be greater, and either greater **Diode Hole-Current Potential Characteristics** and/or small **V**oltage increases allow **Dynamic Voltage Driven** Admittance **Ratios** that are void of **Counter-EMF**.

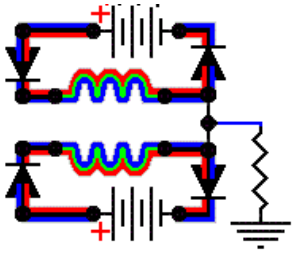
Basic Laws of Electricity and Power still encompass this concept. **W** Out **= V * EIR-A's** and, replacing **V** with **EIR-A * EIR**, we have a **New Ratio Realm**. This allows both relationships to co-exist.
The **New W Out** equals the product of **EIR-A^2** and **the Effectively Inverting Resistance, or EIR**.
My Circuit is a forum for **EIR**, the **Diode Process**, and **Voltage Driven** Admittance**.** Scientific verities do not end with partial or false opinions. These **New Relationship** challenges are that **EIR-A** (Admittance) and **EIR** (**NEW** Resistance) react **Dynamically** to **Hole-Current Potentials**, and/or **V**oltage and, in response, Admittance rises exponentially and **EIR falls**. The Free Energy is both isolated and calculated by the vast difference between this **Realm** and classical **Magnetic Field Flux/W Ratios'**.

$$I * R = V = \text{EIR-A} * \text{EIR}$$
$$P\ In = I^2 * R \qquad P\ Out = \text{EIR-A}^2 * R$$

The ultimate, "natural balance."

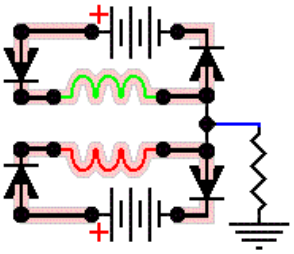
My Circuit Effectively "Inverts" Resistance, dramatically raising EIR-A.





Blue Path is Counter EMF
Red Path is Current's potential
Black is traditional Current

In a classical, or traditional magnetic circuit, the Magnetic Field's Counter-EMF is quite pronounced and heavily "opposes" the Voltage creating the Magnetic Field. In fact, the resulting Field strength is the difference between the two forces, whereas Counter-EMF cannot be equal to, or greater than the Voltage creating the Magnetic Field.



When Counter-EMF is not present, the resulting EIR-A flow would be much greater and, as this scenario could be adapted to a motor, generator, or transformer, the losses incumbent of Counter-EMF could efficiently be transformed into a perpetual avalanche of FREE electrons; thus allowing a greater Magnetic Field Flux/W Ratio.

As the component structures - Oscillator, Main Sources, and Hole-Current Potential - combine influences in My Circuit to eliminate Counter-EMF, the overall results seem to mimic nature's production of lightning.
Relationships for Current and Voltage are Inverted and Power available is increased as a result of these NEW Relationships. The massive EIR Currents of My Circuit are not subject to either large Voltage drops or Counter-EMF losses. The Power consumed by a 2 HP motor may, in My Circuit, easily generate 20 HP.

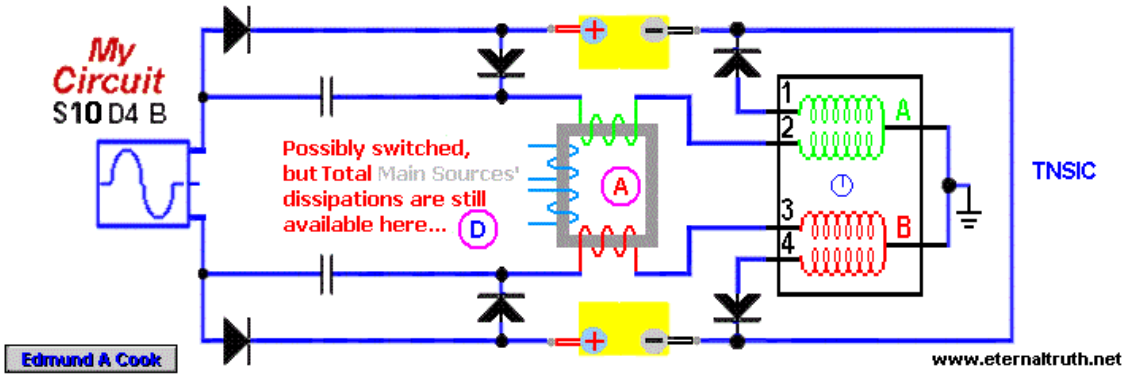
The ultimate, "natural balance."

$I * R = V = EIR\text{-}A * EIR$

$P\ In = I * V$ $\quad P\ Out = EIR\text{-}A * V$

$P\ In = I^2 * R$ $\quad P\ Out = EIR\text{-}A^2 * EIR$

My Circuit "Effectively Inverts" Primary Resistance, allowing the Voltage and/or Hole-Current Potential to raise EIR-A dramatically, independently of classical Resistance, with an inherent potential to resource a Higher Realm's Efficiency along with the massive EIR-A. The EIR represents a **New** Resistance in a **New** Realm.



It is noteworthy large, 36,000 uF Capacitors were in My Circuit's **Oscillator** when appliances were destroyed. The Battery **C**urrent and **V**oltage pass to the Transformer Secondary through the Capacitors, and both the Transformer is overheated and the Transformer Primary **V**oltage and **C**urrent are raised by induction. This is another fascinating design aspect that needs more inquiry. (S8)

Consider the Sea of Energy & Tesla Quote

Most are unaware of those individuals who have witnessed concepts establishing truth as contrary to what we are taught, or presume is known. These stories intrigued me and inspired this approach. Consider a more Efficient **Realm of Energy** producing unpredictable results by adherence to established Law. What would transpire if a **C**ircuit's traditional opposition (Reactance or Resistance) fell with a low **V**oltage and was effectively inverting further to small **V**oltage increases? Would such conditions indicate Admittance, or **C**urrent flow, was increasing exponentially? And what if the **P**ower being consumed was not commensurate with the **C**urrent's **Magnetic Field Flux/W** influences? Might this be how Lightning is created? Could this Efficient **Realm**, which potentially would **P**ower a load while sustaining its **Sources**, benefit our world? We tend to think and believe we have open access to the latest and greatest technologies. Is such true? **These Secondary Principle's concept and findings predate my comprehension of Transient Phases and were unknowingly rooted in a Transient Phase. The Diodes configurations in this Secondary Principle are actually the Switch #1 referenced in the Primary Principle.**

Tesla said, **"Ere many generations pass, our machinery will be driven by power obtainable at any point in the universe. It is a mere question of time when men will succeed in attaching their machinery to the very wheelwork of nature."** Tesla comprehended Lightning as a result of both the earth's natural Resonance (AC) and how that Resonance interacts with stratospheric (DC) charges. Tesla later demonstrated a "**New** electrical Energy," which had an undetermined source. Electrical theory states the number of Electrons (**C**urrent), which enter and exit a circuit, are equal. **C**urrent is calculated by dividing **V**oltage (**V**) by classical **R**esistance. Could the analogy of water's mass (**V**oltage), pushing through a specific size opening (**C**urrent) and a tube's length (**R**esistance), be expanded to account for a precipitation of **New Ratios**: a natural avalanche, or Resonance of **C**urrent (or **EIR-A**)? This **Realm** is where a low **V**oltage redirects the classical focus to a **Hole-Current Potential** (**Voltage Driven** Admittance), and harnesses the **Effectively Inverting Resistance** of the **Cook Effect**. These greater Admittance potentials allow more sensitive responses to **V**oltage. A **Voltage Driven** Admittance clarifies and isolates how a **V**oltage increase finds less **EIR**, as there is no **Counter-EMF**. Nature's (Perpetual Electron Motion) or Sea of symphonic harmonies Energy has neither been expressed nor acknowledged by science.

The Diode Process: (see My Circuits_PN_Junction.exe)

Most diodes are based on the semiconductor "pn" type junction. (-p- is the anode and -n- is the cathode) *Conventional current only flows from anode to cathode* (*intro to negative Currents*). *A particular diode's Current–Voltage Characteristic (IV – Curve) is ascribed to the behavior of the "depletion layer" or "Zone,"* which resides between the semiconductors (Diode Process). When a pn-junction is first energized, *conduction band (mobile) Electrons from the cathode diffuse into the anode* where there is a large population of Holes with which the Electrons recombine (*my negative Currents*). A Hole vanishes when a mobile Electron recombines, and the Electron is no longer mobile. The region around the pn-junction becomes depleted of charge carriers and behaves as an insulator. However, there is a limit. For each Electron–Hole Pair that recombines, a positive dopant ion is left behind in the n-doped region, and a negative dopant ion is left behind in the p-doped region (Admittance, or low **V**oltage High Current flow, or "Natural Order of Relationship Balance," comes of a Diode's greater Hole-Current Potential). As recombination proceeds and more ions are created, an increasing electric field develops through the Zone, which opposes further flows of charge (*my Diode Battery theory*). *If an external **V** of the same polarity is placed across the built-in potential, the Zone continues to act as an insulator, preventing any significant **C**urrent. However, if the external **Vo**ltage opposes a built-in field potential* (*Osc's Switch #1 influence*), *recombination proceeds with substantial electric current* (Admittance, Hole-Current Potential). For silicon diodes, the built-in potential is approximately 0.6 V. Thus, if an external current is forced through the diode, ~ 0.6 V will be developed across the diode such that the p-doped region is positive and the diode is considered "turned on." *As this potential difference increases, at one stage the diode will conduct and allow charges to flow (my negative Currents) and is considered a connection with little (or EIR) Resistance (Admittance, **Voltage Driven** Admittance, Cook Effect, my Diode Battery theory, Diode Process, EIR, EIR-A and the avalanche, or acceleration, Hole-Current Potential). More precisely, the transfer function is logarithmic, but so sharp that it looks like a corner on a zoomed-out graph (EIR-AV Curve).*

A Higher Realm, or Natural Order, of Relationship Balance

Part 1: Introducing the *Concepts of Ratio and Inversion*

E = I * R

A video explaining how *Inversion Principles* are sustained by My Circuit, contribute to a Current Driven Power Amplifier, and shift us to *Efficient Ratios*.

Many rehearse that known *Ratios* are central and the Amp-turns thesis is most significant, while Voltage is of no consequence. If I demonstrate an obscure perspective's *Principles*, which both obey known law and expand our currently known options, will this new perspective allow us to embrace *inverted* and obscure concepts that introduce even more *efficient Ratios*? The *Principle* focus of this *EIR Inversion* presents classical *Ratios* as restricting Amp-turns, which is counter-productive to both nature's thesis and our ultimate *efficiency*.

Questions concerning *Effectively Inverted Resistance* (*EIR*, see Charts 13)

#1 As Voltage is of no significance, and Amp-turns are central to electro-Magnetic Field Gauss increases: note that *EIR Amps* are higher and the *EIR Watts / Amp ratio* is lower at lower *EIR Volts*. A higher energy density.

#2 Do lower *EIR Watts / Amp ratios* *indicate* more *efficient Ratios*?

#3 Consider again a Circuit's consistent Current status vs Voltage losses, and explain why *higher efficiencies* could not exist at lower V and higher A?

#4 Do we have a higher and more efficient *EIR Magnetic Field Flux / Watt ratio*?

#5 Is it plausable that *higher efficiency Ratios* could perform work and also sustain its source?

Data Reconciliation

Concepts of Ratio and Inversion

How can anyone reconcile the details of Free Energy?

The term, Free Energy, is a misconstrued concept of *efficiency*.

$$E = I * R$$

or

Voltage = Current * Resistance

Their goal: higher Amps, and A are a V/R ratio.

so

Current = Voltage / Resistance

Therefore, they had several obvious options...

Chart 1

AMPS	3.1083
Volts	120.00
OHMS	38.605898
Watts	373
HP	0.50

Chart 2

AMPS	6.2167
Volts	240.00
OHMS	38.605898
Watts	1492
HP	2.00

Raise V,

Chart 3

AMPS	12.4333
Volts	120.00
OHMS	9.651475
Watts	1492
HP	2.00

Lower R,

Chart 4

AMPS	24.8667
Volts	240.00
OHMS	9.651475
Watts	5968
HP	8.00

or both.

The *Ratios*, as presented, indicate exactly what is expected.

Chart 5

AMPS	3.1083
Volts	120.00
V/A	38.605
OHMS	38.605

Chart 6

AMPS	6.2167
Volts	240.00
V/A	38.605
OHMS	38.605

Chart 7

AMPS	12.4333
Volts	120.00
V/A	9.651
OHMS	9.651

Chart 8

AMPS	24.8667
Volts	240.00
V/A	9.651
OHMS	9.651

Thus, Engineers chose the higher Supply *Voltage ratio*
to obtain more Current and used, therefore, more Power.
We blindly adhere to an acceptance of a perceived standard.

These options serve traditional purposes well,
yet, either some *Ratios* are obscured within this picture,
or the Laws of Nature have been grossly misinterpreted.

How much work can a specific amount of energy produce?

The real answer is rooted in the *mechanism's efficiency*.
Governments, Researchers, Scientists, and Engineers
have established boundaries for both energy and *efficiency*.
Yet, any challenge to these boundaries is obscurred
and legitimate facts are invalidated as misguided dreams,
and no one will ever be held accountable for the error.
Numerous claims reach *efficiencies* greater than ten-fold.
The ultimate solution resides in a courage to expose facts
and break down the deceit embedded in a subtle corruption.
Clarity of *Nature's Ratios* will not be disturbed by pretense
and, within any freedom, acknowledging God brings more.

However, as we focus intently on known *Principles*, an *Inversion* shifts our embraced *Ratios' perspective.*

The subsequent "Power" from an "Electromagnetic Field" comes of Current flow, not Voltage (see Joseph Henry). and...

Current = Voltage / Resistance

or

Effectively Inverted Amps = Effectively Inverted Voltage / Effectively Inverting Resistance

so

EIR Amps = EIR Volts / EIR

Our goal: higher Amps, and EIR-A are an EIR-V/EIR *ratio*.

Therefore, we have more unobvious *Ratio* options.

Lower EIR influences a rise of the EIR-V/EIR *ratio*!
Lower EIR-V influence a fall of the EIR-V/EIR-A *ratio*!
And... Lower EIR-V reflect a rise in the EIR-W/EIR-V *ratio*!
And... Higher EIR-A reflect a fall in the EIR-W/EIR-A *ratio*!

And finally, note all these *Ratios* lead to a grand summary: The *EIR Magnetic Field Flux/Watt ratio*, demonstrating there is more work accomplished on fewer Watts!

Note: Tesla simply did not recognize there were formulas because EIR is not static, but has a dynamic nature, and EIR is now a *Dynamic Inverse function of EIR-V*.

Even though we can't make EIR too low with high R Volts, we can push EIR (OHMS) really low with EIR-V, and the EIR-A respond exponentially to small EIR-V or EIR changes!

Chart 9

EIR AMPS	746.00
EIR Volts	2.00
EIR-A/EIR-V	372.99
EIR	0.002681

Chart 10

EIR AMPS	1491.98
EIR Volts	4.00
EIR-A/EIR-V	372.99
EIR	0.002681

Chart 11

EIR AMPS	3729.95
EIR Volts	1.00
EIR-A/EIR-V	3729.95
EIR	0.000268

Chart 12

EIR AMPS	7459.90
EIR Volts	2.00
EIR-A/EIR-V	3729.95
EIR	0.000268

Tesla and others have experienced similar *Principles*, but could neither isolate formulas or explain *efficiencies*. Does an OHM-Meter warn when it can't calculate a reading? *Is Voltages' Counter-EMF more than anti-climactic?*

***My Circuit* simply allows EIR-V conditions, within an *Effectively Inverting Resistance* (or EIR), to create a massive *Effectively Inverted Resistance Amps* (or EIR-A) flow, which produces a more *efficient Magnetic Field* to perform work, and, overall, has a much lower level of Power consumption; Especially when considering the startling reality these *Inversions' efficiencies* manifest a completely lawful realm of greater EIR-A *ratios* and also a self-sustaining potential.**

$$\text{EIR-A} = \text{EIR-V} / \text{EIR}$$

These phenomenal *EIR-A efficiencies* are, indeed, real. Neither the Law, nor component relationships have changed, yet, *EIR-A ratios'* perceptions are very mysteriously altered. We have a greater *EIR-A Magnetic Field Flux/W ratio*. *These Efficiency Ratios were with-held from modern analysis.*

The *efficient* conditions present with *My Circuit* do not come by stepping down the R Voltage with a transformer, for, in so doing, the wasted energy has already been consumed. And, as Academics have not focussed on *Inversion Principles*, the energy consumed has far exceeded the work being done and our visions of *efficiency* severely obscurred in the process. The complementary nature of *My Circuit's* components allow a higher EIR-A flow, which is void of Counter-EMF. Most do not consider the magnitude of Counter-EMF, nor contemplate Voltage losses vs Current's consistent status. Are *EIR-A ratios* at EIR Voltage more *Magnetically Efficient*? Will it stun Academia to see *EIR* is dynamic, not static? *My Circuit* accommodates *efficient Inversion Principles*. Powering homes, cars, trains, aircraft, communities, or etc... is not a challenge for this easily scaleable concept.

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Chart 13

scenario	EIR-A = EIR-V / EIR			Watts	Watts/ EIR-A	Watts/ EIR-V	Projected HP
A	100	12	0.12	1200	12	100	1.61
B	100	2	0.02	200	2	100	1.61
C	600	2	0.00333	1200	2	600	9.65
D	600	1	0.00166	600	1	600	9.65
E	1800	1	0.00055	1800	1	1800	28.95

Blue text is a traditional circuit

Efficiency Ratios

Chart 13a

	AWG	#W	A	Trns	Core	V	W	W/A	A-turns	A-turns /Watt
R	12	1	9	450	2-1.5	9	98	11	4.9×10^3	*50*
EIR	30	640	90	90	2-3	2	303	3.4	8.7×10^6	*28,712*

Efficiency Ratios

E C Distributions Edmund@eternaltruth.net

Are scenario A and B's magnetic energies (EIR-A) equal? Is scenario C's magnetic energy greater than scenario B's? If it is indeed Current which generates *Magnetic Field Flux*, and fewer EIR-W's are consumed by *My Circuit* and Motor; Are scenario C and D's magnetic energies (EIR-A) also equal? Is scenario E's magnetic energy greater than scenario D's? Note the phenomenal differences in *Efficiency Ratio* levels. Is there enough HP to both perform work AND recharge the EIR Voltage's Source?

R 83

Chart 14
Traditional R

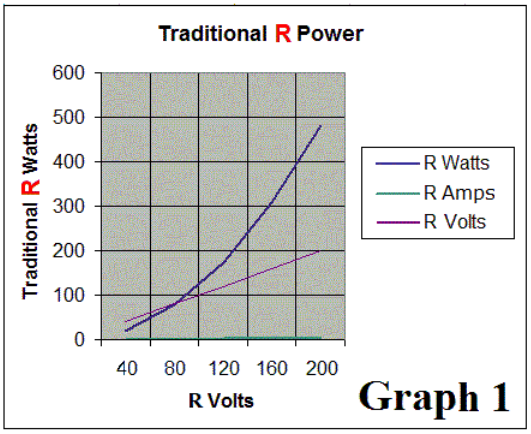
R Volts	R Amps	R Watts
40	0.4819	19
80	0.9639	77
120	1.4458	173
160	1.9277	308
200	2.4096	482

Compare both A & W with an equal Voltage...

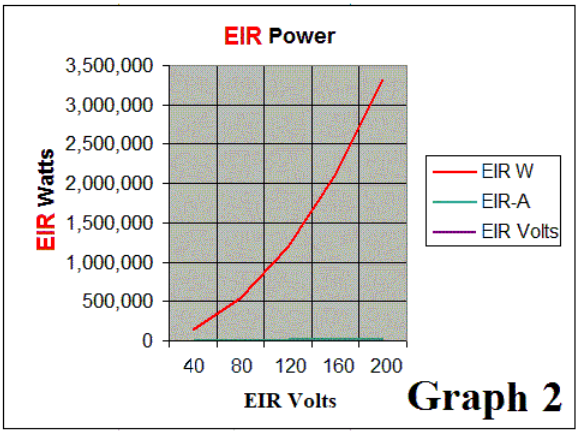
EIR 0.012048

Chart 15
Inverted

EIR Volts	EIR-A	EIR-W
40	3,320	132,800
80	6,640	531,200
120	9,960	1,195,200
160	13,280	1,124,800
200	16,600	3,320,000



Graph 1



Graph 2

Analyze, and contrast these Charts and Graphs.
Allow this *Ratio Potential* to be realized.

R 83

Chart 16
Traditional R

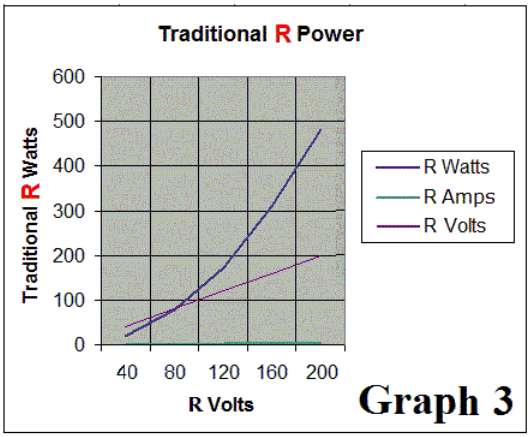
R Volts	R Amps	R Watts
40	0.4819	19
80	0.9639	77
120	1.4458	173
160	1.9277	308
200	2.4096	482

Now compare the astonishing V, A, & W *ratios* for both.

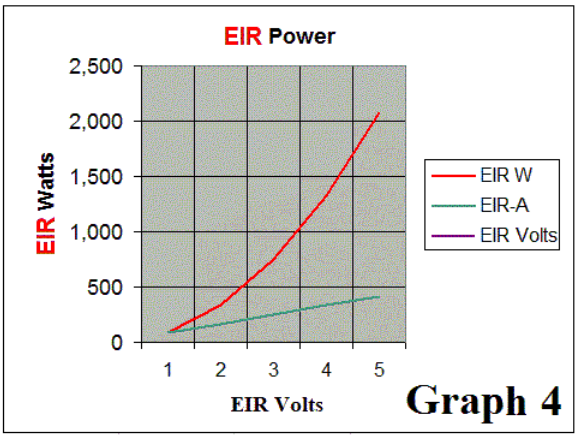
EIR 0.012048

Chart 17
Inverted

EIR Volts	EIR-A	EIR-W
1	83	83
2	166	332
3	249	747
4	332	1,328
5	415	2,075

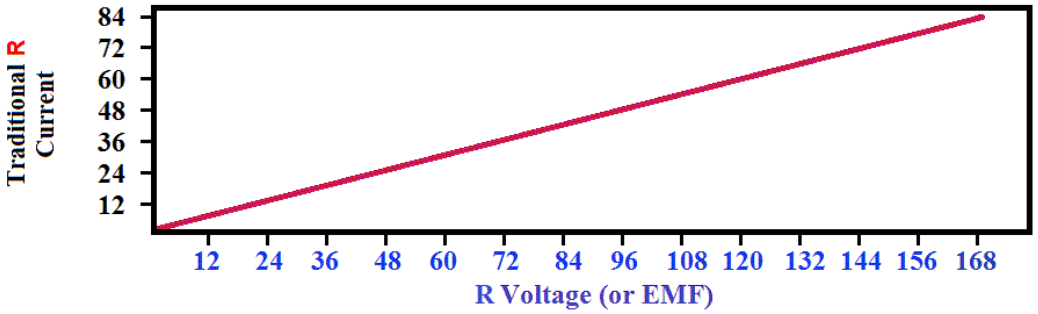


Graph 3



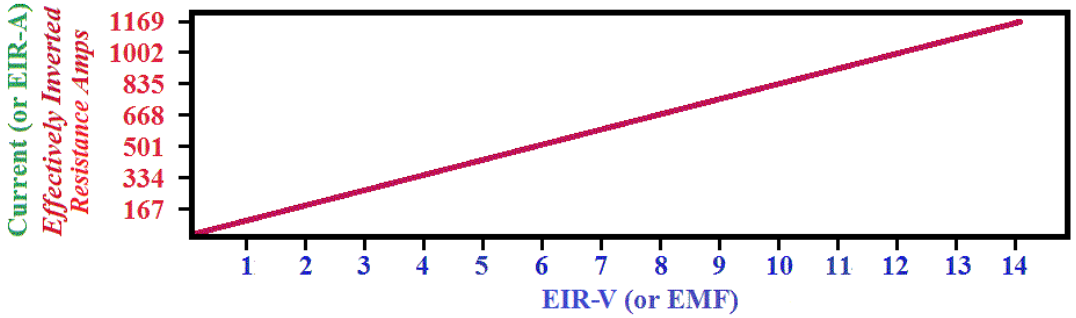
Graph 4

Yet, the true victory delivers what we really want...
***Consider the Ratio Efficiencies*.**



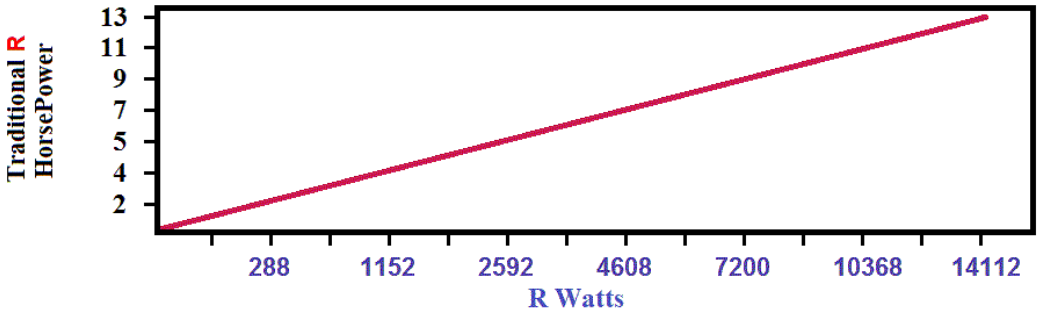
Graph 5

Why do thunderstorms convey efficiencies we can't achieve? I call this characteristic *Effectively Inverted Resistance Amps*.



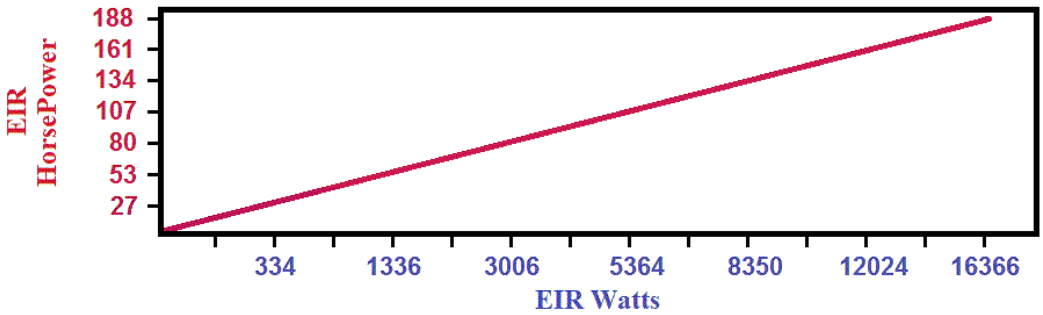
Graph 6

The 7th Graph depicts the commonly accepted standard.



Graph 7

Graph 8: a majestic, obscure, *Magnetic Field Flux/W ratio*.



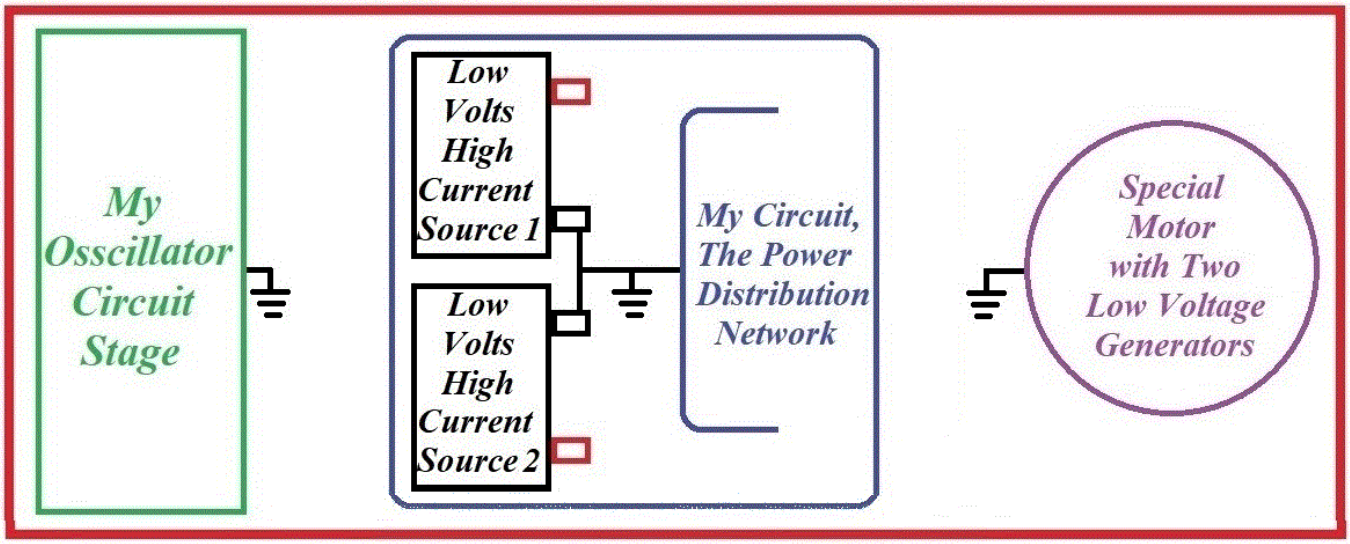
Graph 8

I have already established the reality of a high *EIR-A ratio*.
Voltage is reflected in RPM and Current in Torque.
The elusive unknown resides within the
actual *efficiency Ratios* of an *EIR-A Magnetic Field*.
This theory's compelling nature is founded in *efficiency*.
Lenz's Law references Current and the # of turns, not Voltage.
My application of these *Principles* is very profound & unique.
As *My Circuit* has a huge Current at EIR-V, are not
Magnetic Fields maximized and Voltage losses minimized,
***Inverting* the overall *efficiency* of energy used in the *Process*?**

The final known attribute that has not been explained deals with the claim there is no significant Counter-EMF in *My Circuit*.

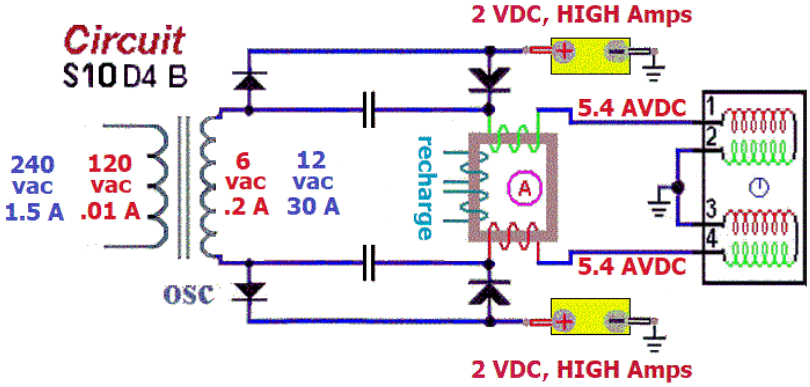
Evidence sustains a concept the higher a Supply Voltage is, the greater a coil's magnetic Counter-EMF becomes. (This is the quantitative difference requiring Henries.) Therefore, whereas *My Circuit* uses a Low EIR Voltage, the EIR presents dramatic changes to the electrical and magnetic responses anticipated with traditional R circuit properties. There are, inherent in *My Circuit's* overall Resistance, differences which both raise the flow of EIR-A and increase the *efficiency* of magnetic work being accomplished. These truths may well be the *Unknown Principles* employed by Clemente Figuera, Nikola Tesla, and others, and also have association with James Clerk Maxwell's compilations. Tesla confidently predicted man would extract energy from "the very wheelworks of nature."

My Concept's Block Diagram



My Concept is based on ***Principles*** of ***Magnetic Field Flux ratios***.
It is clear ***Principles*** of greater **EIR-A** ***ratios*** maximize ***Efficiency***.
Essentially, Resistance and higher Voltage are anti-climactic.
These obscure ***Ratios*** accomplish more with greater ***Efficiencies***.

Current Driven Power Amplifier Schematic



$ki = 1.38065 * e^{-23}$

$uF = \text{max amps} / 2.77777 * e^{-4}$

$\frac{V_{primary}}{V_{secondary}} = \frac{I_{secondary}}{I_{primary}}$

Current = Voltage / Resistance
EIR-A = EIR-V / EIR

Magnetic Field Flux/W Ratio

PEAK VAC = RMS VAC * 1.414
ave VDC = PEAK * 0.637

Torque = ki * I
HP in ft lbs = Torque * RPM / 5252

Vemf = ki * RPM in rad/sec
rad/s/(2*Pi) = Hz or rev/s

Massive DC Current flow is key to efficiency.

Edmund A Cook
TNSIC

The 6 vac and the 2 VDC combine as a cyclic wave to power the Motor, recharge the 2V Batteries, and form a 240 vac Regenerative Feedback Pump. This standing wave Pump enhances at least three, isolated, closed loops of both Secondary and Primary Voltages' through a Regenerative Mutual Inductance.

"Regenerative Feedback Pumping Voltage" is allowed by sufficient uF, which conveys the "free" Massive DC Current in sync with the OSC's Hz, and creates a higher, Reflectively Amplified OSC's Source Voltage (in blue).

Diode Process, Admittance & Hole-Current Potential Data

The central theme of My Circuit's **efficiency**?
There is more **C**urrent and, where-as no **C**urrent is lost, the system has a higher **Magnetic Field Flux/Watt ratio** than traditional circuits, while also recharging its **V**oltage Source. In the early days My Circuit was the unknown cause of two refrigerators and a microwave's destruction. This resulted of a large amount of the additional Source Battery Current passing through large uF value capacitors, which raised my house's **V**oltage and **C**urrent on the appliances' circuit via My Circuit's **Oscillator Primary**. Note: There is a broad scale of control to acquire maximum Torque or speed with these Concepts.

Parallel or series Diode configurations offer **C**urrent selections to deliver variable high Torque, and Motor speed is controlled by either **Oscillator V**oltage or Hz, which also varies **C**urrent demands (**EIR-A = EIR-V/EIR**). My Circuit and Concept are profoundly simple. Any **Oscillator V**oltage above Source Battery **V**oltage raises the **EIR-A** drawn from the huge Source Batteries, and, in a very strange way, the **C**urrent amplifying the **Oscillator's Primary V**oltage is no longer considered as in a closed-loop.

EIR-A response to **Voltage Driven Admittance** is very unique in the **Diode Process. EIR** and the **Hole-Current Potential** are natural conditions of a Diode structure, several characteristics, placement in My Circuit, and **Oscillator** influence, which allow **EIR-A** to be exponentially above classical **V/R** levels.

(See Transient Phase, Admittance, Cook Effect, Hole-Current Potential, My Circuits_PN_Junction.exe)

Chart 18

Diode Process w OSC @ 1.5 V		6A10	SQL100	NLTMFS 4931N	1N3296A	ECD01	SD1700C25K	KBPC5010 3x2xSO	KBPC5010 2x3xSO	100HF160PV
IS:	Saturation current EIR-A	4.260n	60.00n	2.407f	142.0n	142.0n	2.960u	47.00n	47.00n	142.0n
RS:	Ohmic resistance [0.] EIR	44.00m	5.380u	2.000m	420.0u	154.0u	20.20u	5.900u	5.900u	420.0u
N:	Emission coefficient	1.700	1.700	0.750	1.700	1.700	1.700	1.700	1.700	1.700
TT:	Transit-time [0.]	4.320u	4.320u	0.000u	4.320u	4.320u	4.320u	4.320u	4.320u	4.320u
CJO:	Zero-bias junction cap. [0.]	125.0p	1.100m	6.648n	4.110n	4.110n	85.50n	1.100n	1.100n	4.110n
VJ:	Junction potential	750.0m	750.0m	2.643m	750.0m	750.0m	750.0m	750.0m	750.0m	750.0m
M:	Grading coefficient	333.0m	333.0m	0.513m	333.0m	333.0m	333.0m	333.0m	333.0m	333.0m
EG:	Activation energy	1.110	1.110	1.120	1.110	1.110	1.110	1.110	1.110	1.110
XTI:	Saturation-current temp exp.	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
KF:	Flicker-noise coefficient	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AF:	Flicker-noise exponent	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
FC:	Forward-bias depletion coeff.	500.0m	500.0m	500.0m	500.0m	500.0m	500.0m	500.0m	500.0m	500.0m
BV:	Reverse breakdown voltage	1.000k	1.600k	37.00	1.200k	2.000k	2.500k	1.000k	1.000k	1.600k
IBV:	Current at breakdown voltage	165.0u	0.250m	165.0u	6.589m	6.589m	10.00m	11.59m	11.59m	8.785m
TNOM:	Parameter measured temp	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00
Hole-Current Potential @ 2V		2.6 A	24 A	78 A	184 A	333 A	3.8 kA	477 A	372. kA	
Hole-Current Potential @ 3V		12.3 A	105 A	190 A	1.18 kA	2.95 kA	24.5 kA	64. kA	856. kA	
Hole-Current Potential @ 6V		45.0 A	373 A	536 A	4.60 kA	12.69 kA	95.8 kA	381. kA	2.34 MA	
Additional characteristics		1kV 6A	1.6kV 100A	37V 246A	1.2kV 100A	2kV 12kA	2.5kV 2kA	1kV 100A	1kV 150A	1.6kV 1kA

Differing potentials, promoted with four Diode characteristics and the broad influence these four characteristics have with respect to Diode EIR-Amps and EIR, total Circuit EIR, and overall Circuit Current allow any imagineable range of Current flow without changing anything else in the Circuit. This is the referenced "Diode Process," allowing massive Current and Circuit control.

My Circuit exhibits the **Higher Realm** of characteristics others have demonstrated. The Relationships of a **Diode's** Holes, the **Diode's** particle migrations to fill them, and an exponentially **Higher Hole-Current Potential** (**Voltage Driven** Admittance) are major contributors to the **Diode Process**, Admittance and the **Cook Effect**. A "Particle Accelerator" creates conditions where objects - smaller than an atom - move in either higher volumes or speeds, increasing the particles' Energy and the particles' are, in **My Circuit's** instance, allowing (Admittance for) the work potential to be amplified. See My Circuits_SPN_Junction.exe

Questions: Could Free Energy's Mystery be in a massive EIR-A flow?
Are Higher Magnetic Field Flux/Watt ratios more *efficient*?
Is lightning a natural resonance of EIR-A and Low EMF?
Is Counter-EMF directly associated with level of Voltage?
Can electrical 'work' be both more simple and *efficient*?
Which motor design accentuates all features best?

My Circuit NOTES

If a component is reactive (a capacitor or an inductor), then its Instantaneous Watts are negative when the reactive component returns the stored energy back to its environment, i.e., when the source Current and Voltage change or oppose the Instantaneous Reaction. These concepts and findings predate my comprehension of Transient Phases, even though these Secondary Principles were, unknowingly, actually rooted in the mysteries of a Transient Phase. The Diodes configurations in this Secondary Principle are actually the Switch #1 referenced in the Primary Principle.

There are four operational blocks for My Circuit:

#1 My **Main Body**, powered by (**#2**), low **Main Source** DC **V**oltages in the Transformer's Primary and (**#3**), an AC **Oscillator** controlling a **Diode Process**, allowing a **Voltage Driven** Admittance;
#2 My **Main Sources**, two isolated Banks of Batteries, which provide independent DC **Sources**;
#3 An **Oscillating** (Switching) Source, which simply provides the Hertz for (**#1**), My **Main Body**, where a low **V**oltage, the **Hole-Current Potential**, and **EIR** transform Admittance into the **Cook Effect**;
#4 The Transformer's Secondary, which facilitates the transfer of an exponentially **Higher C**urrent/**V**olt Energy, ie… an avalanche, or particle acceleration caused by an **EIR** and the **Diode Process**.

Notes of My Circuit's transformations. There are two ways to increase **Magnetic Field Flux/W** in this **Higher Realm**. Raise the **Sources' V**oltage and/or raise the **Hole-Current Potential**. There are fewer options above Series 10's **C**ircuit because the added Diodes restrict the **Oscillator** feedback influence.

I was asked about the oscilloscope trace of My Original Circuit indicating an initial steady increase of **P**ower. The answer is very clear to me. Nature seeks a balance. This natural balance is sustained when My Circuit "**P**owers Up," and an unfamiliar "**Higher Realm, or Natural Order of Relationship Balance**" enhances My Circuit's "unconventional" design. Another question regards My Circuit creating a Negative **R**esistor. It is obvious, when considering anomalies of both real and simulation Data, My Circuit's **Hole-Current Potential** (Admittance) and an **Effectively Inverting Resistance** (**EIR**) allow **EIR-A** to be so dramatically enhanced with a low **V**oltage pressure that there can actually be more **Magnetic Field Flux/W**; An "***Endless Sea of Energy*,**" indeed.

Theory: These **New** Relationships identify unique differences of a **Higher Realm** as natural consequences, and explain how Admittance's **Hole-Current Potential** allows exponential increases in **EIR C**urrent. Low Sources' **V**oltage within the Diode's **C**urrent capacity (**Hole-Current Potential**), along with small **V**oltage increases over a wide Hertz range allow my **"Natural Diode Process"** to function flawlessly. **Perpetual Electron motion exists naturally as Current. Neither Electrons nor Magnetic Fields are ever static. Is there actually more Efficient Magnetic Field Flux/W within a low V and a massive Current? Did Tesla learn these things from Lightning and the Wimshurst Machine? Was "Litz Wire" used?** Even though Data from My Circuit challenges what the scientific world accepts, the main focus should be on what has actually been accomplished, and can be both sustained and replicated.

There are minimums for **Source C**urrent (A/h capacity), **Hole-Current Potential** (Diode characteristics), Transformer design, and **Source V** to successfully precipitate **Cook Effect C**urrents. Theory: there can be exponentially more "**Magnetic Field Flux/W**" in a Winding than is being dissipated by the **Sources'.**

EIR is a function of **V** Driven Admittance. **EIR-A** equals (**Main Sources' V / EIR**). **Magnetic Field Flux/W Efficiency** is calculated by subtracting (**I^2 *** classical **R**) from (**EIR-A^2 * EIR**). Note: **EIR-A^2** and **EIR** may differ with each Diode, and **EIR's Dynamic Efficiency** levels are specific at each particular **V**oltage.

Even failure confirms my theory. If, after building and running My Circuit, **Hole-Current Potential**, **EIR**, and **EIR-A** are not **Cook Effect** indicative, here are six possible solutions to correct the problem:

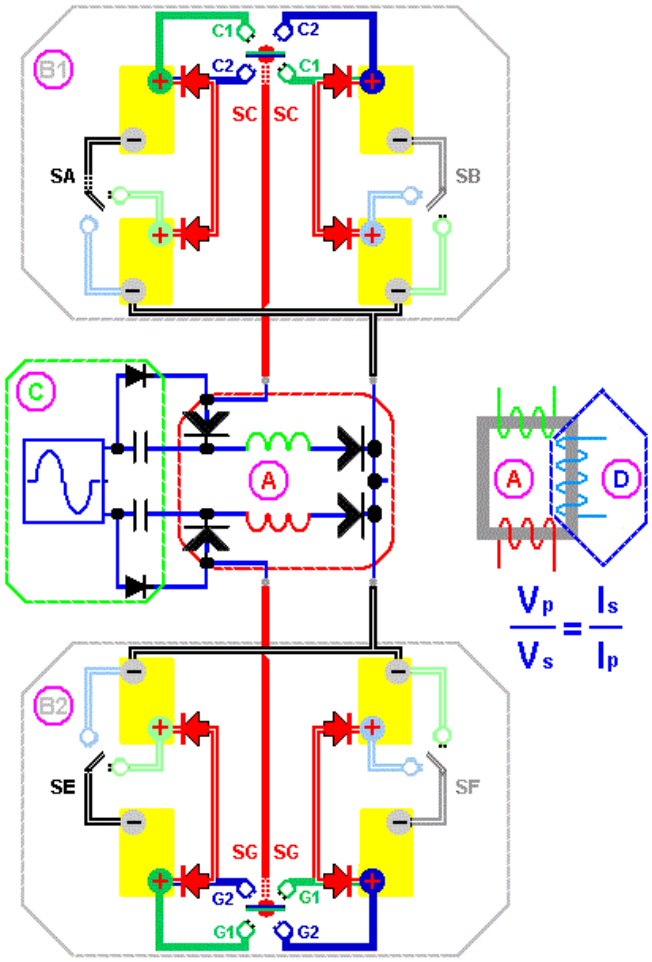
#1 The Main Sources' A/h capacity is not capable of delivering enough Current for the Cook Effect;
#2 The Main Sources' V was too high and Hole-Current Potential was greater than Diodes' specs;
#3 The Main Sources' V was too low and the Diode Process has not been energized;
#4 Diodes function properly, but don't have characteristics commensurate for the Diode Process;
#5 There could be a short, an open, or too much Resistance in the Transformer's Primary circuit;
#6 If there is Current and no A-DC, check Oscillator's Diodes and Caps characteristics.

My Circuit S10 D4 B

My Circuit is comprised of four primary sections:

A.My Circuit's Main Body.
B1, B2. The Main Sources.
C.Oscillator, Hz Source.
D.Output Transformer.

Several aspects of Control.
Splitting Trans Primary electrically raises EIR Amps.
Switching Batts' and Coils reduced Oscillator feedback, and raised EIR Current.
Counter EMF is minimized.
Effective Battery resistance drops w additional Batteries, decreasing Circuit resistance, and raising EIR Current.
A Neg Batts' "Connection" minimized Oscillator feedback. (Virtual Ground)
Series 10 may be unique Diodes' and Batts swap roles. (Recirculation of Electrons)
The Main Sources' Voltage, Diodes', their characteristics and Voltage resonance all influence EIR Current.
A Legs' parallel 'Diodes' Sets control Hole-Current Potential (Voltage Driven Admittance) Switching the individual Sets' parallel Diodes off\on may efficiently control EIR Amps.



(A) My Circuit's Main Body;

The Main Body's structure of 2 - 4 Diode Sets starts the Diode Process with a low Voltage, Oscillator timed, A-DC pulses to energize EIR as the Hole-Current Potential extracts exponential EIR Current for the Transformer's Primary and motor.
The Hole-Current Potential (Admittance) becomes an exponential increase in the availability of Transformer's Primary and Secondary Powers. $P = EIR\text{-}A^2 * R$
It may be best if the Primary Coils' centertap is not connected. See p14 Branch EIR Currents.
A specially designed Electric Motor may replace the Transformer, or connect the centertaps.

(B1) (B2) The Main Sources;

The Main Sources supply the Main Body's (Transformer and motor) Voltage and EIR Current in alternating Power strokes initiated by the Oscillator. The Sources may be single Batts.

(C) Oscillator, Hz Source; (Imagine multiples of My Circuit with multiple Oscillator phases)

The Oscillator section is comprised of an AC signal, 2 Capacitors, and 2 diodes. A wide range of Hertz control the Main Body's Diode Process for a Higher Realm of A-DC alternations and, therefore, Primary, motor and Secondary Power, and Hertz.
An AC signal from a broadcast may be used with the radio's speaker as the Oscillator, or either a variable signal generator or an MP3 player modified to allow scaled accelerator pulses being placed for digital (frequency) control of My Circuit and, therefore, motor's speed

(D) Output Transformer;

The Output Transformer windings' recharge the Main Sources. Edmund A Cook TNSIC

Data Reconciliation; The EIR-AV Curve

Chart #1; Diode Process

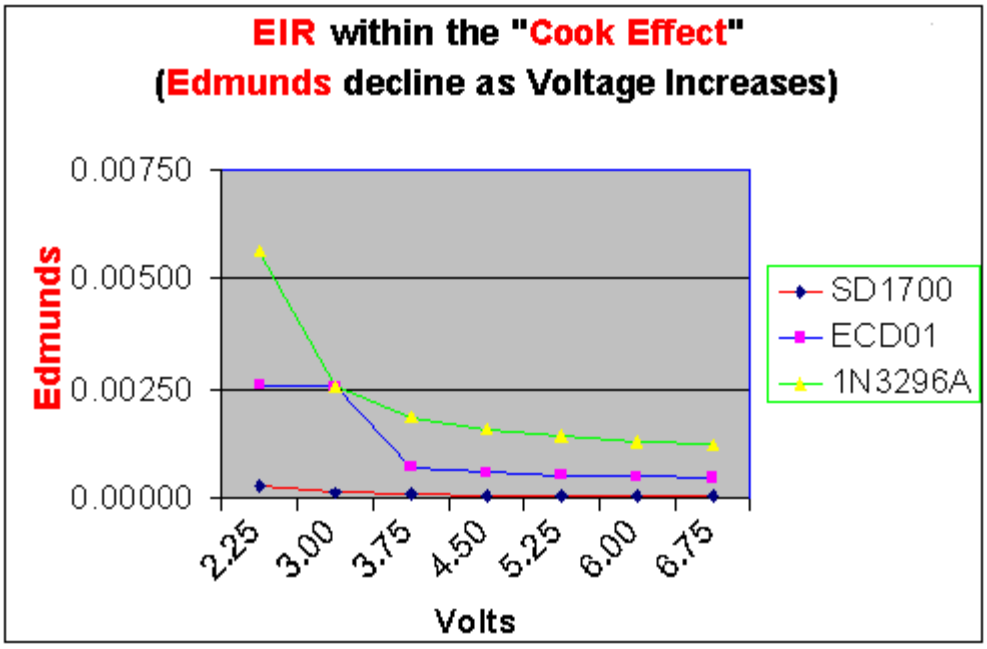
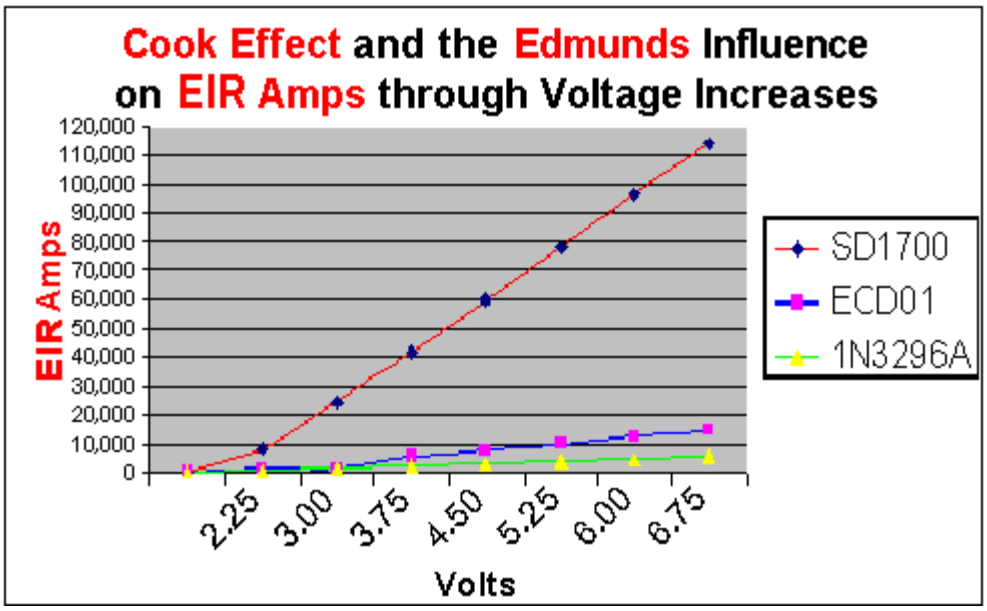


Chart #2; Admittance & Hole-Current Potential



The focus is a function of **EIR-As** equal (**Main Sources' V / EIR**).
Why, when **V**oltage is raised or Diodes are changed, does **EIR** (**Edmunds**) simultaneously drop?
My Circuit's EIR is not static, but **Dynamic**, and changes with **V**oltage or Diode characteristics.

Diodes Breaking Out: Admittance & Hole-Current Potential

Power IN and OUT @ Main Source's Voltage

Simulation w Oscillator @ 1.5 VAC & 60 Hz

Diode & Spreadsheet # SD1700C25K #1

DC Volts	Osc & MS Watts	EIR Amps	Effectively Inverting Resistance	W OUT	% Efficiency
1.50	109.6	73.0	0.02049	37,067	333,814%
3.00	50,000.0	24,540.0	0.00012	4,163,691,002	83,277,382%
6.00	206,000.0	95,860.0	0.00006	63,533,711,194	308,411 607%

ECD01 #2

DC Volts	Osc & MS Watts	EIR Amps	Effectively Inverting Resistance	W OUT	% Efficiency
1.50	11.7	4.0	0.41459	91	771%
3.00	7,084.0	1,180.0	0.00254	9,627,054	135,899%
6.00	147,480.0	12,290.0	0.00049	1,044,318,907	708,109%

1N3296A #3

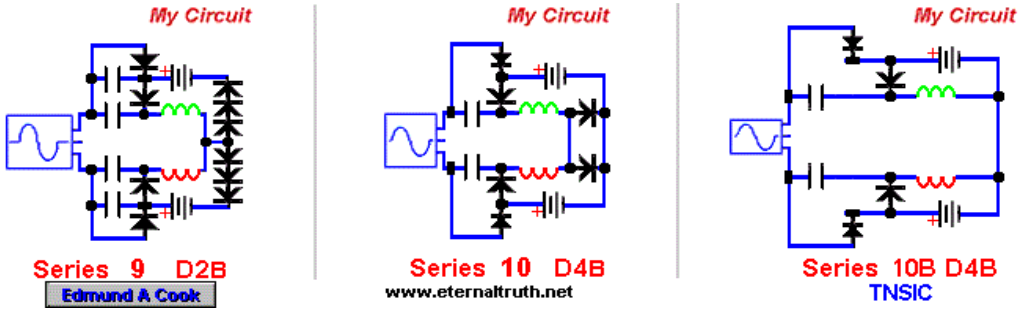
DC Volts	Osc & MS Watts	EIR Amps	Effectively Inverting Resistance	W OUT	% Efficiency
1.50	13.9	3.6	0.41209	92	659%
3.00	7,084.0	1,180.0	0.00254	9,627,054	135,899%
6.00	55,300.0	4,609.0	0.00130	146,873,279	265,594%

6A10 #4

DC Volts	Osc & MS Watts	EIR Amps	Effectively Inverting Resistance	W OUT	% Efficiency
1.50	1.1	0.2	6.04108	0	38%
3.00	75.1	12.3	0.24331	1,051	1,399%
6.00	341.5	45.1	0.13295	14,082	4,124%

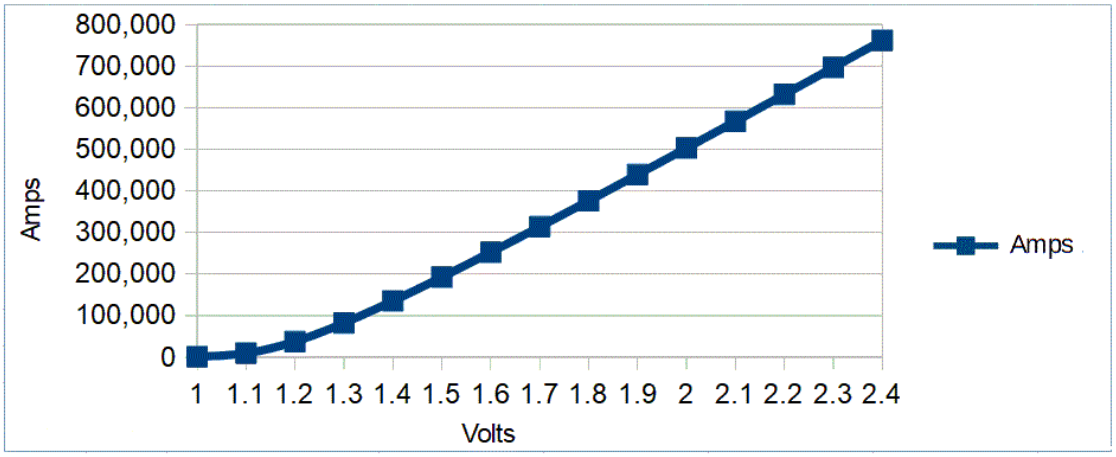
Spreadsheets #1, #2, #3 and #4 were generated from data obtained through running My Circuit in ***CircuitMaker***. When I built and ran My Original Circuit, ***CircuitMaker*** readings coincided with what was seen on meters in real life. The other point of intrigue is there was no **Coil** in this Circuit. In simple terms, a **Coil** embedded in the **Diode Process** and a **Voltage Driven** Admittance is the **Cook Effect's** key. A dissertation is not necessary, but ***CircuitMaker*** can be tricked under specific situations to create unrealistic results. ***CircuitMaker*** was designed to sustain classical Law. As stated, these unrealistic circumstances are avoided in my claims.

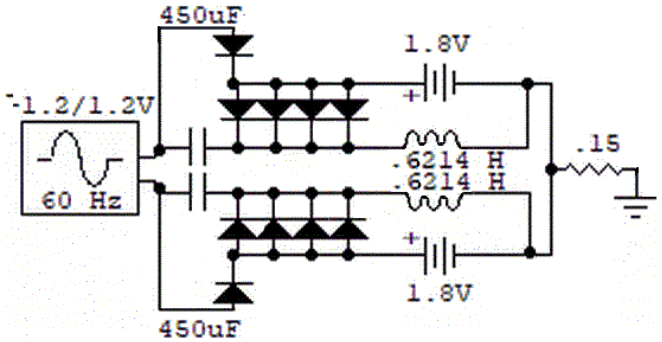
There are several interesting phenomena. My Branch **C**urrents are negative, relative to the **Main Sources'** (The **Diode Process**). Most paramount, as depicted by **Spreadsheets #1 - #4)** Kilowatt **P**ower **O**ut is above the Kilowatt **P**ower **I**N. Without **Coils**, My Circuit is a **V**oltage Amplifier. With **Coils** and the other Higher Relationships, My Circuit Efficiently extracts more **EIR C**urrent than expected. Theory; My Circuit's **Voltage Driven** Admittance allows **C**urrent to naturally avalanche, or ***perpetually*** pass through the **Windings** with each cycle, thereby creating a higher **Magnetic Field Flux/W** than is dissipated by either the **Main Sources** or traditional circuits.



I submit a challenge to the world. We are in a **New Realm** where the mysterious findings of Tesla and others have solid moorings. Welcome to a once hidden world. We are now able to see that we are truly encompassed by a ***Sea of Energy***. Our "wheelworks" can incorporate **Nature's Sea**.

DIODE Process MyCircuit (4 KBPC5010 * 2) Version 10B_DC_D4B





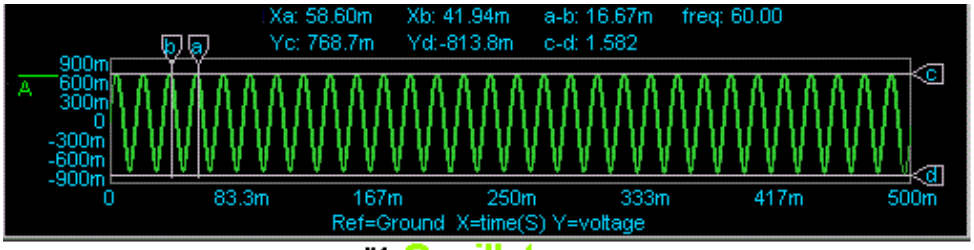
DIODE Process MyCircuit (1 KBPC5010 * 2) Version 10B_DC_D4B at 1.8 Volts there are 94KA, exactly 1/4 of 360KA in the Chart.

EIR (or Edmunds) seem to drop with more Hole-Current Potential, further sustaining there is less back-EMF at lower Volts.

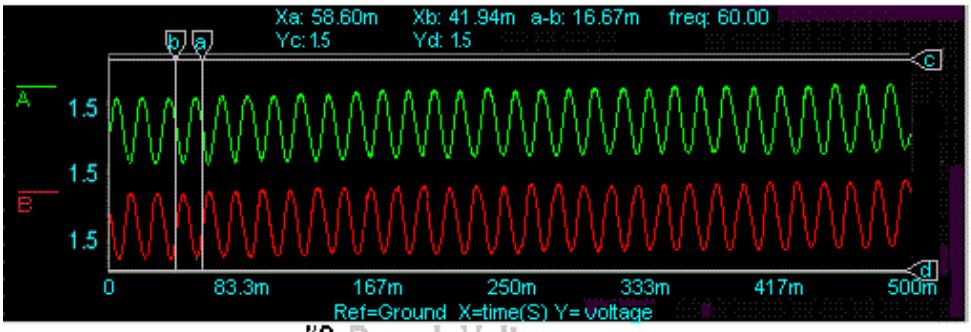
Furthermore, Coil and grounding resistances are inconsequential, as long as Source Current is available and the Circuit handles it.

Once again, reflect on the Magnetic Field Flux/W ratio....

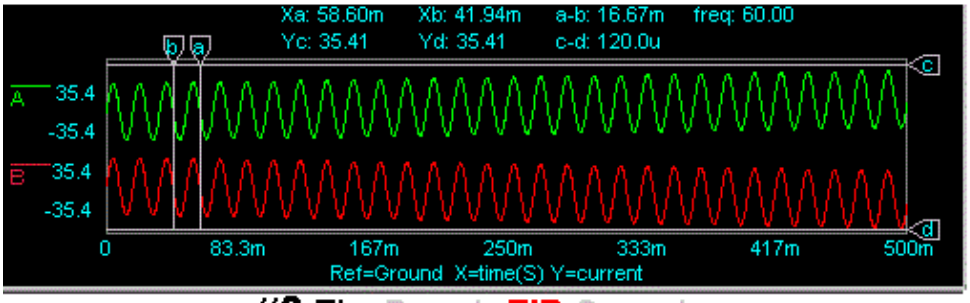
The Realm of the Total Story



#1 Oscillator

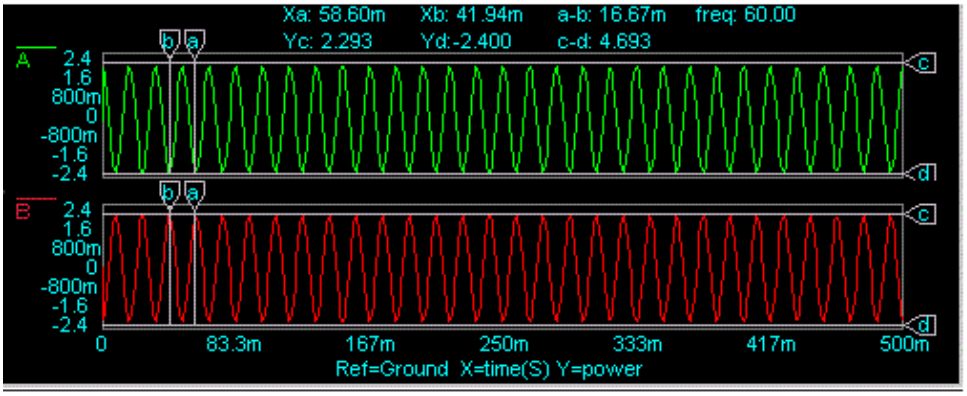


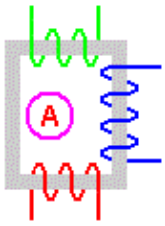
#2 Branch Voltages



#3 The Branch EIR Currents.

The Focus is direction of induced Magnetic Fields.





#4 Transformer's Primary Power

Later on I discovered **Bedini's Circuits** were only **One Dimensional**, yet I developed a **Two Dimensional** version from the same **Transient Phase Principle**, and, even though they are more **Efficient**, both **Dimensions** share the challenging Amps to Voltage characteristics.

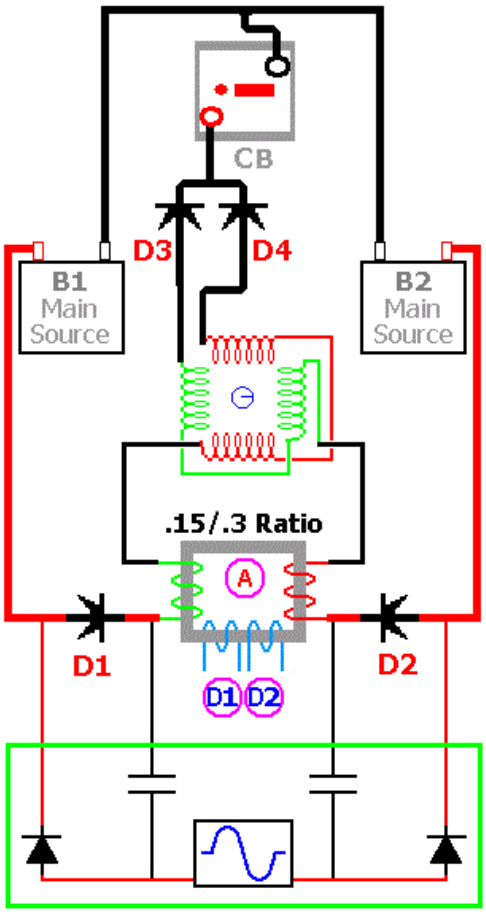
Current Driven Power Amplifier

www.eternaltruth.net

test A

Edmund A Cook TNSIC

Circuit Breaker CB
300 A
Negative Diodes D3, D4
KBPC 70A 1000V X2X4
560 A
Main Sources B1, B2
6.4 V 800 A
1.76 - 1.88 V @ 68 - 274 A
437 - 1753 Constant Watts
Motor
1.76 - 1.88 V @ 68 - 274 A
117 - 512 Constant Watts
Transformer Primary
1.76 - 1.88 V @ 68 - 274 A
117 - 512 Constant Watts
Positive Diodes D1, D2
KBPC 70A 1000V X2X2
280 A
Transformer Secondary
11.7 - 12.5 V @ 10 - 41 A
117 - 512 Constant Watts
Oscillator
1.2 V AC over a wide Hz



My Circuit allows conditions where unusual levels of Primary V and EIR-A, and an absence of Counter-EMF, are driven by the V and/or the Hole-Current Potential. Primary R is insignificant. Therefore, we can have efficient EIR-A Power gains, sufficient to both operate the Primary and a Load AND recharge the Sources with the Secondary, as a direct result of the Higher EIR-A and very minimal V losses.

$I * R = V = EIR\text{-}A * EIR$

$I^2 * R \qquad EIR\text{-}A^2 * R$

The transformer's original primary was ~120V, 8A, with a CT Secondary pulling ~15V, 72A. My Circuit has reversed them. There can be a far greater Current level (EIR-A) at the lower Voltage. However, Magnetic Fields are energized by Current.

Chart # 4

Hole-Current Potential

Voltage Driven Admittance

Neither the levels of EIR-A (Current), nor EIR-A responses to small Voltage changes are commensurate with classical relationships.
These New Relationships are definitely bringing into the light a New Realm.
The natural balance, where we easily can see a Voltage Driven Admittance and other subsequent events which transpire as a result of Diode structure, characteristics and placement in My Circuit, may well be not only a Sea of Energy, but also the key to how lightning is formed.

DC Volts	EIR-A			
	IN3296A	ECD01	SD1700C	KBPCxxxxx 3x2x50
1.60	10.3	11.	215.	53
1.70	27.2	32.	567.	165
1.80	61.3	83.	1,277.	51.
1.90	114.7	182.	2,389.	158
2.00	184.2	333.	3,834.	477
2.10	265.1	527.	5,518.	1,380
2.20	353.9	751.	7,364.	3,434
2.30	448.3	995.	9,325.	7,250
2.40	546.6	1,254.	11,370.	12,810
2.50	647.8	1,523.	13,470.	19,730

DC Volts	EIR-A
	KBPCxxxxx 2x3x70
0.60	.13
0.70	1.2
0.80	11.2
0.90	108.2
1.00	1,015
1.10	7,391.
1.20	21,800.
1.30	61,125.
1.40	104,400.
1.50	142,700.

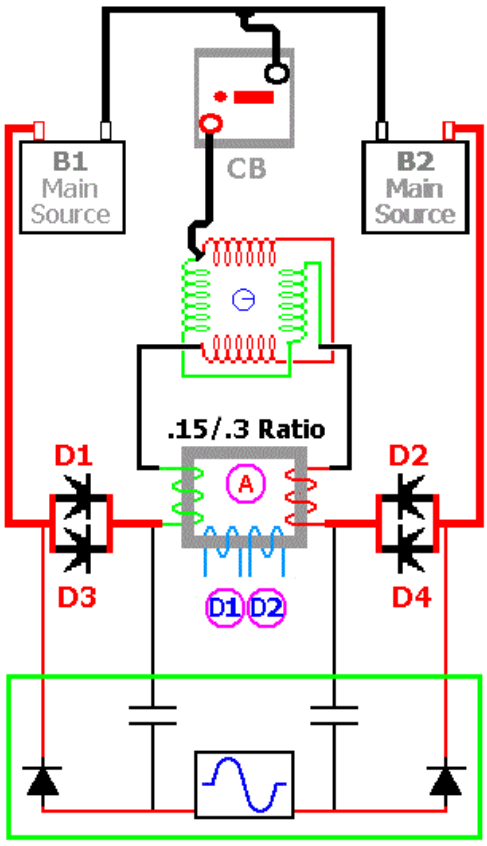
Current Driven Power Amplifier

www.eternaltruth.net

test B

Edmund A Cook TNSIC

Circuit Breaker CB
300 A
Main Sources B1, B2
6.4 V 800 A
0.83 - 0.89 V @ 88 - 334 A
525 - 2138 Constant Watts
Motor
0.83 - 0.89 V @ 88 - 334 A
68 - 297 Constant Watts
Transformer Primary
0.83 - 0.89 V @ 88 - 334 A
68 - 297 Constant Watts
Positive Diodes
KBPC70A 1000 V X 2 X 4
Diodes D1, D2, D3, D4
560A
Transformer Secondary
5.53 - 5.92 V @ 13 - 50 A
68 - 297 Constant Watts
Oscillator
1.2 V AC over a wide Hz



Note four changes from this configuration of My Circuit:
The Neg Diodes are moved;
EIR has dropped;
A lower Voltage is required;
and EIR-A are immense.
My Circuit's inverting nature opens a wide potential.
Note also these influences are only manifest in the Motor and Transformer's Primary.
Low Voltage & huge EIR-A create an efficiency which also stands firm to classical Law.

$I * R = V = EIR\text{-}A * EIR$
$I^2 * R \qquad EIR\text{-}A^2 * R$

The transformer's original primary was ~120V, 8A, with a CT secondary pulling ~15V, 72A. My Circuit has reversed them. There can be a far greater Current level (EIR-A) at a Lower Voltage. However, Magnetic Fields are energized by Current.

Chart # 5
Hole-Current Potential
Voltage Driven Admittance

DC Volts	EIR-A		
	KBPCxxxxx 2x4x70	KBPCxxxxx 2x3x70	KBPCxxxx 3x2x50
0.60	.5	.13	5.3
0.70	4.6	1.2	16.5
0.80	45.	11.2	51.
0.90	435	108	158
1.00	4,065	1,015	477
1.10	29,560	7,391	1,380
1.20	112,400	21,800	3,434
1.30	244,500	61,125	7,250
1.40	401,400	104,400	12,810
1.50	571,000	142,700	19,730

Imagine a Realm where Voltage increases reflect EIR and, in response, EIR-A rise exponentially. It is a challenge in this upside-down Realm because there are also configurations for My Circuit which consume less Power while delivering more Amps. Thus, EIR and EIR-A are born and designate this "natural inversion concept."
The only limits of this Realm are set by components.
The potential for energy creation has, therefore, immeasurable worldy benefit with few limits, and we now live in lightning's shadow. A literal illumination of eternity resides within our reach. The repurcussions are and will be sound witnesses of God's presence and love.

Appendix A1: Historical Clarity

These concepts and findings predate my comprehension of Transient Phases, even though these **Secondary Principles** were, unknowingly, actually rooted in the mysteries of a Transient Phase.

Creating an Efficient and effective electromagnetic coil involves characteristics of a very strange and Dynamic creature. If you set the standard as a number of Turns, you soon discover how the meticulous influences of Wire AWG, Wire Length, Core Dia, Core Height, Core Length, and the Number of Wires all form very stable circumstances if the Wire Length is enough to maintain both sufficient and reasonable amounts of **C**urrent. A Wire Length that is either too long or too short may well inhibit Efficiency with too little or too much **C**urrent. Even a Wire Length which falls within Efficient specs may be tweaked a bit more for a higher Efficiency. Therefore, the most unique and Efficient situation resides somewhere amongst a component combination derived from the diverse number of fluid component inter-reactions, and all this within a realm that seems to house an ever-changing, life-like creature.

Though the printing press was a major influence to dispel the dark age's shadowy beliefs and traditions, the power of any specific information still encountered many challenges. The birth and infancy of new concepts faced challenges with terms used, record/publish accuracies, available technologies, and differing levels of calibrations, subject comprehension, written expression, and translational equality.

There have been many claims establishing the Efficient Principle I reference as being known, validated by expression, recorded, and vanquished for an obscure cause. My research on this subject reveals a fascinating sequence of details. As early as 1842, **Daniel Davis** published the ***Manual of Magnetics***, a compilation of scientific experiments which establish a source that the Efficient Principle was demonstrated by **Joseph Henry**. **Michael Faraday**, **Joseph Henry**, and **Gauss** are referenced by **James Clerk Maxwell** in a ***Treatise on Electricity and Magnetism***, 1873 and 1882, wherein the most current research was broad and these results were unified.

Later, still, **Clemente Figuero**, **Edward Leedskalnin**, **Nikola Tesla**, then **John Bedini**, and others would demonstrate results of this Efficient Principle. Not all knew the Efficient Principle.

It is clear to me that any contradiction and subsequent confusion were not intentional. **Joseph Henry's** earlier statement about the Efficient Principle is simply contradicted by an isolated later reference by **Joseph Henry**. Aside from proving the accuracy of either published info, one could hear or read the latest reference's implications, and believe what they only think is true.

Experimental Researches in Electricity Michael Faraday

p 8 2170. (terminology scaled up) The **electro-helices** (2190.) without the iron cores were very feeble in power, and indeed hardly sensible in their effect. With the iron cores they were powerful, though no more electricity was then passing through the coils than before (1071.)» This shows, in a very simple manner, that the phenomena exhibited by light under these circumstances, is directly connected with the magnetic form of force supplied by the arrangement. Another effect which occurred illustrated the same point. When the contact at the voltaic battery is made, and the current sent through the electromagnet's winding, the image produced by the rotation **(expansion)** of the polarized ray does not rise up to its full lustre immediately, but increases for a couple of seconds, gradually acquiring its greatest intensity; on breaking the **(winding's electrical)** contact, the force sinks instantly and disappears apparently at once. The gradual rise in brightness **(intensity)** is due to the time which the magnet's iron core requires to process all that magnetic power which the electric current can develop in it; and as the magnetism rises in intensity, so does its effect on the light increase in power; hence the progressive condition of the **(magnetic Field's)** rotation **(expansion)**.

p 12 2190. **Helices** of copper wire were employed, three of which I will refer to. The first, or long helix, was 0.4 of an inch internal diameter; the wire was 0.03 of an inch in diameter, and having gone round the axis from one end of the helix to the other, then returned in the same manner, forming a coil 65 inches long, double in its whole extent, and containing 1,240 feet of wire.
2191. The second, or medium helix, is 19 inches long, 1.87 inch internal diameter, and 3 inches external diameter. The wire is 0.2 of an inch in diameter, and 80 feet in length, being disposed in the coil as two concentric spirals. The electric current, in passing through it is not divided, but traverses the whole length of the wire (as a series).
2192. The third, or Woolwich helix, was made under my instruction for the use of Lieut. Colonel Sabine's establishment at Woolwich. It is 26.5 inches long, 2.5 inches internal diameter, and 4.75 inches external diameter. The wire is 0.17 of an inch in diameter, and 501 feet in length. It is disposed as a coil in four concentric spirals connected end to end, so that the whole of the electric current employed passes through all the wire.
2193. The long helix (2190.) acted very feebly on a magnetic needle placed at a little distance from it; the medium helix (2191.) acted more powerfully, and the Woolwich helix (2192.) very strongly; the same battery of ten pairs of Grove's plate being employed in all cases.

Helices	**the long helix**		**the medium helix**		**Woolwich helix**		
AWG	0	**0**	**4**	4	**6**	**6**	**6/4**
Wire Len	1240 feet	**590 feet**	**80 feet**	594 feet	**501 feet**	**622 feet**	**58.75 feet**
Core Dia	0.4	**0.4**	**1.87**	1.87	**2.5**	**2.5**	**2.5**
Height	65	**65**	**19**	19	**26.5**	**26.5**	**8**
Turns	1563	**1200**	**195**	680	**682**	**810**	**70**
Turns/Level	200.0616	**200.0616**	**93.58**	93.58	**163.58**	**163.58**	**24.69**
Levels	7.8	**5.9982**	**2.0968**	7.3118	**4.169**	**4.951**	**2.835**
OHMS/Coil	0.1218	**0.058**	**0.0198**	0.1470	**0.1979**	**0.2456**	**0.00582**
T OHMS	0.1218	**0.058**	**0.0198**	0.1470	**0.1979**	**0.2456**	**0.00582**
Volts	9	**9**	**9**	9	**9**	**9**	**2**
#Coils	1	**1**	**1**	1	**1**	**1**	**1**
AMP-Trns/C	115,400	**186,000**	**88,500**	41,450	**31,010**	**29,680**	**96,519**
T AMP-Trns	115,400	**186,000**	**88,500**	41,450	**31,010**	**29,680**	**96,519**
Watts	**664**	**1,395**	**4,084**	**548**	**409**	**330**	**689**

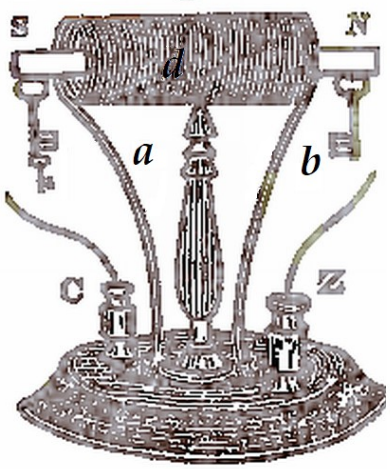
The first column for each **AWG** of this **Helices chart** is taken from **Michael Faraday's** data and was plugged into my Bedini Spreadsheet Calculator. Even though all the data I present was not given by **Michael Faraday**, the relationships at the **V**oltage listed still maintains proper ratio comparisons to contrast and analyze both the Watts consumed and the resulting **AMP-Turns** for each coil. Of special note are the Light Blue depicting **Faraday's** original data, the **DARK BLUE** denotes **Faraday's** original and surprising Efficiencies, and the columns in **RED** are my Spreadsheet's tweaks. However, there are discrepancies. The original **4 AWG** column of **88,500 AMP-Turns** has way too much **C**urrent for that wire at the **V**oltage I set, but ratio comparisons still stand. The **Faraday** claims for which **helix** has the greatest influence does not make any sense when viewing my Bedini Spreadsheet Calculator analysis. It appears as if there is an error of transcription, whether by **Faraday** or publisher. Finally, closely note the **Magnetic Field Flux / Watt ratio** Efficiencies of the **6/4 AWG** column.

We will now immerse our perceptions deeper in historical records. The ***Manual of Magnetics*, by Daniel Davis,** 1842, reveals **Joseph Henry** demonstrated the Principle before 1842.

Manual of Magnetics, INDUCTION OF MAGNETISM pp 71,73,78–81

120. HELIX, ON STAND. The magnetizing power will be greatly increased if the wire be coiled in the manner of a cork-screw, so as to form a hollow cylinder into which the body to be magnetized can be inserted. Such a coil is denominated a Helix; and is represented at ***d***, Fig. 48, mounted upon a stand.

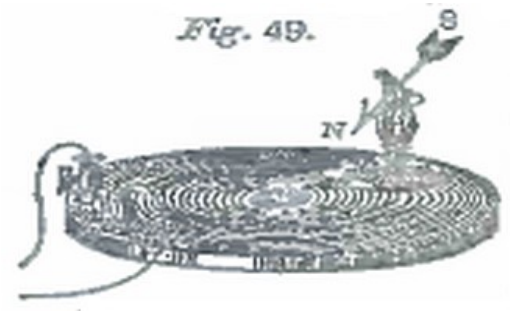
Fig. 48.



121. In using the coil, the following rule will indicate the extremity at which the north pole will be found. If the helix be placed before the observer with one of its ends towards him, and the current of electricity in passing from the positive to the negative pole of the battery, circulates in the coil in a direction similar to that of the hands of a watch or the threads of a common screw; then the north pole will be away from the observer, and the south pole towards him. If it passes round in the contrary direction, the poles will be reversed. Or the formula may be stated thus: the south pole will always be found at that end of the helix where the positive current circulates in the direction of the hands of a watch.

123. FLAT SPIRAL. Fig. 49 represents a ribbon of sheet copper, coiled into a spiral. This instrument is described here in consequence of its possessing considerable magnetizing power, though its principal uses will be mentioned when inductive action of electrical currents comes under consideration in chap. III, section 1. (The entirety of chap. III amazes) The copper ribbon may be an inch wide and one hundred feet long, the strips being cut from a sheet, and soldered together. Being then wound with strips of thin cotton, the copper ribbon is coiled upon itself, like the mainspring of a watch; instead of covering it with cotton, it may be coiled with a strip either of cotton or list intervening. Two binding screw cups are soldered to the ends of the ribbon; the internal end, for convenience, is brought from the centre, underneath the spiral, to its outside, care being taken to insure insulation where it passes the coils. The whole may be firmly cemented together by a solution of shellac in alcohol. The spiral being connected with the battery, its two faces will exhibit strong polarity: a dipping needle placed on any part of its surface or near it will always direct one of its poles towards the centre, as seen in Fig. 49, where a dipping needle N S is represented on the spiral.

Fig. 49.



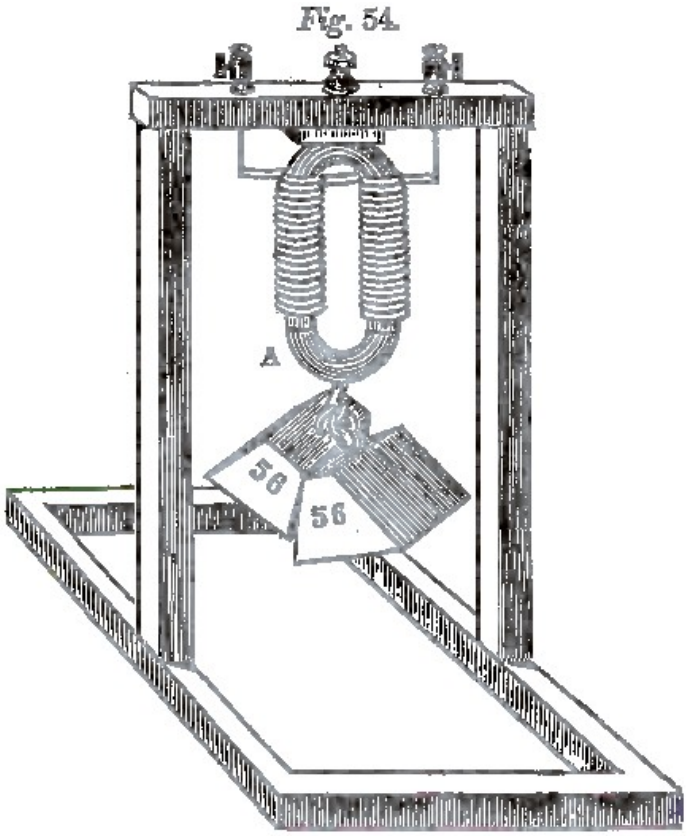
If a current of 1 ampere flowing through the coil produces Flux linkage of 1 weber turn, the coil has a self inductance of 1 henry. The unit is named after Joseph Henry (1797–1878), the American scientist who discovered electromagnetic induction independently of and at about the same time as Michael Faraday (1791–1867) in England.[2] The henry is a based on four of the seven base units of the International System of Units: kilogram (kg), metre (m), second (s), and ampere (A). Expressed in combinations of SI units, the henry is:[3]

$$\mathbf{H} = \frac{\mathbf{kg \cdot m^2}}{\mathbf{s^2 \cdot A^2}} = \frac{\mathbf{kg \cdot m^2}}{\mathbf{C^2}} = \frac{\mathbf{J}}{\mathbf{A^2}} = \frac{\mathbf{T \cdot m^2}}{\mathbf{A}} = \frac{\mathbf{Wb}}{\mathbf{A}} = \frac{\mathbf{V \cdot s}}{\mathbf{A}} = \frac{\mathbf{s^2}}{\mathbf{F}} = \frac{\mathbf{\Omega}}{\mathbf{Hz}} = \mathbf{\Omega \cdot s}$$

in which the following additional derived units occur: Coulomb (C), farad (F), joule (J), weber (Wb), tesla (T), volt (V), hertz (Hz), and ohm (Ω).

132. (terminology scaled up) Prof. Joseph Henry, late of the Albany Academy, appears to have been the first to construct electromagnets of any great lifting power. In one instance, he employed a soft iron bar, two inches square and twenty inches long, bent into the horse-shoe form. Its weight was twenty-one pounds. This bar was wound with five hundred forty feet of copper bell-wire, not in one continuous length, but in nine separate and distinct coils of sixty feet, each coil's winding section having several layers, which occupied about two inches of the bar. By this arrangement the independent coils could be configured in a number of ways; thus, if the end of the first coil was soldered to the beginning of the second coil, and so on, the whole could form a single coil having five hundred forty feet of windings. Or the independent coils might be arranged to more than double the current with two parallel branches of four coils, each branch having two hundred forty feet of windings, or triple the current with three parallel branches of three coils, each branch having one hundred eighty feet of windings, etc. A small battery was used, consisting of two concentric cylinders of copper, with a zinc cylinder between them. The battery required only half a pint of diluted acid for its charge, and the surface of zinc exposed to the acid was but two-fifths of a square foot. Each individual coil's wire being soldered in succession to this battery, one at a time, the magnetism with each individual coil was just sufficient to sustain the armature, which weighed seven pounds. When the first end of each of the nine strands were soldered to the zinc cylinder and the second end to the copper cylinder, so that maximum current circulated in each of the nine coils' sixty foot winding channels, the magnet supported the extraordinary weight of six hundred fifty pounds. With a

larger battery this design sustained seven hundred fifty pounds. Each independent coil could lift but seven pounds. On uniting the ends of the coils' wires to form one series of five hundred forty continuous length feet, the weight raised was only one hundred forty-five pounds. Prof. Henry afterwards constructed a similar electromagnet, which was wound with twenty-six strands of copper wire covered with cotton thread, the aggregate length of the "coils' wires" being seven hundred twenty-eight feet (a 28 foot length of twenty-six strands of wire). With a battery of 47.9 square feet, this magnet supported two thousand sixty-three pounds, or nearly a ton. Others have since been made with a lifting power of three thousand pounds.



133. Fig. 54 represents an electromagnet fixed in a frame

133. Fig. 54 represents an electromagnet fixed in a frame for the purpose of supporting heavy weights. A semicircular keeper Armature circuit, "A", is incorporated with the coil poles, as this form gives the greatest lifting power. If the magnet's iron is soft and pure, the core's magnetic power will be immediately communicated or lost, in accordance to when the coil's connection with the battery is made or broken. If the flow of the current is broken while a semicircular keeper Armature circuit has been incorporated with the coil poles, however, the captured magnet field will sustain one third or one half as much weight for weeks or months. But if the keeper Armature circuit be removed, nearly the whole magnetism will disappear, and the magnet, if of good iron, will not even be able to lift an ounce.

134. … Prof. Henry was the first to employ coils of metallic ribbon for obtaining sparks and shocks from a single pair of plates. P 134

Electromagnets

AWG	20	20	20	20/26	20/26
Wire Len	540 feet	60 feet	60 feet	28 feet	28 feet
Core Dia	2.828	2.828	2.828	2.828	2.828
Height	18	2	2	2	2
Turns	987	110	110	36.8	36.8
Turns/Level	563.2	62.578	62.578	12.27	12.27
Levels	1.7525	1.7578	1.7578	2.9985	2.9985
OHMS/Coil	5.488	0.6113	0.6113	0.01071	0.01071
T OHMS	5.488	0.0879	0.0879	0.01071	0.00119
Volts	9	9	12	12	2
#Coils	1	9	9	1	9
AMP-Trns/C	1,620	1,620	2,159	1,072,000	178,700
T AMP-Trns	1,620	14,580	19,431	1,072,000	1,608,300
Watts	14.7	1,198	2,120	13,445	3,362
Weight	140	650	750	2,063	2,063

This chart, a Bedini Spreadsheet Calculator analysis of both **Joseph Henry's** experiments and My Concept's enhanced contribution to Efficient **Magnetic Field Flux / Watt ratios**, reveals some fascinating insights. **Henry** demonstrated the Principle of high current coils, and the column of **RED** establishes a stark contrast for an even more Efficient low **V**oltage and high current Principle with My Concept.

Then the confusing contradiction. Between 1826 and 1831… Henry declared, "when making an electromagnet using just two electrodes attached to a battery, it is best to wind several coils of wire in parallel, but when using a set-up with multiple batteries, there should be only one single long coil." The latter made the telegraph feasible. (APS American Physical Society)
What is absent are a plethora of details: We have no reference to either batteries' current or **V**oltage capacities, or even Wire AWG. He references two diverse applications in the same moment and more current and less Resistance could magnify an electromagnet's Efficiency in a parallel coil configuration. A subtle misguiding impression lingers, still encouraging others to ignore the Efficient Principle. The telegraph perception of Principle prevailed.

Continuing this same line of analysis, we come to **James Clerk Maxwell**, who was a very brilliant man with vision and an extremely powerful gift of communicating clear perceptions. **Maxwell** could see beyond both perspectives (science and mathematical), and became a bridge to unite their differences, expanding what was known into higher realms.

Treatise on Electricity and Magnetism 01 **James Clerk Maxwell**,1882 PREFACE
Gauss, as a member of the German Magnetic Union, brought his powerful intellect to bear on the theory of magnetism, and on the methods of observing it, and he not only added greatly to our knowledge of the theory of attractions, but reconstructed the whole of magnetic science as regards the instruments used, the methods of observation, and the calculation of the results, so that his memoirs on ***Terrestrial Magnetism*** may be taken as models of physical research by all those who are engaged in the measurement of any of the forces in nature.

The whole theory, for instance, of the potential, considered as a quantity which satisfies a certain partial differential equation, belongs essentially to the method which I have called that of Faraday. According to the other method, the potential, if it is to be considered at all, must be regarded as the result of a summation of the electrified particles divided each by its distance from a given point. Hence many of the mathematical discoveries of Laplace, Poisson, Green and Gauss find their proper place in this treatise, and their appropriate expression in terms of conceptions mainly derived from Faraday.
Gauss, as a member of the German Magnetic Union, brought his powerful intellect to bear on the theory of magnetism, and on the methods of observing it, and he not only added greatly to our knowledge of the

theory of attractions, but reconstructed the whole of magnetic science as regards the instruments used, the methods of observation, and the calculation of the results,so that his memoirs on Terrestrial Magnetism may be taken as models of physical research by all those who are engaged in the measurement of any of the forces in nature.

There are several treatises in which electrical and magnetic phenomena are described in a popular way. These, however, are not what is wanted by those who have been brought face to face with quantities to be measured, and whose minds do not rest satisfied with lecture-room experiments. There is also a considerable mass of mathematical memoirs which are of great importance in electrical science, but they lie concealed in the bulky transactions of learned societies; they do not form a connected system; they are of very unequal merit, and they are for the most part beyond the comprehension of any but professed mathematicians. I have therefore thought that a treatise would be useful which should have for its principal object to take up the whole subject in a methodical manner, and which should also indicate how each part of the subject is brought within the reach of methods of verification by actual measurement.

The general complexion of the treatise differs considerably from that of several excellent electrical works, published, most of them, in Germany, and it may appear that scant justice is done to the speculations of several eminent electricians and mathematicians. One reason of this is that before I began the study of electricity I resolved to read no mathematics on the subject till I had first read through **Michael Faraday's** ***Experimental Researches in Electricity.***

I was aware that there was supposed to be a difference between **Faraday's** way of conceiving phenomena and that of the mathematicians, **so that neither he nor they were satisfied with each other's language**. I had also the conviction that this discrepancy did not arise from either party being wrong. I was first convinced of this by **Sir William Thomson** *I take this opportunity of acknowledging my obligations to **Sir W. Thomson** and to **Professor Tait** for many valuable suggestions made during the printing of this work.*, to whose advice and assistance, as well as to his published papers, I owe most of what I have learned on the subject. As I proceeded with the study of **Faraday**, I perceived that his method of conceiving the phenomena was also a mathematical one, though not exhibited in the conventional form of mathematical symbols. I also found that these methods were capable of being expressed in the ordinary mathematical forms, and thus compared with those of the professed mathematicians.

For instance, **Faraday**, in his mind's eye, saw lines of force traversing all space where the mathematicians saw centres of force attracting at a distance: **Faraday** saw a medium where they saw nothing but distance: **Faraday** sought the seat of the phenomena in real actions going on in the medium, they were satisfied that they had found it in a power of action at a distance impressed on the electric fluids.

When I had translated what I considered to be **Faraday's** ideas into a mathematical form, I found that in general the results of the two methods coincided, so that the same phenomena were accounted for, and the same laws of action deduced by both methods, but that **Faraday's** methods resembled those in which we begin with the whole and arrive at the parts by analysis, while the ordinary mathematical methods were founded on the Principle of beginning with the parts and building up the whole by synthesis.

I also found that several of the most fertile methods of research discovered by the mathematicians could be expressed much better in terms of ideas derived from **Faraday** than in their original form. The whole theory, for instance, of the potential, considered as a quantity which satisfies a certain partial differential equation, belongs essentially to the method which I have called that of **Faraday**. According to the other method, the potential, if it is to be considered at all, must be regarded as the result of a summation of the electrified particles divided each by its distance from a given point. Hence many of the mathematical discoveries of **Laplace**, **Poisson**, **Green** and **Gauss** find their proper place in this treatise, and their appropriate expression in terms of conceptions mainly derived from **Faraday**.

Great progress has been made in electrical science, chiefly in Germany, by cultivators of the theory of action at a distance. The valuable electrical measurements of **W. Weber** are interpreted by him (**Faraday**) according to this theory, and the electromagnetic speculation which was originated by **Gauss**, and carried on by **Weber, Eiemann, J. and C. Neumann, Lorenz,** etc. is founded on the theory of action at a distance, but depending either directly on the relative velocity of the particles, or on the gradual propagation of something, whether potential or force, from the one particle to the other. The great

success which these eminent men have attained in the application of mathematics to electrical phenomena, gives, as is natural, additional weight to their theoretical speculations, so that those who, as students of electricity, turn to them as the greatest authorities in mathematical electricity, would probably imbibe, along with their mathematical methods, their physical hypotheses.

These physical hypotheses, however, are entirely alien from the way of looking at things which I adopt, and one object which I have in view is that some of those who wish to study electricity may, by reading this treatise, come to see that there is another way of treating the subject, which is no less fitted to explain the phenomena, and which, though in some parts it may appear less definite, corresponds, as I think, more faithfully with our actual knowledge, both in what it affirms and in what it leaves undecided.
In a philosophical point of view, moreover, it is exceedingly important that two methods should be compared, both of which have succeeded in explaining the principal electromagnetic phenomena, and both of which have attempted to explain the propagation of light as an electromagnetic phenomenon, and have actually calculated its velocity, while at the same time the fundamental conceptions of what actually takes place, as well as most of the secondary conceptions of the quantities concerned, are radically different. I have therefore taken the part of an advocate rather than that of a judge, and have rather exemplified one method than attempted to give an impartial description of both. I have no doubt that the method which I have called the German one will also find its supporters, and will be expounded with a skill worthy of its ingenuity.

Treatise on Electricity and Magnetism 02 **James Clerk Maxwell**, 1873

280-285

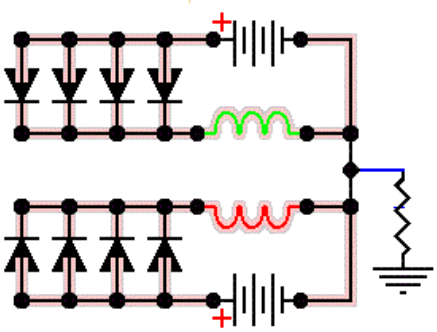
p 280 If the body is a cylinder having any form of section and bounded by planes perpendicular to its generating lines, and if $\mathbf{V_1}$ is the potential at the point (x, y, z) due to a plane area of surface-density unity coinciding with the positive end of the solenoid, and $\mathbf{V_2}$ the potential at the same point due to a plane area of surface-density unity coinciding with the negative end, then, if the cylinder is uniformly and longitudinally magnetized with intensity unity, the **(Magnetic) potential** at the point (x, y, z) will be equal to $\mathbf{V_1 - V_2}$ **(10)** If the cylinder, instead of being a magnetized body, is uniformly lapped with wire, so that there are n windings of wire in unit of length, and if a current, y, is made to flow through this wire, the **magnetic potential** outside the solenoid is as before $= \mathbf{n\ y\ (V_1 - V_2)}$ **(11)** but within the space bounded by the solenoid and its plane ends $= \mathbf{n\ y\ (4\ Pi\ z + V_1 - V_2)}$ **(12)** The **magnetic potential** is discontinuous at the plane ends of the solenoid, but the magnetic force is continuous.
If $\mathbf{r_1}$ $\mathbf{r_2}$, the distances of the centres of inertia of the positive and negative plane end respectively from the point (x, y, z), are very great compared with the transverse dimensions of the solenoid, we may write $\mathbf{V_1 = A / r_1}$ $\mathbf{V_2 = A / r_2}$ where A is the area of either section. The magnetic force outside the solenoid is therefore very small, and the force inside the solenoid approximates to a force parallel to the axis in the positive direction and equal to **4 Pi n y**.

$$E = RC + l\left(A + \tfrac{1}{2}\right)\frac{dC}{dt} - \frac{1}{12}\frac{l^2}{R}\frac{d^2C}{dt^2} + \frac{1}{48}\frac{l^3}{R^2}\frac{d^3C}{dt^3} - \frac{1}{180}\frac{l^4}{R^3}\frac{d^4C}{dt^4} + \&c. \quad (18)$$

p 293 The first term, **RC**, of the right-hand member of this equation expresses the electromotive force required to overcome the resistance according to Ohm s law.
The second term, $\boldsymbol{l}$ **(A + ½) (dC/dt)**, expresses the electromotive force dt which would be employed in increasing the electrokinetic momentum of the circuit, on the hypothesis that the current is of uniform strength at every point of the section of the wire.

311 Calculating self-induction coil dimensions...

Appendix A2: The Diode Process and Hole-Current Potential



Although it is interesting to see what one Diode in each Leg will do, an even more fascinating event occurs as additional Diodes create, as it were, independent paths, or "Circuits for higher Current flow." This literally means each Diode is equally contributing additional portions of the initial Current, irrespective of the Windings' Resistance and a consistent Voltage.

Whereas Counter-EMF is not present, the EIR-A can be exponentially greater, and when higher Current is used with a motor, generator, or transformer, there will be a commensurate increase in Power according to Lenz's Law. Losses are minimized because of the low Voltage and high Current, and maximum EIR-A may well be found to have direct associations with a very minimal, maximum Wire Resistance in My Circuit. It seems high EIR-A are dramatically influenced by too much connecting Wires' Resistance in My Circuit.

A 2 HP motor in My Circuit may now easily generate 20 HP.

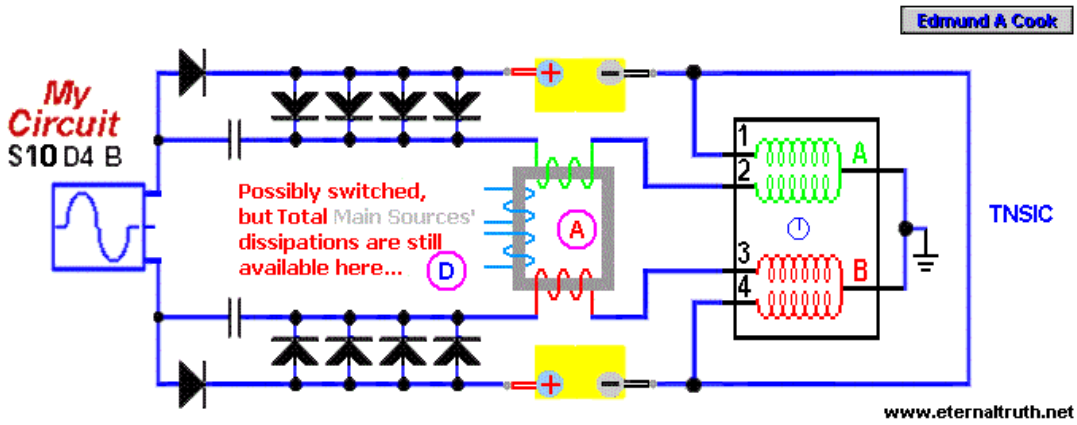
(see My Circuits_SPN_Junction.exe)

The ultimate, "natural balance."

$I * R = V = EIR\text{-}A * EIR$

$P\ In = I * V$ $\quad$ $P\ Out = EIR\text{-}A * V$

$P\ In = I^2 * R$ $\quad$ $P\ Out = EIR\text{-}A^2 * R$



Appendix A3: Basic Inductive Principles, and Switch #1

Faraday related the **rate of Magnetic Field Flux change** **with the** **induced Instantaneous Voltage**.

$$e = N \frac{d\Phi}{dt}$$

e is Instantaneous Voltage
N is the Number of Turns
Φ is Magnetic flux in Webers
t is time in seconds

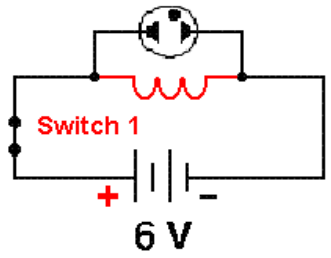
$$e = L \frac{dI}{dt}$$

e is Instantaneous Voltage
L is Inductance in Henries
$\frac{dI}{dt}$ is an instantaneous change in Amps/second

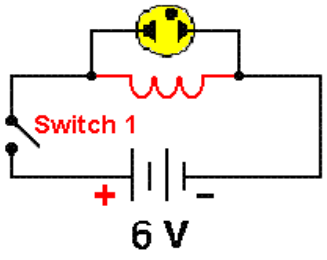
$\frac{dI}{dt}$ will be a very large, negative number.

Self-Induction and High Permeability

Magnetically Induced Voltage occurs only when **Magnetic Field Flux** is changing. Changing magnetic fields affect Electron alignment and cause a **Field Force** to develop between the Electrons. **Field Force** is "a push over distance (EMF, "**V"**, or **V**oltage), and this **Force** can be present in empty space." **Magnetic Field Flux** is the "quantity, or effect of this **Force** through space (**C**urrent, or "**I**"), and cannot exist without the induced Electron alignments, or **Magnetic Field Flux** changes."



A 6 V Lantern battery will not power the neon lamp, which requires a minimum of 70 V. Opening Switch 1 causes a large effective resistance, a Voltage drop, and a Current decrease. The Induced Instantaneous Watts light the lamp. If my theory holds, the absence of Counter-EMF lights the lamp.



A **Coil's** shape determines strength, performance, and other characteristics of the **Magnetic Field**.
Energy storage in an inductor is related to maintaining an amount of Current.
To release Energy, **C**urrent (Field Strength) must be changed (or **Switched**), as in a **V**oltage drop.
When power is applied to a non-magnetic inductor, there is an entire Voltage drop.
As **C**urrent flows, the **Magnetic Field** increases until **C**urrent reaches its maximum Energy level. (Timing Hz)

Turns are related to ***Magnetic Field Flux Forces.***
Greater Coil Area presents **less opposition** to ***Amp-turns Magnetic Field Flux.***
Longer Magnetic Field Flux paths **have greater opposition to the** ***formation of Amp-turns Flux.***
Greater Magnetic Permeability **allows greater** ***Amp-turns Field Flux.***

Efficient 10B Voltage Driven Current Amplification

"A Higher Realm, or Natural Order, of Relationship Balance"

E C Distributions

Blue text is associated with ***CircuitMake***r, the simulation program, or other computer terms.
Red text signifies somewhat new terms which have association to My Circuit.
Letters or **words** emphasized with **BOLD** maintain critical points of focus.

Appendix B1: CircuitMaker Installation

CircuitMaker 113233010
TraxMaker 612182100

Install by running "***Setup32.exe***", Start the ***CircuitMaker*** Program, load My Circuit file "***My Circuit_??xxxx??_10_DC_D4_.ckt***" from the "***Additional Files***" folder on the **CD**, and set the following initial parameters for uniformity and ease of operation.

Choose "Preferences" under ***CircuitMaker's*** "File" tab.
SET "Cycles Displayed" to "10" (**some tests may need 50, or 1,000 cycles or more**)
SET "Points per Cycle" to "5"
SET "Grid" to "9 X 9"

Choose "Analysis Setup" under the "Simulation" tab.
Select "Analog Options"
In the UPPER Window locate
"TRTOL Transient Analysis Error Tolerance"
SET "TRTOL" to "4.0"
In the Lower right corner of "Analog Options"
SET "Integration Mode" to "Gear 2"

The ***CircuitMaker*** simulation is started when you press "**F10**," or the  icon.

Note that a "double left click" while the Mouse is in the "Multimeter Display" allows a change for either AC or DC readings. The "DC Average" setting is the only way to see what is really transpiring in My Circuit. A varying DC **V**oltage read on a non-averaging Meter renders meaningless results. There are AC **C**urrents present in My Circuit.

Either any of my Transient Phase Simulations or the CircuitMaker Program are using Excel or Spreadsheet type techniques) for their intense calculations.
It is, therefore, advisable and wise to know Three things:
Any of these resources files can be corrupted if your computer's resources are over-taxed, and a requirement to use any of the Transient Phase Simulations is to have Excel or an equivalent. Preserve Original File, and Work only from a backup to avoid File corruption when using these resources, and be vigilant protecting your work.

Appendix B2: CircuitMaker Introduction

When running My Circuit, specific readings can be taken in **V**olts (**EMF**), **W**atts (**P**ower) or **C**urrent (**I**, ma, **A**, or **KA**). Characteristics of such readings are determined by which "Window" is active, where the Mouse last touched the circuit and was "left clicked."

First "click" in the "Oscilloscope Window," then "click" in the "Circuit Window " and then "left click" the Mouse near any component or wire to see particular readings or waveforms. "A" and "B," or "C" and "D" markers offer "Time" or "Magnitude" measurements. Some of these measurements and graphs are in the "***Car***" tab of the supplied Spreadsheet titled, "***Bedini Generator Analysis1.xls***," or in "***Additional Files***," if not in this document.

Note again that a "double left click" while the Mouse is in the "Multimeter Display" allows either AC or DC readings. The "DC Average" setting is the only way to see what is really transpiring in My Circuit. There are AC **C**urrents present in My Circuit. For each "Window" in ***CircuitMaker*** there is a letter displayed along with the Mouse indicating where each characteristic can be selected with a "left click." Average readings appear in the "Multimeter Display Window," while the overall "Time" or "Magnitude" measurements are presented in the "Oscilloscope Window."

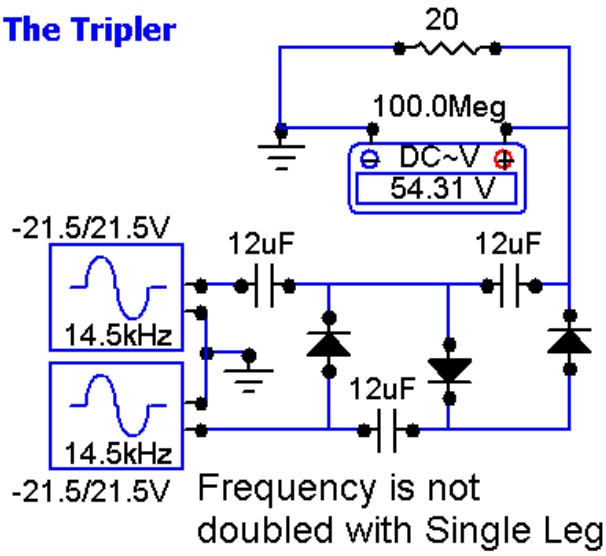
By "clicking" in the "Multimeter Window," the average or overall reading for a desired parameter will now be displayed by a "left click." "**W**atts" are registered when you have the Mouse near a component's main body, while "**V**oltage" is displayed when the Mouse rests over wires or outer leads to components, and "**C**urrent" is viewed when a small area between a component's outer lead and its body is selected with the Mouse.

Various results are observed with changes to "Cycles Displayed," "TRTOL," or "Integration Mode." However, **ALL** readings in simulation at the suggested settings are near what will be seen in a real world, working **C**ircuit. In fact, changing both "TRTOL" AND "Gear Mode" were done to assure those who think ***CircuitMaker*** is being tricked into inaccuracy. **My trust in *CircuitMaker* and the confidence I have in My Circuit and My Original Circuit are both rooted in real life experiences.**

Basic Laws of Electricity and Power encompasses this theory. **P**ower Out **(W) = V** * **I,** and **V (EMF**, OR **E) = I (EIR-A)** * **R (EIR)**. Replacing **I** with **I** * **R**, we have the **New Relationships**. This allows the co-existence of both **r**elationships. **New W = EIR-A^2** * **EIR.** My Circuit is a forum for **EIR**, the **Diode Process** and **Voltage Driven** Admittance**.** Scientific verities do not end with false opinions. Difficulties of the **New Relationships** are that Admittance and **EIR** react **Dynamically** to **Hole-Current Potential** changes and Voltage increases. The Free Energy created is calculated by the difference between these **New Relationships** and the classical component **r**elationships. My Circuit functions flawlessly in this **Higher Realm** over a very wide Hz. Some of the Diodes I used need to be added to ***CircuitMaker's Library for functionality***.

CircuitMaker is challenged when running Digital and Analog without a re-boot.

Appendix C1:The Diode Process and Hole-Current Potential



Appendices C through G compose the history of My Circuits', and show the progression for its applied concepts, and the processes manifest there-in. I recall seeing two diagrams for radio signal reception, which depicted diode arrays connected in series for Voltage gain, or in parallel for Current gain. These two designs and a "multiplier" are the actual core of My Circuits' operational concepts.

TNSIC

Edmund A Cook

eternaltruth.net

My Quad Circuits are, essentially, transforming Current into Voltage. However, My Circuits' efficiencies create more energy than is being consumed by the Source. The debate begins.

My Power Amplifying Circuit is creating a massive flow of Current at a very low Voltage. The diodes in parallel application. This massive flow of Current at a low Voltage represents a strange realm where Voltage losses are very minimal and, where-as Magnetic Fields are not a Voltage result, but are created by Current alone, the amounts of energy present are also beyond what is classically expected. In fact, these Power levels may well be enough to both run a large Magnetic Field and also recharge its own source. (See Apendix A)

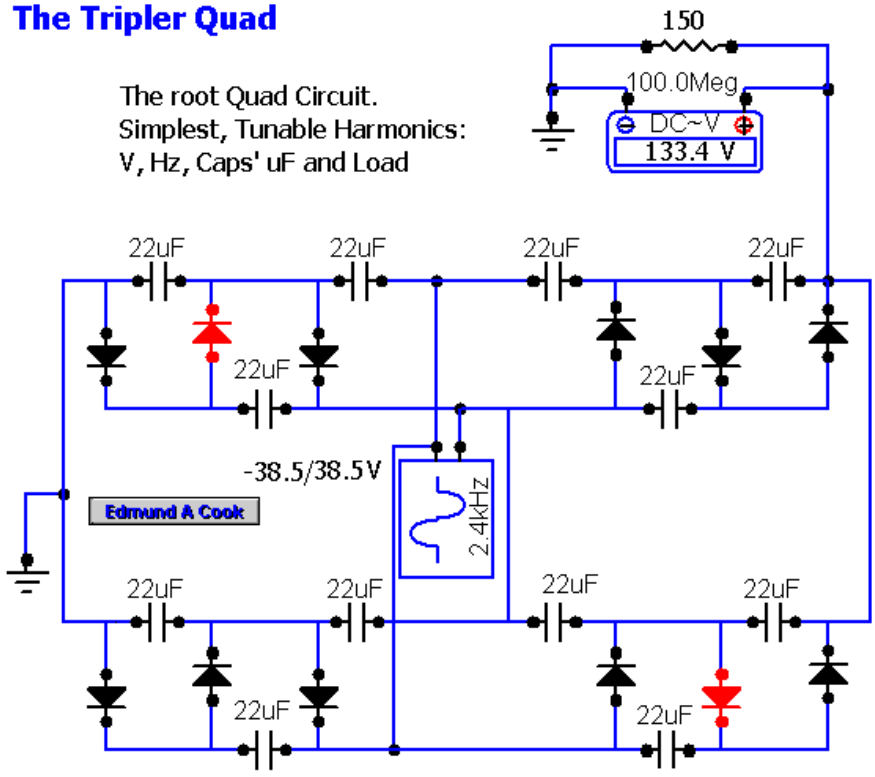
The thesis; there can be more Energy generated than is being dissipated by the Oscillator: Thus, the Efficient Capacitive Driven Voltage Amplification, or the Voltage Driven Power Amplifier (S8) reside in a Sea of Energy. There are unique anomalies concerning Diode structure, characteristics, and Diode placement in both My Original Circuit and My Circuit.

When CircuitMaker installs, the Default for TRTOL (Transient Error Tolerance) is "7." I now realize when I operated My Original Circuit and the numbers in real life were matching, it was before I lowered TRTOL to "4," making the tolerance much tighter. Thus it was not till Abdul was here that I recognized the real life data was not matching the Simulation Data, and now we know why.

As further NOTES to TRTOL, this parameter is saved with each Circuit. Older Versions of My Circuits were operating with TRTOL set at "7." Some of the Circuits "breaking loose" and creating 100 or more times the input Power were of those Circuits saved with TRTOL set to "7." If the setting of "7" is actually valid in real life, or not, there is something unique about My Circuits. If this setting is valid in real life, get ready for a "regeneration" party.

Appendix C2:The Diode Process and Hole-Current Potential

The Tripler Quad



Quad versions may tend to not "Break Loose" if uF values are too low or too high.
Greater success may accompany solid wire. Note Negative Watts at Oscillator.

2.4KHz
4 Quadrants, all balanced @ 22 uF
For 240 Ohm Load (First Range)
w 7 uF centerCaps greatest efficiency @ 25.0 V
w 7 uF outerCaps greatest efficiency @ 25.0 V

For 180 Ohm Load (Fourth Range)
@ 31.5 V, W OUT ratio increases to 72.51 X INPUT W
Less than 1 Watt IN, with 67 Watts OUT
@ 48.0 V, W OUT ratio increases to 20.03 X INPUT W

For 150 Ohm Load (Sixth Range)
@ 38.5 V, W OUT ratio increases to 151.39 X INPUT W
Less than 1 Watt IN, with 119 Watts OUT

For 120 Ohm Load (Second Range)
@ 25.0 V, W OUT ratio increases to 19.33 X INPUT W

*This version does strange things when one of the two RED Diodes are removed... or shorted

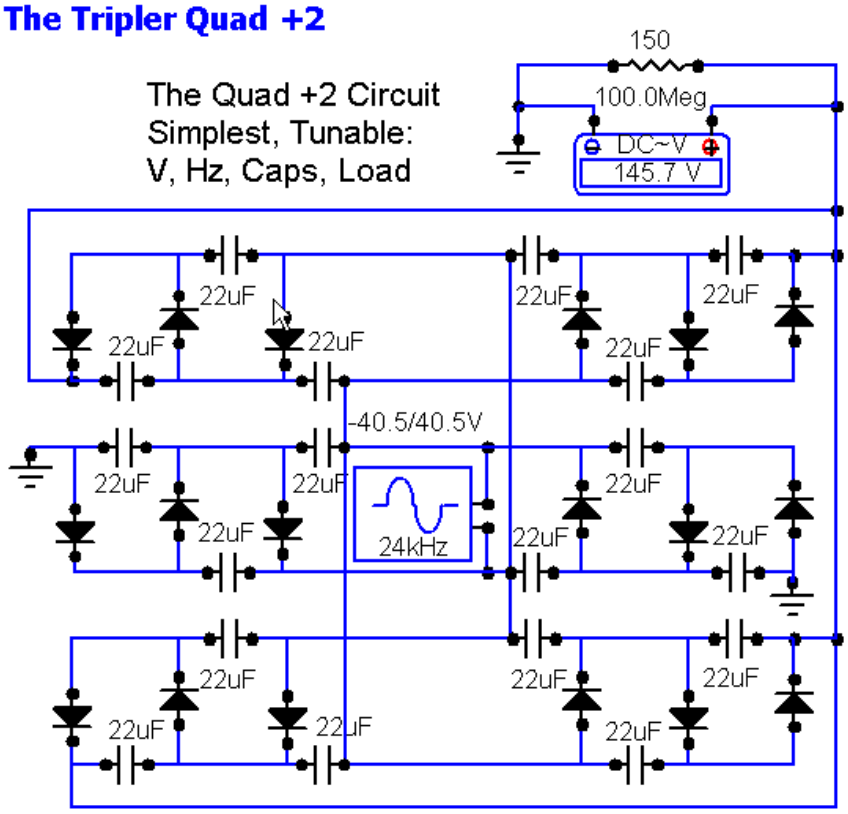
24KHz
4 Quadrants, all balanced 45. V @ 22 uF

32.0 V @ 14 uF 322.89 X
Less than 1 Watt IN, with 80 Watts OUT
38.5 V @ 14 uF 2009.03 X
Less than 1 Watt IN, with 120 Watts OUT
@ 16 uF insignificant
20.5 V @ 18 uF 99.60 X
28.5 V @ 18 uF 98.53 X
43.0 V @ 18 uF 108.38 X
@ 24 uF insignificant
19.5 V @ 26 uF 90.36 X
41.0 V @ 26 uF 104.41 X

These Range values demonstrate W OUT "Efficiency Pockets" as basic, balanced, harmonic functions of V, Hz, uF totals and Load levels.

Appendix C3:The Diode Process and Hole-Current Potential

The Tripler Quad +2



24KHz
4 Quadrants, all balanced 45.0 V @ 22 uF

32.0 V @ 14 uF 322.89 X
Less than 1 Watt IN, with 80 Watts OUT
38.5 V @ 14 uF 2009.03 X
Less than 1 Watt IN, with 120 Watts OUT
@ 16 uF insignificant
20.5 V @ 18 uF 99.60 X
28.5 V @ 18 uF 98.53 X
43.0 V @ 18 uF 108.38 X
@ 24 uF insignificant
19.5 V @ 26 uF 90.36 X
41.0 V @ 26 uF 104.41 X

24KHz
6 Quadrants, two uF values @ 22 uF & 33 uF
Each Front Set balanced with 1 rear

For 160 Ohm Load (Second Range)
@ 14.0 V, W OUT ratio increases to 20.53 X INPUT W
@ 14.5 V, W OUT ratio increases to 274.36 X INPUT W

For 150 Ohm Load (First Range)
@ 30.0 V, W OUT ratio increases to 339.97 X INPUT W
Less than 1 Watt IN, with 80 Watts OUT
@ 31.0 V, W OUT ratio increases to 78.40 X INPUT W

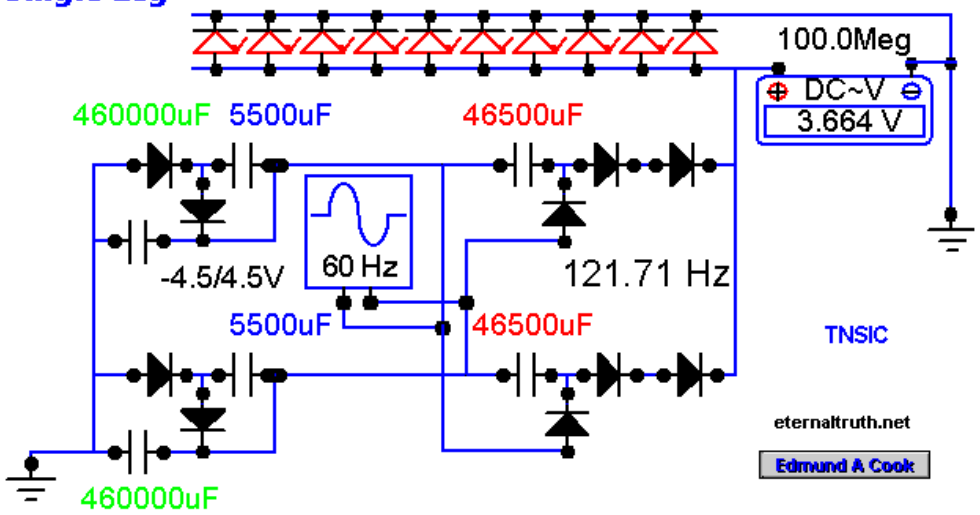
For 150 Ohm Load (Third Range) ALL CAPS set to 22 uF
@ 40.5 V, W OUT ratio increases to 8394.33 X INPUT W
Less than 1 Watt IN, with 142 Watts OUT

For 150 Ohm Load (Fourth Range) ALL CAPS set to 14 uF
@ 17.0 V, W OUT ratio increases to 424.08 X INPUT W
@ 18.0 V, W OUT ratio increases to 580.78 X INPUT W

These Range values demonstrate W OUT "Efficiency Pockets' as basic, balanced, harmonic functions of V, Hz, uF totals and Load levels.

Appendix D1:The Diode Process and Hole-Current Potential

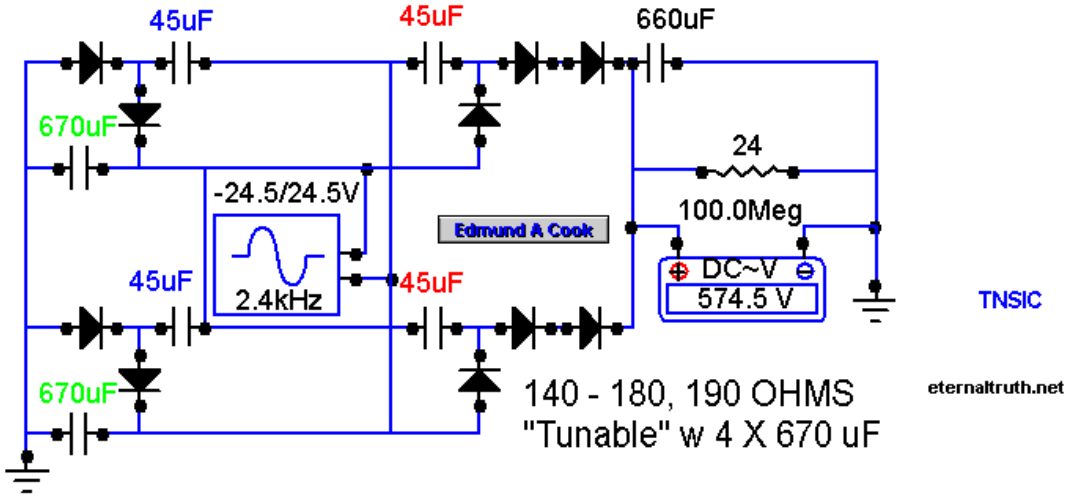
The Single Leg



OscKHz	OUT KHz	Columnar Capacitance (uF)			OUT W X	Load
24.0	48.1	4700	470	470	3.66 X	10 LED
24.0	49.6	4650	465	465	2.29 X	10 LED
14.0	28.46	46500	4650	4650	1.39 X	20 OHM
14.0	27.61	47000	4700	4700	1.0 X	20 OHM
2.4	5.192	46000	4600	4600	4.50 X	10 LED
2.4	4.57	4700	470	470	3.00 X	20 OHM
2.4	4.558	46500	4650	4650	15.07 X	10 LED
2.4	5.074	47000	4700	4700	4.40 X	10 LED
2.4	5.074	47000	4700	4700	9.73 X	10 LED
2.4	4.811	46500	4650	9300	2.44 X	10 LED
2.4	4.782	47000	4700	9400	4.4 X	10 LED
2.4	4.781	46500	4650	4650	2.19 X	20 LED
2.4	4.818	47000	4700	4700	3.75 X	20 LED
2.4	4.852	46500	4650	4650	2.07 X	20 LED
0.100	0.2017	460000	46000	46000	1.56 X	10 LED
0.100	0.1961	465000	46500	46500	13.2 X	10 LED
0.100	0.2104	470000	47000	47000	3.33 X	10 LED
0.102	0.1968	460000	46000	46000	1.57 X	10 LED
0.102	0.2088	465000	46500	46500	3.75 X	20 LED
0.102	0.2037	470000	47000	47000	2.04 X	10 LED
0.102	0.2088	465000	46500	46500	3.75 X	20 LED
0.060	0.1217	460000	5500	46500	4.61 X	10 LED
0.060	0.1181	460000	5500	46500	1.01 X	20 LED

Appendix D2: The Diode Process and Hole-Current Potential

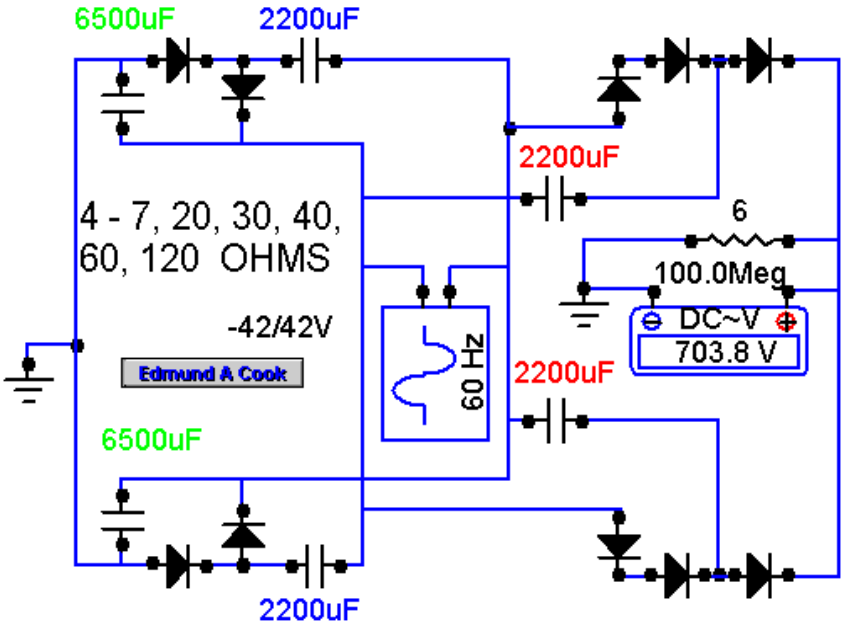
The Single Leg



Osc Volts	Hz	Columnar Capacitance (uF)				OUT W	OUT V	OUT W X	Load
20	60	670	450	450	940	8.158 KW	514 V	14.9X	82
20	60	670	450	450	940	6.998 KW	921 V	68.7X	130
20	60	670	450	450	940	4.393 KW	688 V	204.8X	180
43.5	60	670	450	450	940	1.958 KW	116 V	43.2X	24
43.5	60	670	450	450	940	11.52 KW	661 V	15.9X	58
20	1200	67	45	45	94	4.631 KW	626 V	66.6X	130
20	1200	67	45	45	94	1.060 KW	297 V	29.7X	180
20	2400	6.7	4.5	4.5	9.4	12.8 W	49 V	19.2X	190
20	2400	6.7	4.5	4.5	9.4	802 W	339 V	104.0X	290
20	2400	670	45	45	330	478 W	71 V	6.3X	24
24.5	2400	670	45	45	660	37.82 KW	574 V	3379.0X	24
30.5	2400	670	45	45	330	17.85 KW	445 V	56.2X	24
39.5	2400	670	45	45	660	3.806 KW	215V	28.7X	24
41.5	2400	670	45	45	660	16.12 KW	338V	37.3X	24
43.5	2400	670	45	45	330	2.978 KW	202V	22.0X	24
43.5	24000	670	45	45	33	12.8W	49V	6.9X	24
24.5	24000	67	45	45	33	W	V	50.0X	24
24.5	24000	67	45	45	33	W	V	3.0X	26
29.5	24000	67	45	45	33	W	V	20.0X	26
33.5	24000	67	45	45	33	W	V	21.0X	26
35.5	24000	67	45	45	33	W	V	55.0X	24

Appendix D3:The Diode Process and Hole-Current Potential

The Single Leg

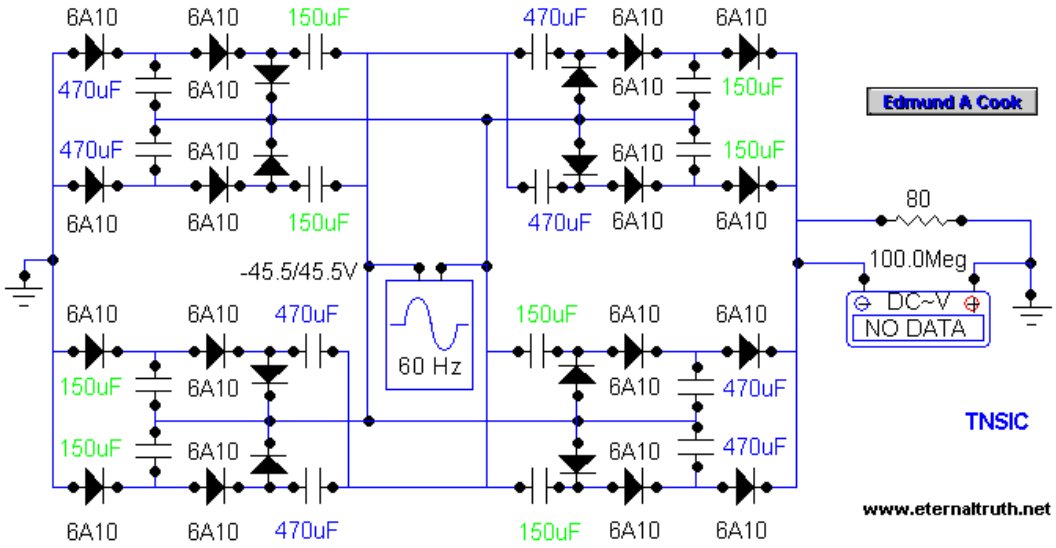


Osc Volts Hz	(uF) Columnar Capacitance			OUT W	OUT V	OUT W X Load	
42	6500	2200	2200	106.1 KW	703 V	70.9 X	6
42	6400	2900	2900	179.1 KW	612 V	61.4 X	3
42	6600	2500	2500	183.4 KW	613 V	64.2 X	3
42	6700	2700	2700	140.1 KW	490 V	77.1 X	3
42	6800	2700	2700	147.4 KW	516 V	55.7 X	3
42	7200	2900	2900	223.7 KW	724 V	57.8 X	3
43	6400	2600	2600	196.0 KW	662 V	59.3 X	3

Many of My Circuits are strange, versatile creatures. If you establish the V IN, by simply changing the uF values, Load's resistance, or Oscillator Hz you can obtain a range of both Voltage and Watts Output. By the same token, you can set the Load and go through a similar "component process" to achieve the desired Voltage and Power Out. The lingering (and haunting) question still is, are the harmonics of My earlier Circuits' real, or are they superimposed by the "operational boundaries" (or limitations) of CircuitMaker? CircuitMaker clearly indicates "pockets," in which the Output is rising and falling, and there seems to be an overall "tuned sweet spot" of electrical or component harmony. A secondarily lingering question emerges; Where is the greatest efficiency? The "greatest efficiency" and "pockets of efficiency" may both be negated in reality because CircuitMaker has been designed around one or more false premises.

Appendix E :The Diode Process and Hole-Current Potential

Original Tupperware

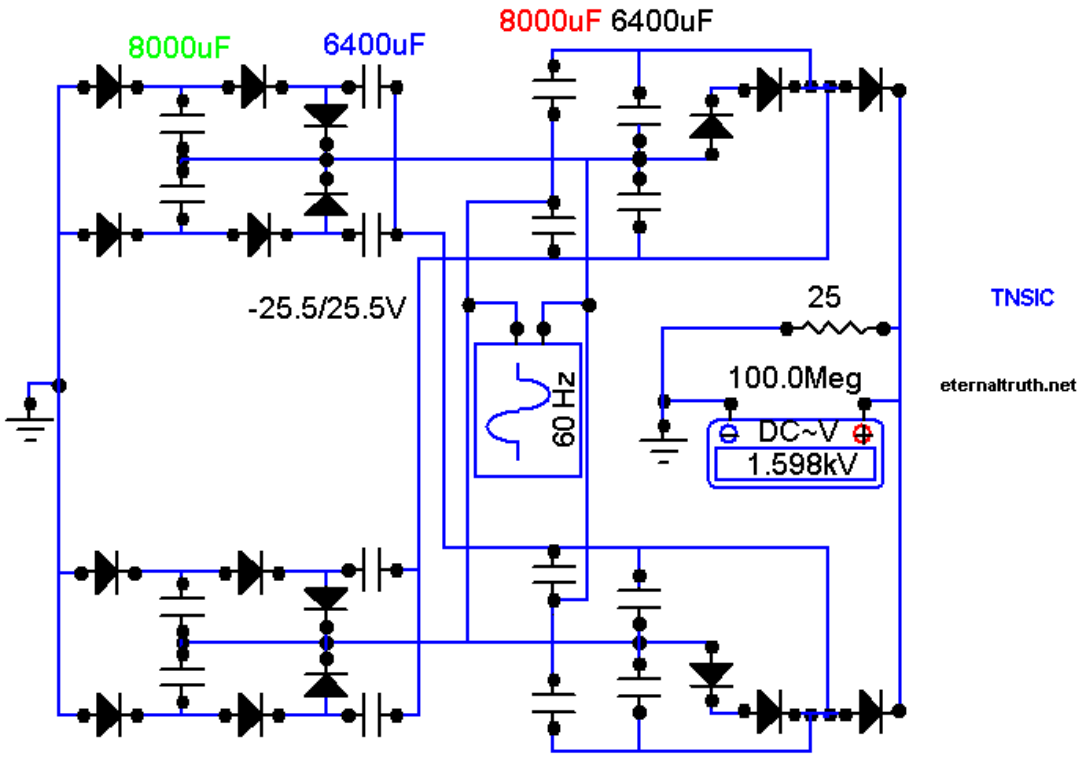


?? if Hz and/or var uF tuning are significant, however, overall uF levels directly influence the V IN required to, therefore, reach the desired V OUT. Solid wire was used initially.
Set Hz. Set Max Cap uF. Tune Min Cap uF to least difference between Watts In & Watts Out, then set Point to Point Osc V to obtain ~ DC V OUT.
Indications are if the Caps' V restraints can handle the Load's Resistance demands, the Power delivered by this version of My Circuit will be very impressive. Oscillator V is Point to Point.
Physical placement of a Circuit in a CircuitMaker Window may influence the Displayed Output, yet the "Resonant Pockets" still hold their validity in real life application.

Circuit	PtoP V IN	Caps Max V Range	Caps Min uF and Power	Noted Hz	Caps Max uF and Power	DC V OUT
ACT 60 Hz	45.5	79-138	150 uF 189 mw		470 uF 247 mw	118.8
NEW A	36.5	98-142	470 uF 122 mw		600 uF 262 mw	125.2
NEW B	32.5	106-148	680 uF 326 mw		680 uF 326 mw	117.4
NEW C	36.5	97-138	470000 uF 188 mw	60 mhz		112.8
NEW D	36.5	101-137	470000 uF 118 W	240 Hz		106.0
NEW E	24.5	68- 93	39000 uF 3.34 W		15000 uF 5.23 W	105.8
UK 50 Hz	70.5	170-256	160 uF 198 mw		470 uF 477 mw	227.7
UK A	58.5	183-250	470 uF 285 mw		1200 uF 1.2 W	223.8
UK C	58.5	178-246	470000 uF 416 mw	50 mhz		219.9

Appendix F1:The Diode Process and Hole-Current Potential

Balanced Crossed A



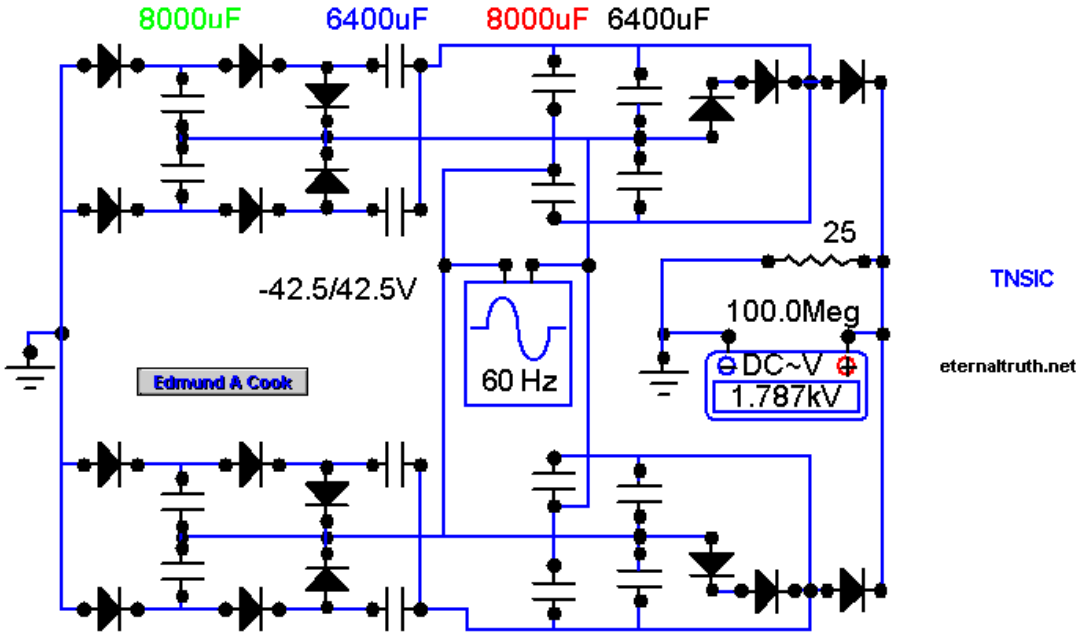
Circuit	Osc Volts	Hz	Columnar Capacitance (uF)				OUT W	OUT V	OUT W X	Load
A	37.9	60	640	640	640	640	.95 KW		4.85 X	9
A	32.5	60	47000	4700	4700	4700	12.52 KW		10.xx X	25
A	26.5	60	8000	6400	8000	6400	7.03 KW		23.3 X	25
A	32.2	60	47000	4700	4700	4700	9.53 KW		25.79 X	25
A	25.5	60	8000	6400	8000	6400	113.2 KW		28.9 X	25

One V can release the Hole-Current Potential barrier, and W OUT explode.
Layout employs Balanced Regenerative Harmonic Feedback
NOTE the strange Current readings: RL to 28 etc V to 42.6, 42.75, then 42.95 (Harmonics)
(Max) Circuit OUT requires Resonance Resonant to V &/or R &/or L &/or uF &/or Admittance
More Hole-Current Potential raises V Out Inverse relationship between Hz and uF
uF's go UP, Voltage rises & Current falls uF's go DOWN, Current rises & Voltage falls
Replace Meter with Large Resistor

Appendix F2:The Diode Process and Hole-Current Potential

Balanced Crossed B

Very Consistant



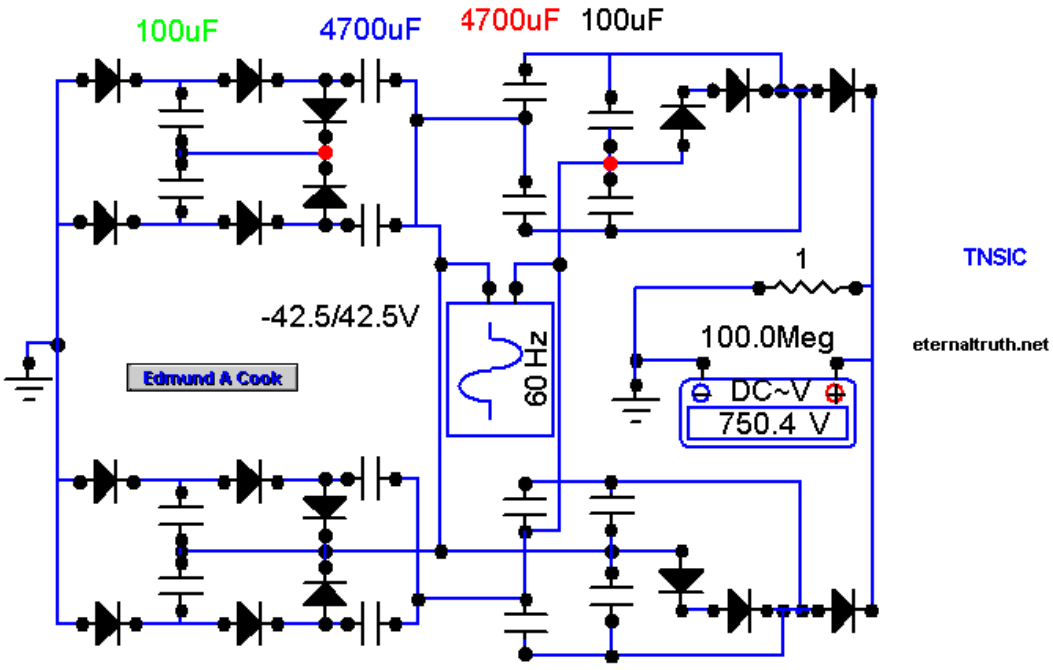
Circuit	Osc V	Hz	Columnar Capacitance (uF)				OUT KW	OUT V	OUT W X	Load
B	27.3	60	6700	6400	6700	6400	76.54 KW		61.6. X	25
B	42.5	60	8000	6400	8000	6400	140.6 KW		95.7. X	25
B	40.5	60	8000	6400	8000	6400	115.8 KW		2512.9. X	23
B	43.5	60	8000	6400	8000	6400	110.0 KW		** .X	23
B	24.5	60	8000	6400	8000	6400	112.7 KW		2256.0. X	22
B	38.5	60	8000	6400	8000	6400	152.9 KW		2089.0. X	21
B	40.5	60	8000	6400	8000	6400	141.1 KW		136.3. X	20
B	31.5	60	8000	6400	8000	6400	92.36 KW		133.2. X	10
B	39.5	60	8000	6400	8000	6400	96.71 KW		96.7. X	10
B	36.5	60	8000	6400	8000	6400	332.6 KW		659.0. X	8
B	36.5	60	8000	6400	8000	6400	149.0 KW		180.5. X	7
B	30.5	60	8000	6400	8000	6400	130.6 KW		356.7. X	5
B	39.5	60	8000	6400	8000	6400	476.7 KW		283.7. X	3

One V can release the Hole-Current Potential barrier, and W OUT explode.
Layout employs Balanced Regenerative Harmonic Feedback
NOTE the strange Current readings: RL to 28 etc V to 42.6, 42.75, then 42.95 (Harmonics)
(Max) Circuit OUT requires Resonance Resonant to V &/or R &/or L &/or uF &/or Admittance
More Hole-Current Potential raises V Out Inverse relationship between Hz and uF
uF's go UP, Voltage rises & Current falls uF's go DOWN, Current rises & Voltage falls
Replace Meter with Large Resistor

Appendix G1:The Diode Process and Hole-Current Potential

Unbalanced Crossed A

Very Consistant



● **These connections identify the areas where "Wire Crossings" vary.**

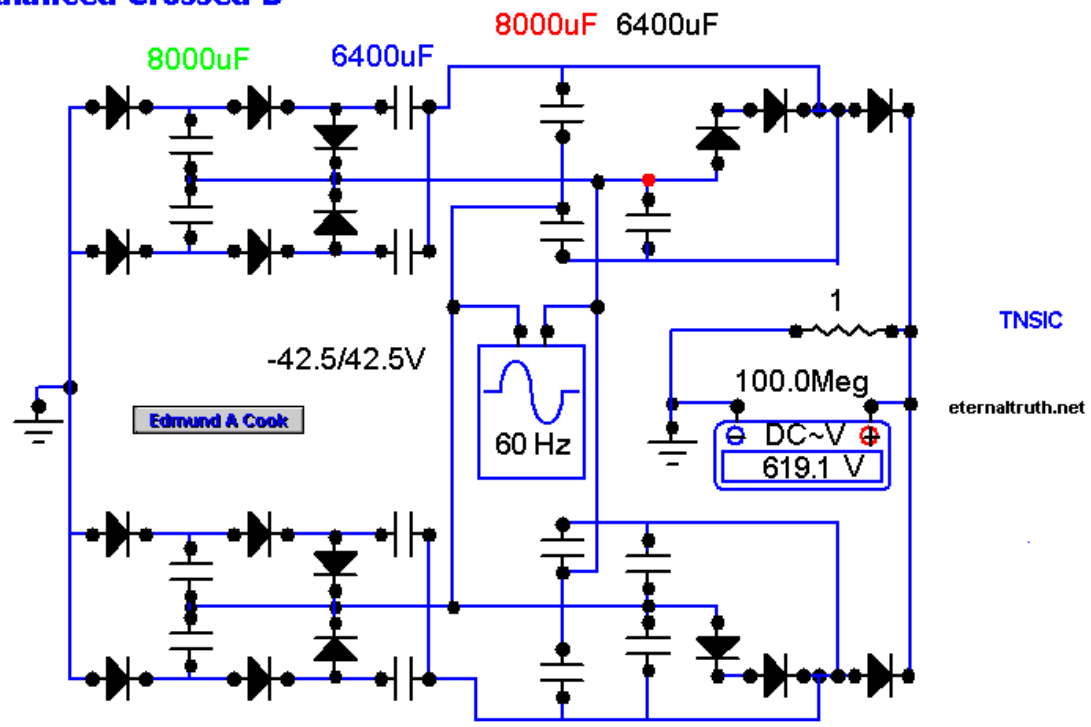
Circuit	Osc Volts	Hz	Columnar Capacitance (uF)				OUT W	OUT V	OUT W X Load	
A Breaks loose @ 41.5 V Note "Wire Crossings"										
A	42.5	60	90	4700	4700	90	893.2 KW	789.9 V	1128 X	1.
A	42.5	60	80	4700	4700	80	893.8 KW	808.3 V	3398 X	0.8
A	42.5	60	90	4700	4700	90	961.8 KW	861.1 V	3444 X	0.8
A	42.5	60	100	4700	4700	100	899.4 KW	811.5 V	2692 X	0.8
A	42.5	60	120	4700	4700	110	867.8 KW	791.3 V	1329 X	0.8

After revisiting several Circuits, and implementing newer concepts, with just a one Volt increase the Output Watts go from less than 100 to more than 100 KWatts. That sounds impossible, yet I have seen similar responses with Current in real life. I find it difficult to delineate what is real or impossible. These experiences also make me consider when CircuitMaker generated an error that could be removed by changing a component value. There have been numerous times I have scratched my head and fanny.

One V can release the Hole-Current Potential barrier, and W OUT explode.
Layout employs Regenerative Harmonic Feedback
(Max) Circuit OUT requires Resonance Resonant to V &/or R &/or L &/or uF &/or Admittance
Inverse relationship between Hz and uF Replace Meter with Large Resistor

Appendix G2:The Diode Process and Hole-Current Potential

Unbalanced Crossed B



- **These connections identify the areas where "Wire Crossings" vary.**

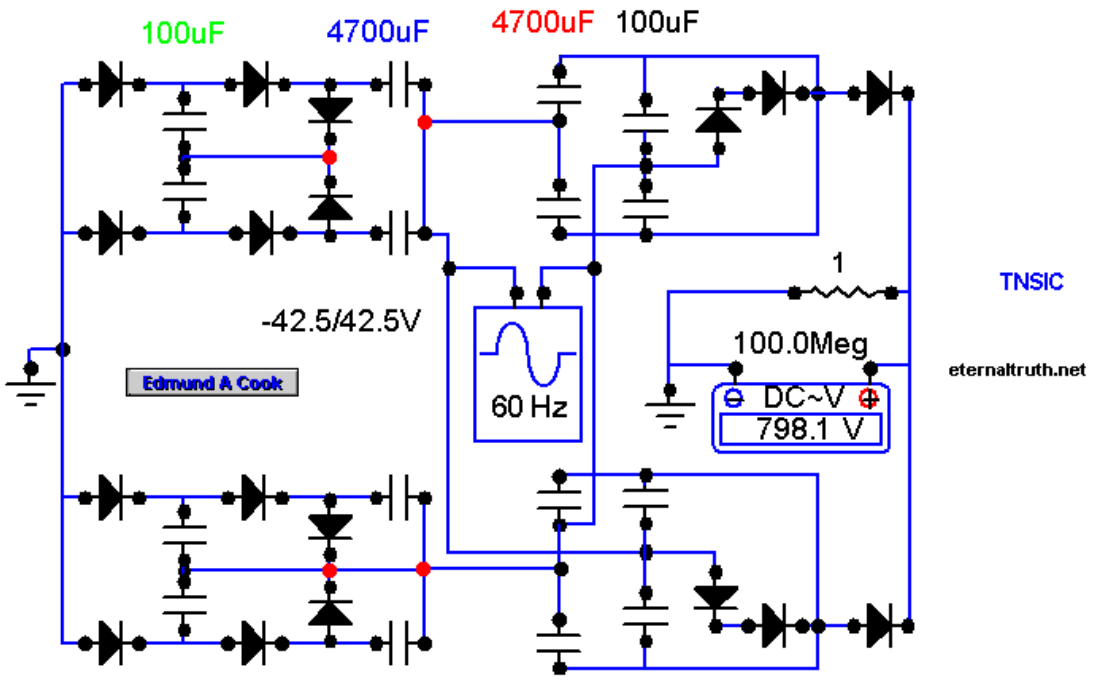
Circuit	Osc Volts	Hz	Columnar Capacitance (uF)				OUT KW	OUT V	OUT W X	Load
B	37.9	60	670	470	670	470	1.00 KW		6.20 X	25
B	27.3	60	6700	6400	6700	6400	76.54 KW		61.63 X	25
B	42.5	60	8000	6400	8000	6400	545.4 KW		643.77 X	1

B Breaks loose @ 40.5 V Note "Wire Crossings" and missing CAP											
B	**40.5**	**60**	**120**	**4700**	**4700**	**120**	**926.2 KW**	**740.8 V**	**3548**	**X**	**0.7**
B	**42.5**	**60**	**100**	**4700**	**4700**	**100**	**992.6 KW**	**798.6 V**	**2370**	**X**	**0.7**
B	**42.5**	**60**	**120**	**4700**	**4700**	**120**	**789.8 KW**	**645.6 V**	**2427**	**X**	**0.7**

One V can release the Hole-Current Potential barrier, and W OUT explode.
Layout employs Regenerative Harmonic Feedback
(Max) Circuit OUT requires Resonance Resonant to V &/or R &/or L &/or uF &/or Admittance
Inverse relationship between Hz and uF Replace Meter with Large Resistor

Appendix G3:The Diode Process and Hole-Current Potential

Unbalanced Crossed C



● These connections identify the areas where "Wire Crossings" vary.

C Breaks loose @ 38.5 Note "Special Wire Crossings"

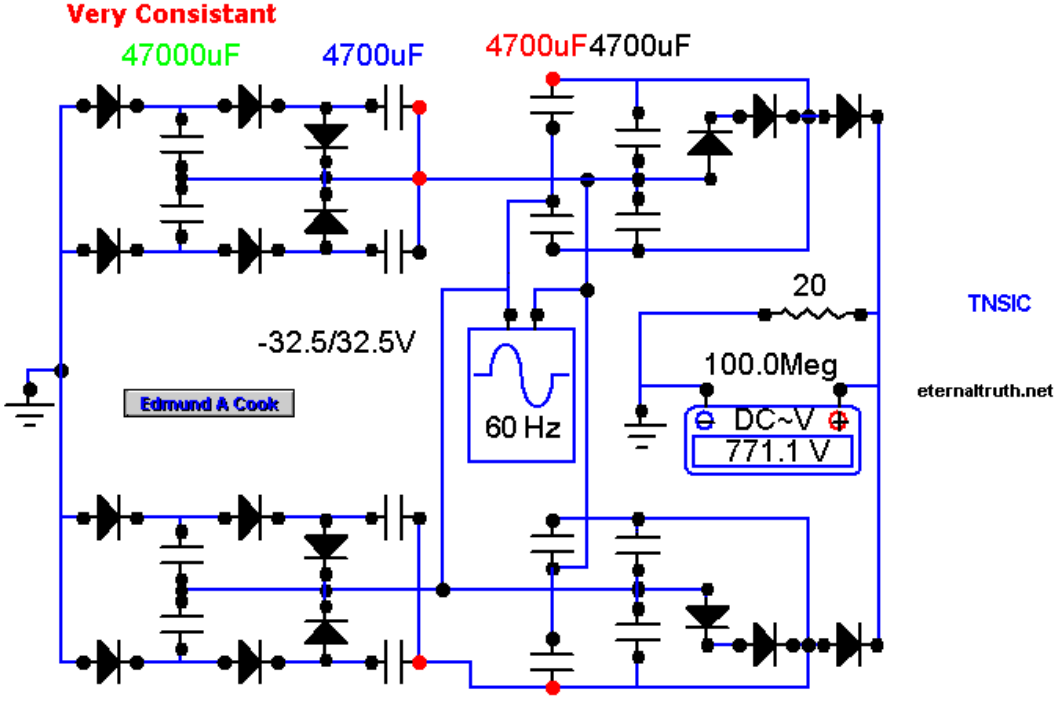
Circuit	Osc Volts	Hz	Columnar Capacitance (uF)				OUT W	OUT V	OUT W X	Load
C	42.5	60	70	4700	4700	70	712.0 KW	791.4 V	706 X	1
C	42.5	60	80	4700	4700	80	Error			
C	42.5	60	90	4700	4700	90	750.8 KW	834.0 V	2647 X	1
C	42.5	60	100	4700	4700	100	703.0 KW	790.9 V	2004 X	1
C	42.5	60	120	4700	4700	120	593.3 KW	685.9 V	1306 X	1
C	42.5	60	130	4700	4700	130	683.2 KW	778.7 V	1292 X	1
C	42.5	60	140	4700	4700	140	Error			
C	42.5	60	150	4700	4700	150	385.9 KW	456.5 V	846 X	1
C	42.5	60	330	4700	4700	330	Error			

One V can release the Hole-Current Potential barrier, and W OUT explode.
Layout employs Regenerative Harmonic Feedback
(Max) Circuit OUT requires Resonance Resonant to V &/or R &/or L &/or uF &/or Admittance
Inverse relationship between Hz and uF Replace Meter with Large Resistor

Appendix G4:The Diode Process and Hole-Current Potential

Unbalanced Crossed D

Very Consistant



● These connections identify the areas where "Wire Crossings" vary.

D Breaks loose @ 27.5 Note "Special Wire Crossings"

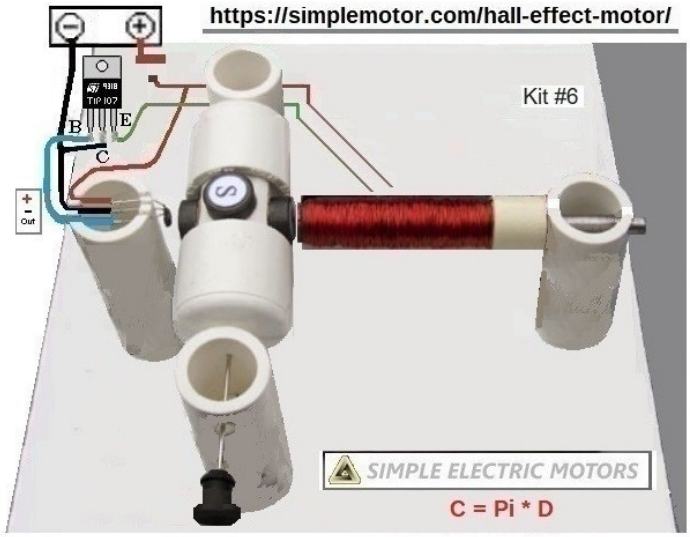
Osc Volts	Hz	OUT KW	OUT V	OUT W X	Load
27.5	60	5.80	176	85.5X	22
27.5	60	23.92	654	62.8X	27
27.5	60	8.52	330	229.4X	29
28.5	60	3.75	143	294.5X	19
28.5	60	10.06	318	1260. X	24
28.5	60	11.37	427	75.0X*	27
29.5	60	28.86	576	66.6X*	21
29.5	60	10.35	325	86.4X*	24
29.5	60	30.31	763	74.4X*	25
29.5	60	22.42	655	67.0X*	27
29.5	60	25.79	728	51.0X*	28

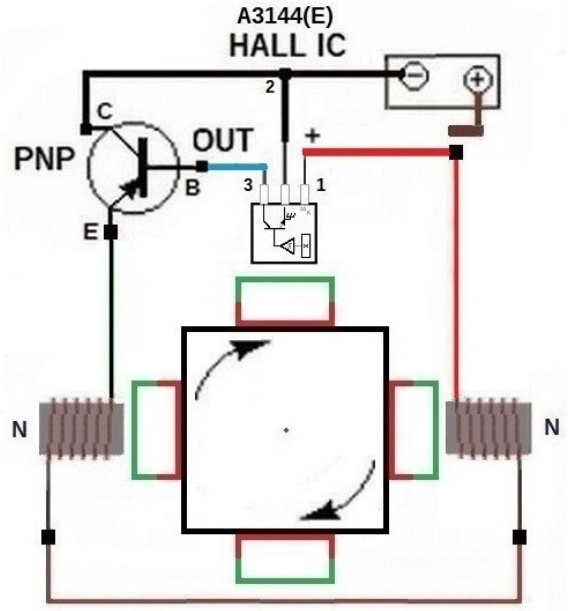
Osc Volts	Hz	OUT KW	OUT V	OUT W X	Load
30.5	60	35.77	792	58.9X*	21
30.5	60	28.03	734	61.8X*	26
31.5	60	24.20	328	59.7X	11
31.5	60	8.56	302	534.8X	22
32.5	60	49.13	555	70.7X	11
32.5	60	38.25	771	56.2X	20
41.5	60	61.80	725	53.3X	11
41.5	60	53.21	903	49.7X	17
41.5	60	141.1	1490	6367. X*	18
42.5	60	73.87	887	56.5X	12
42.5	60	56.51	904	56.2X	16
42.5	60	12.02	424	85.8X	25

One V can release the Hole-Current Potential barrier, and W OUT explode.
Layout employs Regenerative Harmonic Feedback
(Max) Circuit OUT requires Resonance Resonant to V &/or R &/or L &/or uF &/or Admittance
Inverse relationship between Hz and uF Replace Meter with Large Resistor

Appendix H : Application of My Theory

DC Brushless Motor





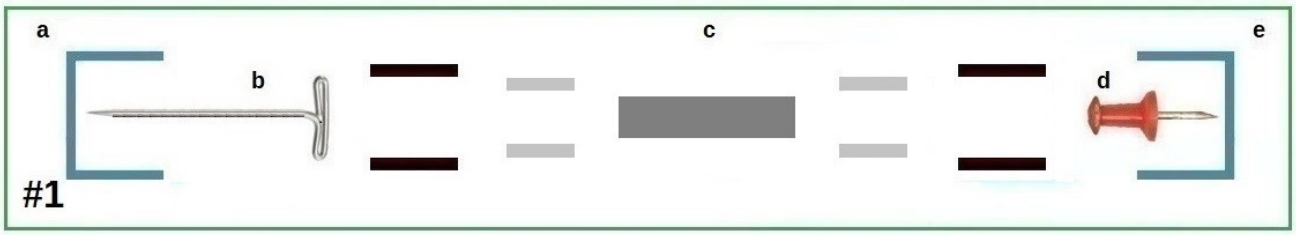
DC Brushless Motor
Armature Assembly
Field Assembly
Soldering
The Hall Effect Sensor
Transistor, eMosfet, or Switch
Armature and PVC Technicals
Field Winding Technicals

#1a,e Armature Caps (2, 1" PVC)
#1b,d Armature Pin End Shafts (T Pin, Push Pin)
#1c Armature Magnet Mounts (Two each of 1" and 3/4" PVC Spacers)
#2f Armature End Shafts' 3/8" Pressure Dowel
#3g,h Armature End Shafts' 3" Supports (2, 1" PVC * 3" L)
#4i,j Hinge Pins (2, 1/4" to 5/16" * 4" L for Electromagnets) Home Depot
#5k,m Electromagnets' 3" Supports (2, 1" PVC * 3" L w Slots) Sides
#5l,n Hose Clamps (2, 1")
#6k,m Electromagnets' 3" Supports (2, 1" PVC * 3" L w Slots) Front
#6o,p Electromagnetic Wire Windings (2, 2" L * .394" D w 27 AWG)
#7 Brushless Motor, with electronics
#7q Battery
#7r Power Switch (ON/OFF)
#7s PNP Darlington Transistor (Hall Effect switched for Field)
#7t Heat Sink, Conductive Grease
#8u,v Hall Effect Sensor A3144(E) and adjusting Mount mechanism
https://www.kjmagnetics.com D42-N52 (5233 Gauss 2.85 lb pull

Operational Background

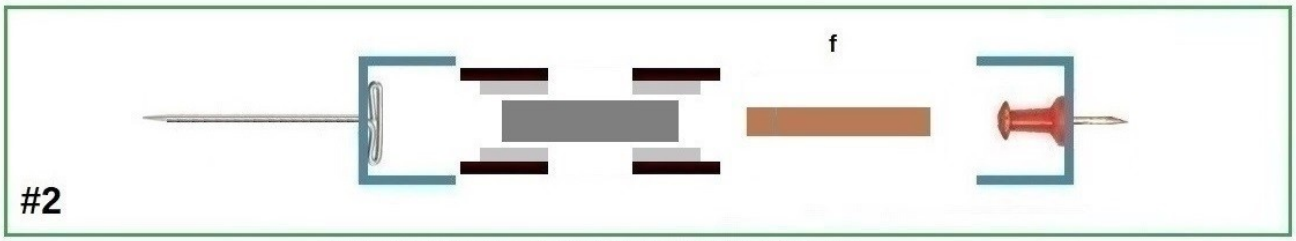
Once these simple components are assembled properly and a Source is connected, and the Hall Effect Sensor, which reads the intensity of the Magnet's Field is adjusted to provide proper energizing timing for the Field Coil's repulsion of an Armature's Magnet, the fun and intrigue begins. The timing of the Hall Effect Sensor should energize the Field Coil(s) very shortly after Armature rotation Magnets reach Top Dead Center (or TDC) and it is at this point where the NPN Transistor's Base Voltage, which comes from the Hall Effect Sensor's Output when in the presence of a Magnet's Pole, should be sufficient to turn the Transistor "ON" and repell the Magnet(s) right after the Armature reaches TDC of the Hinge Pin's Face. This efficient and cyclic motion continues and repeats itself.

DC Brushless Motor Armature Assembly



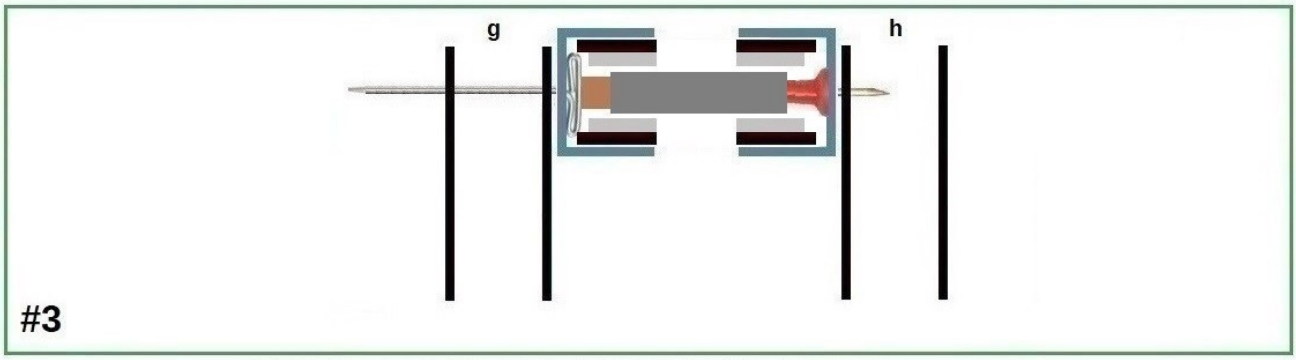
#1a,e Armature Caps (2, 1" PVC for one side dissassembly ease)
#1b,d Armature Pin End Shafts (T Pin, Push Pin)
#1c Armature Magnet Mounts (1/2" alum for 1/4" - 1 1/4" alum for 1") Two each of 1" and 3/4" PVC Spacers

Assembly: Push both Pins (b and d) through the exact center of their respective Caps (a and e).



#2f Armature End Shafts' 3/8" Pressure Dowel

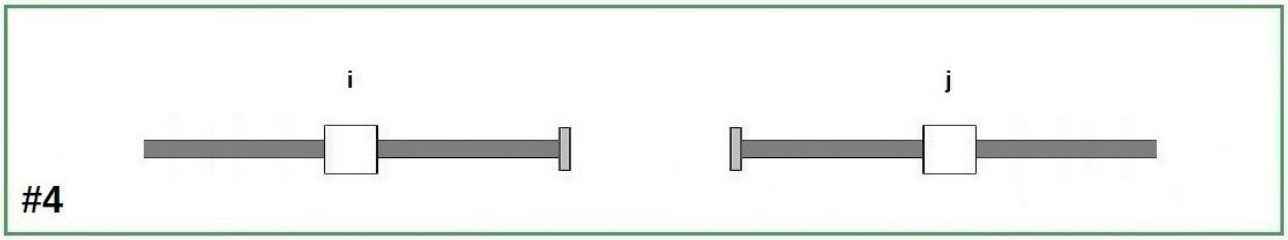
Assembly: Organize Armature Magnets' Mount components.
Wrap C and each of C's four PVC Spacers with enough complete turns of electrical tape to be snug.
Press Armature components as one.



#3g,h Armature End Shafts' 3" Supports (2, 1" PVC * 3" L)

Assembly: Refer back to this step after needed Magnets' height (Figure #6) can accurately be determined.

DC Brushless Motor Field Assembly

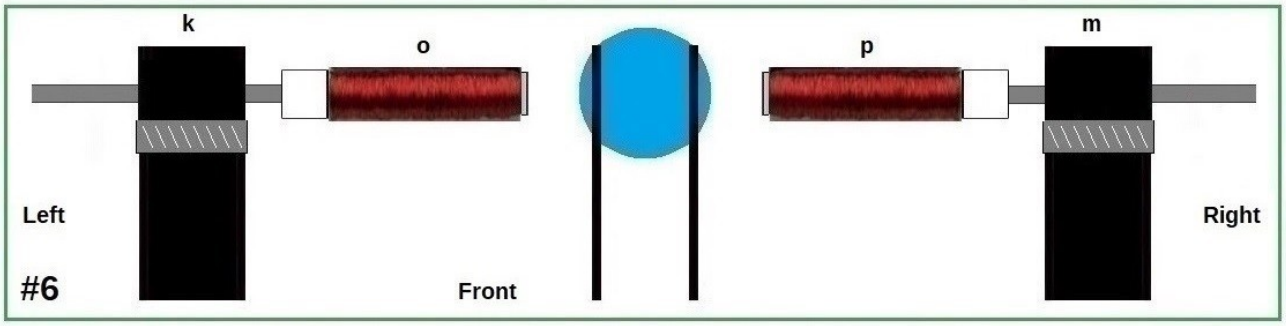


#4i,j Hinge Pins (2, 1/4" to 5/16" * 4" L for Electromagnets)

Assembly: Measure and Mark each Electromagnet's winding Length.

#5k,m Electromagnets' 3" Supports (2, 1" PVC * 3" L w Slots) Side Views
#5l,n Hose Clamps (2, 1")

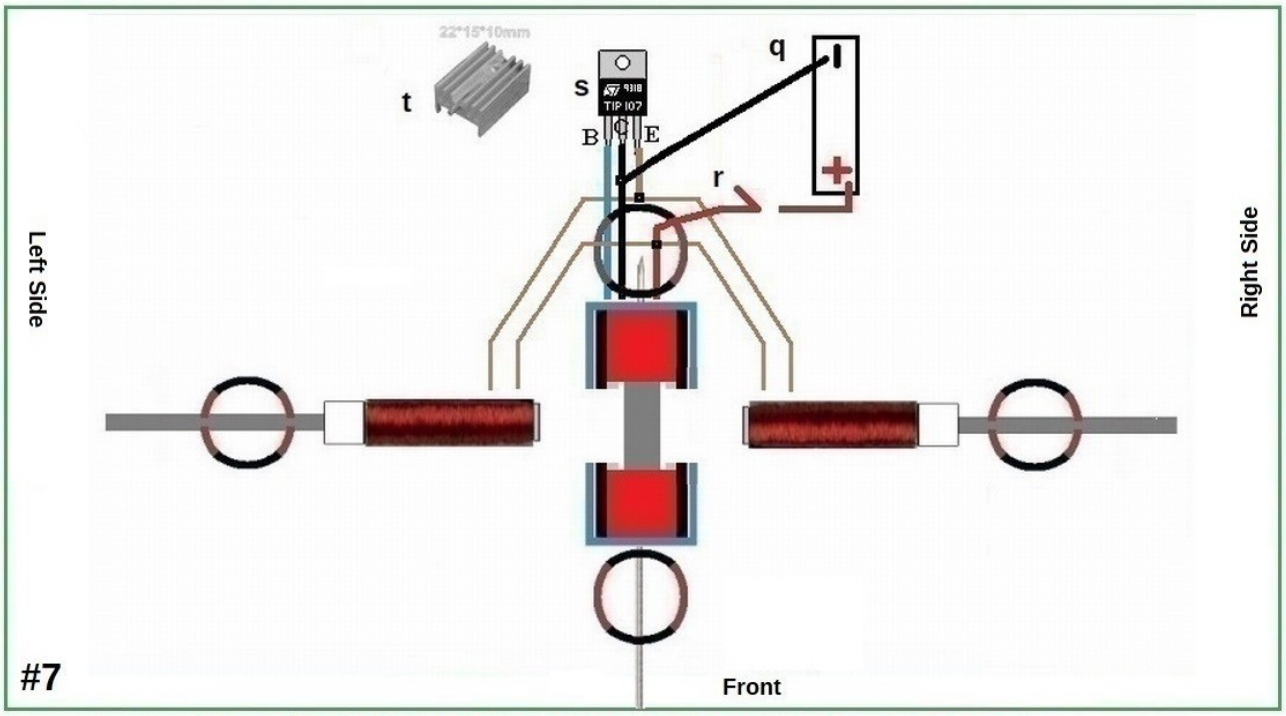
Assembly: Mount Electromagnets' Hinge Pins in their Supports. Using the Right-hand Rule, fingers pointing in the direction of Current flow, the thumb identifies the N Pole, wrap Coils to obtain S Poles facing the Armature. Verify the mounted Hinge Pins are both level and also at the exact same height. Correct any differences.



#6k,m Electromagnets' 3" Supports (2, 1" PVC * 3" L w Slots) Front Views
#6o,p Electromagnetic Wire Windings (2, 2" L * .394" D w 27 AWG)

Assembly: Referencing Figure #3, verify both Armature Supports (#3g,h) stand straight and firm three dimensionally, and both opposing Magnets' Mount faces are centered on each Hinge Pin face. Correct as needed. Push a level Armature's End Shafts at Hinge Pin faces' centers, through each Armature End Shafts' Support.

DC Brushless Motor Soldering



Make certain Wires' lengths are sufficient for desired positioning after gluing
Preset Wires' end positions before tinning... Tinned Wire ends are easier to solder
Solder each Wire's connection quickly to avoid component heat damage

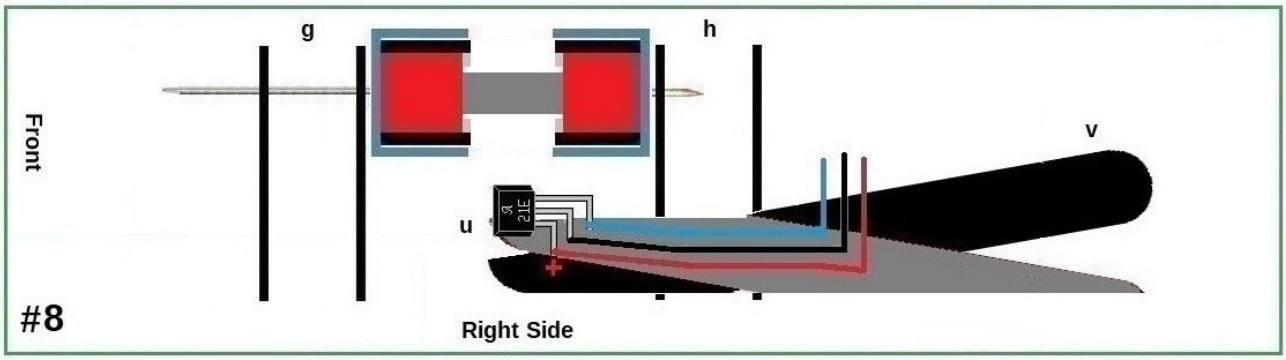
#7 Brushless Motor, with electronics 10 Wires, 15 Connections, at 13 distinct points

#7q Battery 4 Wire Connections
(from Pos Battery Terminal, Wire #1 to ON/OFF Switch,)
(from Neg Battery Terminal, Wire #2 Taps into PNP C's #4 Wire)

#7r Power Switch (ON/OFF) 4 Wire Connections
(from ON/OFF Switch, Wire #3 is Tapped by both Coils' Pos Wires; #7 and #9)
(and #3 Wire then extends to Hall IC Pos)

#7s PNP Darlington Transistor 7 Wire Connections (B C E)
(from PNP's B, Wire #5 connects to Hall IC Out)
(from PNP's C, Wire #4 is Tapped by Battery's Neg #2 Wire)
(and C's #4 Wire then extends to Hall IC Neg)
(from PNP's E, Wire #6 connects to both Coils' Neg Wires; #8 and #10)

#7t Heat Sink, Conductive Grease

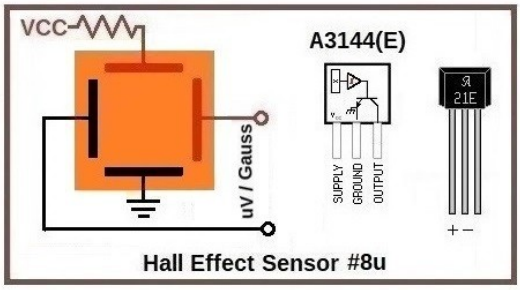


#8u,v Hall Effect Sensor A3144(E) and adjusting Mount mechanism
https://www.kjmagnetics.com D42-N52 (5233 Gauss 2.85 lb pull)

DC Brushless Motor: The Hall Effect Sensor

Hall Effect (Digital: Off/On) Edward Hall, 1879
https://www.youtube.com/watch?v=wpAA3qeOYiI

A Hall Effect Sensor is a Voltage sensitive device to register and measure a Magnetic Field's Gauss (magnitude/intensity). Instantaneous Output Voltage is directly proportional to sensed Magnetic Flux Density (or Field Strength) * Current.



Hall Effect Sensor #8u

The Hall Effect Sensor is a small sheet of silica (glass) with a Source and a ground. As a Magnetic pole nears the silica, the Positive and Negative are isolated in the silica's other two quadrants, allowing a flow directly reflecting the Magnetic pole's Field strength. This secondary flow is the central feature to this Brushless Motor's design. The Hall Effect Sensor precisely controls a timed Current to energize repelling Field Windings, and characteristics of the Sensor's output Voltage determine which transistor characteristics are required for Brushless Motor operation.

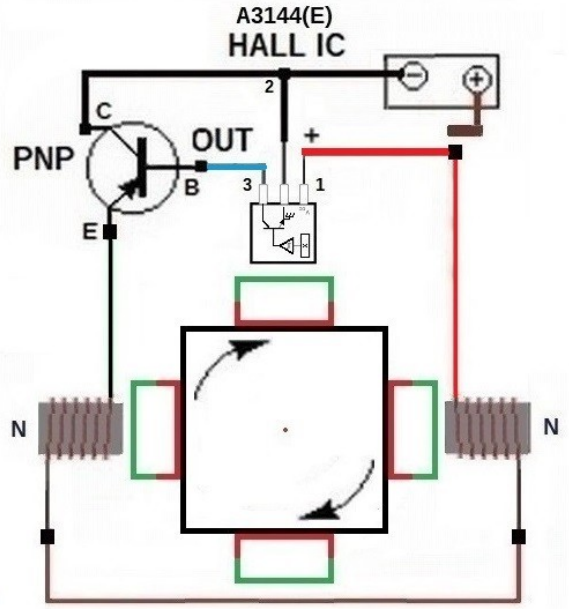
The OH49E Raising the supply Voltage increases sensitivity.
The quiescent output Voltage (B = 0 GS) is half the supply Voltage.
When a magnetic pole appears at the Hall sensor's marked surface:
A magnetic S pole influence drives the output Voltage positive;
A magnetic N pole influence drives the output Voltage negative;

The A3144(E) Hall-effect switches are monolithic integrated circuits with tighter magnetic specifications, designed to operate continuously to +150°C, and are more stable with both temperature and supply Voltage changes. The unipolar switching characteristic makes this device ideal for simple bar or rod magnets. This device includes a Voltage regulator for operation with supply Voltages of 4.5 to 24 volts, reverse battery protection diode, quadratic Hall-voltage generator, temperature compensation circuitry, small signal amplifier, Schmitt trigger, and an open-collector output to sink up to 25 mA. With suitable output pull up, they can be used with bipolar or CMOS logic circuits.

The A3144– is the improved replacement for the UGN3120/UGS3120.

DC Brushless Motor: Transistor, eMosfet, or Switch

TIP 107 10A (PNP)
2955 15A (PNP)
IRF4905 eMosfet P-Channel 55V 75A
TIP 41 6A (NPN)
2N3055 15A (NPN)



The PNP transistor of this Brushless Motor is basically a Switch, whereas the output of the Hall Sensor is Negative and energizes the transistor's Negative Base, thereby allowing Current to flow through both the PNP transistor and electromagnetic Field Windings, and the like pole of the Armature is repelled on, to the next Armature Magnet, to repeat the cycle of Armature motion. An NPN transistor would function if the Hall IC output were Positive.

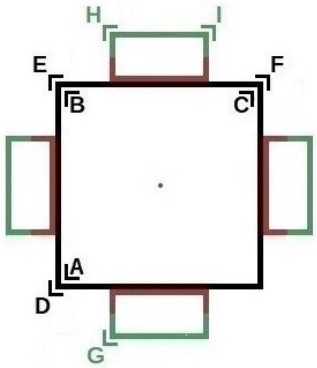
The tolerance of a transistor restricts levels of Voltage, Current, and heat. Thus, the overall design of the Source, the resistance of the Windings, whether there are one or more Windings, whether the Windings are in series or Parallel, and whether the level of Current passing through the transistor will require a Heat-sink are all necessary considerations to building a functional Brushless motor.

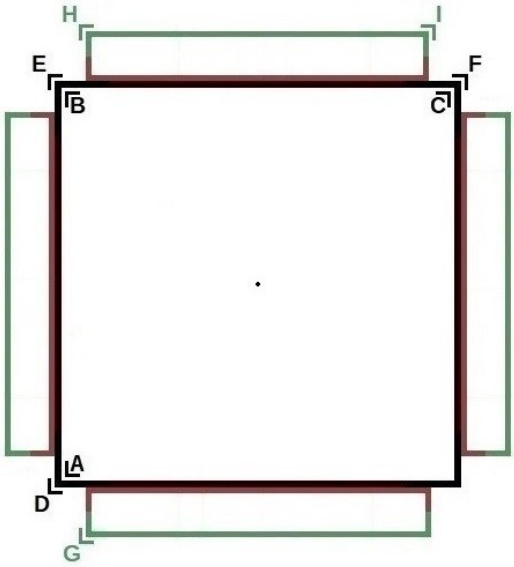
Control for the 'energized repulsion timing of the Field Windings' begins with proper positioning of the Hall Effect Sensor. The precise location of the 'quadratic voltage generator' within the Hall IC, and the minimum distance the Hall IC is from the moving Magnets, and the degree where the Hall IC first encounters a moving Magnet, and the transistor Base's required minimim Voltage to be 'Switched ON,' and even the relative position of the Field's face to Armature Magnets are, ultimately, all critical components for how effective (or efficient) the sequential events for a 'timed' repulsive action will actually be.

DC Brushless Motor: Armature and PVC Technicals

see DC Brushless Motor Armature Assembly, Figure #1

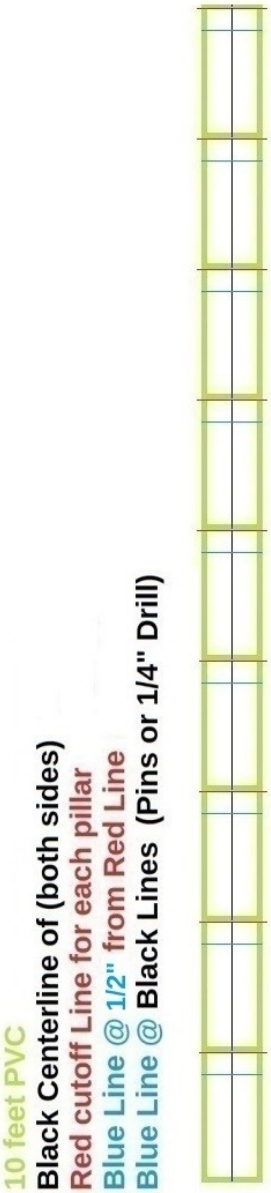
PVC	2"	1 1/2"	1"	3/4"
OD	2.375	1.900	1.315	1.050
ID	2.047	1.610*	1.049*	0.824





MAG D * H H-I ; H-EF	1/4" * 1/8"	15/16" * 1/8"
Dim Alum MAG Mount	2" * 1/2"	2" * 1"
IDim A-B, B-C	1/2" * 1/2"	1" * 1"
Wall A-D, B-E, C-F	0.058"	0.0625"
IDIAG A-C	0.707	1.414
OD D-E, E-F	0.616	1.125
ODIAG D-F	0.871	1.590
O MAGs' Dim G-H	*0.866	*1.375
ODIAG MAGs' G-H;H-I→G-I	0.901*	1.664*
Alum to G-I 1 or 1 1/2 PVC	*- .148	*- .055
MAG TDC Gap (G-I - G-H)/2	0.0175	0.144

Analyzing the Armature's central core and understanding its structure is not crucial to building the Motor, however, such information will greatly assist any who seek to modify the Armature. Each aspect of each component's dimensions are here-in compiled and demonstrated. All key headings using the term '_DIAG' are rooted in the Trigonometric equation of $A^2 + B^2 = C^2$ to determine diagonal measures, and, thus, we can determine how much of the Magnetic Fields are actually engaged.
Note the Hall Effect IC measures Gauss for both Magnet types.
Note changes in PVC also require attention to sizes of Caps, Spacers, and filler tape.

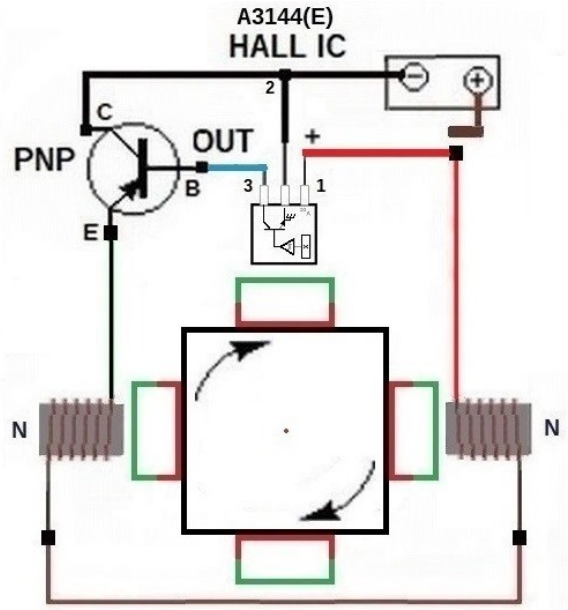


DC Brushless Motor: Field Winding Technicals

see DC Brushless Motor Field Winding, Figures #4, #5, #6

Transient Phase 1.5 * 10^{-19} sec in copper

Coils, each 2 in L * .3937 in D on a 4 in L * 1/4 in D Hinge Pins



Beyond the noted central features of the Hall Effect Sensor, we come to find the mysterious characteristics that, in the end, unite their uniquely combined influences to perform work for us.

An electromagnetic Winding has a Core with Diameter and Length, a wire which also has Diameter and Length, and then a Number of Turns per Level with a specified Number of overall Turns, offering yet another Diameter. Every one of these aspects contribute to the mysterious nature and unusual characteristics of an electromagnet.

All in all, the mysterious converges on the Amp-Turns, or the amount of Current flowing through the Total Number of Turns.

These attributes are reflected in our chart. I have also included the additional insights for more Amp-Turns being achieved with an implementation of My Concept's principles, which allows both greater Current flow and much higher efficiency at less Watts.

The tolerance of a transistor restricts levels of Voltage, Current, and heat. Thus, the overall design of the Source, the resistance of the Windings, whether there are one or more Windings, whether the Windings are in series or Parallel, and whether the level of Current passing through the transistor will require a Heat-sink are all necessary considerations to building a functional Brushless motor.

www.eternaltruth.net Edmund A Cook TNSIC

Core – L	AWG	Turns	W Len	Vs	Peak-A	Peak-W	A-Turns
.25 – 2	27	400	32	9	5.5	50	2.2E+3
.25 – 2	27	500	42	12	5.5	76	2.8E+3
.25 – 2	26	450	38	9	5.7	50	2.6E+3
.25 – 2	26	550	76	12	5.9	71	3.9E+3
.25 – 2	23	650	79	9	5.6	50	3.6E+3
.25 – 2	23	750	99	12	6.1	73	4.5E+3
.25 – 2	21	750	120	9	5.9	53	4.4E+3
.25 – 2	21	750	120	12	7.8	93	5.8E+3
.25 – 3	30/260	400	417	2	12	24	1.2E+6
.25 – 3	30/260	200	121	2	42	84	2.2E+6

Bedini's Peak A are <= (13 * AWG's A capacity)
With respect to higher Watts inherent efficiency losses, higher Voltages' demand for more resistance is the key player for the ever increasing inefficiencies.