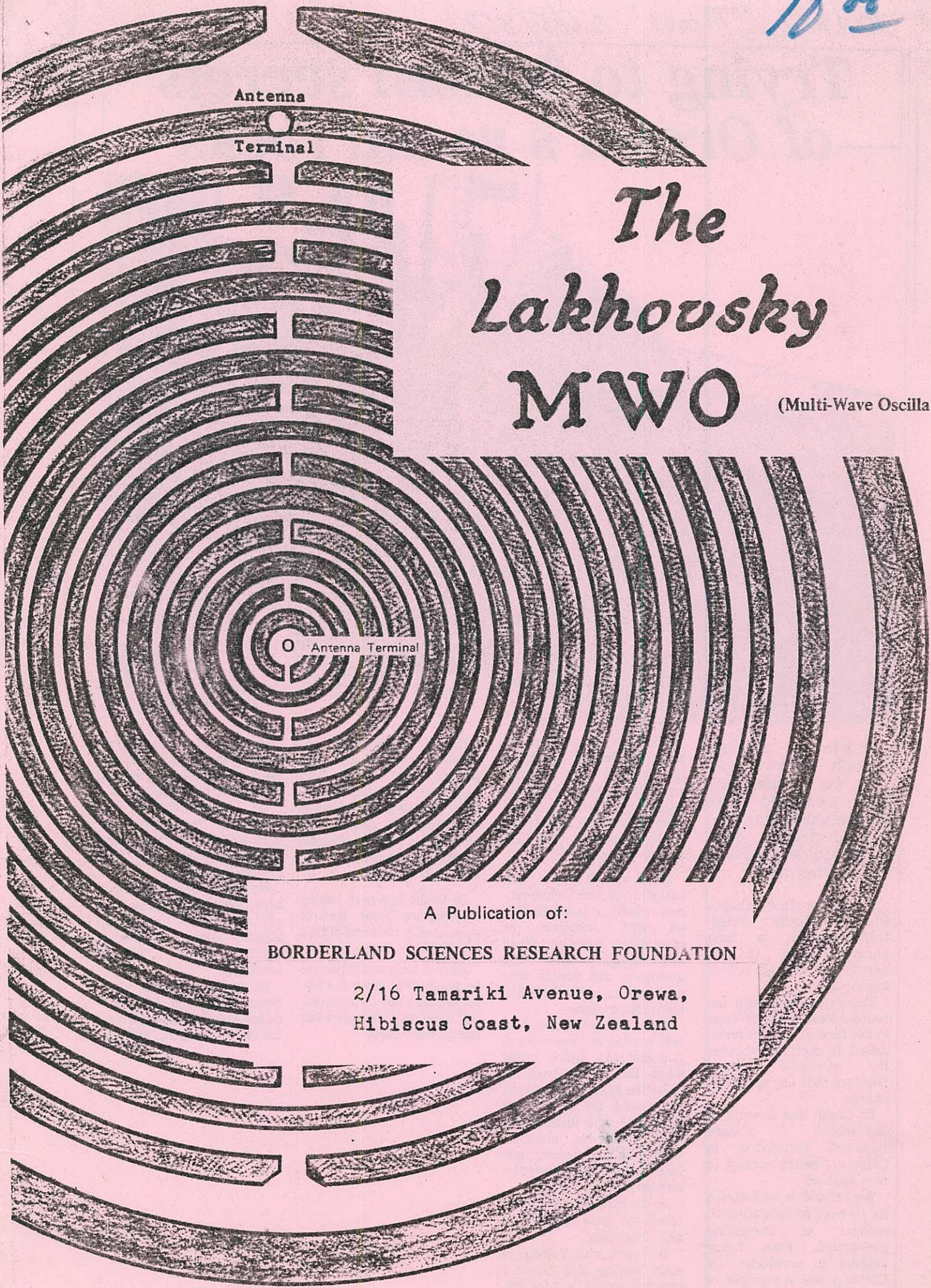


1102



The Lakhovsky MWO

(Multi-Wave Oscillator)

A Publication of:
BORDERLAND SCIENCES RESEARCH FOUNDATION
2/16 Tamariki Avenue, Orewa,
Hibiscus Coast, New Zealand

Trying to fathom secrets of Orewa's round rocks



People passing through Orewa at 11am on Friday may have wondered who the gentleman was tapping electrodes onto round boulders outside Orewa Pharmacy.

It was Dr Riley Crabb, Orewa's resident scientist/theosophist, a man always willing to try anything in the pursuit of knowledge.

The experiment with the round rocks, or concretions to use their geological term, aimed to discover whether the strangely shaped boulders held any electrical charge.

Dr Crabb was director of Borderland Science Research Foundation in California before coming to New Zealand.

Borderland is well-known for its work investigating all manner of interesting phenomena, from flying saucers to occultism. Dr Crabb is now a member of the Orewa Theosophical

Scientists believe concretions are formed naturally by deposits of calcspar gathering around a core, the beginning of the formation of such balls dating back to the upper cretaceous era, 135 million years ago.

Some, called geodes, are real oddities with hollow centres, wholly or partially filled with minerals or crystalline deposits. They are sought after by geologists and people who cut them in half and polish them into trinkets.

One such geode found in 1961 proved too much for a diamond saw which broke when the owner tried to halve the stone. It turned out to be solid, not hollow, and geologists who dissected it found inside an unknown stone with an iridescent surface that had been formed by intense heat.

In its core was a shining metal rod 2mm in diameter and 17mm long.

Dr Crabb wasn't about to start sawing into Orewa's concretions but 'just for fun' he decided to test for elec-

His micro-ampmetre revealed they had the same polarity and were both magnetic, but the instrument proved too sensitive to give accurate readings of any charge passing between them and nearby traffic disrupted the needle.

Dr Crabb had been hoping to measure some sort of pulsing effect but this did not eventuate.

He said tests would have to be made over several months to reach any conclusions, including tests at night when traffic was scarce.

He hoped to get a sensitive stethoscope instrument to see if there were any noises emanating from the stones.

Dr Crabb believes the stones are man-made and date back to the Lemurian era when Australasia was one huge continent.

He thinks they could have been made by the same people who made the giant Easter Island sculptures which have baffled scientists.

He said when he got some better equipment he might do tests on the concretions at the Orewa Trust and Hilltop.

THE RUSSIAN LAKHOVSKY REJUVENATION MACHINE

By Associate Bob Beck

In September, Dr. L. O. Anderson, Anderson Research Center director and BSR Associate, phoned me about a "marvelous electronic machine" purported to "cure" almost any human ailment. I've looked into dozens of these "modalities" every year; so with extreme scepticism I gathered instruments and took off to check another possible hoax.

I found a heavy spark-gap Tesla Coil inside a four-foot cabinet. This console was rigged to circular "antennas" and was partially shielded inside a home-built Faraday cage in the living room of Dr. Anderson's friend. It hadn't functioned in over a decade, and had been given up by some twenty-odd medical instrument repairmen and engineers as unfathomable.

The machine, which had no nameplate or other identification, turned out to be a Lakhovsky "Multiple Wave Oscillator", or MWO. Fortunately the present owner had found patents and two books describing its operation. We were able to reconstruct the circuits and after several hours had it operating perfectly. The machine was not a hoax!

Lakhovsky did his research prior to World War II and died in 1942. No infringement can be involved in duplicating Lakhovsky's work, since his U. S. Patent #1, 962, 565 expired in 1951 and is in public domain. I have found from the literature, "The Waves That Heal", that Multiple Wave Oscillators are extensively used in hospitals in France, Germany and Italy, and although tested in a New York hospital with fantastic success, MWOs remain practically unknown in the United States. "Waves That Heal" was written by Mark Clements and published by Health Science Press, Kent Cottage, The Brambles, Rustington, Sussex, England, price 6 shill.

MDs testing Multiple Wave Oscillators reported up to 98% cures of terminal cancer, arthritis and other "hopeless" conditions. Case histories were complete with before-and-after photos. Often rejuvenation was demonstrated, not only in human beings but in plants and animals as well!

So, on Sept. 18th I designed and built a modern (technologically) MWO based on Nikola Tesla and Lakhovsky's original work and patents. The transistorized instrument fits into a brief case and weighs under 14 lbs. Experiments with MWO on some eighteen volunteers have demonstrated almost unbelievable results. At this writing, Oct. 20th, every single subject, including myself, reports fantastic gains.

My mother, age 72, who has suffered from hypertension and glaucoma for many years, measured absolutely normal blood pressure the morning after her first treatment. And the eye tension, tested by her MD the week following, had dropped to a lower point than in the previous two years.

Another woman with a long-standing back condition says she was permanently relieved in one 15 minute exposure. An asthmatic with chronic bronchial complications claims he is now symptom-free after two exposures and her husband with a bad dermatological condition of seven years history appears to be very definitely improved. Perhaps the most dramatic is Mr. N. V. C. who had broken his leg skiing last December. Because of an old polio complication the broken leg had never healed and flesh surrounding the fracture was in a very poor, waxey condition. After one exposure he phoned to say he had regained feeling in the area. The next day we made an "after" photo slide of nearly normal tissue.

A friend suffering allergies of long standing says she can now eat anything and her MD admits he was startled by her youthful appearance and new vitality. The Lakhovsky literature illustrates many such rejuvenations as an unexpected side effect of cancer cases (pg. 32 to 40 in book). Subject's wrinkles disappeared along with the tumors!

THEORY OF OPERATION

Lakhovsky pointed out that all cells capable of reproduction contain in their neuclei "filaments" of highly conductive material surrounded by insulating media. This filament, which may be the RNA-DNA complex, is always in the form of a spiral or helix in other words, a coil. Therefore, each will react as a tuned circuit if its resonant frequency can be approximated by an external oscillating coil.

Lakhovsky did not carry this to it's conclusion; however, I postulate that by exciting the neuclei with electromagnetic energy a "charge" can be induced by the long established principle of electromagnetic induction. This demonstrably raises the energy level and perhaps the vitality of every cell in the field simultaneously. Since each cell is an individual, and of slightly different physical dimensions, the exciting wavelengths must be multiple, and must span a broad frequency spectrum. Diathermy machines, limited to crystal-controlled single frequencies in the 27.255 MC region, can do nothing but heat the tissue; and yet this approach, abandoned by Lakhovsky in the 1930s, can still be found in "modern" doctor's offices!

The Electromotive Force (emf) produced by the MWO and induced in the cell nucleus, can raise the cell's metabolic rate by Electrolysis, and perhaps jog the RNA-DNA "memory" and reproductive capabilities to their level at an earlier, younger age, thus the rejuvenation. Even more subtle changes might be postulated, such a magnetic "progression" effects as evidenced by heavy water in magnetic fields.

By contrast, any chemical taken into one's system by mouth or by injection -- such as vitamins, food or medicine -- must first be absorbed in proper solution and ratio with unknown trace elements, then be transported by the blood to affected tissue only to be possibly rejected by the target areas.

Perhaps in cancer the emf induced by the MWO raises the vitality and memory of marginal cells to normal reproduction levels. In the case of other

disease, perhaps cells given higher energy levels can more readily throw off affliction.

A WAVE FOR EVERY BODY CELL

The Multiple Wave Oscillator described here radiates a bandwidth of radio frequency energy from the audio frequencies up beyond microwave frequencies. By actual measurement with standard field strength meters, this vast bandwidth of frequencies and harmonics can be shown. In fact, a bluish glow of "brush discharge" surrounds the antenna when operating. A fluorescent lamp held anywhere within several feet of the subject glows brilliantly. Within this multiple-wave range of frequencies, every cell in the body can find its ONE resonant frequency and absorb energy at its own natural wavelength.

Obviously the Electrostatic energy cannot penetrate the body. This is known as the "skin effect". However, the Electromagnetic component of the energy can and does permeate and will induce an emf in each cell. It is precisely this energy to which Lakhovsky attributes his almost miraculous "cures"

A word of warning, although no deleterious side effects have ever been reported for human reactions, the MWO has input power exceeding 35 watts. It radiates RF interference over a bandpass of 15 Kilocycles to well beyond 250 Megacycles. The Federal Communications Commission has stiff penalties for unlicensed transmitters and radio and TV interference -- not to mention making all your neighbors very unhappy. We operate our machine in a shielded room, and the battery input prevents RF interference from feeding back into power lines.

The deluxe MWO diagrammed here can be built by any intelligent 16-year-old with readily available electronic parts for under \$35. I do not plan to build, manufacture, sell or otherwise exploit this device, as my interest is purely in research. Several Associates given this circuit have successfully constructed MWOs. We would certainly like to hear from any BSR Associates who undertake this project, but please do not communicate until after building the unit. Our phone has been ringing off the hook for weeks! I absolutely will not and cannot correspond with individuals over details which any intelligent person should be able to thresh out with his own technical friends.

At one stage we had planned constructing a much higher powered unit but the results with the "portable" are so gratifying that Model Two was shelved. Extensive tests are scheduled with plants and animals, and every effort is being made to remove any element of "suggestion" from results. A physician friend is cooperating with the project by sending a few "problem" patients for tests. It is much too soon, however, to make a finished statement concerning the MWO's potential. No cures can be claimed even if obviously demonstrated, since our laws are controlled by medical unions forbidding the use of the word except by MDs. But I have satisfied myself with nearly twenty miracles in these few weeks of tests that the MWO might well be the most promising device to come to light in many years.

I have one request, however, that no one building this device ever be tempted to charge a fee, donation, or reimbursement of any kind whatsoever for its use. I feel most strongly that any device potentially helpful to suffering humanity should be available completely free of charge to anyone needing it.

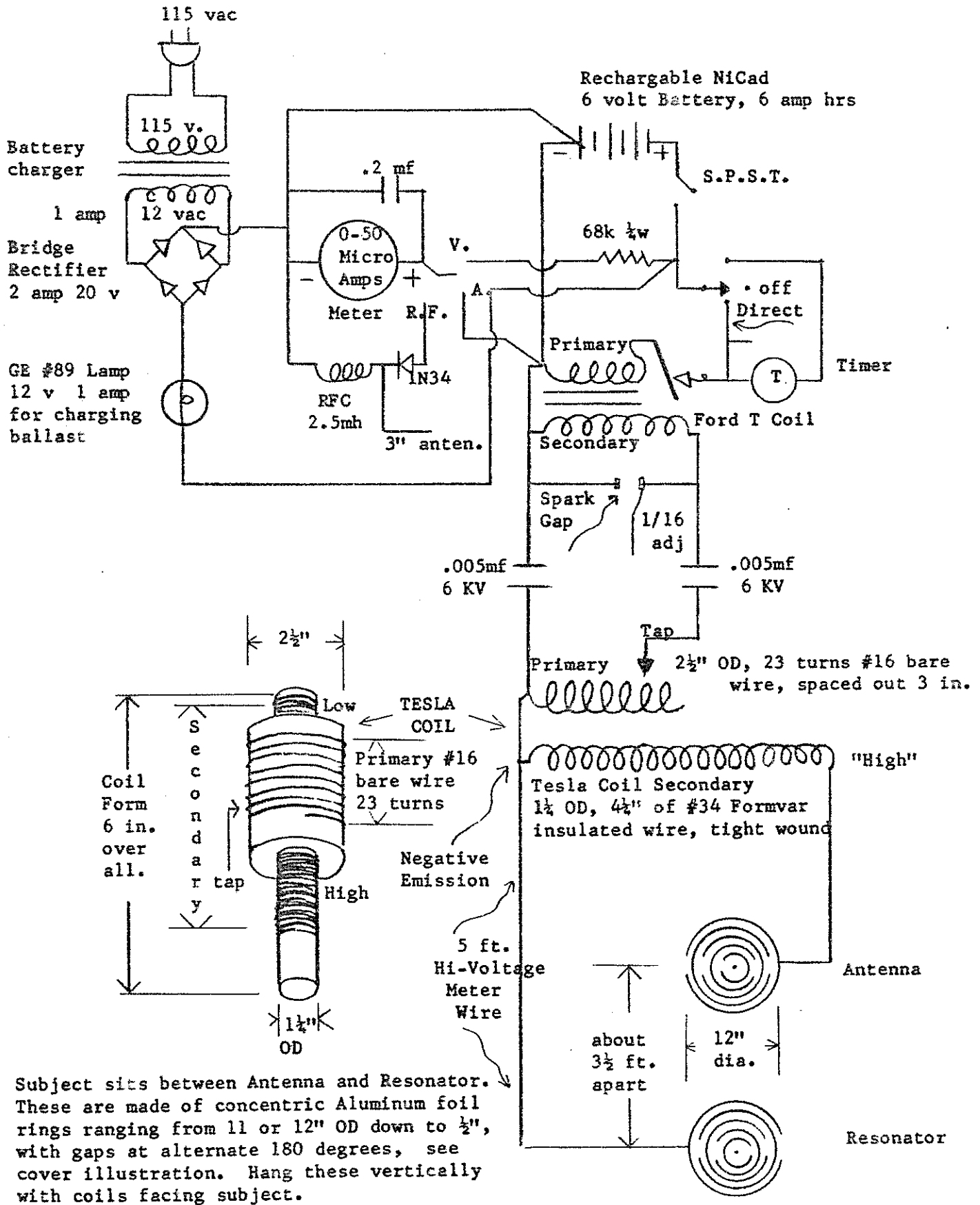
CONSTRUCTION TIPS

My MWO is built on a 11 x 11 1/2 inch plastic panel. Components extend 3 1/2 in. below this, so the unit fits nicely into a small attache case. The 6 volt battery was a Sonotone lifetime Nickel Cadmium unit; however, five war-surplus NiCads (1.2 v each) wired in series and costing \$1.95 each would be less expensive. (Available from C&H Sales Co., 2174 E. Colorado St., Pasadena, California 91107.) The Ford Model T coils are still available at Pep Boys stores in California at \$4.69 list. My first unit used a transistorized driver for the Tesla Coil but the Ford coil works equally well, is far cheaper, but has the disadvantage of making a buzzing noise. (Model T Ford coils can be purchased from J. C. Whitney & Co., 1917 Archer Ave., Chicago, Ill. 60616 at \$4.95 each, 1967 catalog, shipping wt. 2 lbs.) The spark gap was made from salvaged tungsten relay contact points about 1/4 in. in diameter. (Chevrolet Six timer points, 1950, do very well.) The relay spring arm can be tuned by a Nylon 6-32 screw adjusting its natural spring tension. The gap must be carefully tuned for maximum output for every individual, since the subject's absorption seems dependent on his body fluids and weight. Adjust for maximum sparking at random times and intervals between several of the inner antenna rings.

The automatic timer, zero to 15 minutes, the meter, the internal battery charger, the RFC circuits, etc., are all simply conveniences and may be left out of the circuit without in any way subtracting from results. By not building in these deluxe features, the entire MWO will cost about \$18 for all parts, including the attache case! Use plastic instead of metal screws around the high-voltage coil. High voltage capacitors cost about 50¢ each at surplus stores, or three for one dollar. (The .005 mfd - 6000 wv or 6KV Capacitors can be bought for 81¢ each, 1967 catalog, from Allied Radio, 100 N. Western Ave., Chicago, Ill. 60680, p. 291, Part No. 43A5852.) The Tesla Coil must be hand wound as it is not available commercially.

We have determined experimentally that a workable pair of antennas, radiator and resonator, can consist of 16 concentric rings, ranging from an outside diameter of 10 3/4 inches down to 1/2 inch. These were constructed by cementing a one-foot square of Reynolds kitchen aluminum foil to a 11-inch square of thin Formica, or Fibreglass, support. The outline of each set of circles was carefully scribed with a sharpened compass (or razor or Scripto blade attached). By scoring or cutting the aluminum foil was cut through to the plastic backing and the waste area strips pulled away before the cement hardened. Excess cement was removed with a solvent. The gaps were then cut with the razor. Note that gaps are alternated in position each 180 deg. per drawing (on the cover.) This was drawn from an actual antenna and you can set your compass distances for each ring from it. Keep gaps between inner rings narrow to encourage random arcing between the rings.

BECK ADAPTATION OF LAKHOVSKY MULTIPLE-WAVE OSCILLATOR, U.S. Patent #1,962,565



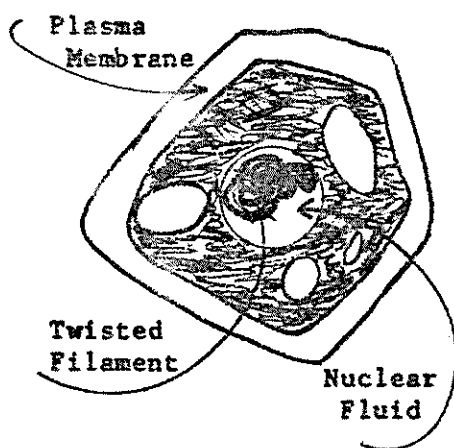
Trim the corners from the gaps of the three or four outside rings to discourage fixed arcing at these places. Also be sure to clean away any bits of foil between rings. These also will cause fixed arcing.)

In use, the second from the outside ring is connected to the high side of the Tesla secondary. (Refer to "antenna terminal" on Cover drawing.) This is the radiator coil. The arcing from this ring to the outside ring causes the "shock excitation" of the fourteen other antenna elements. Since each radiator is of different diameter, the array spans a broad, multiple-wave segment of the Radio Frequency (RF) spectrum. The other antenna element, called the Resonator, is connected with a five-foot, high-voltage meter wire to the ground side of the Tesla coil secondary. (Lo or Ground or Common).

PUTTING THE MWO TO USE

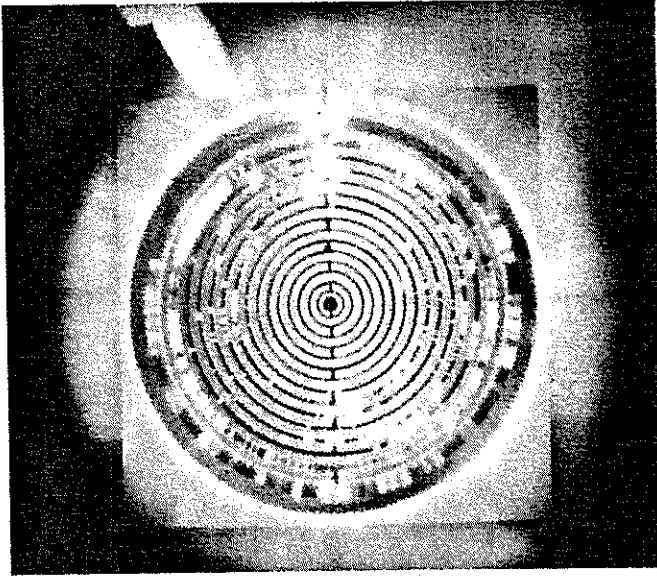
The antenna and resonator are suspended from non-conductive supports about three feet apart, such as wooden chairs with no nails or screws. The subject of the experiment, preferably with all metal removed from his person, including belt buckles, zippers, hooks, fasteners, coins, hairpins, earrings, rings, metal brassiere fasteners, etc., is seated on a wooden or plastic rest between the antenna and resonator (hung vertically, the foil rings toward the subject. Unless the Resonator is powered by a separate Tesla Coil it will not arc. Metal on the subject will produce eddy currents in the field of radio frequencies, reducing their effectiveness.) Experiments should last from nine to not over 15 minutes. A four-day interval between experiments is recommended. Four such experiments over 16 days should suffice to demonstrate anything.

Warning, two-inch sparks can be drawn from antenna; so keep subject at least three inches away. If touched a mild and harmless sting can be felt. HF effects can be demonstrated in a darkened room by holding a flourescent lamp anywhere near the subject. The RF energy will cause the lamp to light although no wires are touching it. Field strength measurements read several watts of power from the audio frequency spectrum to beyond 250 megacycles.



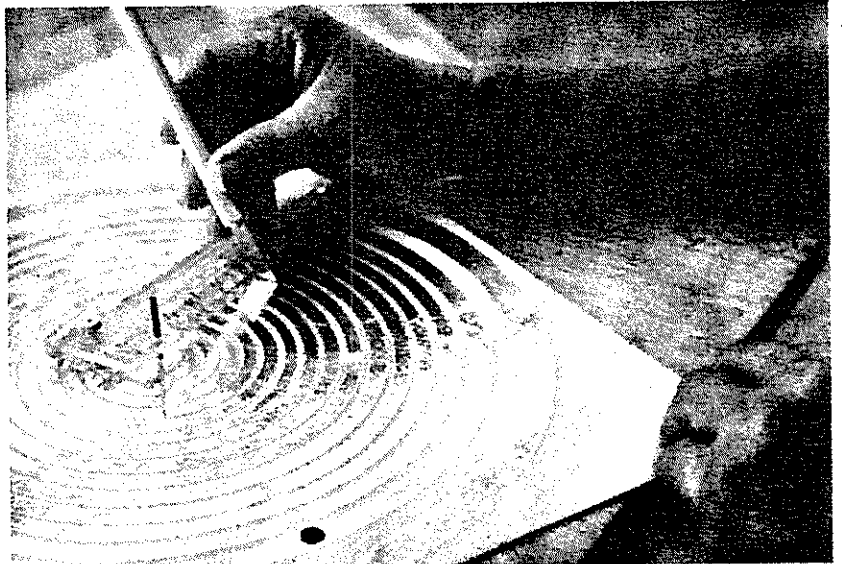
(From Clement's book, Waves That Heal, Lakhovsky's microscope copy of a living cell. "In the centre is a twisted filament which, possessing self-inductance and capacity, constitutes an oscillating circuit. The similarity to a short-wave circuit is manifest; the filament shown here oscillates like a coil having a very small number of spirals." He writes that Lakhovsky wrote: "Every living being emits radiations." And Clements adds: "the living cell can thus play the part of a transmitter or receiver of exceedingly short radio-electric waves which give rise to high frequency currents in the circuits of the cellular nucleus.")

THESE PHOTOS were kindly furnished by Associates from their own experimental work with the MWO during 1964-1965.

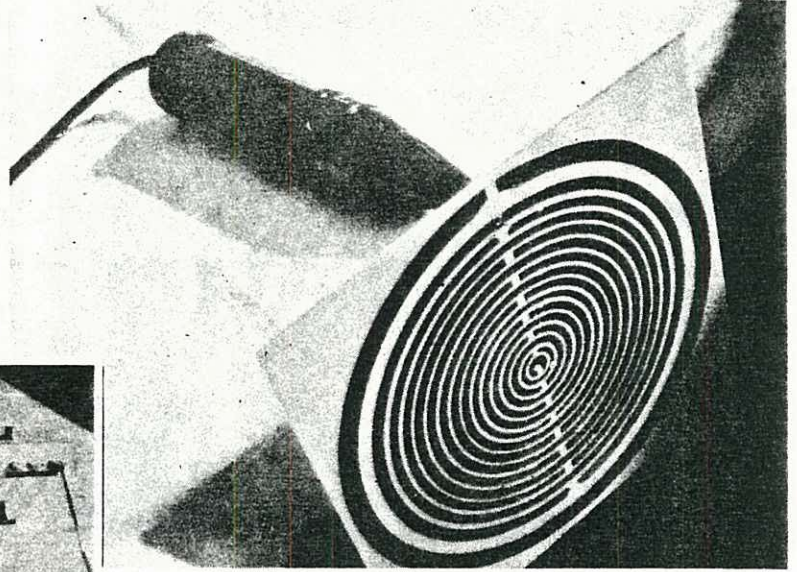


THE RADIANT ENERGY of the Multi-Wave Oscillator is obvious in this three-minute time exposure in the dark, of the antenna, with the equipment turned on. Note the brush discharge of etheric energy all along the edge of the outside ring, going three or four inches. Look at the random arcing between the antenna rings, down to the eighth ring! This antenna received full power by being mounted on the MWO case, directly at the positive end of the Tesla Coil.

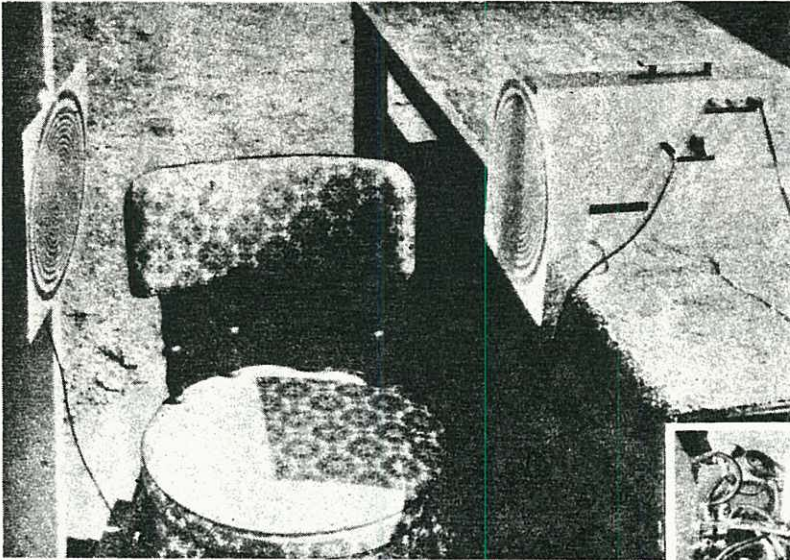
THE PRINTED-CIRCUIT ANTENNA foil is glued to an 11-inch square of 1/16th inch thick fiberglass. Spray one surface of the plastic with Hobby Shop spray glue and stretch smooth-surfaced kitchen aluminum foil across it. Press the foil on firmly from the center out, smoothing out repeatedly with a soft cloth. Any remaining air bubbles can be released through a small pin hole. The circles are more easily cut if you make a jig with a 16-inch square of plywood with a headless nail for a center post. Using the antenna pictured on the front cover as a pattern, mark and notch an old ruler or stick where each circular cut is to be made. This marked guide ruler is mounted over the antenna on the plywood jig as shown at right. The foil-covered surface is then turned clockwise with the left hand against the Scripto blade held firmly in the successive notches by the right hand. Be careful to cut through the foil. If you dont, in lifting the cutouts afterward, you may also lift or tear the rings. If a metal grommet is placed in the terminal hole in the second ring this will prevent the high-frequency arc from burning foil and fiberglass during operation. Copper foil can be used for the printed-circuit antenna rings but deposits build up on it from arcing, wherever it occurs. There is no deposit buildup on aluminum foil.



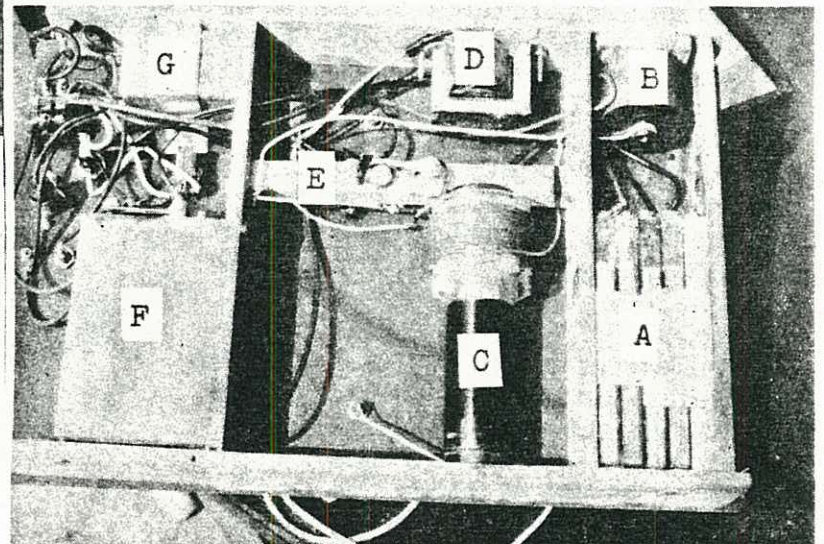
THE MASTER APPLIANCE COIL No. 9 (referred to on page 41) makes a good driver for the MWO antenna, shown below at the right, hanging on the tip of a brass tube adaptor fitted into the light socket of the appliance, and suspended off the edge of a table. Everything is contained in the black bakelite plastic handle. The spark-gap adjustment is on the back end of the handle, not in sight in the photo. Power supply is regular 115 volt alternating current (115 vac).



BELOW, a typical experimental set up, with chair for "guinea pig" between antenna and resonator.



Beck's original equipment called for an 18-inch lead wire from the positive end of the Tesla Coil to the antenna. It was found that there was too much loss of power along this wire. The later development shown above has the MWO set up right, with the antenna mounted directly against the positive end of the Tesla Coil in the case.



PICTURE NO. 3 is a typical, professional-looking layout of an MWO, neatly packaged for an attache case. A. The five Ni-Cad batteries, $1\frac{1}{4}$ volts each at full power. B. Timer. C. Tesla Coil. D. 115VAC transformer (for house current operation if desired). E. Spark-gap using modified Chevvy Six points. F. Model T Ford Coil. G. Battery charger.

"THE WAVES THAT HEAL

The New Science of Radiobiology
By Mark Clement

Bob Beck has loaned us a copy of the late Mark Clement's brief, illustrated, 64-page review of Georges Lakhovsky's work. This contains excellent photographs of Lakhovsky's Multiple Wave Oscillator antenna, or transmitter, of before-and-after skin cancers apparently cured by the Oscillator, and of cancerous plants returned to normal health by Lakhovsky oscillating circuits. Price in the book is 6 shillings and Bob says it can be obtained from Health Science Press, Kent Cottage, The Brambles, Rustington, Sussex, England.

Clement translated from the French, Lakhovsky's own book on his work, "The Secret of Life". This was published in 1939 by Heinemann (Medical Books) Ltd., London, and contains a preface by Professor d'Arsonval. Then in 1949 Mark Clement wrote and published his own review of the Russian's radical researches in the field of electronic medicine. Here are a few quotes from his Introduction.

"On the day Hitler's mechanized hordes drove into Prague a book was published in London entitled 'The Secret of Life' by Georges Lakhovsky, a Russian-born engineer resident of Paris. The book had previously appeared in French, German, Italian and Spanish translations and Lakhovsky's theories were well known on the Continent long before the English translation was published.

"The evil designs of the Nazis soon gave rise to depressing repercussions in all spheres of human activity and Lakhovsky's remarkable work was left virtually unnoticed in this country (England) by the medical profession and the public alike. A few discerning critics, however, expressed their views with appreciative understanding. The Hospital said 'Lakhovsky's theories are so interesting from the point of view of future developments that it will repay any keen hospital officer to give them his close attention.' ... Science Forum 'The admirable translation of Lakhovsky's 'The Secret of Life' will be heartily welcomed in progressive circles. The general theory is one which physicists, biologists and medical men cannot afford to ignore.' ... But these were voices in the wilderness and the field for experimental investigation was left open to a few amateurs devoid of scientific training and lacking the necessary resources...

"The impartial investigation of claims of cure of various diseases by unorthodox methods demands high qualities of mind and character possessed by very few men indeed. Scientific truth is no respecter of persons or of vested interests, and Lakhovsky's spectacular results in the treatment of plants and animals and human beings were inevitably bound to antagonize orthodox

practitioners and exponents of popular medical cults.

"On the Continent Lakhovsky's work attracted a great deal of attention in scientific circles, particularly in Germany and Italy. Italian investigators were among the first to study Lakhovsky's theories and put them to the test in laboratories and clinics. It was, of course, to be expected that the new science of Radiobiology should make a special appeal to the intellectual heirs of Galvani, Volta and Marconi. It is somewhat depressing to observe that in the country of Faraday and Clerk Maxwell (England), Lakhovsky's theories have not yet received the attention they deserve.

REGENERATING OSCILLATING CIRCUITS

"Lakhovsky has been criticised by physicists ignorant of biology and by biologists ignorant of physics! These self-appointed censors of knowledge soon found they were confronted with redoubtable opponent who fully realized the value of experimental evidence. Its publication resulted in causing annoyance to the custodians of infallible doctrines who made up with carping verbiage what they lacked in clarity of vision. But Lakhovsky's achievements with his oscillating circuits supported by astonishing photographs of regenerated tissues in plants and human beings could not be exploded by mere verbal fireworks, and as evidence accumulated the scepticism of hostile critics relapsed into morose silence.

"The indisputable fact remains that Lakhovsky was the first experimenter to make use of high frequency electro-magnetic waves in the domain of biology. Thus out of the application of radio-electricity to biology his work developed and gradually established the foundations of the new science of Radiobiology. The first international Congress of Radiobiology was held in Venice in 1934. A leading authority on electro-therapy, the late Dr. E. P. Cumberbatch, wrote: 'Although it had been frequently observed that the short Hertzian waves could produce heat at a distance from the transmitter the first scientific investigation from a biological point of view was made by Lakhovsky and his colleagues who published a paper in 1924 on the effects of very short waves on cancer in plants.' . . .

"When France was occupied by German troops Lakhovsky, being a prominent anti-Nazi, decided to leave Paris and made his way to New York where he died in 1942 at the age of 73.

"In the United States Lakhovsky's theories were put to the practical test with typical American speed. Noticing that patients treated with Lakhovsky's Multiple Wave Oscillator showed signs of rejuvenating appearance, the possibility of exploiting this side-effect proved irresistible to an enterprising 'beautician'. A film was made featuring cases after treatment with Lakhovsky's Multiple Wave Oscillator, which proved to be both interesting and convincing.

"In New York Lakhovsky was approached by several hospitals with a view to testing his apparatus experimentally. The remarkable results obtained. . . in a large New York City hospital, and also by a prominent

Brooklyn urologist are fully set out in the text.

"In this country (England), owing mainly to the inauspicious time at which Lakhovsky's major work was published, very little interest has been shown on the part of those best qualified to judge its merits. The medical profession, whose conservatism is the most formidable barrier to progress, has been notoriously slack in investigating the new radio-electrical methods of treating disease as originated by Lakhovsky. . ."

Mark Clement's observation on the formidable conservatism of the medical profession in 1949 is still true today. Effective electronic diagnosis and treatment of disease is still a closed door here in America as far as the AMA is concerned. Those brave MDs who have tried to keep medical practice abreast of developments in electronic science have been discouraged, if not actually driven out of practice. Dr. Abrams is a good example, with his Oscilloclast, developed and proven effective in San Francisco about the time Lakhovsky was developing the MWO in Paris in the 1920s. Radical innovations in any line of endeavor are usually thought up and proven by rank outsiders. Georges Lakhovsky was no doctor, but an electrical engineer!

Doctors, with their own pharmacies and with massive investments in the drug industry, are not likely to show much interest in radical new ways for treating human ailments, especially if the new way is a threat to profitable practice; and, as long as Americans think they can buy health in a pill or a shot in the fanny, doctors will continue to treat them with poisonous drugs at top prices. This is good business.

BORDERLAND RESEARCH

But for those of us who would like to keep our bodies as uncontaminated -- and as healthy -- as possible, Lakhovsky's theories offer a way out of the clutches of the medical trust. There is little likelihood that the AMA will support research in this area of electronic science for years to come. There is every probability that there will be murderous opposition to any attempt to exploit the MWO on a national scale. This means that you will have to build and test your own equipment, or make friends with some electronic technician -- engineer, TV or radio repairman -- and prevail upon him to build it for you. This is the active kind of borderland research which requires that you get up out of your easy chair and get to work! If you live in an isolated spot, take a mail order course in basic radio construction. If you live near a high school that has an adult education program, sign up for the evening class in radio theory and bench work. I did at Barstow in 1958, so can you. Electronics has replaced aircraft as the basic industry here in Southern California. If you want to be a citizen of the New Age you should make some effort to keep up to date, even if the sick industry doesn't!

What are Lakhovsky's general theories? Mark Clement sums them up neatly in Chapter One of "The Waves That Heal":

"The fundamental principle of Lakhovsky's scientific system may be summed up in the axion 'Every living being emits radiation'. Guided by

this principle Lakhovsky was able to explain such diverse phenomena as instinct in animals, migration in birds, health, disease, and, in general, all the manifestations of organic life. (Here follows the drawing of a living cell shown on page 6 of the November Journal).

"According to Lakhovsky the nucleus of a living cell may be compared to an electrical oscillating circuit. This nucleus consists of tubular filaments and chromosomes made up of insulating material and filled with a conducting fluid containing all the mineral salts found in sea water. These filaments constitute minute oscillating circuits endowed with capacity and inductance and capable of oscillating according to a specific frequency. They are comparable to the circuits, coils and windings of radio-receivers."

I believe Clement's comparison of a body cell with a radio-receiver is only half-true. The cell can also be compared with a radio transmitter when it is releasing energy. We are both radio-receptive and radio-active! Lakhovsky's theory should be acceptable to any occult scientist. The push-pull idea, the positive and the negative, the Law of Opposites, is basic to all forms and to all life at this level of existence. By inductance Clement means that radio-electricity can be induced or put into every cell of your body. By capacity he means that each body cell can hold a charge of radio-electricity, just as the battery of your car can carry a charge of electricity. In the case of your car battery the charge is put in through wire or battery cables. In the case of your body, the charge is put in through invisible but very real radio waves. These can travel unimpeded through any solid object!

"The living cell can thus play the part of a transmitter or receiver of exceedingly short radio-electric waves which give rise to high frequency currents in the circuits of the cellular nucleus. Now the vibration of an oscillating circuit is maintained by radiated energy. But where does it come from?"

If the terminology of electronics is unfamiliar to you, let's take an example out of your daily life, if you own and use a television set. Right now NBC's television transmitter is oscillating (broadcasting) on top of Mt. Wilson, 6000 feet above Los Angeles and a hundred miles away from headquarters here in Vista. These "exceedingly short radio-electric waves" are bombarding this typewriter and my body, but they are so weak they don't effect me very much. Though undoubtedly some of my body cells are reacting feebly to the NBC frequency which we call Channel 4 here. Nor do my body cells tell me the quality of the radiated NBC energy, fortunately; to discover this I turn our TV set on. As the current surges through the "circuits, coils, windings" and tubes, sound and picture tell me what is being transmitted. Now my TV set is oscillating in tune with NBC's oscillator. The transmitter and receiver are in balance and the program comes in fine. With this picture clearly in mind now let us turn to the cells of our bodies as receivers, and Clement's interpretation of the Lakhovsky theory.

COSMIC RAYS

"Scientists have established with the existence of highly penetrating waves to which, by reason of their universality, they have given the name of cosmic rays. These rays, generated by the interference of astral radiations, are

capable of traversing dense metals and soils to a great depth. Lakhovsky has demonstrated the cellular oscillation of living organisms is maintained by cosmic radiation. According to him disease may be said to result from oscillatory dis-equilibrium due to either a deficiency or an excess of cellular radiation. An important factor in this connection is the nature of the soil. A reinforcement of cosmic rays takes place on soils which are good conductors of electricity such as clay, ferruginous and carboniferous soils.

RESONATE IN HARMONY WITH THE UNIVERSE

"To avoid the harmful effects of loss of oscillatory equilibrium it is necessary to ensure the regularization of the cosmic field round the living organism by filtration. Lakhovsky's own explanation of the problem of filtration is as follows: 'The terrestrial atmosphere is known to be impregnated by a vast range of electro-magnetic oscillations of all wave lengths and intensities as a result of unceasing electrical discharges (thunder, etc.). Besides that we know that electric motors and other electrical machines create in the atmosphere a field of auxiliary waves. Moreover, during the past 25 years the earth has been flooded with radio-telegraphic, radio-telephonic and other waves. Under such conditions it is easy to understand why any oscillating circuit of any form or dimensions is likely to find in this vast field of waves its own resonance with which it can vibrate harmoniously.' It is therefore obvious that to make any oscillating circuit oscillate there is no need to have recourse to a local generator such as the Radio-oscillator used by Lakhovsky in 1924 when he first treated and cured geraniums inoculated with cancer. The oscillating circuit utilized by Lakhovsky in his second series of experiments -- a circuit having no artificial source of excitation -- proved equally effective in curing geraniums rendered cancerous by inoculation."

Yes, in 1924 Lakhovsky "graduated" from electronics to radionics! He discovered and proved to his own satisfaction that in some ways a simple, one-turn coil of wire or fibre was as effective as the electric powered Multiple Wave Oscillator. The simple Oscillating Circuit, as Lakhovsky called it, has two advantages over the MWO. It doesn't have to be plugged in to a battery or 110 volt home power supply, and it broadcasts no interference with radio and TV sets. If you want to experiment in this area of far less cost and trouble, get in touch with BSR Associate Col. A.E. Powell, 15051 Otsego, Sherman Oaks, California 94502. He has written several articles on Lakhovsky Oscillating Circuits and is ready, I believe, to supply Circuits at reasonable cost to interested experimenters.

In England the Health Science Press mentioned earlier can probably answer questions on these Oscillating Circuits. Down under, our Regional Director, James Brownlee, 37 Inglewood St., Glen Innes, Auckland, New Zealand should have information on the Oscillating Circuits as he and his borderland friends have been experimenting with them for years. Clement says that "it must be particularly stressed that only Circuits made in strict accordance with Lakhovsky's directions should be used, otherwise the results will prove to be entirely negative."

To get back to Clement's text in Chapter One: "Through the action of this constant field of radio-electric waves which emanates from the surrounding atmosphere the oscillating circuit is made to resonate like an instrument in tune

with certain sounds. Thus the oscillating circuit creates a local field which canalises and filters, so to speak, the cosmic waves necessary for cellular oscillation.

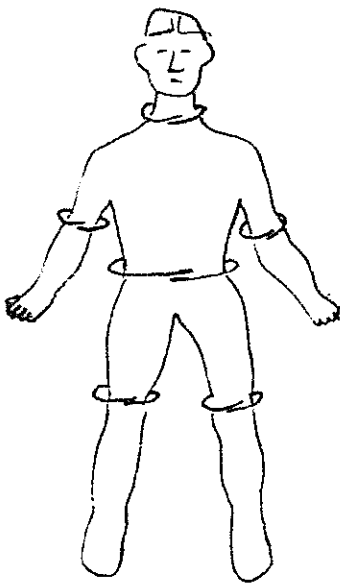
THE DANGER OF BURNING X-RAYS

"Furthermore, this filtration is a general phenomenon. It has been discovered, through the investigations of Lakhovsky, that radiations such as those associated with light, ultra-violet rays, X-rays, etc., have the property of making cosmic rays act, as it were, to the advantage or disadvantage of the cells. Now the field created by an oscillating circuit is constant and emits a steady and sustained force. It invariably acts in a favourable manner on the oscillation of the body cells, facilitating by the filtration of cosmic rays, regular cellular division, a fact which explains the immunity imparted to the cells and their consequent capacity of resistance to diseases and microbes."

It is highly significant that about the only rays and ray machines approved for general use by the American Medical Association are the destructive ones of X-rays and atomic radiation for the mis-treatment of cancer.

"Since Lakhovsky's oscillating circuits were first used for the treatment of cancerous geraniums, an experiment fully described in communications to the French Academy of Science, the same method has been successfully applied in Continental hospitals and nursing homes."

Photos of the successful treatment of cancerous geranium plants are included in Clement's book, along with the pictures of the disappearing skin cancers in human beings. So Clement describes the two major features of Lakhovsky's work in this first chapter, the simple, one-coil Oscillating Circuit powered by cosmic rays, and the electric-powered Multiple Wave Oscillator. There are photos of the Multiple Wave Oscillator, showing clearly the unique, circular antennas. These were made of metal tubing, separated and suspended with silk thread. The simpler, aluminum-foil printed circuit in Bob Beck's adaptation is apparently just as effective.



THE OSCILLATING CIRCUIT

"The diagram on this page shows where the oscillating circuits should be worn, i. e. round the neck, waist, and above the elbows and knees. The effect is intensified if more than one circuit is worn. Generally speaking, the neck and waist are the favoured sites and likely to bring about the best results.

"In the light of Lakhovsky's theories the fight between the living organism and microbes is fundamentally a 'war of radiations'. If the radiations of the microbe win the cell ceases to oscillate and death is the ultimate result. If, on the other hand, radiations of the cell gain the ascendant the microbe is killed and health is preserved.

THE SECRET OF LIFE (AT THE FORM LEVEL)

"Broadly speaking, health is equivalent to oscillatory equilibrium of living cells whereas disease is characterised by oscillatory dis-equilibrium. This general principle has given rise to a vast number of experiments covering the whole field of biology. Plants, animals and human beings have been successfully treated by the application of Lakhovsky's oscillating circuits and the reader is referred to his major work The Secret of Life for a full discussion of this important subject.

Those of you who have been studying the Kabala with Mrs. Crabb and me must have been struck immediately by the metaphysical soundness of Lakhovsky's basic theory expressed above. One wonders if this Russian escapee from Communism, and from Naziism, wasn't indeed a student of the Western Mystery Tradition, perhaps even an Initiate! The Tree of Life is the ground-plan of our Tradition. On the Tree we show the descent and the ascent of power, oscillating back and forth from left to right and right to left across the Middle Pillar, or balance point.

You'll be glad to know that a re-print of Lakhovsky's original work, "The Secret of Life", in English, is again available. Today, Nov. 26th, we have a letter from Leslie Speight, owner of Health Science Press in England, offering to purchase six copies of our November Journal. This contains Bob Beck's article, and the schematic diagram of his Space Age version of the Lakhovsky's Rejuvenation Machine, the Multiple Wave Oscillator. In England, copies of "The Secret of Life" are available from Health Science Press for £2:2s;6d; he says that a supply of these have been sent to Health Research, Mokelumne Hill, California, where they can be bought for \$7.50. Speight also tells us that Clement's "Waves That Heal", from which we have been quoting, can be bought from Health Science Press in England for \$1.00, postpaid. Now for the final paragraph of Chapter One.

"During recent years observations on the part of several investigators have established the fact that most animals, including insects and birds, emit radiations while they are also sensitive to the influence of external electromagnetic waves. These radiations emitted by all living beings cover an indefinite range (infinite range?) and are characterised by a multitude of different wave lengths. In the immense range of existing radiations we can only perceive the luminous octave (visible light) but we know that whole gamuts of radiations exist beyond the narrow limits of the visible spectrum. The limitations of our senses prevent us from perceiving radiations of living beings and this sensory incapacity also excludes from the field of direct awareness the vast gamut of electro-magnetic waves traversing our atmosphere. Yet all these radiations and waves exist and affect all forms of organic life in various ways."

DR. RAUL ARAUJO'S REPORT

In Chapter Two Mark Clement gives "Medical Reports on Lakhovsky's Oscillating Circuits." We'll give only one, by Dr. Araujo, Physician at the Prophylactic Institute, Montevideo, Uruguay. "In 1929, Dr. Araujo was suffering from a long-standing infection of the larynx which his eminent

colleagues had failed to cure. While in Paris he met Lakhovsky who advised him to wear one of his oscillating circuits in the form of a collar. Although feeling rather sceptical about this unorthodox method of treatment Dr. Araujo wore the oscillating circuit for several months with the result that he fully recovered and has had no relapse since. This personal experience led him to treat his own patients with Lakhovsky's oscillating circuits. Having treated over 300 patients suffering from a wide variety of diseases Dr. Araujo succeeded in curing or greatly improving cases of rheumatism, asthma, anemia, neuralgia, gastric ulcer, colitis, glandular disturbances, sterility, genito-urinary affections, general weakness and even cancer. . . Dr. Araujo observed that in cases in which Lakhovsky's oscillating circuits appeared to give no definite results there was invariably a latent infection which required special treatment such as syphilis, cholecystitis, sinusitis, pyelitis, dental sepsis, etc. . . A full account of Dr. Araujo's Report appeared in a monograph entitled 'Cosmic Rays and Oscillating Circuits' by Dr. P. Rigaux, Paris, 1932."

CHAPTER THREE, THE MULTIPLE WAVE OSCILLATOR

Most of this has been well explained by Bob Beck in his article in the November Journal, though we might quote again in Clement's own words: "After many experiments Lakhovsky succeeded in constructing an apparatus generating an electrostatic field in which all frequencies from 3 metres to the infra-red region could be produced. Hence in this field every cell could find its own frequency and vibrate in resonance. . . . Thus a type of oscillator was obtained giving all fundamental wave lengths from 10 cms. to 400 metres, corresponding to frequencies of 750,000 to 3 milliards per second. . . ."

"Since 1931 the Multiple Wave Oscillator has been used in most European countries and in America for the treatment of many diseases including cancer. No contra-indications for the use of the apparatus nor any harmful effects on patients have ever been reported. This is in striking contrast with short-wave therapy in general, X-rays and radium whose application in the hands of experts has not infrequently been followed by the most serious consequences. . . ."

Then follow several pages of photos of before-and-after cancer cures and medical reports from doctors. This one is typical, from Dr. Nicholas Gentile, Chief Radiologist of the Clinic for Incurables of the Apostolic Ladies of the Sacred Heart of Jesus, Rome, published in the medical review "Medicina Nuova" XXVI, N.5., 1935, Rome:"I. Effects On The Nervous System. Generally speaking I have observed a marked analgesic action following the application of the Multiple Wave Oscillator in all affections associated with pain, particularly in the classical cases typical of such affections. For example, a patient suffering from cephalalgia, resulting from violent cranial trauma, for a duration of 10 years, was subjected to a great variety of treatments, but all in van. The patient was definitely cured after 2 months' treatment with the MWO. Improvement was manifest after only 3 applications."

Dr. Gentile also reported the effects of the MWO on the Central Nervous System, on Chronic Inflammations, on Metabolism, on Disorders of the Cardio-Vascular System, and on miscellaneous cases. He says he adopted the "technique of localized irradiation. Generally speaking, treatment is given every 4 days for a duration of 5-15 minutes per session. This is the technique which

has given me the best results after having experimented with many forms of application. For children, old people and debilitated women, a relatively weaker application is indicated. If results are not apparent after 7 or 8 applications, I continue until 15-30 applications are given at the rate of a single treatment once a week. I have never observed any ill-effects from the MWO treatment, whatever the number of applications was in any given case. Moreover, the general condition of patients is always improved, even if only temporarily, so much so that the patients themselves sometimes insist on having further treatments. . ."

This chapter on the MWO concludes with four pages of reports of notable improvement or cure by American doctors. Chapter Five is concerned with the remarkable results obtained by using the Multiple Wave Oscillator on animals. Chapter Six contains Lakhovsky prophecy that some time in the future diagnosis of disease would be obtained by television! This is something which Dr. Drown's Radio-Vision instrument and radionics instruments have already accomplished.

THE NOVEMBER CONVENTION TESTING PROGRAM

There were two Multiple Wave Oscillators available. These were generously furnished by Bob Beck and Ed Skilling, and were set up in the shielded seance room. Only short exposures of from 2 to 5 minutes were given, during the lunch and dinner hours on Saturday and Sunday. In that time perhaps a 100 people volunteered for tests. Until a follow up inquiry is made, no statistical conclusion can be made, or even begun!

A few individual cases reported to your Director are worthy of note, including my own. By mid-morning on Saturday a spinal injury from my old, hockey-playing days was acting up. Doctors have called it a spasm in the sacro-iliac area. Ed Skilling invited me to sit in the rays from the MWO for a couple of minutes while the seance room was being readied for testing. Within a minute the spasm relaxed completely and the pain was gone. This was not a permanent change, of course, but the analgesic effect was certainly noticeable.

Mrs. Fred Rannenber, financial secretary of Harmony Grove and a BSR Associate, told me she had had a sharp pain in the area of her left hip for over two weeks at the time of the Convention. One 3-minute exposure to the rays of the MWO removed this completely. When I attended the Grove Board meeting a week later she said the pain had still not returned.

One Associate did report a negative reaction to the MWO. She attributed it to arsenic poisoning. She had had a severe case of this earlier in the year. When the machine was turned on she felt a severe pain through her right side, as though someone had jabbed a knife into her. It could be that some of the lead poison was still in her system and the stirring of the cells in the mid-section produced this reaction. It was endurable, however, and she sat out the exposure without a murmur. The pain persisted that night and she had to put cold compresses on her side to get to sleep. The next morning she felt fine and was eager to take another exposure to the multiple waves. This

time there was no negative reaction.

The most startling subject of all was the woman who had been awake all Saturday night with a migraine headache, an old and recurring ailment. By Sunday morning, Nov. 10th, she was sick and nauseated. It was suggested that before taking her to a doctor or hospital she be given a short exposure to MWO rays. Within minutes all pain was gone and she returned to her cotage to lay down and sleep like a baby.

THE PSYCHEDELIC EFFECT

Ed Skilling is the only one we know of who has stayed in the MWO field or rays for longer than 15 minutes. While testing and adjusting his equipment at his microphone factory several weeks ago he deliberately stayed between the antennas for an hour. At the end of that time he was beginning to feel light-headed and dreamy he thought it a good idea to get out before losing consciousness altogether.

An even more spectacular possibility is the Time-Machine effect in connection with rejuvenation. If, as Bob Beck suggested in his article, the MWO tends to take the body cell back down the time-track to a more youthful, more vital period, what would happen to a person who stayed in the field of the machine for four hours? Would his vibratory rate be speeded up to where he would disappear completely? Like the hero of H. G. Wells' "Time Machine"? Anybody want to try it? It seems, from hints George Van Tassel has been dropping over the years, that his Integratron at Giant Rock, California might do something like this -- if and when he gets it working! As I recall, both George and the Canadian Saucerian, the late W. B. Smith, spoke of the four dimensions of electricity: 1. is the electricity moving in one direction along a copper wire, 2. is the magnetic field around the wire, 3. is the static charge created by the first two effects, and 4. is Time -- or the "tempic field" as Smith called it. The Time Field equates with Space, where consciousness is everywhere present. Seems to me Lakhovsky's Multiple Wave Oscillator is a gadget which gives us the opportunity -- for the first time -- of approaching the Time Field with scientifically acceptable equipment, operating in known frequencies. Remember, that with its circular antennas it operates on the vortex principle. Each individual antenna in the group is a segment of a 60 degree cone. The 1/2 in. gaps, at alternate 180 degree from each other, conform to the alternating principle and give a damped or pulsed wave.

THE SPACE AGE EFFECT

Copies of our November Journal have gone all over the world. Each day's mail brings new orders. We are confident that Lakhovsky's invention, far ahead of its time in the 1920s and 30s, has been given a new lease on life and will be pushed to its ultimate development on every continent. There will be vigorous opposition from the right-wing conservatives and reactionaries. Their resistance will furnish the platform from which electronic "medicine" will eventually sweep the world.

I see the day when a device, similar to the MWO, will be a standard part of every home bathroom or cleansing center. You will consider it as necessary

and as routine to take an electronic showerbath, as to take a water bath. Home from work, tired, dirty and discouraged, you strip, flip on the MWO switch, and while shaving, doing your hair or whatever, re-balance your whole system with a two or three minutes exposure to the pulsing waves from the oscillator as they flood the whole room. For the sale of the house of the future it will be as important for the ad to say "shielded bath with MWO" as it will to say "tile bath with radiant heat."

Mr. Skilling told me he was tired and "dragged out" after processing dozens of volunteer "guinea pigs" late Saturday afternoon. Before shutting down the equipment he sat in the nail-less wooden chair between the antennas and gave himself a three minute shot of pulsed waves. Refreshed and revived he looked forward to a good dinner and the full evening program.

I don't know of a better Christmas gift we could have given the Associates than the idea and the plans for the Lakhovsky MWO, researched and so generously offered us by Bob Beck in the true borderland science tradition. Now it is up to you to carry it forward in your own individual way. We welcome your comments, observations and research data as you develop equipment and a testing program.

NIKOLA TESLA'S GIANT OSCILLATOR

From Chapter 11 of "Prodigal Genius,
The Life of Nikola Tesla"
By John J. O'Neill

Eventually the giant coils with their banks of condensers and other apparatus in the Colorado laboratory were ready for use in full scale experiments. Every piece of equipment was thoroughly inspected and tested by Tesla -- and the moment had finally arrived for the critical test of the highest voltage experiment that had ever been made. He expected to top his own earlier records one hundred times over, and to produce tens of thousands of times higher voltages than ever had been produced in the high-voltage transmission lines at Niagara Falls.

There was not the faintest shadow of doubt in Tesla's mind as to whether his giant oscillator would work. He knew it would work, but he also knew that he was going to produce millions of volts and tremendously heavy currents; and neither he nor anyone else knew how these terrific explosions of electrical energy would act. He knew that he had planned the experiment so that the first bolts of man-made lightning ever created would shoot from the top of the 200 foot tall mast.

Tesla asked Kolman Czito, who had worked with him for many years in his laboratories in New York, to preside at the switchboard through which current was brought into the laboratory from the powerhouse of the Colorado Springs Electric Company by an overhead transmission line two miles away.

"When I give you the word," said Tesla to Czito, "you close the switch for one second -- not longer."

The inventor took a position near the door of the laboratory from which he could view the giant coil in the center of the great barnlike room -- but not too close to it, for a stray bolt of his own lightning might inflict a painful burn. From the point where he stood he could look upward toward the open roof and see the three-foot copper ball on top of the slender 200-foot mast that had its base in the center of the cage-like secondary coil. A quick visual survey of the situation, and Tesla gave the signal -- "Now."

Czito jammed home the switch and as quickly pulled it out. In that brief interval the secondary coil was crowned with a mass of hairlike electrical fire, there was a crackling sound in various parts of the room and a sharp snap far overhead.

"Fine," said Tesla, "the experiment is working beautifully. We will try it again in exactly the same way. Now!"

Again Czito jammed home the switch for a second and opened it. Again the plumes of electrical fire came from the coil, minor sparks crackled in all parts of the laboratory and the very sharp snap came through the

open roof from far overhead.

ELECTRONIC ARTILLERY

"This time," said Tesla, "I am going to watch the top of the mast from outside. When I give you the signal I want you to close the switch and leave it closed until I give you the signal to open it." So saying he started for the near-by open door.

Reaching a point outside from which he could see the copper ball on top of the needle-like mast. Tesla called through the open door, "Czito, close the switch -- Now!"

Czito jammed the switch closed and jumped back -- but held his arm extended to yank open the blades quickly should he receive an emergency signal. Nothing much happened on the quick-contact closing, but now the apparatus would be given an opportunity to build up its full strength and no one knew what to expect. He knew that the apparatus would draw a very heavy current through a primary coil that looked like a "short circuit," and he knew that short circuits could be very destructive if the current was allowed to continue to flow. The switchboard could become a scene of interesting activity if anything let go. Czito expected the quick flash and explosive blast of a short circuit a second or two after the switch was closed. Several seconds passed with no short circuit.

As soon as the switch was closed there came again the same crackling sound, the same snap high in the air that he had heard before. Now it was followed by a tremendous upsurge of sound. The crackling from the coil swelled into a crescendo of vicious snaps. From above the roof the original staccato snap was followed by a sharper one -- and by another that was like the report of a rifle. The next was still louder. They came closer together like the rattle of a machine gun. The bang high in the air became tremendously louder; it was now the roar of a cannon, with the discharges rapidly following each other as if a gigantic artillery battle was taking place over the building. The sound was terrifying and the thunder shook the building in most threatening fashion.

There was a strange ghostly blue light in the great barnlike structure. The coils were flaming with masses of fiery hair. Everything in the building was spouting needles of flame, and the place filled with the sulphurous odor of ozone, fumes of the sparks, which was all that was needed to complete the conviction that hell was breaking loose and breaking into the building.

As Czito stood near the switch he could feel and see the sparks jump from his fingers, each pricking like a needle stuck into his flesh. He wondered if he would be able to reach for the switch and turn off the power that was creating this electrical pandemonium -- would the sparks become longer and more powerful if he approached the switch? Must this head-splitting racket go on forever? It's getting worse, that tremendous ear-wrecking bang-bang-bang-overhead. Why doesn't Tesla stop it before it shakes down the building? Should he open the switch of his own accord? Maybe Tesla has been hit, perhaps killed, and can't give orders to open the switch!

It seemed to Czito that the demonstration had been going on for an hour but as a matter of fact it had lasted thus for only a minute; nevertheless, a tremendous amount of activity had been crowded into that short space of time.

VICIOUS FINGERS OF FLAME

Outside stood Tesla, properly attired in cutaway coat and black derby hat for the auspicious occasion, his slender six-foot-two figure bearing signs of close relationship to the mastlike rod sticking out of his bizarre barnlike structure. His height was increased by a one-inch-thick layer of rubber on the soles and heels of his shoes, used as electrical insulators.

As he gave the switch-closing "Now" signal to Czito, he turned his eyes heavenward to the ball on top of the mast. He had hardly spoken when he saw a short hairlike spark dart from the ball. It was only about ten feet long, and thin. Before he had time to be pleased, there was a second and a third and a fourth spark, each longer, brighter and bluer than its predecessor.

"Ah!" ejaculated Tesla, forgetting to close his mouth that was widely opened for a shout. He clenched his hands for joy and raised them skyward toward the top of the mast.

More sparks! Longer and longer! Ten, twenty, thirty, forty, fifty, sixty, seventy, eighty feet. Brighter and bluer! Not threadlike sparks now but fingers of fire. Wriggling rods of flame that lashed viciously into the heavens. The sparks were now as thick as his arm as they left the ball.

Tesla's eyes almost popped out of his head as he saw full-fledged bolts of lightning darting into the air, accompanied by a barrage of tremendous crashes of thunder. Those lightning bolts were now half again the length of the building, more than 135 feet long, and the thunder was being heard in Cripple Creek fifteen miles away.

Suddenly -- silence!

Tesla rushed into the building.

"Czito! Czito! Why did you do that? I did not tell you to open the switch. Close it again quickly!"

Czito pointed at the switch. It was still closed. He then pointed at the voltmeter and ammeter on the switchboard. The needles of both of them registered zero. Tesla sized up the situation instantly. The incoming wires carrying power to the laboratory were "dead."

"Czito," he snapped, "call up the powerhouse quickly. They must not do that. They have cut off my power."

The telephone call was put through to the powerhouse. Tesla grabbed the phone and shouted into it:

"This is Nikola Tesla. You have cut off my power! You must give me back the power immediately! You must not cut off my power!"

"Cut off your power nothing," came back the gruff reply from the other end of the line. "You've thrown a short circuit on our line with your blankety-blank-blank experiments and wrecked our station. You've knocked our generator off the line and she's now on fire. You won't get any more power!"

How TO BLOW UP A DYNAMO

Tesla built his apparatus substantially, so that it would be able to carry the tremendously heavy currents he expected to draw off the line. While his own equipment was able to stand what amounted to a heavy short circuit, he had overloaded the generator at the Colorado Springs Electric Company powerhouse, which tried manfully to carry the added burden -- but the load of current was too much for the dynamo that was not designed to stand such heavy overloads. Its wires became hotter and hotter, and finally the insulation took fire and the copper wire in the armature coils melted like wax, opening its circuits so that it ceased to generate electricity.

The powerhouse had a second, standby generator which was started up in a short time. Tesla was insistent that he be supplied with current from this machine as soon as it was running, but his demand was refused. In the future, he was told, he would be supplied with current from a dynamo operated independently from the one supplying the company's regular customers. The independent dynamo, he was told would be the one that already burned out -- and he would get no service until it was repaired. Tesla offered to pay the cost of an extra-special rush job on the repairs if he were permitted to handle the work. Alternating-current dynamos were no mystery to him. Taking his workers from the laboratory to the powerhouse he soon had the repair job underway, and in less than a week the dynamo was again operating.

SUPERMAN CHARGES THE EARTH

A lightning stroke produces its spectacular pyrotechnics and earth-vibrating effects with less than a nickel's worth of electricity -- at a five-cent-a-kilowatt rate for current. It consists of tremendously heavy currents, many thousands of amperes at millions of volts, but it lasts only a few millionths of a second. If supplied with this "nickel's worth" of current continuously, the lightning flash would last indefinitely.

Tesla, in his Colorado Springs laboratory, was pumping a steady flow of current worth, at the above rate, about \$15 an hour into the earth. In an hour he charged the earth with several hundred times as much electrical energy as is contained in a single lightning stroke. Owing to resonance phenomena, he could build electrical effects in the earth greatly exceeding those of lightning since it was only necessary, once resonance was established, to supply energy equal to frictional losses, in order to maintain this condition.

In describing his work with the giant oscillator, Tesla, using conservative estimates of his results, stated in his article in the Century Magazine of June, 1900:

"However extraordinary the results shown may appear, they are but trifling compared with those attainable by apparatus designed on these same principles. I have produced electrical discharges the actual path of which, from end to end, was probably more than 100 feet long; but it would not be difficult to reach lengths 100 times as great.

"I have produced electrical movements occurring at the rate of approximately 100,000 horsepower, but rates of one, five or ten million horsepower are easily practicable. In these experiments effects were developed incomparably greater than ever produced by any human agencies, and yet these results are but an embryo of what is to be."

OSCILLATING THE EARTH!

The method used by Tesla to set the earth in electrical oscillation is the electrical counterpart of the mechanical device previously described, the plunger bobbing up and down at the right rhythm that created the stationary waves in water.

Tesla used a stream of electrons which were pumped into and drawn out of the earth at a rapid rhythmic rate. At the time the experiments were made the electron still was not known to be the fundamental atom of electricity, so the operation was spoken of simply as the flow of electricity.

The pumping operation was carried on at a rate of 150,000 oscillations per second. These would produce electrical pulsations with a wavelength of 2,000 meters (about 6,600 feet).

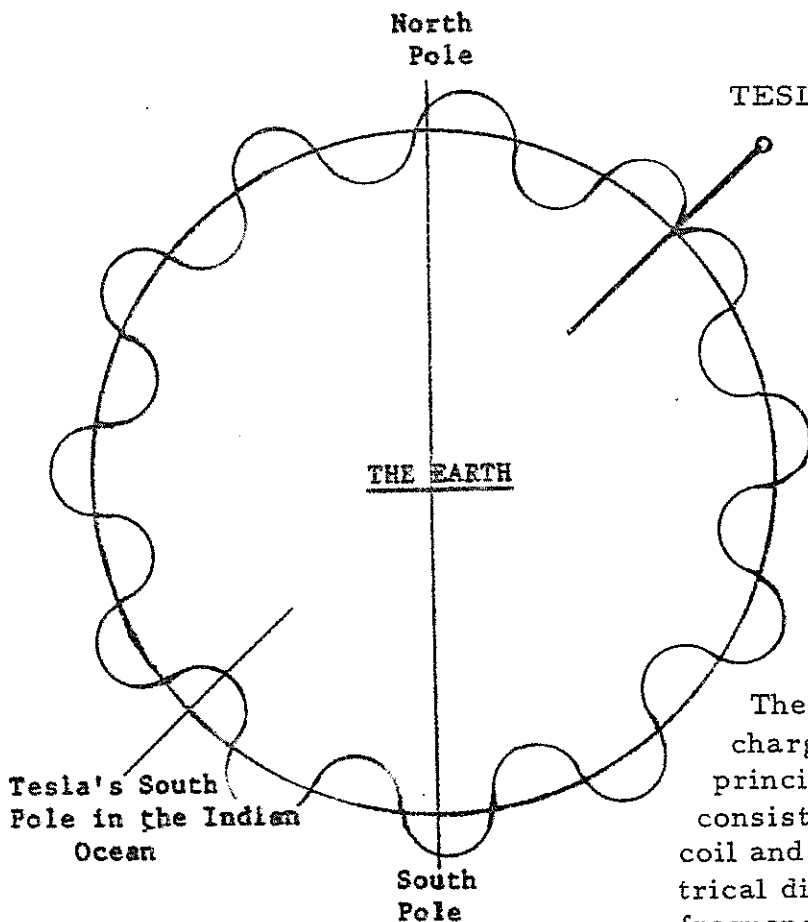
When the moving waves expanded outward from Colorado Springs, they traveled in all directions in ever increasing circles until they passed over the bulge of the earth, and then in ever smaller circles and with increasing intensity converged on the diametrically opposite point of the earth, a trifle to the west of the two French islands, Amsterdam and St. Paul, in the area between the Indian and Antarctic oceans midway between the southern tip of Africa and the southwest corner of Australia. Here a tremendous electrical south pole was built up, marked by a wave of great amplitude that rose and fell in unison with Tesla's apparatus at its north pole in Colorado Springs. As this wave fell, it sent back an electrical echo which produced the same effect at Colorado Springs. Just as it arrived back at Colorado Springs, the oscillator was working to build up a wave that would re-enforce it and send it back more powerfully than before to the antipode to repeat the performance.

If there were no losses in this operation -- if the earth were a perfect electrical conductor, and there were no other sources of resistance -- this resonance phenomenon would build up to a destructive action of gigantic proportions, even with the charging source of only about 300 horsepower which Tesla used. Voltages of gigantic magnitudes would be built up. Charged particles of matter would be hurled outward from the earth with vast energies, and eventually even the solid matter of the earth would be affected and the whole planet disintegrated. Pure resonance, however, is not attainable.

Tesla frequently stressed the fortunate nature of this fact; for otherwise disastrous results could be produced by small amounts of energy. The electrical resistance of the globe would prevent the attainment of pure resonance; but practical resonance can be attained with safety by supplying continuously the amount of energy lost in resistance -- and this supplies perfect control of the situation.

WIRELESS POWER, INSTANTLY AVAILABLE EVERYWHERE

With the earth set in electrical oscillation, a source of energy is provided at all spots on the earth. This could be drawn off and made available for use by a suitable simple apparatus which would contain the same elements as the tuning unit in a radio set, but larger (a coil and a condenser), a ground connection and metal rod as high as a cottage. Such a combination would absorb, at any point on the earth's surface, energy from the waves rushing back and forth between the electrical north and south poles created by the Tesla oscillators. No other equipment would be needed to supply light to the home, provided with Tesla's vacuum-tube (fluorescent) lamps, or to produce heating effects.



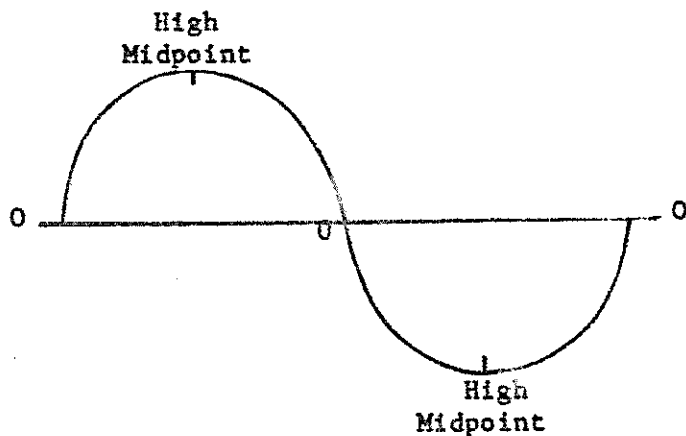
TESLA'S ELECTRONIC NORTH POLE
at Colorado Springs

(This is your editor's attempt to illustrate O'Neill's explanation of Tesla's world-shaking experiment at Colorado Springs, Colorado in the summer of 1899! With his gigantic oscillator Tesla didn't have to worry about interfering with radio and TV broadcasts then, as we have to now in 1963 with our little Lakhovsky Multi-Wave Oscillator.)

The apparatus that Tesla used to charge the earth is very simple in principle. In its elementary form it consists of a circuit containing a large coil and condenser of the correct electrical dimensions to give it the desired frequency of oscillation, a source of electric for energizing the circuit, and a step-up transformer, also tuned in, for increasing the voltage.

The current of a few hundred volts obtained from the powerhouse was stepped up by an ordinary iron box transformer to more than 30,000 volts and at this potential was fed into a condenser which, when filled, discharged into the coil connected across its terminals. The rate of back-and-forth surge of current from condenser to coil and coil back to condenser, in endless repetition, is determined by the capacity of the condenser for holding current and the length, or inductance, of the coil through which the discharge must travel. An arc between the joint terminals of condenser and coil completed the free oscillating path of the high-frequency current.

In an oscillating circuit the current is at zero value at the start of each cycle, rises to a high value and drops to zero again at the end of each half cycle. The voltage does the same. Both build up to high values at the midpoint in each half cycle.



(This familiar Sine Wave symbol of electronic science should also be recognized by the student of metaphysics as the Ying-Yang of Chinese occult science, but strung out along a zero line. The geometry of curves can be applied to Sine Waves by Western technicians in a way undreamed of by Chinese philosophers a thousand years ago. By mathematics, men like Tesla can turn this abstract symbol into a concrete equation of immense value in our daily lives. Ed.)

The coil through which the current flows is surrounded by a magnetic field produced by the current. With heavy current flows, these fields can become very extensive and of high intensity, particularly at the midpoint of each half cycle.

The primary coil, or energizing circuit of Tesla's oscillator, consisted of a number of turns of heavy wire mounted on a circular fence eighty feet in diameter in the great hall of his laboratory. In the space within this fenced enclosure the magnetic field built up to a crescendo of intensity with each half cycle of the current in the primary coil. As the magnetic circles of force moved to the center of the enclosure, they became more concentrated and built up a high density of energy in space in this region.

Centered in this area was another coil perfectly tuned to vibrate electrically in resonance with the crescendo of energy in which it was immersed 300,000 times per second. This coil -- about ten feet in diameter, consisting of nearly one hundred turns on a cage-like frame about ten feet high -- in responding resonantly, built up potentials with maximum values of more than 100,000,000 volts. No scientist has ever succeeded in building up currents

with even one tenth of this potential since that time

A TIDAL WAVE OF ELECTRONS

When the first surge of magnetic energy crashed into this coil (the secondary), it caused a downward avalanche of electrons from the coil into the earth, thereby inflating the earth electrically and raising its potential. The next surge of magnetic energy was of the opposite polarity and caused a tidal wave of electrons from the earth to rush through the coil and upward to the terminal of the coil. This was the metal ball mounted on the mast 200 feet high. The downward flood of electrons was spread over the wide area of the earth but the return upward flood was concentrated on a small metal ball on top of the mast, upon which tremendously high potentials developed. The electrons on the ball were under explosive electrical pressure and were forced to escape. They made a spearpoint attack on the surrounding air, broke a small opening, and through this rushed uncounted billions of billions of electrons, their mad stampede rendering their path through the air incandescent for a distance of scores of feet -- in other words, producing a flash of lightning.

Having thus succeeded in making the earth oscillate as if it were a piece of laboratory apparatus, Tesla would now proceed to test the practical applications of his unique method of world-wide power transmission. The full story of Tesla's accomplishments at Colorado Springs has never been told and never will be told. He carried the records engraved on his almost infallible memory, with him when he died. Fritz Lowenstein, a competent electrical engineer, interested in high-frequency currents, was his assistant at Colorado Springs. Tesla, however, took neither Lowenstein nor anyone else into his confidence.

* * *

We felt that this dramatic presentation of the use of a gigantic Tesla coil, by its inventor, would help the Associates understand better the operation of the small Tesla coil in the Lakhovsky Multi-Wave Oscillator. The primary coil at Colorado Springs in 1899 was 80 feet in diameter, ours is 2 1/2 inches. His secondary coil was ten feet in diameter with 100 turns of wire. Ours is only 1 1/4 inches in diameter and is tightly wound for 4 1/2 inches with small, insulated wire. Tesla drew 300 volts of current from the Colorado Springs powerhouse and stepped it up to 30,000 with a black box transformer. We draw 6 volts of current from a battery or a 110 volt AC transformer and step this up to a couple of thousand volts with a Ford Model T coil or transformer. Tesla's setup operated vertically between the earth and copper ball antenna. The Lakhovsky MWO operates horizontally between antenna and resonator. Tesla's copper ball antenna put out a single wave of 2000 meters. Our multi-wave antenna covers the whole frequency spectrum. These primary, positive waves, interacting with the secondary, negative waves from the opposite resonator, create rising and falling harmonics which may well reach into infinity. It is conceivable that a subject, sitting relaxed between the antenna and the resonator of the MWO will have standing waves of energy built up all over and within his body. Out of this force-field of many frequencies, the intelligent body cell apparently selects the wave-length suited

to its needs and normalizes its behavior pattern with this external stimulus.

* * *

AND NOTHING HAPPENED!

"No doubt you are deluged with correspondence about your articles on the Lakhovsky Rejuvenation Machine. Since you said it is possible for any intelligent 16-year-old to build one that is exactly that which I have had to rely on. Fortunately, my son is fairly well informed on electronics but obviously no expert at his age, 16. He followed your diagram but instead of battery power he used an electric train transformer, which he assures me, is equally efficient. He also found he had to make one change in the hookup of the Tesla Coil. I have taken four exposures and the results? Nil!"

Maybe this lady expected to be rejuvenated back to her early twenties. As far as we know, no such claims have ever been made for the Lakhovsky gadgets -- though it would be interesting if it happened! As for power supply to the Model T Ford coil, for any 6, 8, 10 or 12 volt battery or transformer should do, depending on what you have available and where you intend to do your experimenting. We understand the old Model T magneto delivered as high as 18 volts to the four coils. One handy source of 6 or 12 volt electricity is the cigarette lighter on the dash of the car. Plug in there for power when you want to expose yourself while driving or out in the country.

"I had been fighting a virus for several days and the day after the first exposure I felt a great deal better, but the second day I was right back where I had been. But that was the pattern the virus had been taking. One day I'd feel fairly normal, the next miserable again. So it is difficult to know if the Lakhovsky machine could be credited with the temporary improvement."

That's right, ma'am, some people show little or no reaction to the mytogenic waves put out by the Lakhovsky instrument. The results are unpredictable. Perhaps that's why the research was pushed no further in the 1930s by authorities here in the United States. You, like most people, think that health can be bought in a package. Lakhovsky didn't agree with this erroneous conclusion. His theory was that health is a condition of balance of all of the forces of the body. Ill health is a condition of imbalance caused by your misbehavior. If you continue to misbehave, any force applied from the outside, whether it be mytogenic waves, manipulation, drugs, medicine or surgery, will only bring temporary relief. Pain is an insistant teacher, urging you to change your mind; but if you can't change your mind, how can you change your body?

"One possible reaction to the exposure I can report is that I took the first one just before going to bed at night. It took me three hours to get to sleep. Several things puzzle me about the machine we have constructed. First of all, although we have experimented with a Tesla coil of the size your diagram calls for, as well as one almost twice the size and strength, we cannot get a two-inch spark from the antenna or resonator, 1/2 to 3/4 of an inch is the absolute maximum."

The mention of a two-inch spark was Mr. Beck's error. 1/2 to 3/4 inch arcing is all this circuitry will produce and that is adequate to affect notable changes in many forms of cell life. More power might produce faster changes, and much harm! Be reasonable, a living cell is so small as to be invisible without a microscope. Only minute amounts of energy are necessary to affect a cell, to stimulate it or to kill it.

"Second, under no conditions do we get the 'bluish glow of brush discharge' from the antenna that you mention; although we have no trouble lighting up a two-foot fluorescent lamp."

Operate your Oscillator in total darkness and you should see some brush discharge at some points on the antenna. True this re-designed equipment puts out nothing like the five-inch brush discharge visible in the photo of original Lakhovsky equipment in Mark Clement's book, "Waves That Heal", and Lakhovsky's antenna appears to be at least two feet across.

But power is not the answer to balanced cell life! Dr. Abrams discovered this with his early electronic experiments in San Francisco in the 1920s. It is the quality and the variety of the pulsed waves that counts! In any event weaker equipment can be compensated by longer exposure, and this may be more beneficial to living matter.

"And thirdly, since we have not constructed any outer shield for the machine, such as a Faraday cage of copper screen, I have been monitoring the operation on our radios and television. On the radio, one notes an annoying and loud buzz, but on T. V. except for a couple of light horizontal lines and a very slight hum, there is no serious effect. So I doubt that we're bothering our neighbors very much. In any case, we try to use the oscillator very early or very late in the day, when few people are using their radios or TV. I have sent for Clement's book, 'Waves That Heal,' and Lakhovsky's 'The Secret of Life', not only to better understand what we're trying to work with but also in the anxious hope that I will find out why our machine does not have the affect it apparently should have."

Let me assure you, good lady, there is no single cure-all for man's ills. The clue to better health is in the profound statement of the Savior of our race: "As a man thinketh in his heart, so is he." Pain is still the great teacher in the world and will be for a long, long time to come. I don't know what your physical condition is and it's none of my business; that's between you and your doctor. If you have a long history of frustration and thwarted ambition, going back to childhood and even into past lives, this mass of energy, of crystallized thought-forms, is not going to be broken up and dissipated overnight. If you have consciously and willfully flouted Cosmic laws, or have turned them to your own selfish ends, the consequences of this misbehavior will have to be worked out at this level. The occult scientist calls this Fixed Karma. In this connection, one of my favorite teachers, Dion Fortune, reminds us: "What cannot be cured must be endured!"

If the Lakhovsky oscillator does have an analgesic affect -- as it appears to have had in some cases -- it has this advantage over pain-relieving drugs; it does not leave a residue of poison in our already over-loaded liver and kidneys!

WORD OF A SIMILAR INSTRUMENT UNDER DEVELOPMENT

We have a second letter from this same lady Associate, also worthy of note in connection with the Lakhovsky Multi-Wave Oscillator.

"First off, when my brother received the machine we had built for him, using the battery indicated in the schematic, he felt the power source might be too weak. It so happens he has a business contact with one of the largest electronic instrument companies in the area where he lives. He decided to go straight to the president and seek his advice. With the whole idea placed before him this gentleman said, 'This is very interesting. I want you to meet one of our physicists who is working on a very similar instrument.' A meeting with the physicist revealed two interesting pieces of information: first, the physicist had never heard of Lakhovsky or his machine; second, as soon as this new instrument was completed, arrangements had been made to test it in a large nearby hospital! Is this latter not a cheering bit of news?"

Both cheering and discouraging. The basic principle discovered by Lakhovsky is certainly available to the mental probings of other sincere researchers, so let us keep it alive by all means. But barring a revolution in the ultra-conservative leadership of the American Medical Association, no electronic developments will be allowed to threaten the high-profit position of the drug industry.

"In their discussion of the power source, the physicist suggested my brother use a wet-cell car battery, #50, 39 plates, 70 A.H. We are using one too and it makes a much better spark from the antenna, although it still is no greater than 1/2 to 3/4 inch. It does seem stronger. Of course the machine is not so readily portable with such a heavy battery. My brother had only one exposure at this writing but he reports a noticeable improvement in the arthritic pain bothering him in his right arm for months. On the other hand, the report on the use of my own machine is somewhat less encouraging. The only positive results concern my husband. After his first ten-minute exposure, within a few hours, a painful bursur in his shoulder cleared up. He has been subject to off-again, on-again attacks of bursitis there for some 15 years; for which he had taken medication, short wave, and even X-ray treatments, when the attacks were severe. He has since taken another exposure, but neither this nor the first one seemed to help an itching-skin allergy which has bothered him for some years.

NOT THE FOUNTAIN OF YOUTH SHE EXPECTED!

"As for myself, I have taken at least a half-dozen exposures and cannot in all honesty detect the slightest difference from them. I'm sure if it were a matter of 'suggestion' or desire to prove the capabilities of the machine. On the contrary, I notice such strange contradictions as the fact that although I took an exposure yesterday morning, in the evening the fourth and fifth fingers on my right hand were painful, from some kind of arthritis or rheumatism. I had never had anything like this before. Does it not seem odd that it should develop on the day of the exposure?"

Not at all! Any positive reaction to exposure to the mytogenic rays of the Lakhovsky oscillator indicates that it is working! The mad Russian's theory is that the waves or oscillations excite the cell, causing it to release more energy, also to shake off accumulated poisons and/or tensions. If your system is loaded down with tensions from daily living in America, if your system is loaded down with poisons from processed foods and contaminated air and water, you can expect painful reactions when the junk breaks free. I believe that is what sickness is the body struggling to get rid of poison. For you, things may get worse before they get better!

HOW OFTEN AND HOW LONG?

"With the mention of two successive exposures in two days I get to what is the most important question in the use of the MWO. No one has explained why exposures are suggested at four-day intervals. Is it harmful or useless to take them more frequently? When one is uncomfortable or in pain, one is anxious to rid oneself of the discomfort as quickly as possible. And to have to wait four more days for additional improvement seems unnecessary if there is no harm in the exposures. I have exposed myself at more frequent intervals and still have observed no reactions?"

The suggested exposure rate of fifteen minutes every four days came from Dr. Gentile's extensive researches with Lakhovsky equipment in Rome in the 1930s. This is a typical professional approach to treatment of disease by doctors. From long experience with drugs and others proven forms of therapy, they know that it takes time for the human organism to adjust itself to radical changes -- without harming the organism.

Whether or not this holds true for the operation and effect of Lakhovsky machine remains to be proven and you'll have to be your own guinea pig. It's your machine; it's your body; it's your life. You can take an exposure every hour on the hour if you like; stay in all day. Who's going to stop you? This is borderland research and you are a borderland scientist, looking for new knowledge which may be of benefit to yourself and to the human race, judging from the last lines of your letter.

"I am so excited and hopeful of the efficacy of this MWO machine that I do not want to leave any avenue unexplored that may possibly help me in understanding its use and making it freely available to anybody I can possibly help. May I take this opportunity to tell you how tremendously enthusiastic and interested I am in BSRA, not only what you are trying to do but what you are accomplishing, too. From what you imply of the financial situation, it seems to be largely a labor of love and service on your part, for which you deserve great praise and the heartfelt thanks of every BSRA member and others whose lives they touch. Please accept this very, very small donation of the enclosed check, as a symbol of my appreciation."

This \$5 check was most welcome toward the expenses of carrying on this work, also the words of appreciation. The lady was also most curious about the Lakhovsky circuits, those single bands of wire which are placed around the waist, or knees, or ankles, wrist or neck, and seem to have a subtle but

very real affect on the wearers. We have an article on the "Lakhovsky Circuits or Belts" from Associate A. E. Powell, a retired lieutenant colonel of the Bri-Indian Army, and will print it in full in the March Journal; for those of you impatient to experiment with them, we quote from Col. Powell's article.

THE LAKHOVSKY OSCILLATING CIRCUIT

"The Belts can be made by almost anyone, for a few cents. At most hardware stores, for a few cents per foot, one can buy twin electric cable insulated with white rubber, used for lamps, etc. Get the smaller size 1/4 inch wide, having 42 strands of copper wire. Slit an end with a knife and the two wires easily tear apart.

"For the button, get white sheet plastic about 1/8th inch thick, saw it into pieces about 1 1/2 by 5/8th inches, and drill near each end a hole large enough to take two wires. Round the corners of the plastic and bevel edges. Thread the wires, from opposite directions, up through one hole and down through the other, leaving about half an inch projecting beyond each end of the button. Where a circuit can be slipped off the body without unbuttoning, you may overlap the ends of the wire belt an inch or two, bind with fine string and smear with Duco cement for strength.

"Parallelism and overlap of the ends are important. This builds up capacitance, produces inductance and generates an alternating current. Circuits may be worn, as many as you please, round chest, waist, neck, arms, wrists, legs, ankles, neck or head continuously. Water will do them no harm.

"Gladly will I supply Circuits, in any quantity, with buttons or bound ends. To avoid trouble with the Food and Drug people, I make no charge. Donations, however, are acceptable, and go intact into my Fund for the Sick. For long this has been doing fine work and I'm sure you will approve. For reasons stated I make no claims whatsoever for the Circuits, not guarantee nor promise of any kind. If you want to give them a trial, that is wholly your affair."

(Col. Powell died in March 1969.)

Col. A. E. Powell
15051 Otsego
Sherman Oaks, Calif. 94502

MWO USED TWENTY YEARS AGO

"The recent article in the BSRA Journal pertaining to the Lakhovsky Oscillator is of special interest to me. First, I am an engineer, Physician and Surgeon, and a Scientific Consultant for the U. S. Government. (Technical Intelligence). I am not in any manner snooping for the government. This is completely personal. We built several oscillators in 1944. These were used in my sanatorium in Dallas where we had some startling results. As we did not have the proper facilities to research the instruments adequately, we became more and more conservative. Many patients would show reactions, resembling the old fashioned Flu, after a few days following exposure to the oscillator. I realized we were using too much power, so cut the level several times with good results; but we did not completely eliminate the side effects. In 1946 I was sent

to Germany for the Government to explore Electro-biology and Biophysics in its application to electro-medical equipment. I felt it wise to destroy the machines so injudicious use would not be indulged. The possibilities have intrigued me ever since. It looks as though you have solved most if not all of the problems involved. Hence my renewed interest. The excess power upset the enzyme complex of the body, or as some felt, distorted the double electric layers of charge carried on the cells, hence allowing for the penetration of virii directly into the cells (virii operate within the cells -- bacteria operate between the cells). Cells as well as organs function in a force field so mild oscillating currents not only work through resonance but seem to regenerate these force fields. Here is where application to cancer can be optimistically explored. "

Speak for your own state, Doc! Here in California the medical association has decreed that only four forms of treatment for cancer are legal, drugs, surgery, burning rays and death.

"Proof of energy flow from the fingers and thumb is here and must be recognized. We have demonstrated it by its effect on Yeast cells, viewed under the microscope (Girwich research) whether it comes from the conscious and the subconscious mind is harder to prove, but I am impelled to believe it does. This may interest you. Years ago we experimented with crystallization. Precipitated water vapor to snow flakes in a chamber with electrodes planted in two sides. When we threw a current into chamber at a given frequency the flakes were all the same. Changing the wave length changed the crystallization pattern. Each frequency had its own pattern. Here is the explanation of energy absorption by the chemical used, and the control of the crystalline patterns by the nature of the energy flowing. "

Naturopaths are in 100% disagreement with the doctor's above explanation of the side affects of his use of the MWO on his patients. If I understand the theory correctly, according to the natural view of cold, Flu, virus infections, etc., these are attempts by the human organism to throw off mucous, to eliminate intolerable accumulations of poison from the system. Exposure to the field created by the MWO tends to raise the general tone of the whole system by stimulation. The raised vibrations release an unusual amount of mucous and other junk into the elimination channels, and until this is eliminated one would have a cold or Flu and the usual aches and pains which generally go with such a condition.

Another doctor stopped by here not long ago to tell of his sad experience in trying to use spark-gap electronic equipment in his medical practice " for those suffering patients not helped by drugs. " This powerful, high-frequency machine produced a two-inch spark! Every time he turned it on, everyone in town seemed to know it and the phone would ring Even a Faraday cage didn't shield the output of this monster. Finally he was called before the county medical board to explain what he was doing. The board presented a staggering combination of fatuous conceit and stubborn ignorance. "They didn't want to know anything about the affects of radio waves on the body and didn't care!"

CURING CANCEROUS PLANTS
WITH ULTRA RADIO FREQUENCIES

By Georges Lakhovsky
From "Radio News", Feb. 1925

"The new application of short wave-length oscillations described in the following article," wrote the Editor of Radio News, "is one of the most important ever found, and we are pleased to present to our readers this article by Mr. Georges Lakhovsky, the well known French scientist. The experiments described were carried out in collaboration with several doctors and scientists of high standing and it seems from results obtained, that the very high frequency treatments will play an important role in the future. We shall publish in a later issue another article on this new system together with the effects of ultra radio frequencies in the treatment of other diseases in human beings."

Since November 1923 I have published in various technical and radio publications, several papers in which I explained by theory that the instinct or special feeling, which permits birds to direct themselves in space, is only the results of the emission and reception of rays by living beings. While developing this theory, I explained how thoroughly I was convinced that science will discover, some day, not only the nature of microbes by the radiation which they produce, but also a method of killing disease bacilli within the human body by means of the proper radiations.

The researches I have made by means of special apparatus have shown such results, that I believe my theory is correct. This theory is that life is born from radiations, kept going by radiation and suppressed by any accident producing the destruction of the oscillatory equilibrium, especially by the radiations of certain microbes, which suppress those of the weaker cells.

Before going any further in our reasoning, it is necessary, in order to present the facts to the uninitiated reader, to imagine what oscillations really are. The motion of a pendulum will be used for this explanation. When a pendulum is displaced from the position of equilibrium, it moves back and forth producing what are known as ochrone oscillations, until the energy stored is entirely exhausted. By means of a motor, a spring, or an electro-magnet, it is possible to keep the motion of the pendulum of constant amplitude, producing undamped oscillations. If, on the contrary, the source of power is removed, the oscillations die down and it is necessary not only to re-apply the power sustaining the oscillations, but also to furnish additional energy to start the pendulum in motion. This oscillation of a pendulum reproduces exactly what happens in the cells of a living being.

Our organs are composed of cells formed of protoplasm containing various mineral matters and acids, such as iron, chloride, phosphorous, etc.

It is by the combination of these elements that the cells detect outside waves and vibrate continuously at a very high frequency, probably higher than the period of X-rays or over all other vibrations known and measured today (1925). The amplitude of cell oscillations must reach a certain value, in order that the organism be strong enough to repulse the destructive vibrations from certain microbes.

COSMIC RAYS AND CELL LIFE

The astrophysicians are actually carrying out experiments of great interest on the existence of vibrations, which have been called penetration rays and of which the frequency is higher than that of X-rays and of the alpha, beta and gamma rays of radium. Such rays, according to the theory, are produced by the earth itself and some others come from outside space. Some accurate measurements have proved the correctness of this theory. Therefore, it is quite permissible to believe that these penetration rays, or at least some of them, produce the vibratory motion of living cells and consequently their life.

For instance, let us suppose a cell vibrates at a certain frequency and a microbe vibrates at a different frequency; the microbe begins to fight the cell, and sickness is started. If the cell cannot repel the stronger vibrations and if the amplitude of its own vibration decreases, the microbe gains and its vibrations in decreasing and stopping those of the cells, bring dangerous sickness or death. If, on the contrary, the living cell is started vibrating with the proper amplitude by inside or outside causes, the oscillatory attack is repulsed. Such is my theory.

The problem is somewhat similar to the situation in which a rescuer finds himself when, coming to help a friend in a dangerous situation, finds himself fighting hand to hand against strong aggressors. The rescuer does not dare to fire his gun; fearing to harm his friend mixed up with the aggressors in the melee. Similarly, microbes and healthy cells are all exposed to electric or radio-active action, which could be used to destroy the unwanted rays and it is difficult to suppress them without harming or killing at the same time, the cells which are to be treated. In fact, since Pasteur, scientists have been constantly searching for means of destroying microbes. The great difficulty with all methods found was that in destroying the bacillae, the cell was attacked too. The experience gained in cancer and tuberculosis treated with radium, X-ray, or ultra-violet rays, shows how difficult is the work of the investigators.

A RADICALLY NEW METHOD

The remedy in my opinion is not to kill the microbes in contact with the healthy cells, but to reinforce the oscillations of the cell either directly by reinforcing the radio activity of the blood or in producing on the cells a direct action by means of the proper rays. During January 1924 I began to build, according to this theory, and with the purpose of therapeutic applications, an apparatus which I have called Radio-Cellulo-Oscillator, with the firm belief that the cells vibrating at extremely short wave-lengths would find their own in the Hertzian waves, which have the properties of producing extremely short

harmonics. The cells with very weak vibrations, when placed in the field of multiple radiations, finds its own frequency and starts again to oscillate normally through the phenomenon of resonance. This type of vibration which I propose to use, is harmless, unlike those of X-rays and radium. Their application, therefore, does not present any danger to the operator.

I exposed in front of my apparatus, during long periods, a certain number of microbes in culture, which developed themselves normally. I, myself, have never felt the effect of these ultra radio frequencies, although I remained for a great many days near the apparatus, during the treatment applied to the living cells. It is only when two living beings such as a cell and a microbe, are in contact, that the rays produced by the Radio-Cellulo-Oscillator have any direct effect upon cellular structure.

WORK IN A FRENCH HOSPITAL

The experiments which I carried out at the Salpetriere Hospital in Paris, in the service and with the collaboration of Prof. Gosset, were made with plants inoculated with cancer, and the results were described in a paper presented on July 26, last year, before the Biological Society. The text of this paper follows.

"One knows that it is possible to produce by inoculation of Bacterium tumefaciens in plants tumors similar to those of cancer in animals. One of us obtained experimentally by this method, a great number of tumors. These had various degrees of development. Some of them dry up partially, but do not die entirely until the entire plant or at least the limb bearing the tumor dies. Even removed by surgical methods, these grew again on a sick limb.

"We propose to describe in this paper, the action of electromagnetic waves of very high frequency obtained by means of the Radio-Cellulo-Oscillator of Georges Lakhovsky. This apparatus produces wave-lengths of the order of two meters and less, corresponding to 150 million cycles per second. A first plant was submitted to the effect of the radiation one month after being inoculated with cancer; at this time small tumors of the size of a cherry stone were visible upon it. This plant was submitted to the rays twice, for three hours each time. During the following days, the tumors continued to grow rapidly in the same way as those on plants, which had not been submitted to the effect of radiations. However, 16 days after the first treatment, the tumors began to shrink and dry up. A few days later the tumors were entirely dried up and could be very easily detached from the limb of the plant by merely touching them. The drying action of the radio frequency radiations is selective and affects only the sick part of the plant. Even the inside sick tissues were destroyed, although they were next to healthy cells in the center of the limb, showing that the radiations had not affected the healthy parts.

"Another plant was treated in the same way, except that it was exposed 11 times for three hours each time, to the radiations of the oscillator. Sixteen days after the first exposure the tumors, which were rather large as shown in one of the photographs, began to shrink and dry up and were easily detached from the limb exactly as in the first case. Again in this case, the healthy parts of the plant were not affected in the least. A third plant exposed to the radiations for

nine hours, that is, three treatments of three hours each, was cured in the same manner as the two others. Sixteen plants also innoculated with cancer, were left without treatment. They have tumors in full activity, several of which are very large. These experiments show conclusively that plants innoculated with cancer can be treated and cured by means of the ultra radio frequency vibrations, whereas surgical treatment fails.

"In conclusion I wish to call the attention of the reader to the fact that I have obtained very conclusive results not only with a wave length of two meters, but with longer and shorter wave-lengths. The main thing is to produce the greatest number of harmonics possible."

Such are the results of my researches with plants. At the present time, similar experiments are being carried out with animals and it seems that the effect on cancerous animals is the same as on cancerous plants.

I am highly pleased to present my theory and the results of my work in a scientific review of the United States, this great country, which has always been in the lead in the fight against this horrible sickness, cancer, and whose sympathy and help I would greatly appreciate.

* * *

The above article from Radio News magazine of over forty years ago shows how long some of Lakhovsky's theories have current in America. This article was furnished BSRA by an Associate who had met the Russian-French scientist in New York. He claims also to have visited several times the New York hospital which set up a research program on the Multi-Wave Oscillator and saw the Lakhovsky-type equipment. No information on the machine or its effects could be elicited from the hospital authorities and in the early 1950s the shielded room was dismantled and the equipment destroyed.

We feel that Lakhovsky's theories and early researches should be followed up. It should be publicly proven that high-frequency waves, in the proper concentrations, do affect living organisms in a beneficial way, or that Lakhovsky be declared an idle dreamer. Since research of this kind falls within the purposes of Borderland Sciences Research Associates Foundation, Inc., members are encouraged to build their own equipment and, in a suitably shielded or isolated environment, carry on their own research program. If you cannot obtain the necessary materials, BSRA may be able to put you in touch with another borderlander who can be of help. Until the medical authorities come forth with official approval of this radical approach to the state of imbalance or un-health attributed to disease, no one but a fool would go into commercial production of this kind of equipment in America today. It is now said to take a minimum of \$300,000 in research money and three years of testing to develop medically acceptable data.

HOW DR. JAMISON WAS TRAPPED

In a letter dated Aug. 29, 1967, Dr. Jamison enclosed this news clip from the "Modesto Bee":

"Turlock -- Veterinarian Stanton L. Jamison yesterday was fined \$249 in Turlock Judicial District Court after being convicted of three charges stemming from his use of an electronic machine to treat human patients for cancer. A jury of nine women and three men returned a verdict of guilty on one count of practicing medicine without a license and two counts of advertising a device represented to have effect on cancer, stomach ulcers or bone diseases. The decision followed a two day trial in which Jamison defended himself. . .

"They (Jamison and his assistant, Martha Ann Davis) were arrested last December following a lengthy investigation by Turlock police officers and agents of the State Bureau of Food and Drug Inspection. The investigation began when Police Chief John Viarengo requested assistance from the bureau after learning 'the cancer-curing machine' was being operated here.

"During the investigation, Food and Drug agents Willis Worley and Harvey Lee arranged several meetings with Jamison on the pretense they were interested in purchasing machines similar to his. Jamison reportedly organized a church as a front for his operation. The facility, located at 200 West Main St., was known as the Life Aquarium Center. Worley and Lee became bishops of the church as did deputy District Attorney Frank Damrell, Jr., who prosecuted the case. At the time of the investigation, Damrell was employed in the State Attorney General's office.

"Worley said Jamison's intention was to open other treatment centers throughout the state, using his bishops to set up facilities under protection of the church. 'This was the most fantastic investigation I've ever been involved in,' said the agent this morning.

(Yes, it is fantastic to think anyone would want to give or donate healing services free when there are billions to be made on the four kinds of cancer treatment authorized by the California Medical Association: Drugs, Surgery, Radiation and Death. RHC.)

"Worley points out the manufacturer of Jamison's machine was convicted of grand theft two weeks ago in Los Angeles after selling a similar machine to a Food and Drug agent under false pretenses. (This was probably Ralph Bergstresser, Burbank Calif., who was manufacturing and selling the Bob Beck MWO for \$250.)

"After Jamison's conviction yesterday, Damrell called for imposition of a prison term for the veterinarian. If he had received the maximum penalty, he could have been sentenced to 18 months in jail and fined \$1,500.

"'We felt very strongly on this,' said Worley, 'because Jamison could have easily become a menace to many innocent victims throughout the state.'"

MWO IN USE AT INDIAN CLINIC

"I am continuing my experiments with the MWO and my experience is that in practically all cases there is an aggravation of the existing symptoms which

were there long back are brought to the surface. Hemorrhage was seen in another case and treatment was stopped forthwith. This is one problem which has to be tackled before MWO can be used with confidence. I think MWO treatment should not be given to tubercular cases. Also in cases where there is a hemorrhagic tendency this would do more harm than good.

"Neuritis seems to respond nicely to this treatment. Sciatica is definitely cured by this. Some cases of Rheumatism and Arthritis are benefitted, responding at first but the improvement does not last much longer. I cannot understand the reason for this eccentric behavior. I think there must be something with the frequencies."

Don't blame it on the frequencies, Doc, blame it on the patient who stubbornly clings to his fixed ideas and rigid, unyielding mental patterns. We have no evidence that the radio frequencies of the MWO reach into the mental world. Each person's aura is loaded with "signatures", national, family and religious concepts hammered into him over the years. His creative energies, flowing freely down from the higher worlds, channel through these deeply cut "grooves" in mind and emotions. The health or illth of the physical body indicate whether the person's ideas are in tune or out of tune with Creation. As a man thinketh in his heart, so is he.

"Can you please let me know what are the ranges of frequencies these machines have? Have they been measured and are they the same in all instruments? Is there any difference in the models prepared in the USA and France? Which model was tried by Lakhovsky in the New York hospital? What are the actual frequencies used by him?"

The only frequency readings we have on an MWO were those submitted by Bob Beck originally, from the output of his own machine. "It radiates RF interference over a bandpass of 15 Kilocycles to well beyond 250 megacycles. This blocks AM, FM and Television reception for hundreds of yards. . ." But so does my electric razor, and I've been using one for years. I was told by a sailor that electric razors are very effective as "scramblers" for knocking out the electronic brains of guided missiles, and have been so used as defensive equipment during missile exercises on aircraft carriers at sea. No one has furnished us with RF output figures from original Lakhovsky equipment, either at the New York hospital or from Europe. If anyone has these figures I hope they will be kind enough to forward them to you.

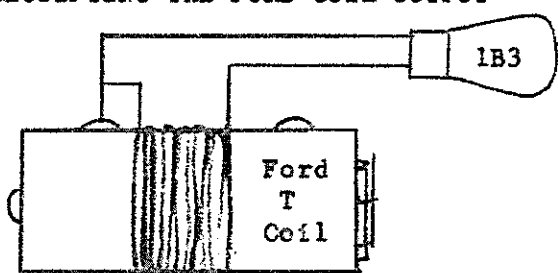
"An Associate writes 'A very good psychic in Florida gave the following, in a sitting devoted to the MWO. It is not anywhere near developed to its potential. It has unlimited amplifications to be made.' The use of the MWO can change the auric field, thus spiritually it can change the individual. This is done with the work of the seven rays of life. The MWO should be used in conjunction with the radionics instrument.' What about this radionics instrument? I would appreciate it if you can throw some light on this.

Sorry, Doc, the punitive hand of the American Medical Association has driven radionics builders and users underground here in the United States. No one but a fool like me would stand up on the firing line. England isn't quite the police state America is and you can get information on radionics and radionics equipment from the Delwarre Laboratories, Oxford, England, and from Bruce Copen, British Radiesthesia Ass'n., "The Lodge", Brantridge Forest, Balcombe, Sussex, England. Radionics experts have developed rates for every organ in the body. Equilibrating those rates with specific radio frequencies offers an interesting field for borderland research.

"I have tried both the Vitic and the Eeman Screens. I am still continuing my experiments with the Eeman Screens. Only a couple of days back I gave a set of screens to a patient who is having an encyclopedia of complaints. The MWO did not give her much improvement hence the change. I have one set of Vitic with me and whenever I feel a bit out of sorts I sit for ten minutes and get back my vigor. I am using a very strong pair of magnets and a carbon rod 1 1/2 in. in diameter. After I received the MWO my interest in the other two flagged. I think I will have to cultivate them again."

Dr. A.K. Bhattacharya, Shastri Villa
Naihati 34 PGS, West Bengal, India

RECTIFYING THE FORD COIL OUTPUT



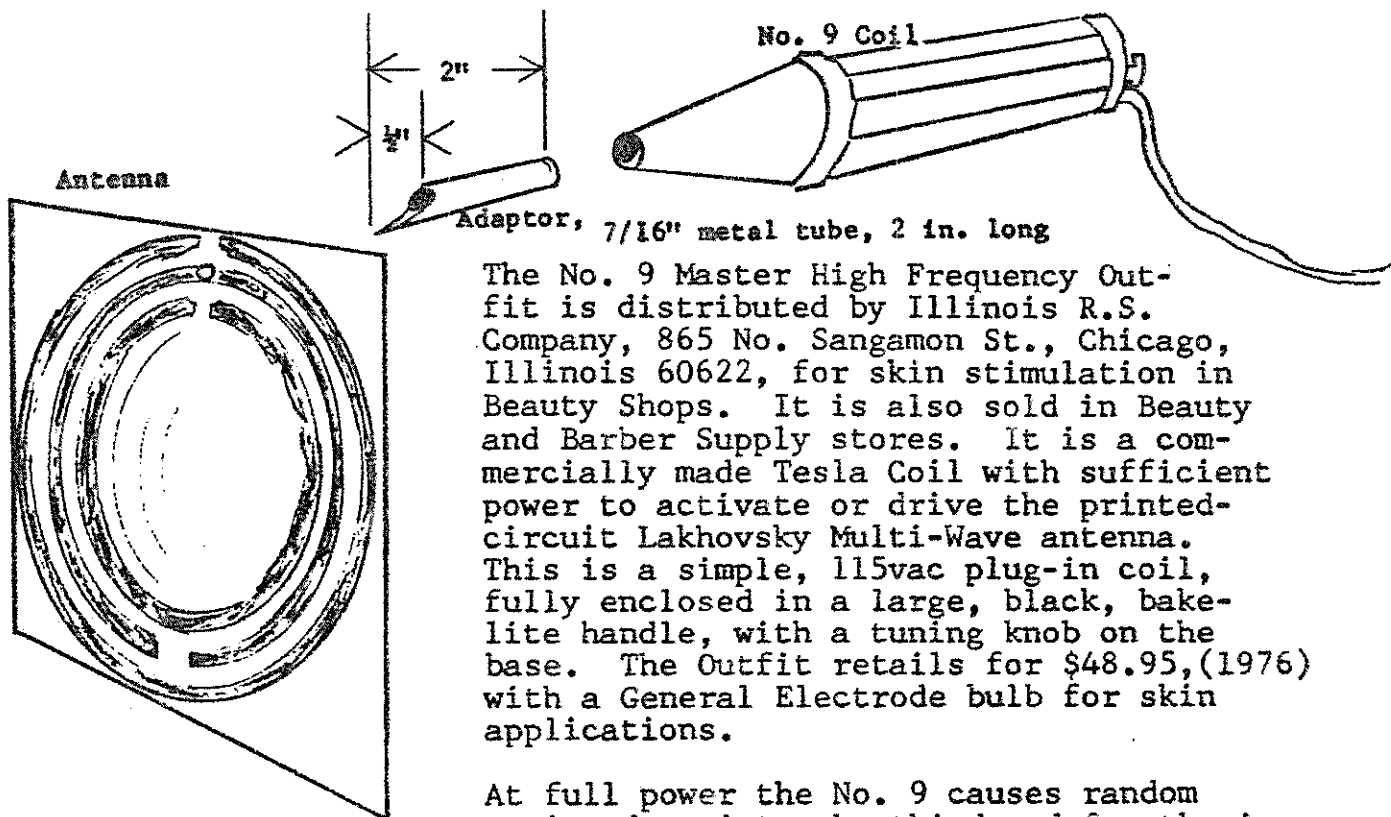
To Spark Gap and Condenser

Wind 15 or more turns of fairly heavy insulated copper wire around the middle of the Model T Ford Coil.

One lead from the winding goes to the Hi-voltage output of the Coil, and to pin 2 or 7 of the 1B3 tube. The other lead goes to the other pin, as only two pins of the tube, 2 and 7, are used in this hookup.

The souped-up or rectified voltage is drawn off the top of the tube to the spark gap and condenser.

The 1B3GT or 1G3GT high-voltage tube can be bought from local radio stores for \$2.75. It is listed at \$1.38 in Allied's latest catalog, No. 270, page 263, Dept. No. (25B28) for RCA and GE tubes. Allied Radio, 100 N. Western Ave., Chicago, Illinois 60680.

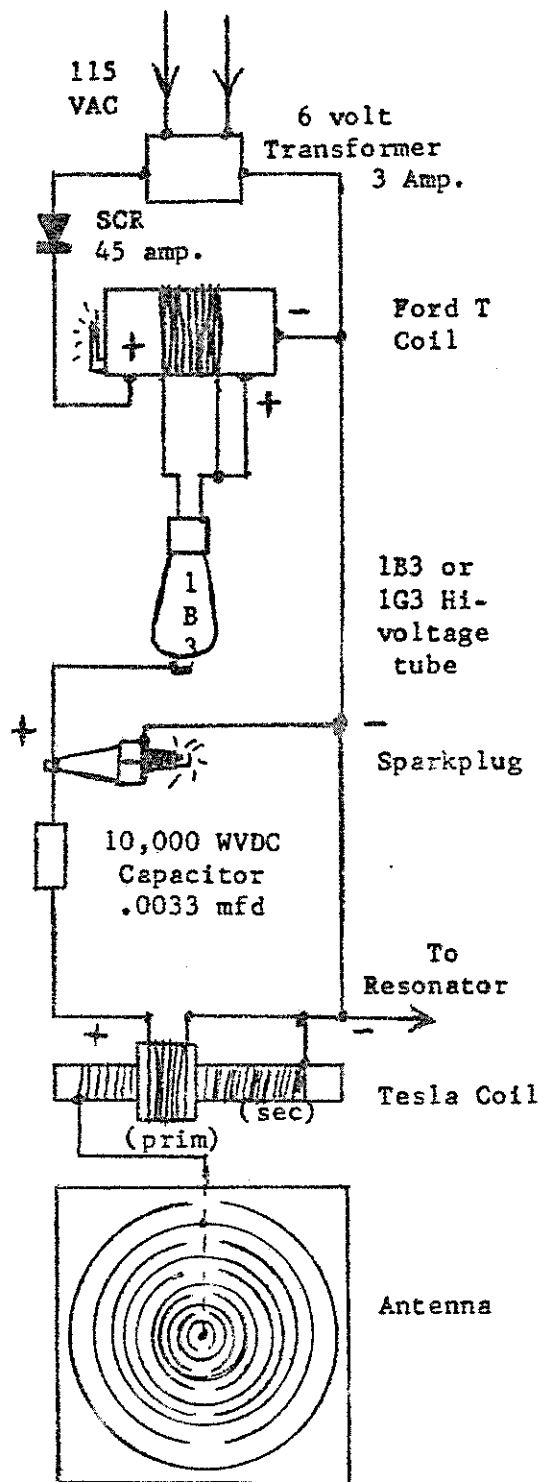


The No. 9 Master High Frequency Outfit is distributed by Illinois R.S. Company, 865 No. Sangamon St., Chicago, Illinois 60622, for skin stimulation in Beauty Shops. It is also sold in Beauty and Barber Supply stores. It is a commercially made Tesla Coil with sufficient power to activate or drive the printed-circuit Lakhovsky Multi-Wave antenna. This is a simple, 115vac plug-in coil, fully enclosed in a large, black, bakelite handle, with a tuning knob on the base. The Outfit retails for \$48.95, (1976) with a General Electrode bulb for skin applications.

At full power the No. 9 causes random arcing down into the third and fourth rings of the antenna. There is no negative ground for hooking up a Resonator Antenna as suggested by Bob Beck, but the single Angenna produces a strong, local field anyhow. Prove it by holding a fluorescent tube in your hand while standing or sitting in the field. The General Electrode bulb is very effective for knocking out local infections because of the ultra-violet light released.

To adapt the Coil to the MWO antenna, make an adaptor from a two-inch piece of brass or other metal tubing, 7/16 inch i diameter. One end of the tubing will have to be sanded down lightly to fit easily into the bulb socket on the Coil. The other end should be filed or cut back an inch, but leaving a narrow tit or stub on which to hang the antenna, through the terminal connector hole on the second antenna ring, or in the center hole.

The Coil can be laid on the edge of a desk or table. Let it stick out as far as possible from drawer handles or other metal parts which might draw off the invisible brush discharge from the antenna as it hangs vertically from the adaptor. Metal parts close to the antenna field or in it produce eddy currents in the field, reducing its effectiveness and power.



MODIFIED VERSION OF THE BECK TESLA COIL

115 volt house current into the black leads of the 6 volt transformer, one green lead to the T Coil negative terminal, the other to an SCR 45 amp Diode to make direct current to the Plus terminal of the T Coil. A 12-volt current to the T Coil heats it up and will not increase the spark. Radio Shack's 6.3 volt, 3 amp transformer does very well for a power supply.

Wrap 16 turns of insulated hookup wire around the middle of the T Coil and feed to pins 2 and 7 of the 1B3 rectifier tube. Feed the plus output of the T Coil into pin 2 or 7 of the IB3 also.

Hi-voltage from the top of IB3 toes to Sparkplug. Widen gap of plug to 1/8 inch or more for maximum output of Secondary coil to Antenna.

One 10,000 WVDC (Working Volts Direct Current) commercial-type Capacitor, on the plus side, will do very well in this circuit. Capacity can be from .0015 to .005 microfarads.

Beck's tunable Tesla Primary called for 20 or more turns of bare wire for his movable contact but experience shows that 16 turns gives the maximum output; so experimenters now wind 16 turns of insulated #19 wire for a Primary and adjust one turn more or less for maximum spark at Plus end Secondary coil. This is 4 1/2 inches of tight-wound #34 insulated wire, or 4 3/4 inches of #32 insulated wire, for 420 turns more or less on a 1 1/2 inch coil form 6 in. long. The Primary is wound on a 2 or 2 1/2 in. coil form. There should be heavy insulation between Primary and Secondary to prevent power-loss arcing between Coils.

REMEMBER, the goal is a thin blue, or blue-white spark at least 3/4 inch long at the plus end of the Secondary. When fed into the center hole of the Antenna it should light up like a Christmas tree, with arcing between every ring. Feeding the coil output into the center hole gives more power to the shorter wave lengths. We get plenty of the longer wave-lengths from other electrical apparatus and from power lines.

This coil would be a good high-frequency power supply for Kirlian Photography.

(Antennas now available at \$9.00 each, and .0033 capacitors \$4.95 each.)

TESLA, ON THE USE OF HIS COIL FOR CELL STIMULATION

From the book, "Nikola Tesla", published by the Nikola Tesla Museum, Belgrade, Yugoslavia, 1956. (In English)

"When a person is subjected to the action of such a coil, the proper adjustments being made, luminous streams are seen in the dark issuing from all parts of the body. These streams are short and of delicate texture when the number of breaks (spark gap) is very great and the action of the device free of any irregularities; but when the number of breaks is small or the action of the device imperfect, long and noisy streams appear which cause some discomfort. The physiological effects produced with apparatus of this kind may be graduated from a hardly perceptible action when the secondary is a great distance from the primary, to a most violent action when both coils are placed at a small distance. In the latter case only a few seconds are sufficient to cause a feeling of warmth over all the body, and soon after the person perspires freely. I have repeatedly, in demonstrations to friends, exposed myself longer to the action of the oscillations, and each time, after the lapse of an hour or so, an immense fatigue, of which it is difficult to give an idea, would take hold of me. It was greater than I experienced on some occasions after the most straining and prolonged bodily exertion. I could scarcely take a step and could keep the eyes open only with the greatest difficulty. I slept soundly afterward, and the after-effect was certainly beneficial, but the medicine was manifestly too strong to be used frequently."

The Beck Tesla Coil in this brochure is not powerful enough to cause such strong reactions as Tesla describes -- at least not to any experimenter who has reported in so far; so it can be tried out several times a day, if one wants to; but remember, body cells are minute things, requiring minute amounts of energy.

"High frequency impulses produce powerful inductive actions and in virtue of this feature they lend themselves in other ways to the uses of the electro-therapist. . . if the body of the patient constitutes a terminal, and an assistant may by the motion of a handle cause the points of highest potential to shift along the body with any speed he may desire. When the action of the coil is vigorous, the region of the highest potential is easily and unpleasantly located by the discomfort or pain experienced. . . "

To put it simply, augment your own healing energies with the discharge of the Coil by picking it up through a pair of pliers held in the bare left hand, then with the bare right hand, massage lightly the bare skin of your subject over the affected area. That's what Tesla was trying to say. This technique concentrates the electro-magnetic energy in one area, rather than creating a field which envelopes the entire body.



Antennas
from BSRF, \$9.50 each, pp.

TESLA COIL FOR MWO

"Dr. A.K. Bhattacharya of India advised me that you have got Microwave Oscillators for sale. I am here in the U.S.A to to buy this equipment for the Karnatak Homeo-Medical College, Hubli, Karnatak, India. Please let me know details of power, frequency, method of operation and price. We are also interested in buying eletrophoto colorimeter and plastic human skeleton."

J.W. Deshpande, M.D.
Chicago, Illinois

Glad to hear from you, Doc, but we re not in the manufacturing business, except for printing, and you can buy our MWO brochure (BSRF No. 29) from us for \$4.00. This gives details of a Multi-Wave Oscillator and summarizes such research as our Associates have done up to the present time. If technicians at the College cannot build an MWO from plans, you can buy a commercially manufactured Tesla Coil of adequate power (50,000 volts) from Edmund Scientific Company, Barrington, New Jersey 08007 for \$89.95. This puts out a good, 3/4 inch spark from the metal ball accumulator at the top of the coil.

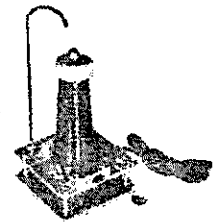
For Multi-Wave operation the ball is unscrewed from the shaft at the top of the coil, a multi-wave antenna is mounted on the shaft, as shown in the illustration above, and the ball screwed back on to hold the antenna in place. The whole assembly can be turned on its side as shown and set near the edge of a table, close to the subject of the experiment. so the hi-frequency, electro-magnetic waves can beam directly into it, or him, or her.

The negative ground rod shown in the catalog illustration below, can easily be removed. Then the wire lead from the Resonator antenna can be attached to the negative ground post -- though the Resonator is not absolutely essential to the successful operation of the Coil or MWO. The Edmund Tesla Coil is much more desirable than the No. 9 coil available from beauty supply stores because it can be operated for 10 or 15 minutes at a time without overheating.

14 years of research by dozens of Associates here and abroad indicate that soft radio waves in these comparatively weak configurations have a very beneficial effect on living tissue.

Tesla Coil

Radiates high frequency energy through space. Lights fluorescent tubes 2 ft. away. High frequency generator with coil capacitors and transformer. Unit has ball electrode, insulative base, protective plastic cover and cord. Comes equipped with small neon lamp, discharge electrode, 2 radiation antenna plates and 16 page instruction booklet that includes 21 experiments. Socket for standard bulbs enables you to connect these or similar radiator to coil top. Generates 50,000 volts. 110v AC, 60 Hz, 14 x 6 x 6" in size.



No. 70,301 \$89.95