

# "The Transmission and Reception of Telluric Waves" -- N6KPH

## The Tesla Magnification Transmitter:

Equivalent Circuits of the oscillating coils in the Tesla Magnifying Transmitter. Coils are now waveguides, not coils and capacitors anymore.

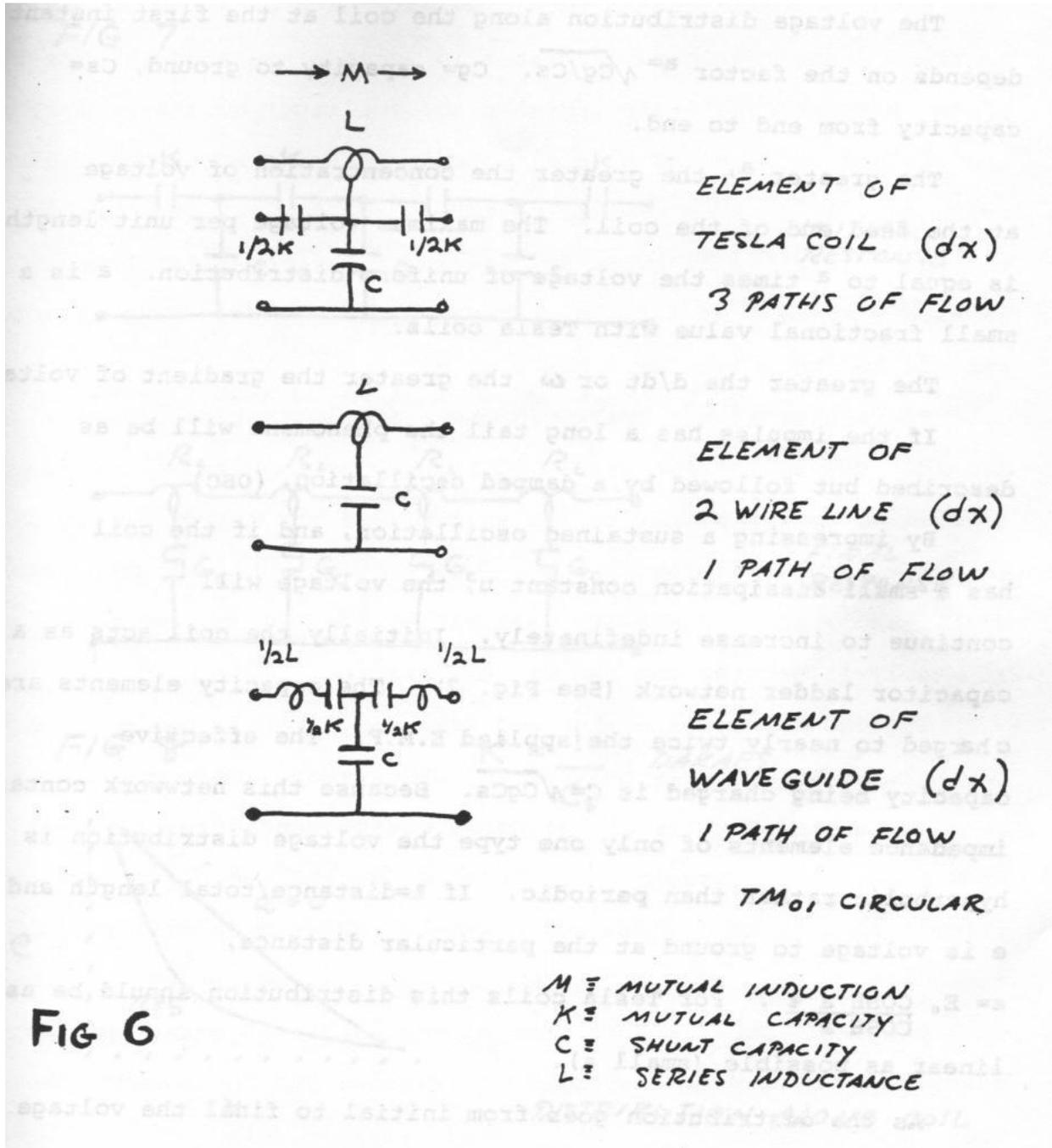
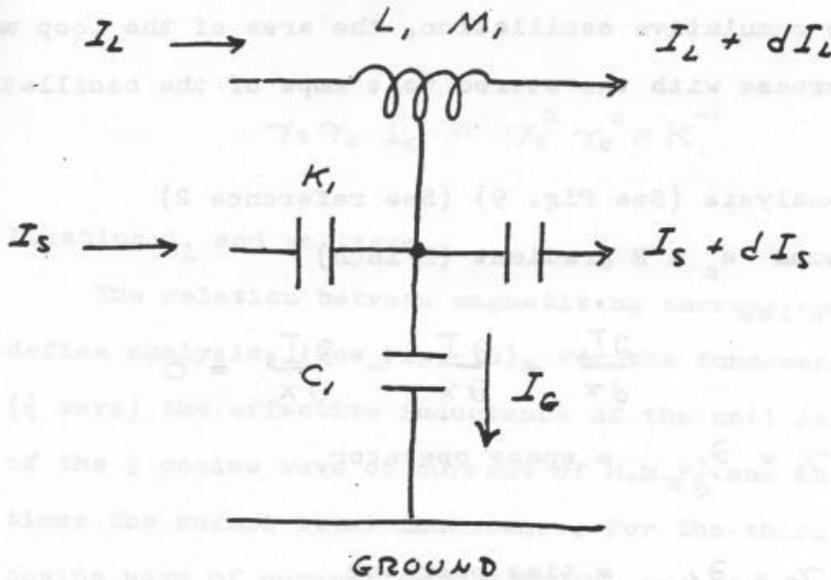


FIG - 9

THIS IS BETWEEN WINDINGS  
IN A TRANSFORMER



LINE ELEMENTAL

$dx$

$L =$  SELF INDUCTANCE IN HENRY

$C =$  CAPACITANCE TO GROUND IN FARADS

$K =$  INTERTURN CAPACITANCE IN DARAFS

$M =$  MUTUAL INDUCTANCE IN (HENRY)<sup>-1</sup>

$L_1 =$   $L$  PER INCH

$C_1 =$   $C$  PER INCH

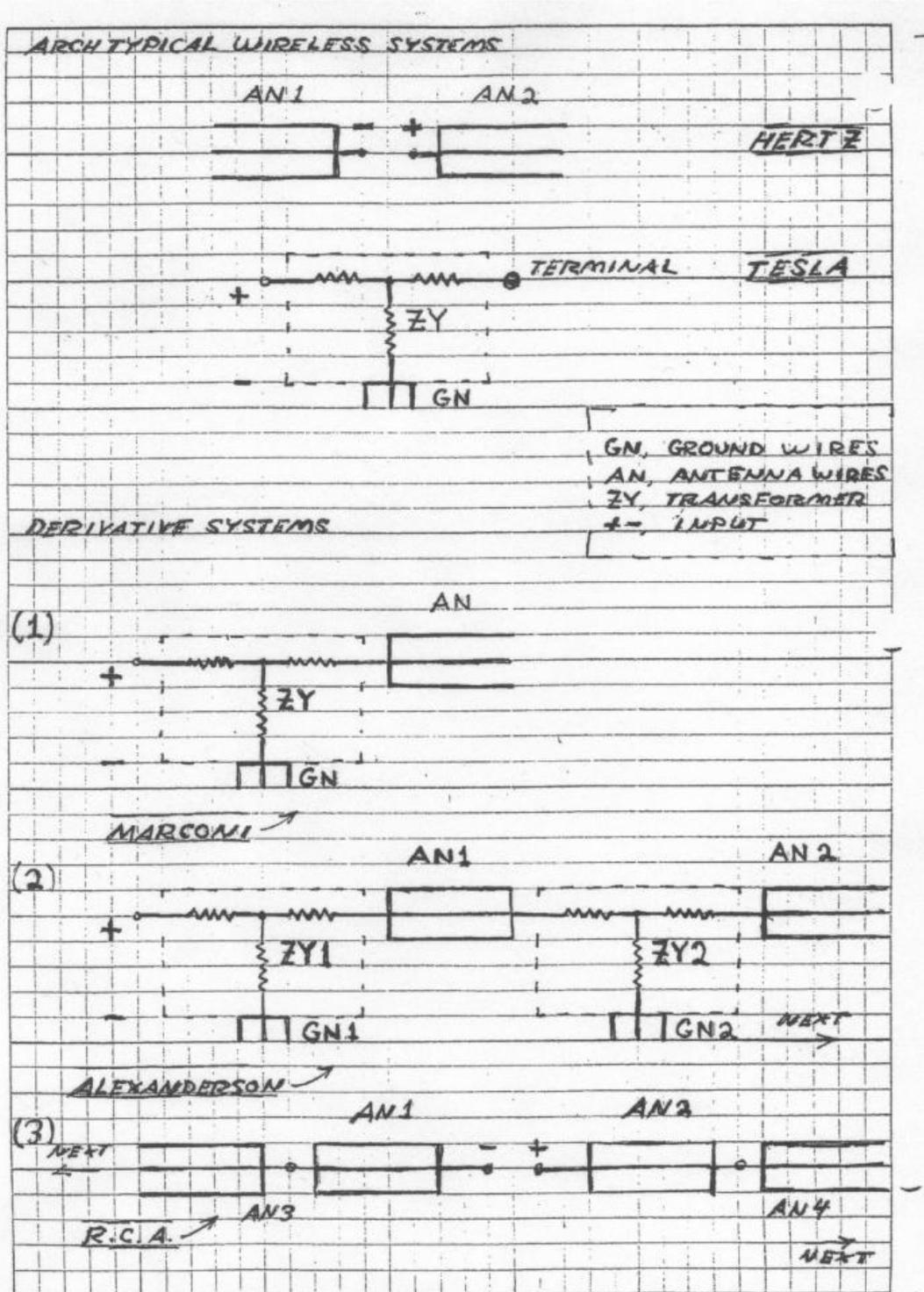
$K_1 =$   $K$  PER INCH

$M_1 =$   $M$  PER INCH

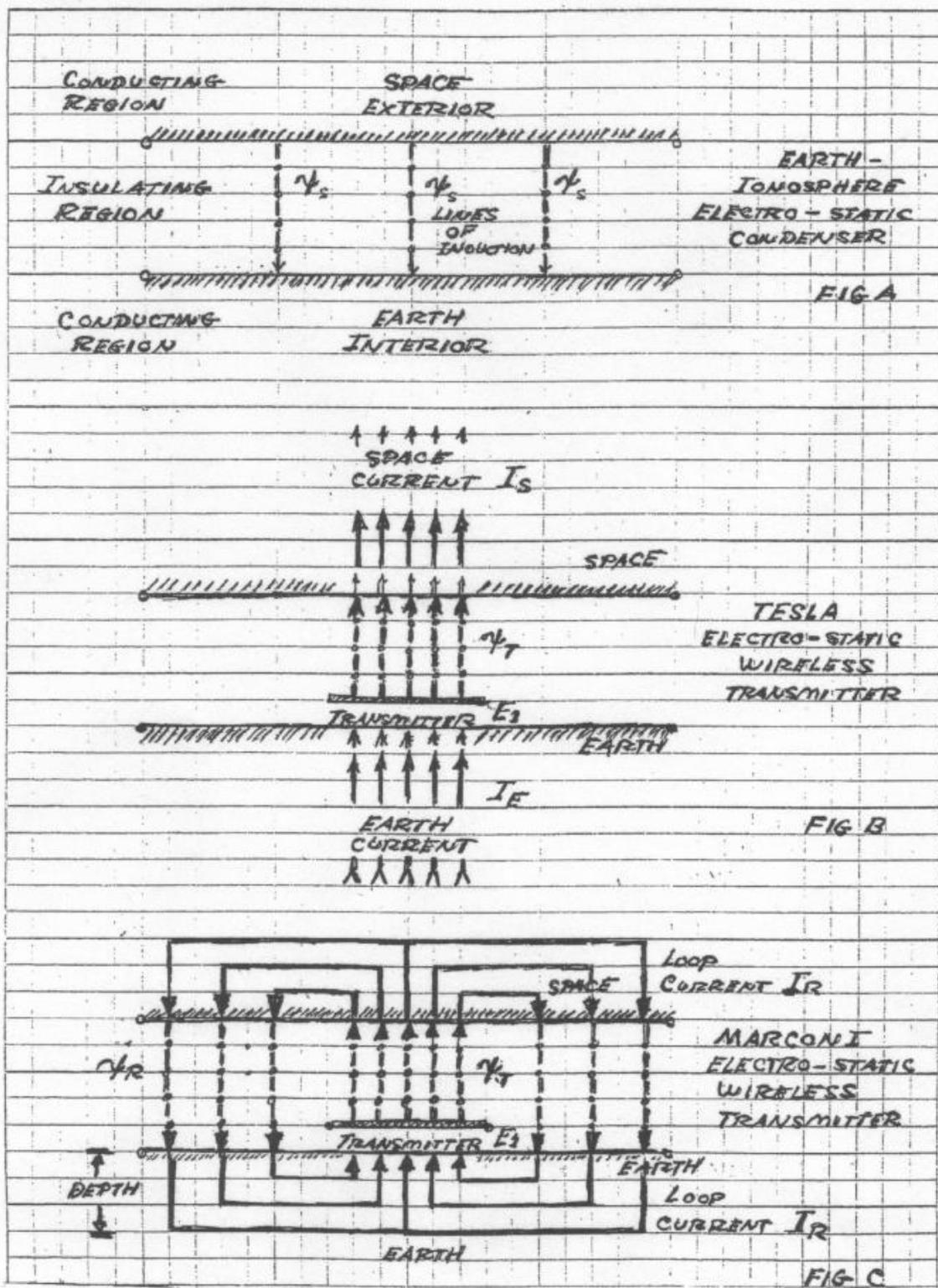
$$\alpha = \frac{1}{2} \left[ \frac{R}{L} + \frac{G}{C} \right]$$



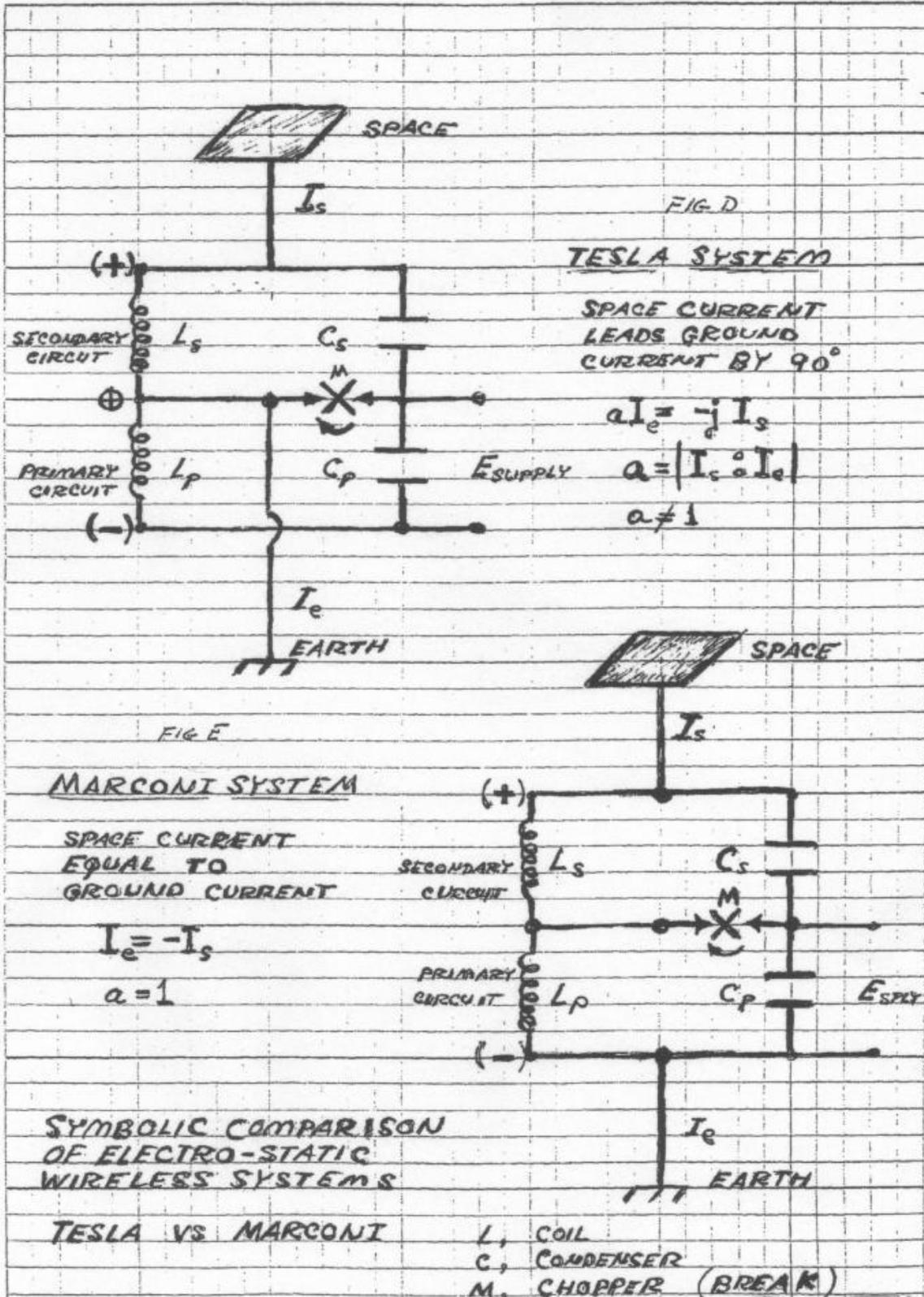
[The Tesla Wireless Transmitter:](#)



9-7 Archtypical Wireless Systems (2 diagrams) and Derivative Systems (3 diagrams)



9-8 Three diagrams: "Earth-Ionosphere Electro-Static Condenser." (Fig. A); "Tesla Electro-Static Wireless Transmitter." (Fig. B); & "Marconi Electro-Static Wireless Transmitter" (Fig. C).



9-9 Symbolic Comparison of Electro-Static Wireless Systems – Tesla vs. Marconi

A golden dragonfly rose into the air, La-mare and his "[Longitudinal Moon Bounce](#)."

**Lamare Lunar Effort Ideas:** The longitudinal antennae ideas seem stuck in the mud. Seems everything is quasi E.M. "Electrical Soundwaves in the Aether", Tesla. Only two ways I see; a form of open ended circular waveguide. One mode, hard to excite, is longitudinal. Please post circular waveguide mode chart (Frederich Terman)!!

Another way is a tiny U.H.F. resonant coil, NOT A HELICAL RESONATOR. AN OPEN COIL NOT ENCLOSED IN A COAXIAL CYLINDER. For the circular waveguide the pipe is closed on one end, open at the other end. Open end may require mode stabilizer. The proper mode of excitation is extremely important! (Terman, Radio Engineers Handbook). For the resonant coil, a disk larger than coil diameter at current end, a disk smaller than coil diameter at voltage end. Ratio of disk diameters derived from coil impedance. Excite coil with small loop. As for the frequency, the waveguide must be greater than 1000 Mc, for the coil must be less than 1000 Mc. These would be my first efforts to create electrical sound waves in the aether. The longitudinal waves of my work involves Telluric Waves (submarines) and windings (transformers). Free space longitudinal waveforms may not have any relation to my (MK) waves

**Lamare Dialogue:**

When considering waves on coiled windings, leave out the electrons, let us forget them once and for all. They are for electronic devices (RG) NOT for electrical devices (LC).

It is generally considered that any wave must consist of a conjugate pair of energies, magnetic and dielectric let's say. Only then an interaction between time and space is possible. It is through the union of a conjugate pair (L and C) that the dimension of time is produced. The propagation constant is then equal to:

(1) Negative Gamma Square

Having a pair of imaginary roots, plus j Gamma and minus j Gamma

It is however that the J.J. Thompson Longitudinal Dielectric Motions cannot have a periodic solution, there is one energy only, dielectric. This needs to be resolved.

There are four distinct forms of energy stored in a winding,  
Magnetic Pair:

L, Leakage Inductance, Henry  
M, Mutual Inductance, per Henry

Dielectric Pair:

C, Leakage Capacitance, Farad  
K, Mutual Capacitance, per Farad

The Magnetic Distribution along the coil axis is given by

(2) Epsilon to the square root of LM power. It is an exponential curve along the axis.

The Dielectric Distribution along the coil axis is given by

(3) Epsilon to the square root of CK power. It too is an exponential curve along the axis.

LM and CK are time scalars hence it can be seen that these initial distributions at  $t = 0$  give rise to complex energy exchanges because of the exponential space distributions. We have now a fourth order differential in space and time. Alice lands in Wonderland. . . .

Lamare Discourse Continued:

Continuing with the four energy co-efficients:

LC, this gives the space scalar frequencies of oscillation, having no distribution in space, only in time (dot product)

MK, this gives the "Tesla Vector" normal to the coil windings, a counter-velocity in per centimeters per second. (axial product)

Also,

L/K this gives the clockwise "Poynting Vector" around the circumference of the coil windings, a velocity in centimeters per second (cross product)

C/M, this gives the counter-clockwise "Poynting Vector" around the circumference of the coil windings, a velocity in centimeters per second (cross product)

(4) Hence  $(LC + MK(k^2)) + k(L/K - C/M)$

(5)  $a + kb$

The Heaviside relation for the dimension of space. For the condition of balance,

(6)  $L/K = C/M$

The T.E.M. component vanishes and the "Poynting Vectors" cancel out. The resistance of the coil also cancels out giving rise to a very great magnification factor, as well as a pure longitudinal wave, a "Tesla Coil."

It is my belief that we have outgrown Maxwell. The path started by Tesla, through Steinmetz and Alexanderson, to L.V. Bewelly has taken us far beyond the primordial physics interpretation of J.C. Maxwell. The Bewelly-Dollard Theory has made it obsolete. Leyden Jars and scales have grown to giant substation transformers and high speed oscilloscopes. We are entering a brave new world of electricity, electricity without electrons.

DE N6KPH

At this point I shift my writings from rudimentary ideas to reproducible engineering with the “military minded” aim to initiate within this “Energetic Forum” the “First Tesla Telluric Transmission in history.” A perfect compliment to La-Mare’s efforts.

The Objective:

(9) International Ham Radio Contest to disprove Einstein’s Theory.

Ultimately my primary objective is to continue my work started at Landers, that is;

(10a) Develop a superior submarine communications system for the United States Navy.

(10b) Adapt system principles to a system for Advance Seismic Warning (A.S.W.). This for the City of Los Angeles Dept. of Water and Power.

These systems were completed at Landers by the way, in a completely engineer-able form. The product of 30 years of work. (See pictures of the site on the [American Marconi Website](#))



None of the work at Landers was ever intended to be released to the public, this station was for government use only. But the “Legal System” gave it to Bales. It has come to pass that it is being sold off a chunk at a time on e-bay. Homeland Security. Let’s Hope Israel gets some of it and turns it into weapons of mass destruction. Providence plays these jokes now and then.

For a basic description of my work at Landers, see Dollard, E.P., “[System for the Transmission and Reception of Telluric Waves](#).” The engineering embodiment at Landers took the work of Tesla and Alexanderson to the next level, and being a Naval development will not be demonstrated or discussed on my part. However, even the weak minded may have noticed that I am giving complete engineering instructions on Tesla’s Telluric Transmission System, as he envisioned it. I am speaking to what I suspect may be a “silent majority.” And I know that any competent radio engineer or experimenter can make a go of it. . . .

73 DE N6KPH

For those who have no knowledge of resonance, etc., you must work to gain that knowledge.

Here is how you do it: find a "Radio Amateurs Handbook", around 1960 – 1965 edition. Read it, and make a crystal A.M. broadcast radio. When this is done then I can answer any questions, not beforehand. You must do the work, not me. And we need more La-mare's, those who experiment with ideas and materials.

### **The Primary Circuit First:**

A global contest, who will be the first HAM radio operator to disprove Einstein? Will it be you?

We begin with the "Primary Circuit." It is a parallel resonant circuit. This exists in the dimension of time, it is space scalar. Hence no T.E.M., etc. Tim only in Neper-Radians per second. PER SECOND. It should be noted that no generalized analysis of this circuit even exists today, so where do YOU want to begin. I will tell you how, get a 1960's Radio Amateur's Handbook, and read it. Then make a 100 watt 80 meter transmitter. Then you can begin to understand Tesla.

The circuit I have shown is from the Colorado Springs Notes, read this for circuit values, these can be scaled. The reasoning here is that no resistance is wanted in the main tank circuit (L1,C1), it must be tight against leaks to assure maximum magnification factor. The Auxilary Circuit (L2,C2) is an impedance matching network to carry energy from the supply E.M.F. to the tank circuit M.M.F. The energy in L2 C2 refracts into L1 C1 so as not to disturb the primary M.M.F. This M.M.F. to be maximized to the highest possible magnitude.\*

\* See Nikola Tesla, "System of Concatenated Tuned Circuits", patent number unknown

Here is how the contest works. We learn how to make a "Crystal Set", just as everybody should. It is a "Rite of Passage". A crystal set is an A.M. radio that uses no battery, the magnification factor of its tank circuit powers the radio. Hence it can be seen that the A.M. broadcast station's transmitted energy is powering the crystal set, JUST AS TESLA ENVISIONED. Wow Mr. Wizard that is fantastic. Let's start today.

[INSERT "CRYSTAL SET" SCHEMATIC HERE]

Supplement to Intro to Tesla Transformers:

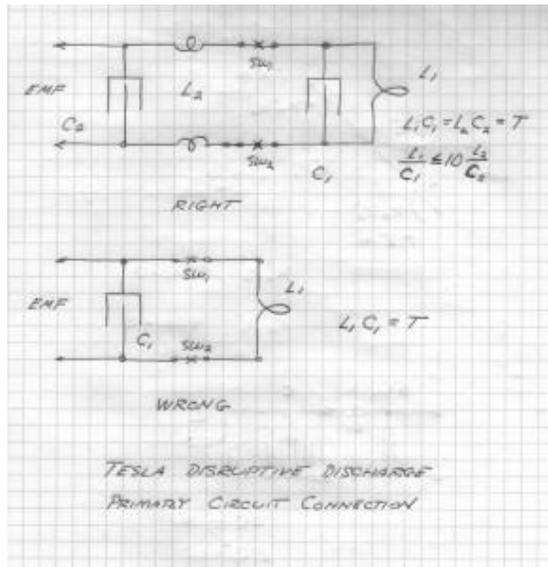


FIG. 128

From Radio Engineers Handbook: Tesla Coil geometric configuration:

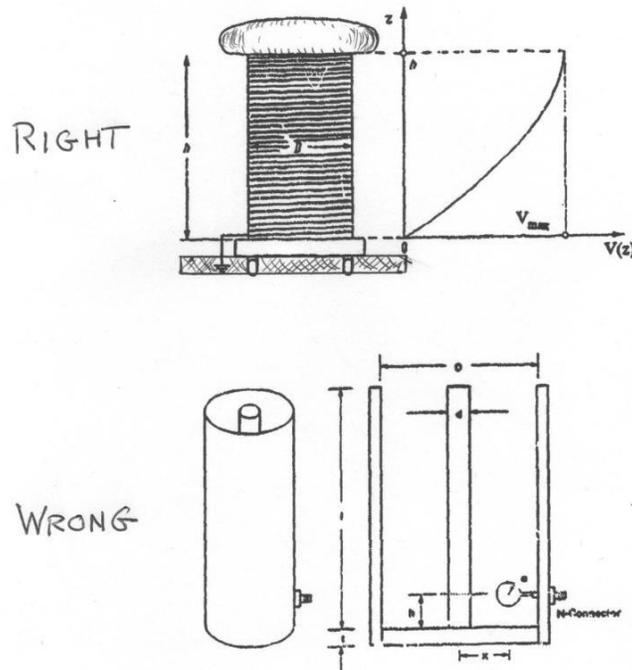


Figure 3. (a) Tesla resonator with voltage distribution. (b) VHF resonance transformer

The Oscillating Current Transformer, "Metrical Dimensional Relations of the Aether" by E.P.Dollard

Internal Obstruction and Superficial Conduction (Heaviside EM Theory):

In a perfect conductor, for one thing, which this is slightly at variance with perfect conductors regarding induction. But it is also a perfect conductor liberally, though in a different sense to that commonly understood. Ohm's law has played an important part in the development of electrical knowledge, especially in the practical side, that it is really not as if a resistor of resistance that some provision should have been so reluctant to take in the idea of a conductor as an obstruction. Scientific men who can follow the reasoning by which the functions of conductors have been known, that have an difficulty in pushing the assumptions for beyond experimental observation. Again, younger men, with lesser prejudice to experiment, do not find much trouble with superficial conduction and internal obstruction. But the old established prejudice with prejudice, who could not see the reason, you put into a position of some difficulty—resolving theory. If you have got anything new, in substance or in method, and want to propagate it rapidly, you need not expect anything but hindrance from the old prejudice—even though he set as the test of Faraday. Besides could do that. Besides, the old prejudice is apt to measure the value of science by the number of failures he thinks it is likely to bring into his pocket, and if he does not see the failure, he is very disinclined to thank his student prejudice. But only give him plenty of rope, and when the new view have become habitually correct, he may not be worth his while to solve these electrical questions.

conductor must induce forces, but some who have no previous prejudice are understood them, and do. Younger men are less into the world with some advanced ideas, on the average. There must be a fault there by: if you had taught the Galileo to the student. Besides you would not have found a man to take it in enough the whole lot, Dr. and all. Consider too, what a possible scientific man would to have with the principle of the preservation of energy. They could not see it, but everybody else it was. The important thing is to begin early, and look up the young with as you want it to grow. Even with Quaternions it is difficult. You may get off all tomorrow what you cannot do today, for how you commence the study no soon. Of course, I refer to the Heaviside-Fitz systems, where you have to do violence to reason by making believe that a vector is a quaternion, and that is a vector is negative.

According to Ohm's law, a perfect conductor should be one which carried an infinite current under a finite voltage, and the current would flow all through it because it does so uniformly. But what is left out of consideration here is the manner in which the current steady state is established. If we take this into account, we find that there is no steady state when the resistance is zero, for the variable part is infinitely prolonged, and Ohm's law is discarded out of it, as in the usual application goes. In a circuit of no resistance containing a finite steady impressed voltage E, the current would increase up indefinitely and never stop increasing up. On the other hand,

We recognize the existence of electric current in a wire by the magnetic force around it, and in fact measure the current by its magnetic force. Therefore, according to this, there is the same total current in the wire, if the magnetic force outside it remains the same. It then, the magnetic force steps completely at the surface of the wire, whose intensity is entirely free from magnetic force, the measure of the current is just the same. The uniformly distributed current of the steady state appropriate to finite conductivity becomes a more surface current when the conductivity is infinite. In one case we have a finite conductivity of current, and in the other a finite nonconductivity. When the current inside the wire is not so in the electric form, is accordance with Ohm's law again. The electric and magnetic phenomena are entirely in the dielectric outside the wire, the existence of any static conditions here it being perfectly obstructed by the absence of resistance. For this purpose the dielectric itself would serve equally well. In the usual sense that an electric current is a phenomenon of matter, it has become quite an abstraction, for there is no matter concerned in it. It is done out completely in the circuit of finite resistance, a portion of which is a wire of no resistance, supporting a steady current, there is no difference whatever in the external magnetic force outside the moving and non-moving parts, though it may seem that in existence of the magnetic force and state of energy, which in the other there is no entrance and no waste. These are

The Effect of a Perfect Dielectric on External Displacement, Induction and Obstruction of Waves.

1294. The conditions at the interface of a perfect conductor and a dielectric are that the electric force in the dielectric has no tangential component and the magnetic induction no normal component.

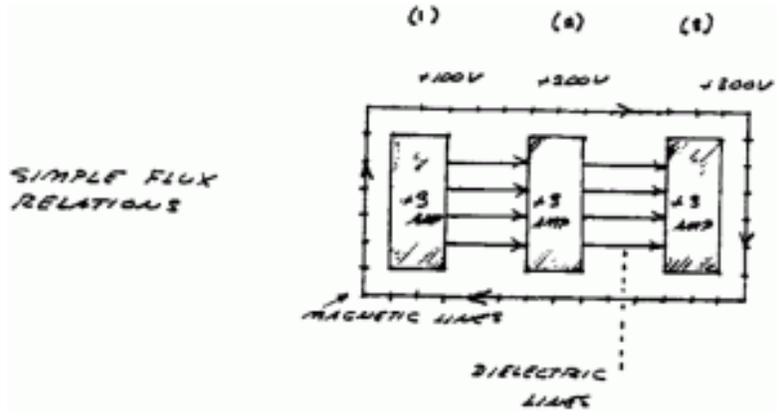
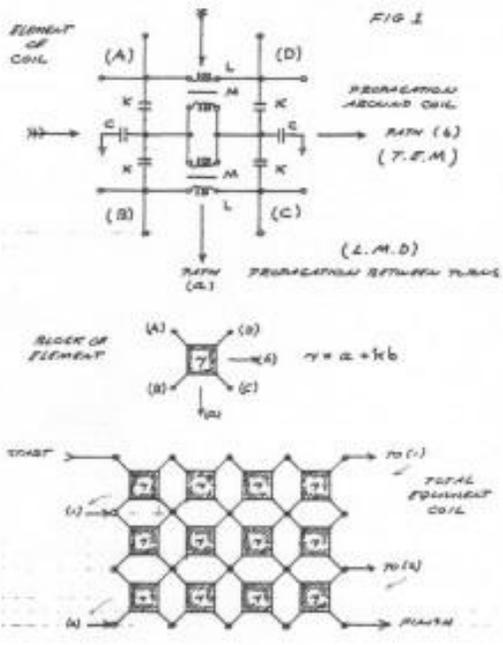
THE-6. EE-1.

If E is the unit normal from the conductor. Then, when there is electric force at the boundary it is entirely normal, with distribution so nearly uniform that it is entirely tangential, with electric current so nearly uniform. Both distribution and current are superficial. The displacement assumes the surface density  $\sigma$  of the wire, and the magnetic force that of the wire, say  $\gamma$ , then

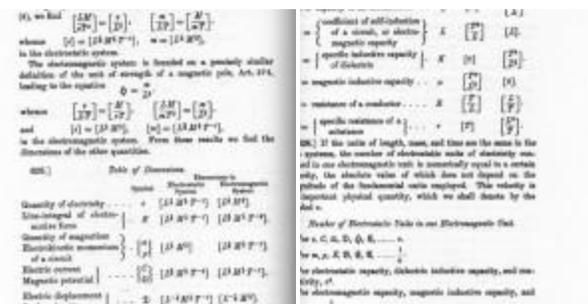
$\sigma = ED$ ,  $\gamma = 7EM$

is identical with, without any notice and arbitrary to constant, such as is required in the D.S. system of units of measuring inductively. If, then, we have electromagnetic disturbances given in a dielectric containing a perfect conductor, the latter has of all its free from disturbance, and next assume such external waves as to annihilate the irregularity of the electric force and the irregularity of the magnetic force.

As regards steady state, the influence of a perfect conductor on induction due to foreign sources is to exclude it in the same



(5) Maxwell's Original Dimensions:



I think it's time that Maxwell's dimensions get changed to something more suitable for Electrical Engineers. This I have already presented. As did Steinmetz, I think we really need to go beyond Maxwell, not deeper into it. That can only lead to Relativity.

73 DE N6KPH

**Mass Free Electricity:**

I maintain the pounds per square inch has absolutely no relation to capacitance whatsoever, in the world of electrical engineers. Hence it is absurd. To quote E.H. Armstrong, "They substitute words for reality, and then talk about the words." This is what physics has done. In Electricity, the ideas of Goethe and Wilhelm Reich are much more in accord with electricity, and the formative forces in general. Newton was a materialist and his physics represents an impediment to the understanding of electricity. For those married to "Little Ball Bearings", this is why we have the Planck. Here you can have your beloved E equals mc squared which is so dear to your heart. So use it, don't heap capacitance and inductance with lead weights.

The Aether does not relate to the inertial laws of Newton, but the [formative forces laws of Goethe](#).

**[Heaviside; Adagio, Andante Alegro Moderato, p. 1-3.](#)**

The Aether is a genie in a bottle, it beckons your command. Tell her what you want her to be, and that she will become.

We start with the Faraday contiguous particles, the Maxwell's cellular aggregates, Babbitt's Vortex Swirls, Tela's Gas, Heavisides Rotational Model of Variable mu and epsilon, and the blockheaded solid Aether theory. She is all, she is none. Einstein holds the cork in the bottle, the Quantum Mystic seeks a Pandora. What a choice.

My efforts in 6 months of writing here are directed to the practicing Electrical Engineer, not the Quantum Mystic. You were given the Planck as a way out of the Quantum Goddess's trap. But she exudes such sweet honey. Engineers do not want Quarks in their capacitors.

There are some dogs that keep eating fecal matter no matter how many times they get kicked in the head. Steinmetz provided, among many other important concepts, three terms:

1. Magnetic Field
2. Dielectric Field
3. Electric Field

The Electric Field is not that Dielectric Field, it is not interchangeable, the electric field is the Planck.

Please keep the Quark out of the condenser. There are "less delicate" ways of saying this from a rear end versor position. Capacitance is a metrical dimension, and so is inductance. They are dimensions of space separated by the dimension of time, no more than that, metrical dimensions.

Pounds per square inches as a Farad is obscene. Let us take a dynamical analog, my Corolla. It operates through 3 distinct forms:

- 1) The inductance, the body of the car
- 2) The capacitance, the tires of the car
- 3) The conductor, the road on which the car stands

And since the conductor has resistance, the electrons are that part of the road(the conductance) which wants to move with the tires(the dielectric).

The tires are capacitors, and are rated as such. Three factors present themselves:

- 1) The geometry of the tire
- 2) The pressure contained
- 3) The deflection through which the weight of the car pushes the wheel to the ground

The geometry is the capacitance of the tire  $9 \times 10$  to  $10$  to the third centimeters cubed.

The pressure is the voltage of the tire, 44 P.S.I., voltage max rating.

The deflection is the charge or displacement in per c.m.

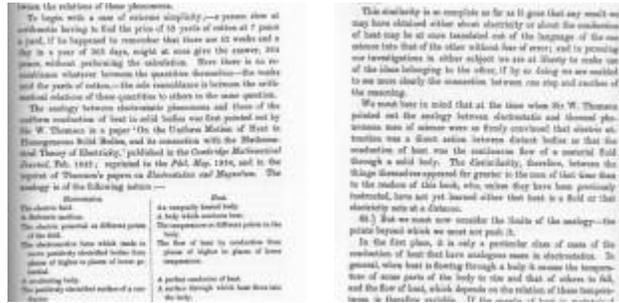
One way to make pounds per square inch capacitance is to say the pressure contained is the permittivity of the capacitor since the deflection is the result of the weight, or force of it, which then is the applied voltage.

Remember equating the Laws of Physics to the Laws of Electricity can be very misleading and is the principle cause for misunderstanding.

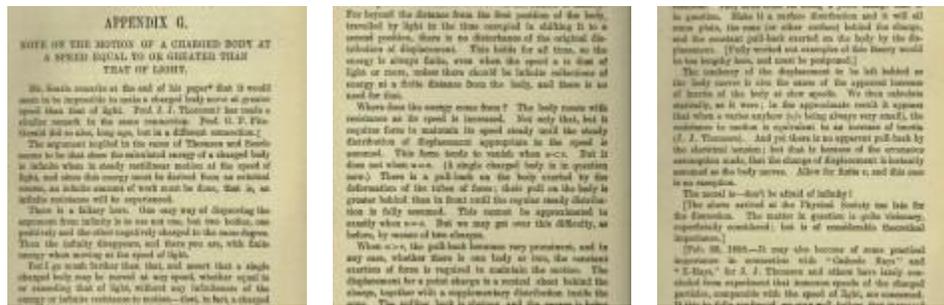
(5) . . . Oliver Heaviside's Telegraph Equation, . . . BECAME THE FOUNDATION FOR LONG DISTANCE TELEPHONY IN AMERICA (A.T.T.). More so, Heaviside's Telegraph Equation and related operational calculus serves as the cornerstone of American Electrical Engineering. The full potential of Heaviside's work has not nearly been reached, and it's application to the transmission structures of Tesla could result in a tremendous new understanding of electricity. . . .

(6) Pump them scalar waves, smash them dipoles, capture that back E.M.F. . . .

From "An Elementary Treatise on Electricity", by James Clerk Maxwell



Heaviside Vol II, Page 533



- 1) I am an Electrical Engineer
- (2) Einstein says electricity does not exist
- (3) So what can I say? It is that basic!

This is why I wrote the "[Theory of Anti-Relativity](#)." It is in the thread "Peter whatever happened with Eric P. Dollard?" It will make any Einstein's blood boil, you can rest assured of that. To quote Nikola Tesla; "Today's scientists substitute mathematics for experiments and they wander off through equation after equation and eventually build a structure which has no relation to reality." Such is the "Theory of Relativity".

... Tesla said exactly what is required as a basis for his efforts. Something as simple as the "Extra Coil" is an Alice in Wonderland for the Engineer, but it seems just a simple coil. Over the years I have provided a basic engineering structure by which to engineer Tesla like systems, as he said they must operate. . . . I have [cited] every book, paper, lecture, etc. from Tesla's era. Remember that Tesla stands as a monument to his era, with a solid foundation upon the efforts of his contemporaries. Tesla was a product of his time, so go back to it and learn.

See also, ElectroMagnetic Theory, Oliver Heaviside, Vol 1, "Introduction", Vol 2, art 223, art 224, art 225, and art 226. p 1-12 "Mathematics is an Experimental Science", Vol 3. 73