The Orgone Amplifier: A Novel Orgone Emitter Utilizing the Reverse Piezoelectric Effect

Summary

In this article we introduce a novel apparatus for the transfer of microwave, 5G, RF, and EM waves into orgone, an ordered force of life energy. We examine the nature of orgonite and orgone pyramids, and understand the operating theory behind these common devices. We break down each step in the oscillator process and examine the harvesting of electromagnetic waves. We explore the wave nature of mediums and explain the resonance patterns that we expect to see in the crystal. Finally we test the circuit to prove the production of orgone. This article is the first part in a two part series that explains the complete theory, operation and construction of the Orgone Amplifier. Part 2 will contain a build guide with part selection and construction techniques.

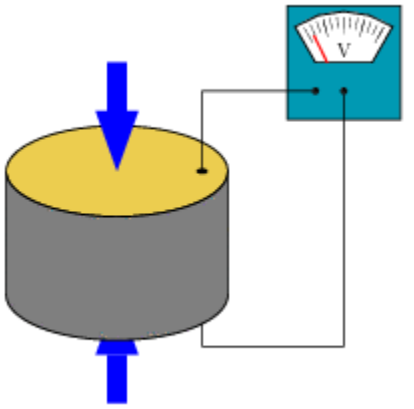
What is Orgone?

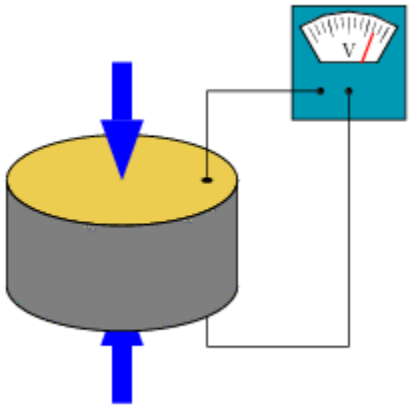
Orgone is life energy

Orgone was conceived as the anti-entropic principle of the universe, a creative substratum in all of nature comparable to electromagnetic aether. Orgone is experienced as a mass-less, omnipresent substance, more closely associated with living energy than with inert matter. Orgone can create organization on all scales, from the smallest microscopic units—called bions—to macroscopic structures like organisms, clouds, or even galaxies. Orgone is a universal life force closely related to Chi and Prana.

Orgone is generated from order

Quartz crystals are a very regular repeating structure of silicon and oxygen atoms. Orgone can flow from the silica crystal lattice under proper conditions. Quartz is used in many electronics, one of which is the common electronic scale. When the quartz lattice is strained under the weight of an object, it produces a charge, which can be detected. The amount of detected charge is measured, and this measurement indicates the weight of the object on the crystal.





https://en.wikipedia.org/wiki/Piezoelectricity#/media/File:SchemaPiezo.gif

The effect of turning strain into measurable charge is called piezoelectricity, which many electronics utilize for other functions. The Orgone Amplifier circuit uses the piezoelectric effect to vibrate the quartz crystal at its resonance frequency and all harmonics, called overtone frequencies. Each crystal specimen has a resonance frequency set specific to the cut and clarity of the specimen, but also the orientation of the applied charge. By electrically pulsing the quartz specimen in tune with its resonant and overtone frequencies, the Orgone Amplifier is able to turn quartz and silica based crystals into an energy transferring Orgone Emitter.

How do Orgone Pyramids work?

Orgonite and orgone pyramids both aim to utilize Radio Frequency (RF) energy, sometimes called negative orgone or DOR, to create positive orgone energy. Orgonite and orgone pyramids are both made from layers of epoxy resin and conductive materials, with a quartz based crystal suspended within the metal/resin structure. The orgonite materials are specifically chosen for their properties, resin for its electrically insulative property, metal for its high electrical conductivity, and a mono-crystalline quartz crystal for its well studied property of piezoelectricity.

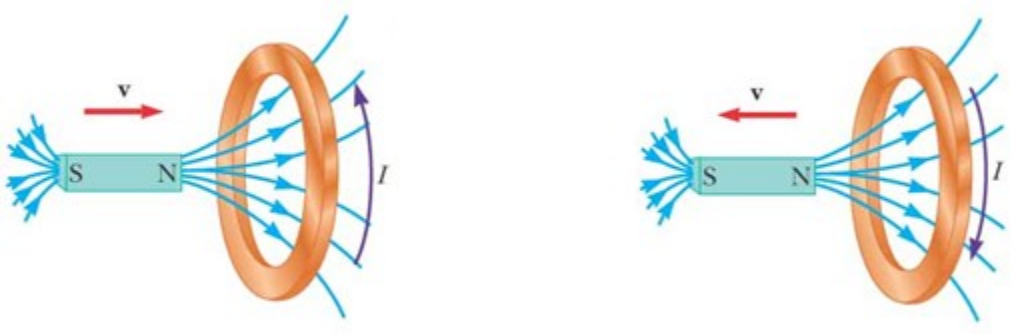
Orgonite is constructed by mixing conductive material with epoxy resin, and allowing the resin to cure while a specimen of quartz is suspended within the mold. The quartz specimen ends up encased in layers of resin and conductive materials, and uses the metal in the orgonite to harness EM waves. The energy in the captured EM wave is provided to the quartz crystal to be transferred into orgone.

Photo Credit: Marcel Klapp

The conductive material used within orgonite can be copper, steel shavings, silver, gold, aluminum, or metallic glitter, each serving the same purpose, to facilitate the transfer of charge. The concentration of conductive materials within the resin is of great importance as there must be a greater than 50% concentration of conductive materials to resin, to facilitate optimal number of paths that charge can distribute itself throughout the structure. Certain metals have a higher conductivity than others, with Silver, Copper, Gold and Aluminum having the most electrical conductivity. Silver is the most conductive metal, but quite expensive, so copper is used instead with little impact to conductivity. The purpose of the conductive material is to maximize the effect of Lenz's law.

A short review of Lenzs law is below:

Lenz's law is one of the foundational theories of electromagnetism and was discovered by Emil Lenz in 1834. It can be visualized in the below image:



When the magnetic field moves into the ring, current in the copper conductor is forced to move in one direction, denoted by the purple arrow. When the magnet is moved out of the ring, the flow of electric current is reversed. This simple experiment extends to the orgone pyramid, the magnetic field is induced by very fast frequency electronic waves, and the copper conductor acts as a channel for electric charge.

With optimal concentration of conductive material within the resin, this induced charge is directed to the embedded quartz crystal.

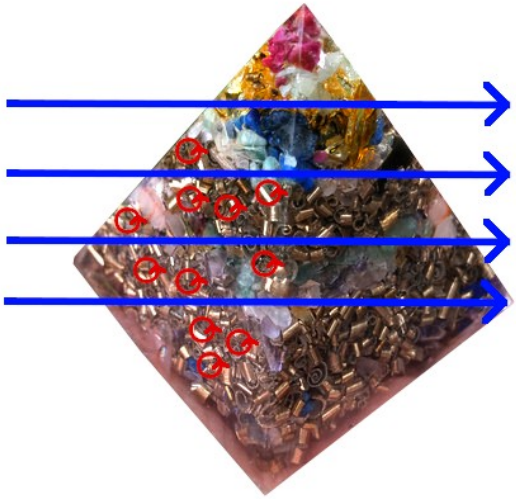


Photo Credit: Marcel Klapp

There is some controversy as to the exact nature of the quartz crystal and the mechanism that produces orgone, but after much research and experimentation, a consensus has been reached that orgone arises from the piezoelectric effect of crystal structures.

<u>Piezoelectricity is a Property of Crystals</u>

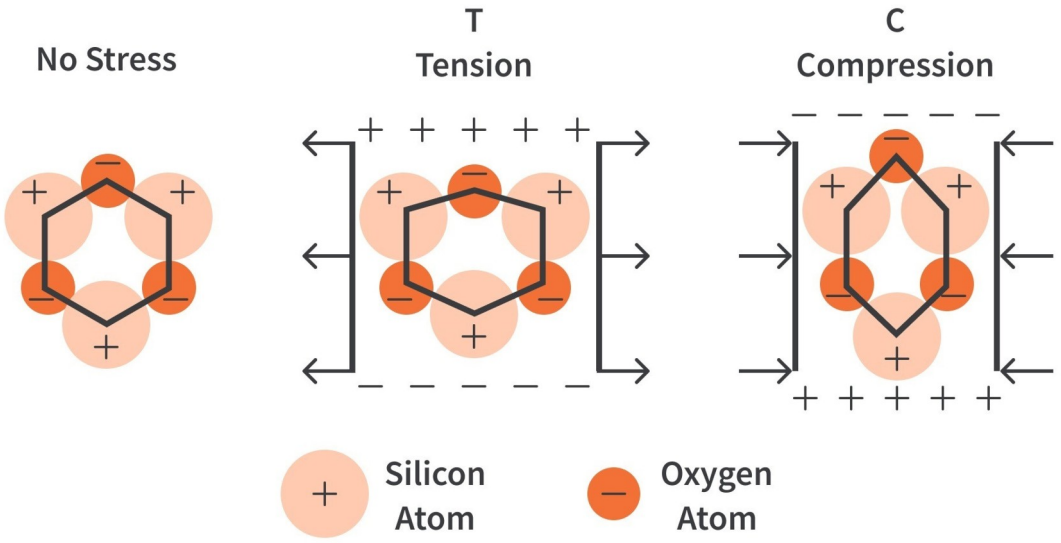
The piezoelectric effect is not a sole property of quartz. There are many gemstones and other materials that have a crystal structure which exhibit the same effect. Langasite, Gallium, Topaz, Tourmaline, and even strange crystal structures such as certain salts, sugars and bone can display the properties of piezoelectricity.

From left to right, Langasite, Topaz, Tourmaline, Rochelle Salt and Bone

Due to the reliance of orgone pyramids and orgonite upon the piezoelectric effect, a section is dedicated below.

The Piezoelectric Effect

Piezoelectricity is the property of a crystal structure to create a net charge under strain. Lets observe the below diagram



When the crystal lattice is under no stress, it is charge neutral, all atoms are charge balanced. As the crystal lattice is placed under tension, the atomically positive silicon atoms are shifted upwards relative to the atomically negative oxygen atoms. The result is that the area around the two positive silicon atoms at the top becomes a net positive area of charge. The opposite happens toward the bottom of the lattice, the oxygen atoms are moved downwards relative to the positive silicon atom, creating a net negative area of charge. When the lattice is under compression the reverse happens, and the oxygen atom toward the top of the lattice is displaced, creating a net-negative charge region. Towards the bottom of the lattice, the displaced silicon atom creates a net-positive charge region. Remember to not be confused by the terminology, a net-negative region or net-positive region is not inherently better than the other, but two sides to the same electrical force.

To summarize, when the silicon/oxygen crystal lattice is distorted, it produces a net electric charge.

This effect is used in common industrial and scientific devices which include speakers, microphones, piezoelectric ink-jet printing, generation of high voltage electricity, clock generators in electronic devices, micro-balances, ultrasonic nozzle drivers, and in ultra-fine focusing of optical assemblies. It forms the basis for scanning probe microscopes that resolve images at the scale of atoms. It is used in the pickups of some electronically amplified guitars and as triggers in most modern electronic drums. The piezoelectric effect also finds everyday uses, such as generating sparks to ignite gas cooking and heating devices, torches, and cigarette lighters. Materials that exhibit the piezoelectric effect also exhibit the reverse piezoelectric effect, the internal generation of a mechanical strain resulting from an applied electrical field. The reverse piezoelectric effect is the primary mechanism used within orgonite and orgone pyramids. The generation of orgone lies in the crucial step after electrical energy is applied to the crystal. After the strain within the lattice reaches a maximum, it is the lattice’s tendency to return to an equilibrium state that generates orgone energy. The electrical field enters the crystal, and like compressing a spring and feeling the recoil, the crystal has a natural tendency to return to the ordered state. The action of returning from an excited state to the equilibrium state is the primary emission of

the orgone pulse. The crystal lattice has the ability to cycle between states many thousands or millions of times every second.

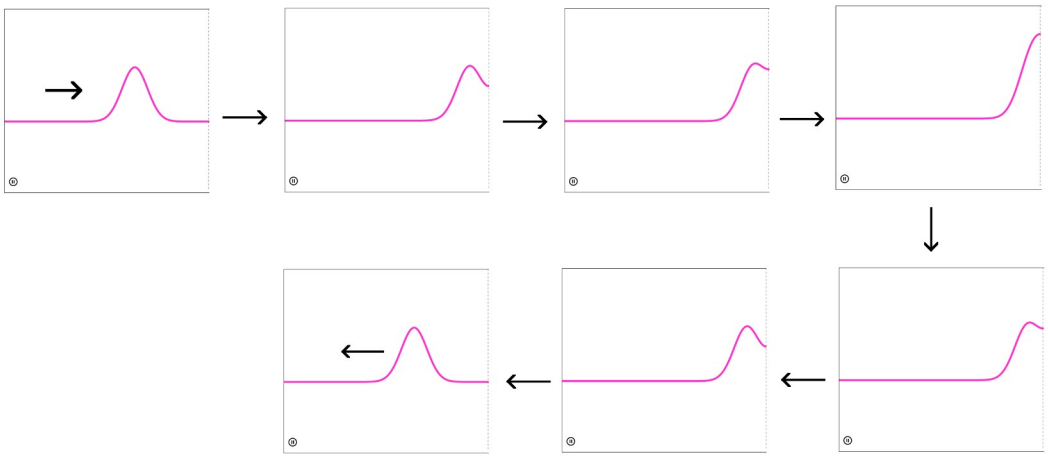
Through this method the quartz crystal can be pumped of orgone energy, provided a very regular pulsed charge is applied across the lattice. The crystal will oscillate in accordance with all harmonics and overtones, different for each specimen, dependent on the geometry and makeup. When the pulses of energy through the crystal become fast enough to tune with the specimens natural frequency, positive feedback occurs and the crystal will vibrate with a standing wave pattern. This wave structure takes the characteristic mathematical form of a Bessel wave function. To properly understand the continuous generation of orgone energy, we must understand the wave theory behind the vibration modes of the material.

Wave Theory

Many have been to the beach or the lake and understand the action of surface waves.

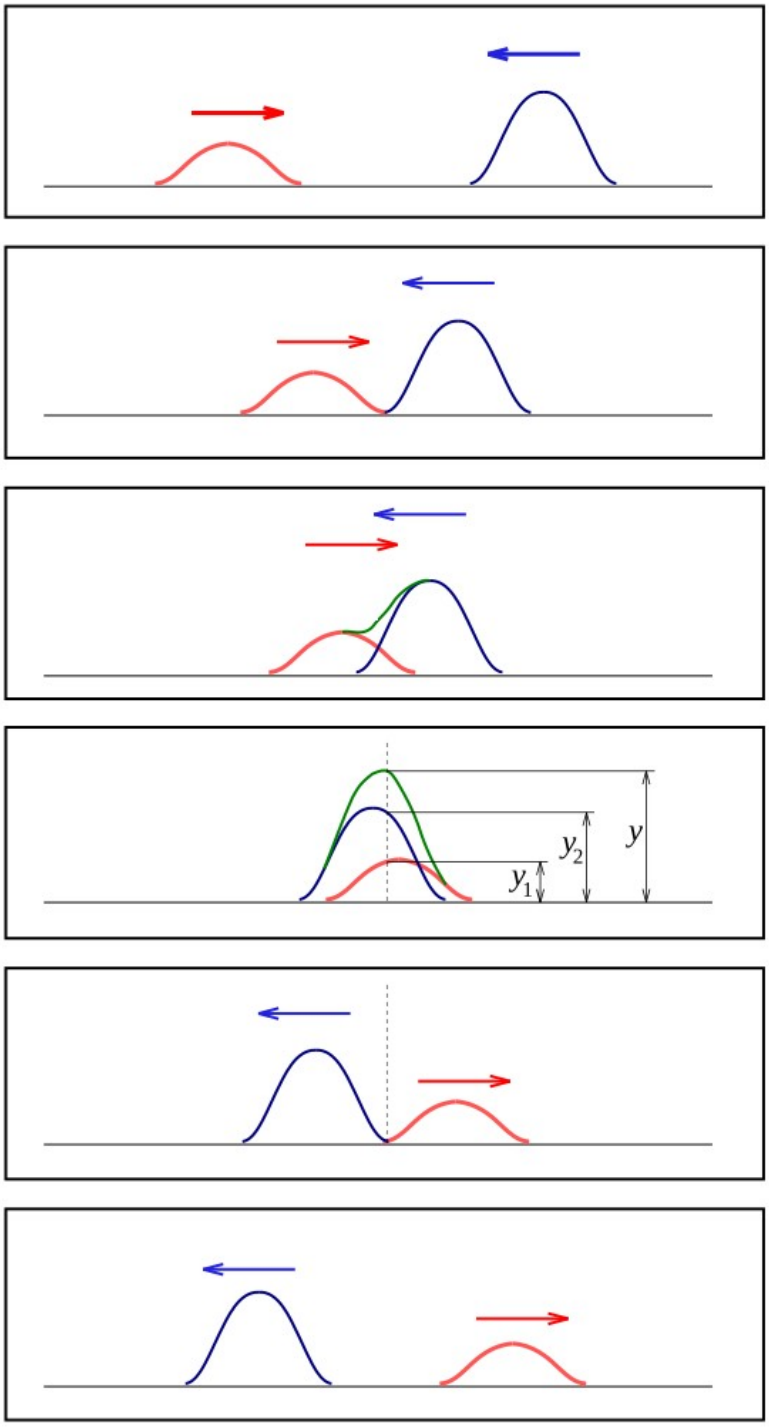
We can see that the waves follow a pattern, and that they are spaced out at regular intervals of time. This pattern occurs when waves are free to propagate through a medium and break onto the shore. This is an example of wave motion in a liquid, but it turns out that waves can form and propagate within solid and gaseous objects as well. Some interesting things happen when waves traveling in a medium are confined to propagate within a certain geometry. If the beach that the waves are crashing on is too steep, or if there is a sea cliff at the water’s edge, there exists the possibility for a wave to reflect off the boundary that the shore creates.

Incoming waves reflect from the sea-wall, and the energy is carried back into the medium away from the boundary. A graphic is provided below to illustrate the reflections.



To understand what happens after the incoming wave is reflected, the reader must understand a concept called superposition. Within a linear medium such as water, waves that pass over each other can constructively add. If two waves of equal polarity collide while moving in opposite directions, the waves can stack on top of each other, reaching a new combined height. It follows that this reflection from the sea wall will add with the next incoming wave, creating a resulting wave up to twice the height of original.

Below is an illustration of the superposition of waves:



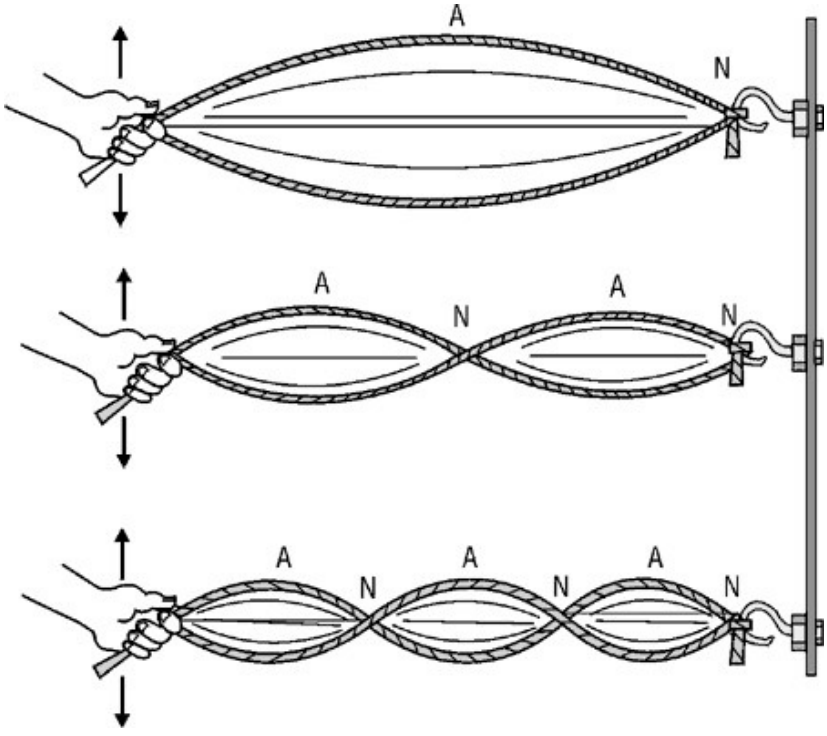
We can see in this diagram, the two waves pass right through each other, but combine to form one combined height in green. We see this property in virtually all mediums: gasses, liquids, solids, plasmas, Bose-einstein concentrates, and others. We see this pattern at the macro scale and subatomic, It is virtually everywhere we look.

Observe this surfer riding a wave that has been reflected off the shore:

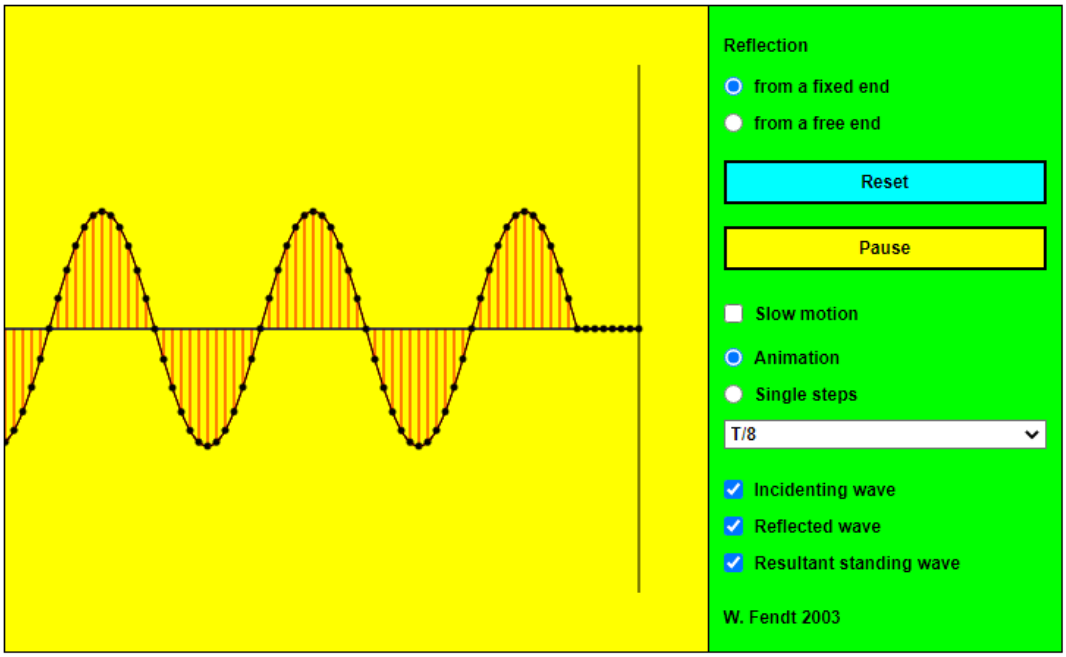
https://www.youtube.com/watch?v=YB9sl7xFjdc

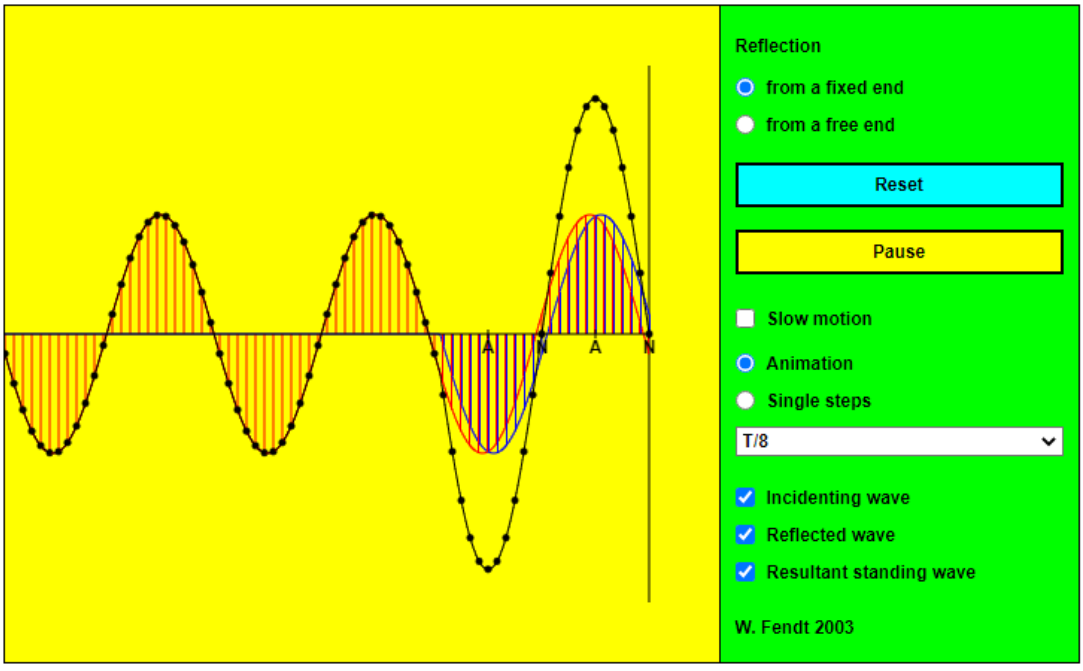
We can see the reflected wave (purple) and the next incoming wave (yellow) combine to form a larger wave (blue)

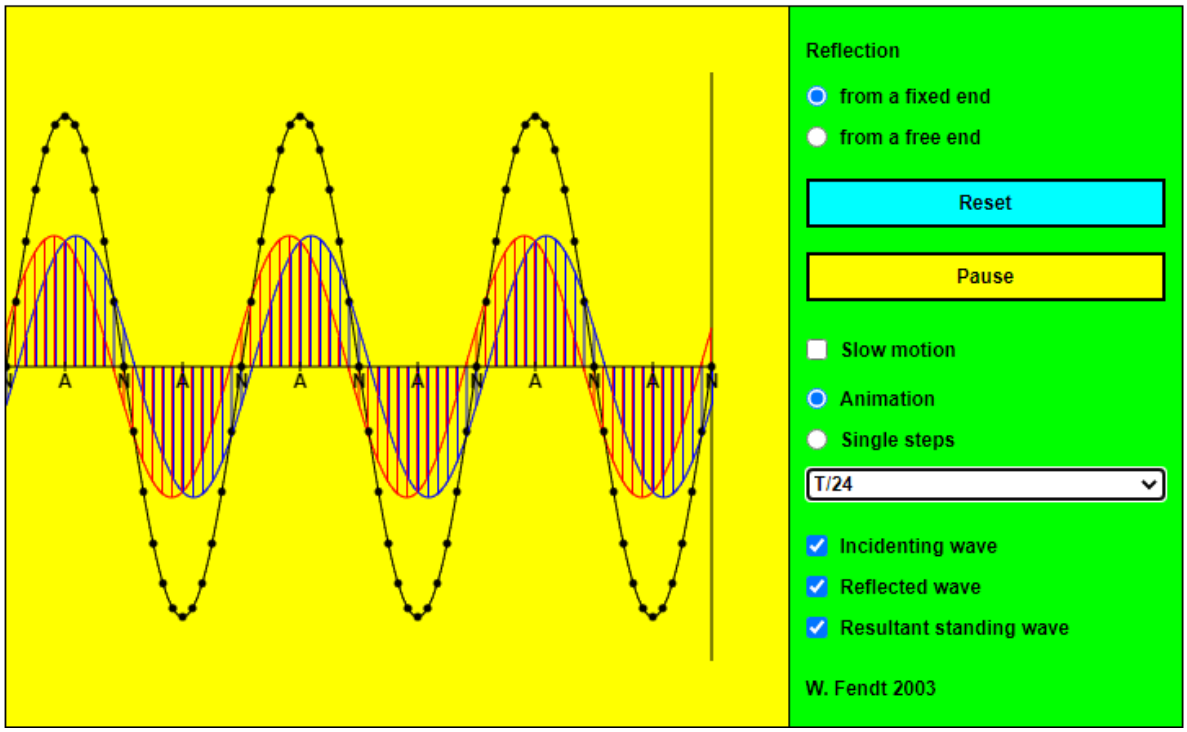
Having understood the properties of reflection and superposition, we can now understand the physics behind a standing wave pattern. Many have seen this pattern before in the twang of a rubber band or the jump rope of a child. Below is a graphic depicting the 1st, 2nd and 3rd order standing waves



Below is a link to an animation that depicts the standing wave pattern, it is a really good visual to describe the standing wave concept.



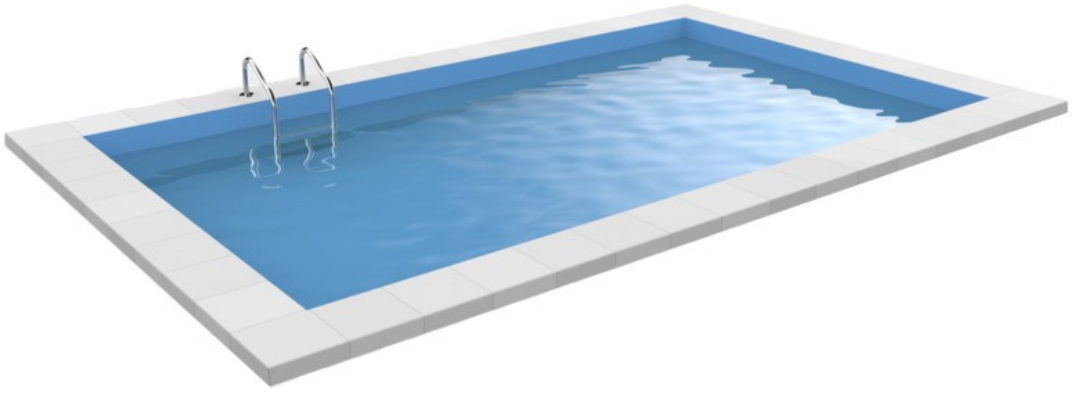




Incident wave (red), reflected wave (blue), Standing wave (black)

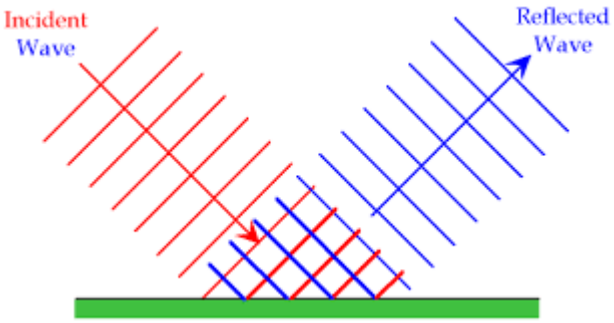
https://www.walter-fendt.de/html5/phen/standingwavereflection_en.htm

Suppose we now confine the wave motion a second time, so the waves will reflect within a structure that looks very similar to a swimming pool. We use a swimming pool in this analogy because it allows surface waves to form within the liquid medium and has a reflective concrete barrier on all sides.

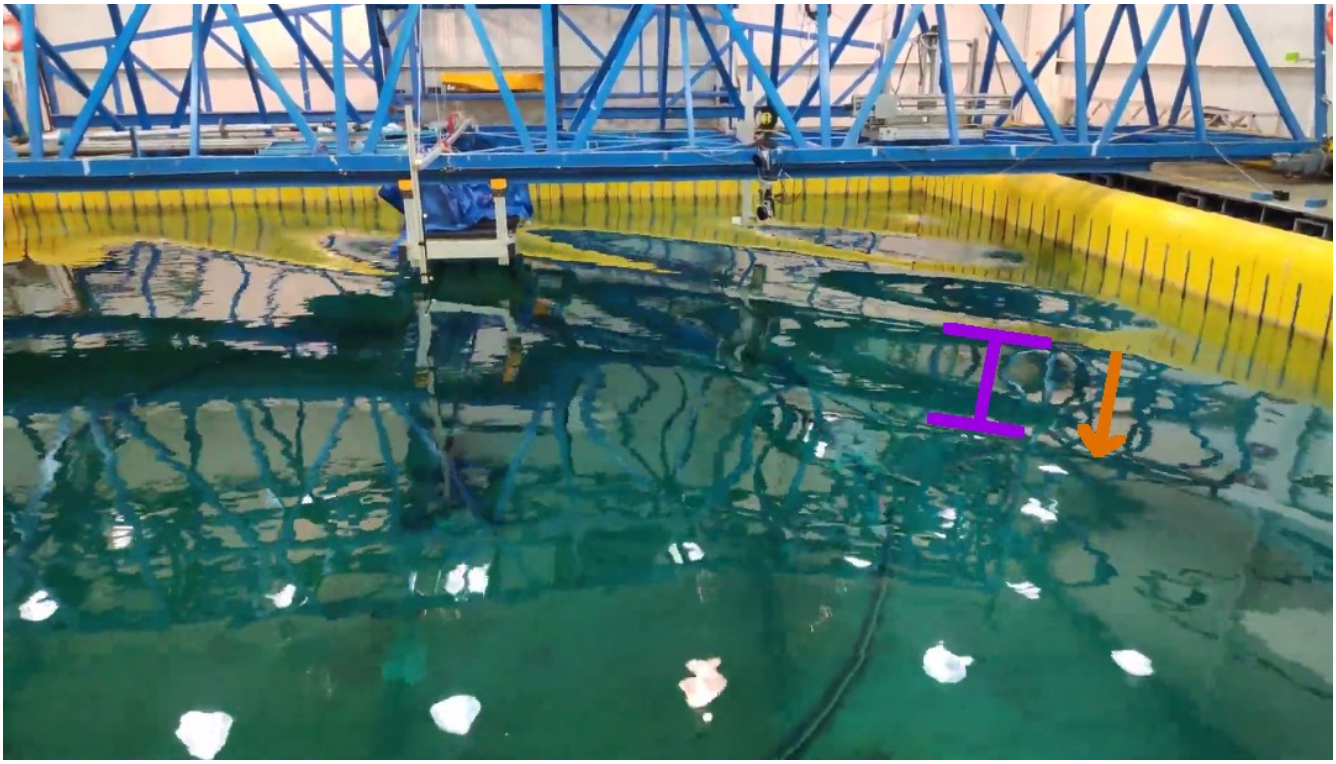


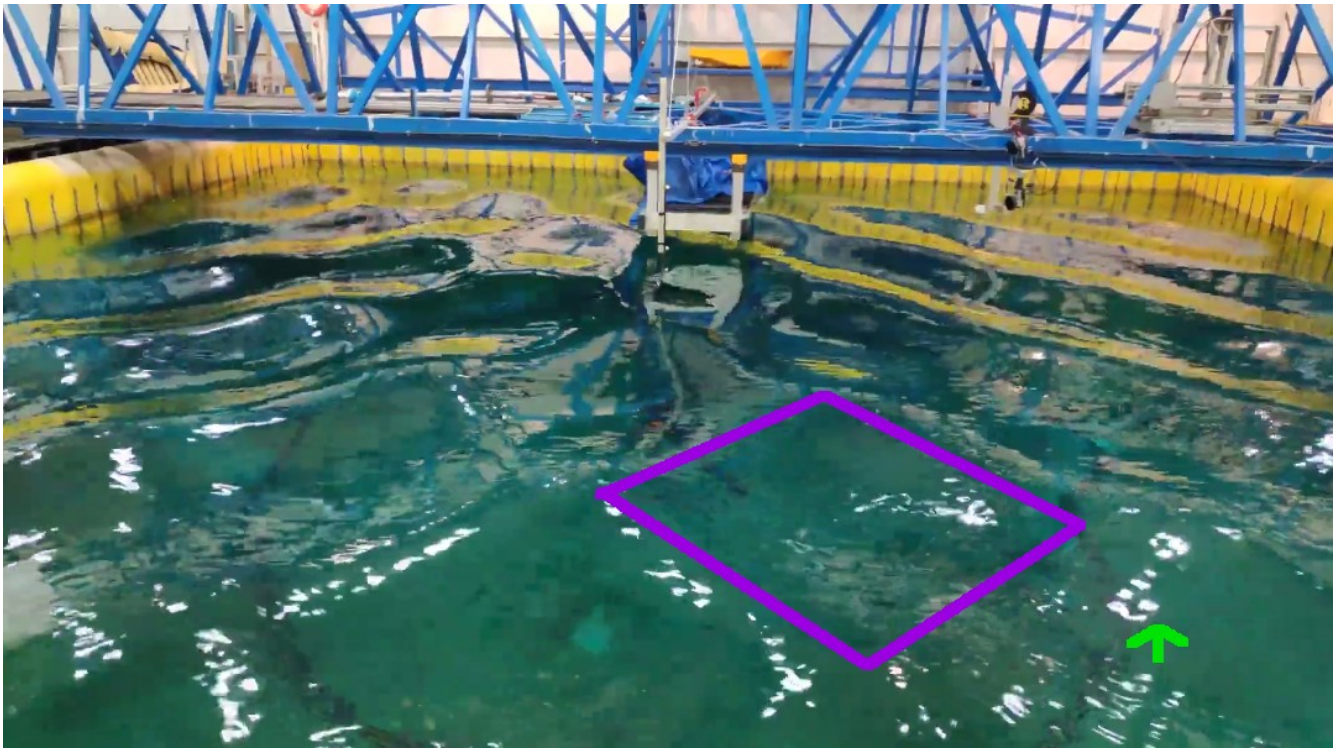
Our thought experiment has created a wave pool, and we will use this analogy to describe the wave like vibratory motion of the crystal structure.

When the 2D incident wave is reflected against the container walls, we get a checkerboard pattern as can be seen below



Below is a video that shows a 2D standing wave within an experimental wavepool:

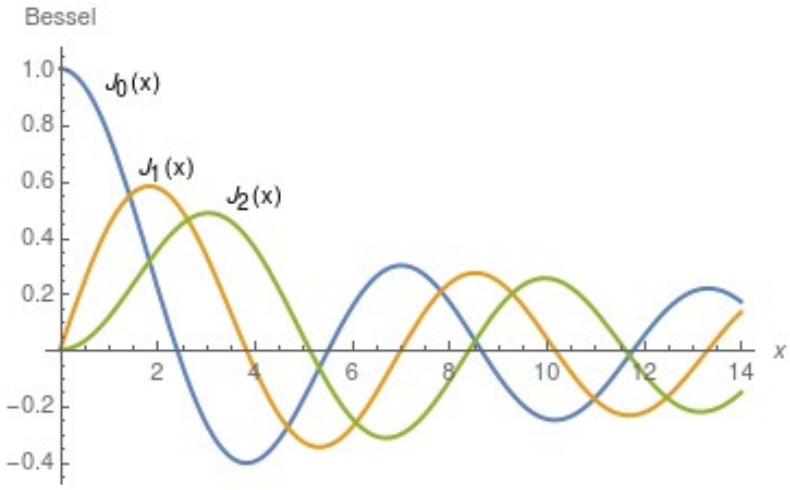




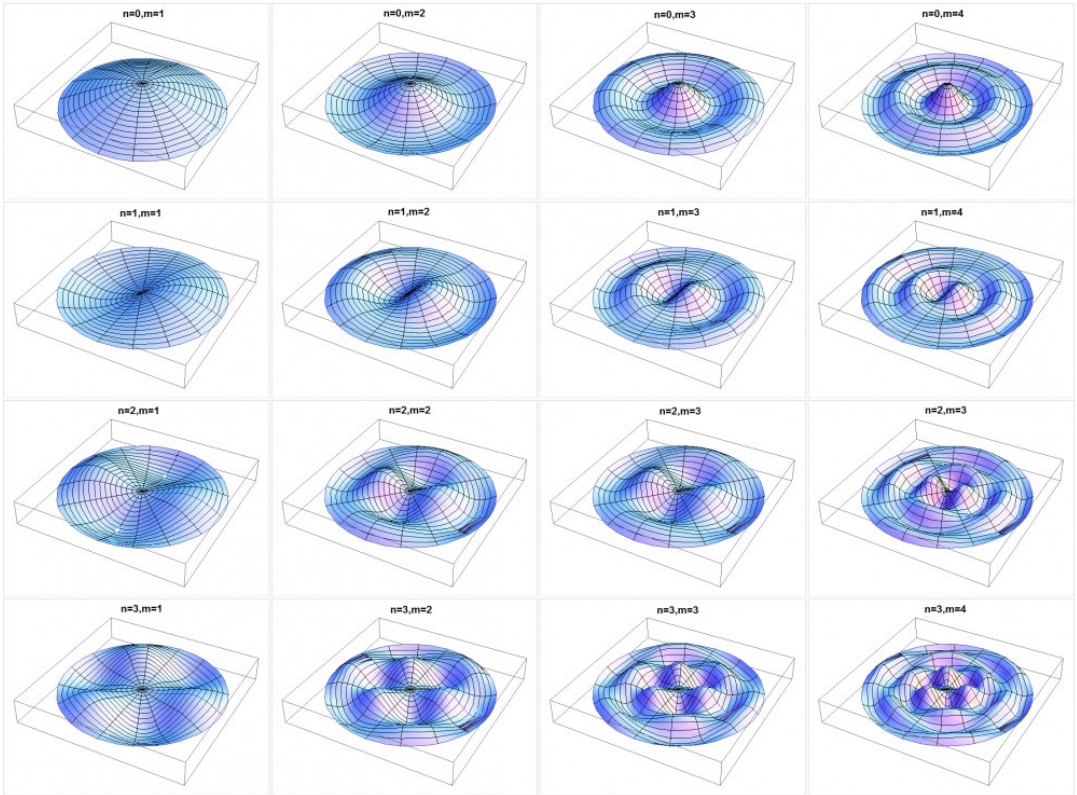
https://www.youtube.com/watch?v=JcdOWlmPh1w

The first image shows the pool with still water and an incident wave coming from the top right corner of the pool. The orange arrow shows the direction of propagation, and the purple measurement shows the wavelength of the incoming pulses. In the second image we can see how waves traveling in both directions creates a checkerboard pattern. If we look at the green arrow, we notice a very interesting effect in the reflection of the light on the water. We see a similar checkerboard pattern but at a smaller scale. Compare this pattern to the light reflecting from the surface in the first image. This is a visual representation of the higher level harmonics, or resonant modes.
This standing wave pattern also arises in a very common instrument that nearly everyone is familiar, the hand drum. If we extend this thought experiment to a circular 2D plane, we can envision that the drum membrane vibrates in much the same way as the string or the swimming pool.

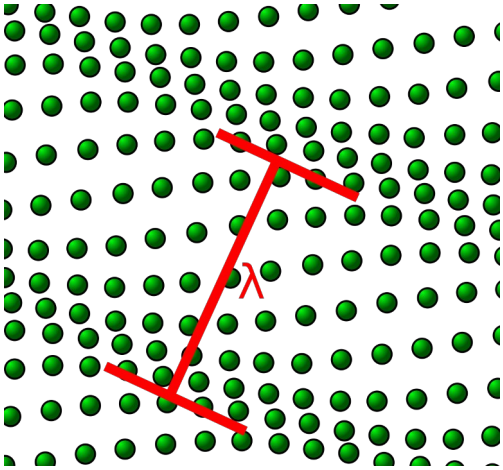
The drum vibration can be mathematically predicted with a Bessel function, and based on the physical dimensions of the drum, the tension in the diaphragm, and the mass of the membrane, the resonance modes of the drum can be calculated. Below is the generic mathematical form of a Bessel function.



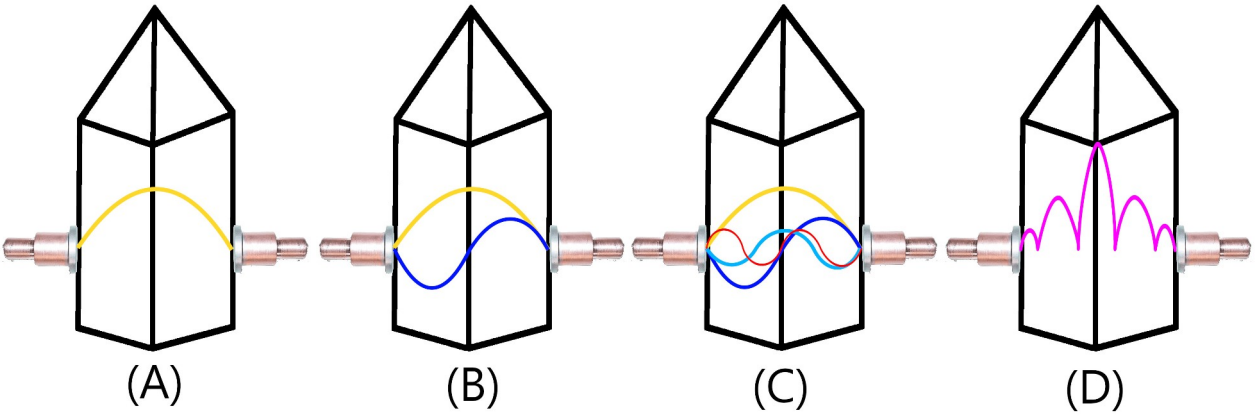
Below is a depiction of example resonance modes that a vibrating membrane can occupy. If we consider 0 on the above graph as the center of the drum, and the Bessel function is rotated around the center point of the membrane. By revolving the Bessel function around the center axis we can predict the resonance modes for drums of all sizes in 2D. This is how drum makers predict the musical notes and harmonics of a drum before it is built.



We can see the same standing wave structures appear on molecular levels, and from our experience with waves at a macro level we can predict the same phenomena at quantum scales.



The water medium in our swimming pool is replaced with a medium of silica and oxygen atoms, and our reflective barrier is replaced by the edges of the crystal lattice. The resulting structure is now our piezoelectric quartz specimen, and by stimulating the quartz with electrical energy, we can induce the same type of standing wave pattern as seen in the swimming pool or drum. Above we have a crystal lattice simulation with the depiction of our phonon waves within the crystal. Theory suggests the bion particle/wave pair arises from the collapsing of the phonon wave. The bion particle/wave pair is accelerated out of the crystal like the surfer riding the wave, and we experience the cumulative effect of all resonant modes as orgone energy. In the above diagram we can see lambda (λ) represents the wavelength of a phonon in the atomic crystal lattice. At the beach we can expect the distance between waves to be 30 or so feet, but in our crystal these waves can be 30 micrometers or smaller. The below graphics show how the standing wave harmonics stack on each other when confined to the structure of a terminated crystal.



Specimen A depicts the first order resonance, called the fundamental frequency, shown in yellow. Specimen B depicts the second order harmonic in dark blue along with the yellow fundamental. Specimen C shows harmonics 3 and 4 in light blue and red respectively. Even though only the 2nd through 4th order harmonics are shown, there are harmonics for all whole numbers, and even fractional harmonics as frequency increases. All resonance modes contribute to the final tone, with specimen D representing an intensity pattern in magenta after the fundamental and all harmonics are added together.

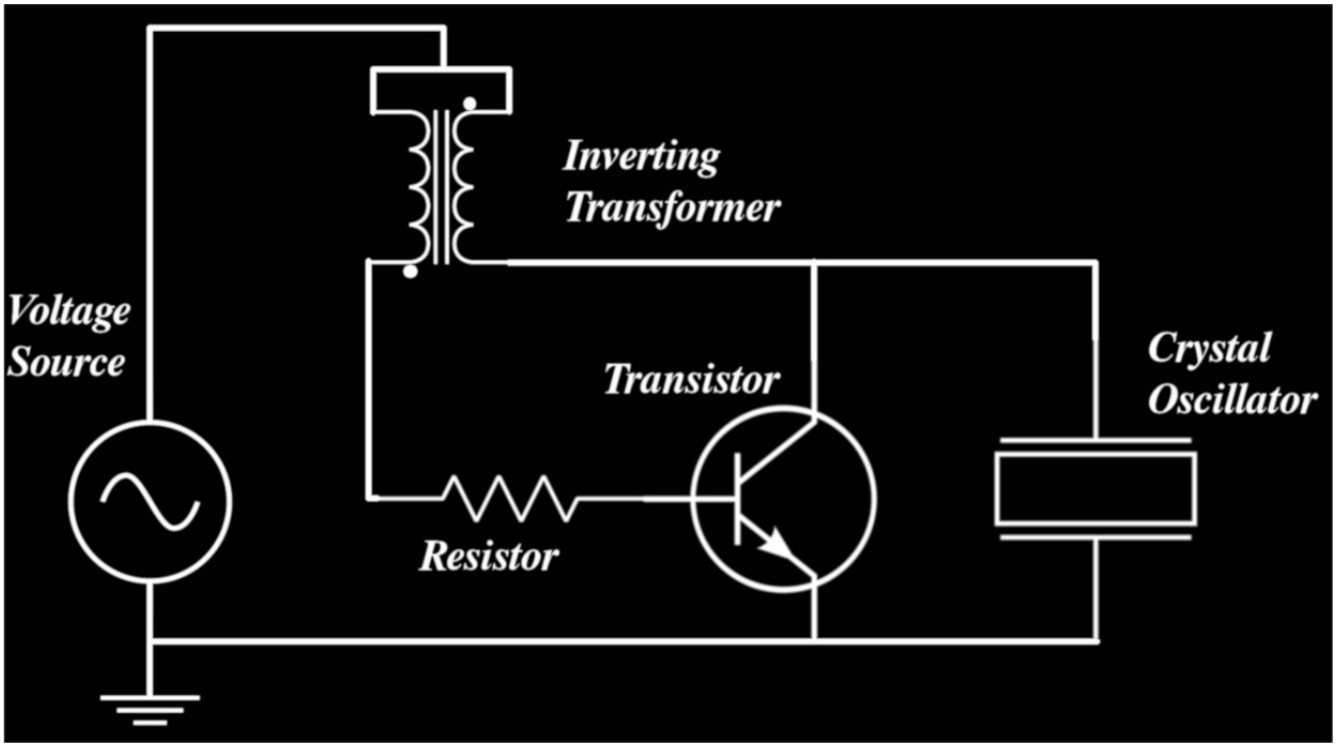
The examples we have presented consider the 1 dimensional and 2 dimensional nature of standing wave oscillations, but our crystal is a 3 dimensional structure. We extend the standing wave concept to 3D, and we have created a resonance cavity that internally reflects induced vibrations. Very quickly after the first few reflections the 3 dimensional standing wave is induced into the specimen. This is the importance of using a crystal specimen with at least one termination, as the 3 dimensional standing wave creates the most intensity where the lattice is brought to a point.

After examining the basis theory for generating orgone with the piezoelectric quartz crystal, we decided to improve on these principles and create an electrical device that could both receive electromagnetic radiation with efficiencies greater than a metal-resin suspension, and stimulate the quartz crystal to produce orgone in harmony with all overtones of each emitter.

The Orgone Amplifier

With the application of the piezoelectric effect, one can create a resonating device that is active in the creation of orgone energy. By pulsing electricity through a quartz crystal, orgone can be generated on demand at the frequency and intensity desired. If the charge and discharge cycles are rapid enough and exactly in tune with the resonant frequency of the specimen, a 3D standing wave with all harmonics is formed within the crystal structure and orgone will flow continuously from the device.

Consider the below diagram



The above circuit diagram illustrates the components and internal connections of the orgone amplifier. The primary components are the crystal oscillator, transistor, resistor and inverting transformer. The circuit operation will be described in detail in part 2 of this article series, but is also briefly described below:

-First, energy is given to the circuit from the voltage source. This turns the transistor “on” and allows all the energy from the incoming pulse to build up a magnetic field in the transformer.

-The voltage across the transistor saturates which causes the current through the transformer to slow down. The change in current induces a signal in the opposite side of the transformer, changing the transistor state from “on” to “off”

-all of the energy in the magnetic field and the rest of the energy from the incoming pulse is directed to the crystal oscillator. The collapsing magnetic field induces a pulse across the crystal many times larger than the source voltage.

-the crystal absorbs the pulse of charge, inducing strain within the lattice. After a point of maximum strain, current through the transformer reverses. This induces an opposite current in the base of the transistor, turning the switch back “on” and quickly releasing the charge across the crystal. The transition between exited state to equilibrium state emits a powerful orgone pulse.

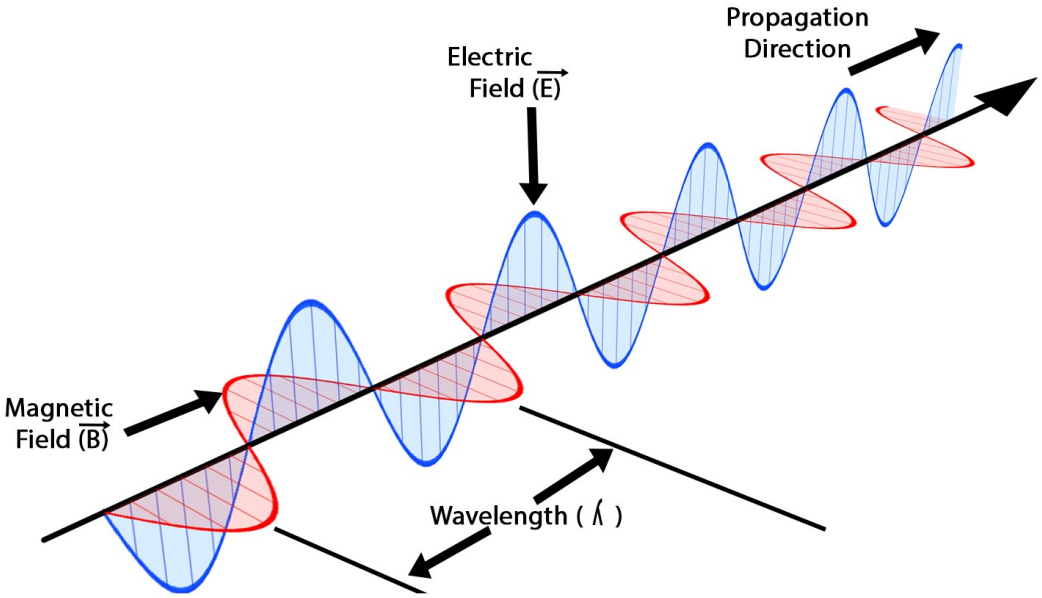
-The circuit is reset, magnetic field in the transformer is again building and the crystal ready to accept the next impulse of charge.

This cycle can repeat many thousands or millions of times every second.

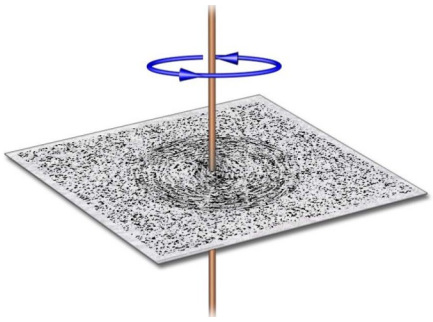
The next step is to understand the source of the electrical energy, the variable voltage source. The voltage source described in the above circuit is energy gathered from natural and man-made electromagnetic radiation (EMR). The Orgone Amplifier can draw power from the EM spectrum provided the correct “Air to Electric” interface is used.

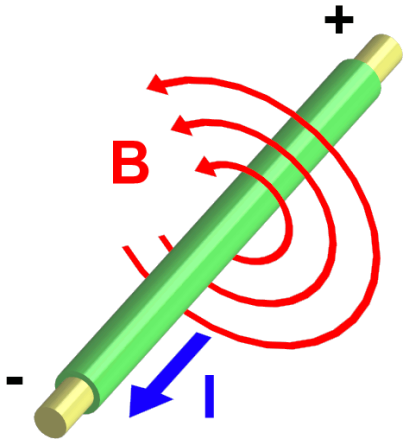
To understand the devices that emit and capture electromagnetic waves, we must first understand the nature of electromagnetic waves, and how they travel across a medium. The medium that EM waves travel is both the electric and magnetic field, in the past these fields have been referred to as “aether.” The electric field and magnetic field can be thought of as two universal variables, and much like temperature, it has a value everywhere in our known universe. Below is a diagram of a model electromagnetic wave.

Electromagnetic Wave

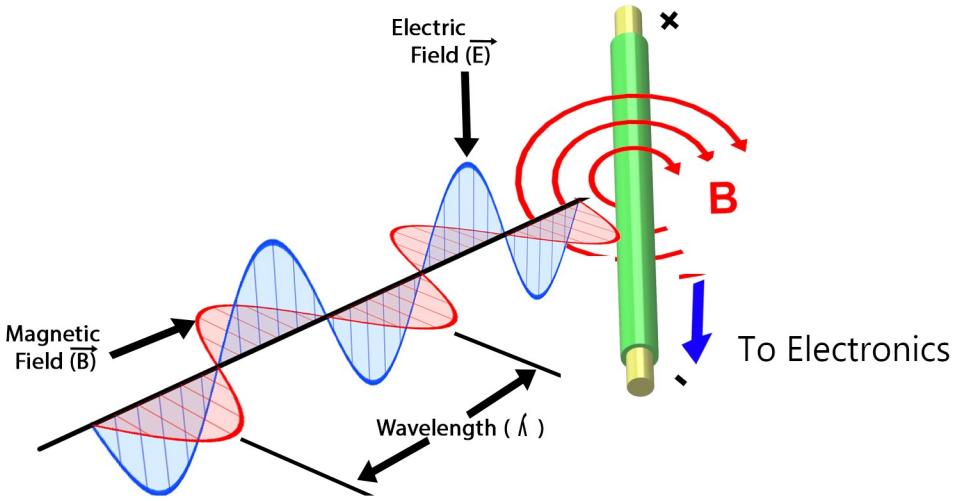


We can see from the above diagram that the electric and magnetic field are coupled, they act in tandem. When the magnetic field is at a maximum, so is the electric field, and the same when both fields are at a minimum. To understand the operation of an antenna, we recall a grade school science experiment where iron filings are put on a cardboard plate with a strait wire through the center. When electric current is run through the wire, the iron filings align to the newly created magnetic field. The implication of this experiment is that an electric field will induce a magnetic field, and also the opposite, a magnetic field will induce an electric field in a wire, as Lenzs law predicted.





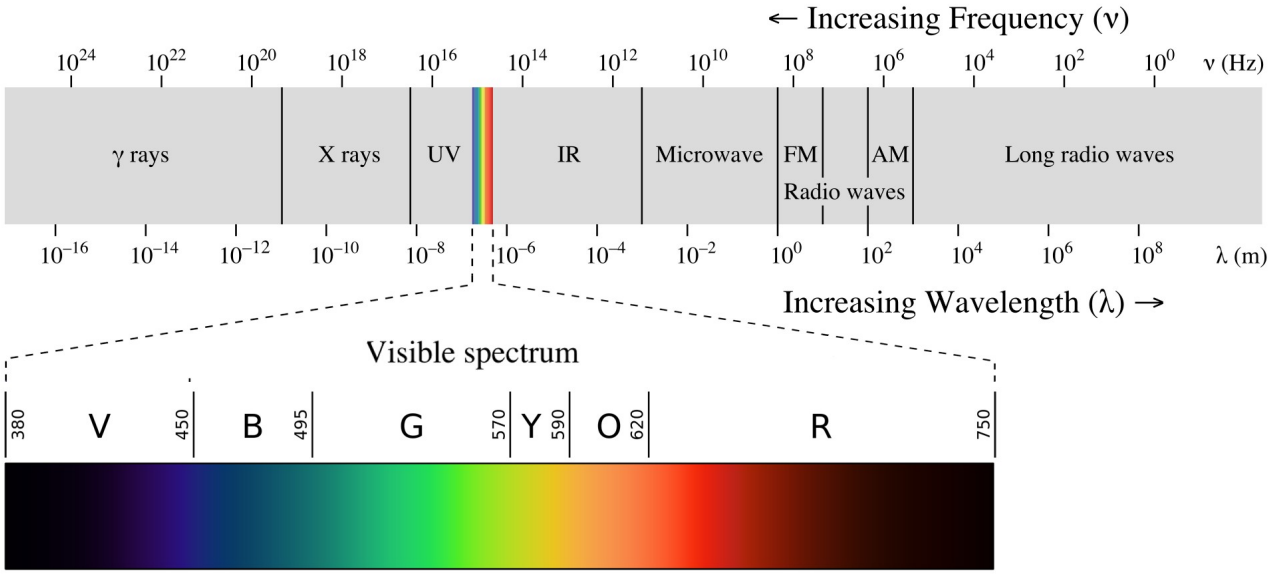
When the electromagnetic wave propagates through space, it interacts with the upright conductor by curling the magnetic field around the wire and inducing an alternating electrical current that can be detected.



The reciprocity of the effect allows an alternating current in a wire to give off an electromagnetic wave, and the reverse, and electromagnetic wave to induce an alternating current in a wire. It is through this process that antennas are able to both emit and receive electrical power. Lenz's law gives us the ability to sense magnetic fields based on the induced current in a wire. This is the underlying theory behind electromagnetic action at a distance and remote field sensing. By attaching the active wire from the antenna into the resonator circuit, we can utilize the energy contained in the fluctuating electric/magnetic medium to power the device.

Microwave and Millimeter Wave Technology

Every second the Electromagnetic spectrum is active. Like sitting under stadium lights, you are constantly bombarded with EM frequencies in the microwave and RF band. A diagram is included below to reference the electromagnetic spectrum.

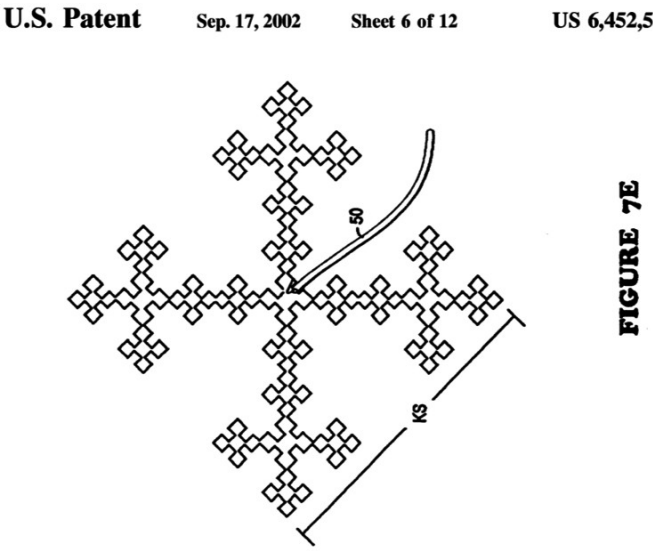


The electromagnetic spectrum ranges from 0Hz to billions of Hz, and we can see that visible light, all the colors our eyes can see and more, lie on this scale. The frequencies of electromagnetic waves that are of interest fall below the visible spectrum, shown in the diagram to the right of the rainbow. Below the visible spectrum lies infrared, terahertz, millimeter waves and all radio frequency communication signals. Above the visible spectrum are very high energy frequencies which have been proven to cause cancer. These harmful rays include Ultraviolet, X-rays, Gamma Rays and ultra high energy cosmic radiation that originates far outside our own solar system. These high energy rays crash into our atmosphere from our own star and others, but the vast majority of those rays are reflected by our ionosphere or diverted by the earth's magnetic field creating Van Allen belts. The very small portion that do make it to near ground level can interact with the atoms in our atmosphere and get down-converted to light or microwave frequencies after bouncing off many molecules in the process. Lightning and these other natural sources combine to create about 11% of the RF energy that is available for harvesting. The spare energy in the EM spectrum allows the RF harvesting circuit to continuously work anywhere on the earth's surface even if there is little man-made EMR, due to the naturally available energy. The amount of power available to the quartz circuity is directly dependent on the amount of power in the RF and microwave spectrum, so a more active and noisy environment will provoke a greater response from the device. It is through this mechanism of feedback that allows the Orgone Amplifier to continuously adjust to the user's environment.

Recently there have been next generation radio networks deployed in the millimeter wave (5G) spectrum. This portion of the EM spectrum is much higher than 4G, 3G and WiFi networks. Previous to the deployment of 5G technology, the millimeter wave spectrum has been a quiet and peaceful band for most of the world, even in large cities. Understandably, many are concerned with health effects of this new radio frequency, and have been taking steps to prevent the proliferation of these waves within their own spaces. By transferring the broad spectrum EM energy to orgone pulses, the spare RF, microwaves, and millimeter waves can be used to create a calming, ordered and positive environment.

Orders of Magnitude Greater Power

Passive Orgone Devices such as orgonite and orgone pyramids can capture EM waves provided that the metal/resin suspension is at a 50/50 mix or greater. Common orgonite has a metal-resin suspension with conductors fairly uniform in size and at various orientations. Some orgonite is made with metallized glitter, while others utilize metal shavings and various configurations of copper. To set a baseline of what type of device we will compare the Orgone Amplifier against, we will now create a model orgonite pyramid displaying average characteristics. Our model Orgone Pyramid is a 4”x4” base, Giza ratio, containing a 50/50 metal resin mix, with equal distribution of metal throughout the structure. We now want to understand how this structure interacts with EM waves. To an EM wave, the 50:50 metal/resin suspension looks like a fractal antenna.



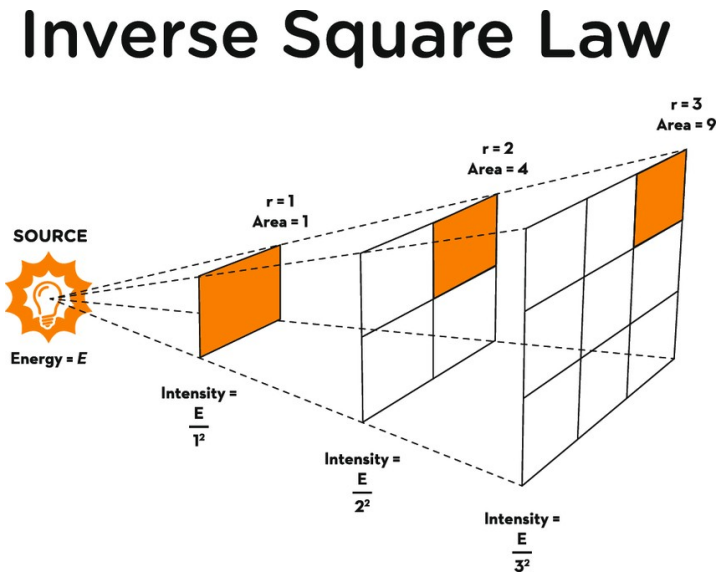
An antenna can be thought of as a sort of lens that is able to focus the signal into detectable electrical energy. An interesting property of antennas, like lenses, is the ability to work as both an effective transmitter and an effective receiver. An antenna’s effectiveness at collecting signal power is rated by the amount of signal gain that it offers, expressed in decibels and written as +/- XdB. We refer to the below study that examines the effectiveness of fractal antennas in the microwave spectrum.

https://www.researchgate.net/publication/340243609_Design_Simulation_and_Analysis_of_Fractal_Antenna

The research team reported values between -11dB and -20dB for their fractal antenna, which was an ideal design with near perfect dimensional accuracy. We will use -20dB as the maximum gain the metal-resin structure offers, with a more likely result around -40dB due to metal shavings in the 50/50 mix being at the random orientations with random contact between one conductor and its neighbor. The 50/50 chance of contact between two metal shavings detracts from the total harnessed energy available to the quartz crystal. The random orientation of shavings in the mixture creates eddy currents which detract signal power from the incoming EM wave. As the particulate size of the metal shavings gets smaller, the randomness increases and the less RF power penetrates the denser metal-resin structure. We assume a -40dB of signal harnessing power for the metal-resin suspension, and from this basis we make a generous estimate that 1-10 micro-volts can be harvested from the EM spectrum with the model orgonite pyramid. We will use 1-10 micro-volts as our baseline for evaluating the signal gain of the proposed orgone amplifier circuit.

Instead of a metal-resin suspension, the Orgone Amplifier device utilizes communication grade antennas, which have been designed to respond to the range of the electromagnetic frequencies that are of interest. By using an antenna, an impedance matching network, a charge pump and a positive feedback oscillator, energies of 10-300 milli-volts are available to the quartz crystal. This is a 1000x – 300,000x increase in total harvesting effect compared to the metal-resin suspension, which is an equivalent of 60-110dB effective gain. If we compare this gain to sound, it is the difference between a jet engine and a library. A signal gain of this magnitude allows the crystal to vibrate with intensity equivalent to thousands of orgonite pyramids.

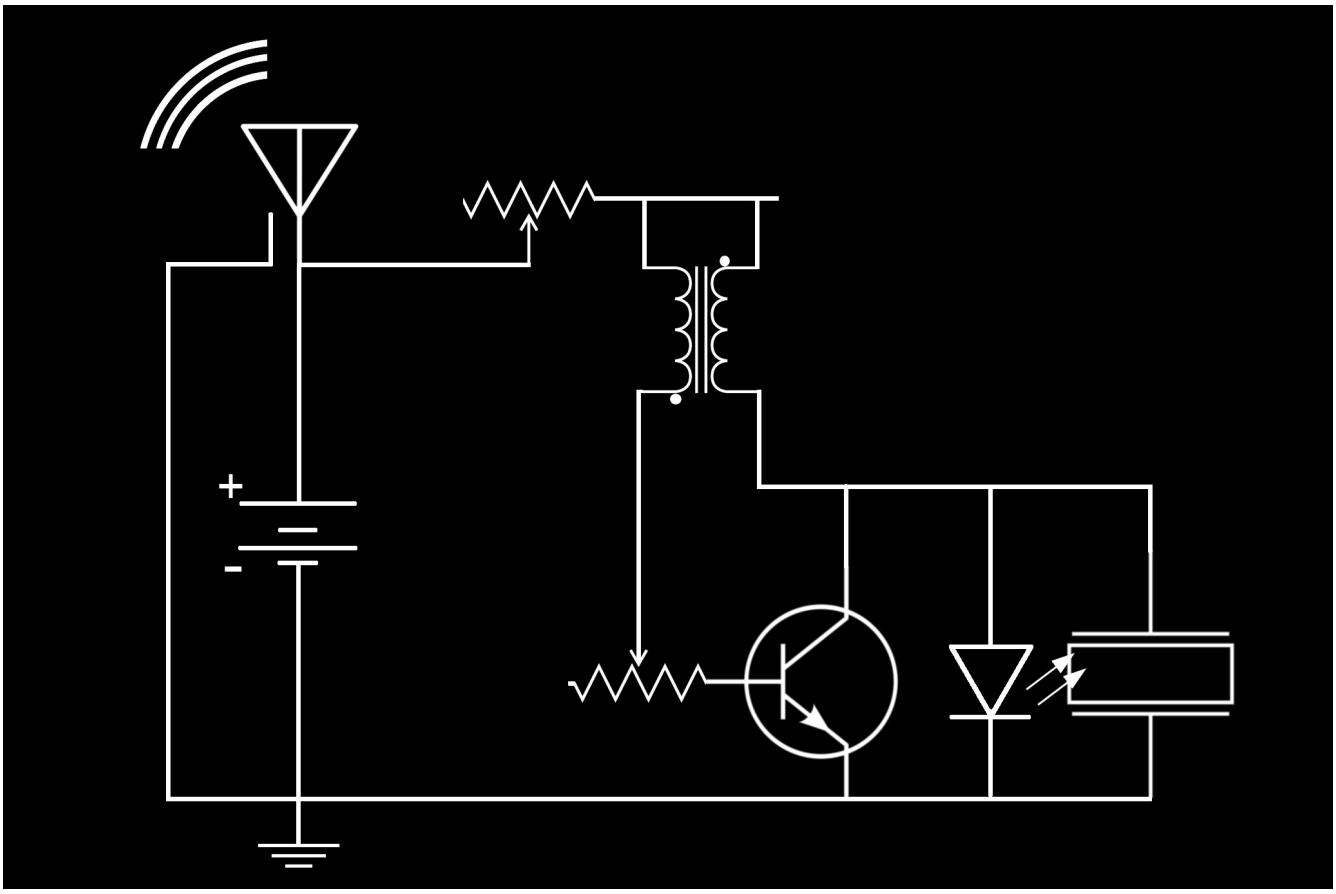
An added benefit to the increase of power available is an increase of effective range. We can use the inverse square law to estimate our effective range for the RF Harvesting circuit.



We will start with our previous assumption that the orgone pyramid can harvest 1 micro-volt of EMF energy and provide orgone to a 25 foot (7.6m) radius sphere. Using the ratio of 1 micro-volt to 300 milli-volts (1/300,000) for the RF harvesting Orgone Amplifier, the inverse square law gives a result of 4173.6 meters, or a spherical radius of 2.6 miles. This result states that a user would have to stand at a distance of 2.6 miles from the RF harvesting circuit to experience the same intensity as our model orgone pyramid. When we think about this result compared to other RF devices, it starts to make sense. Cell towers and even hobby remote control aircraft can transmit a signal about the same distance if within line of sight of the transmitter. An equivalent orgonite device compared to the RF harvesting circuit would be a fairly large cloud-buster. To have an effect on clouds, orgone energy from the cloud-buster device must reach the lower to middle atmosphere, ranging from 1 to 12 miles in height. For this to be possible, a cloud-buster would also need to have an effective range of 1 mile or more.

Active Orgone Generation

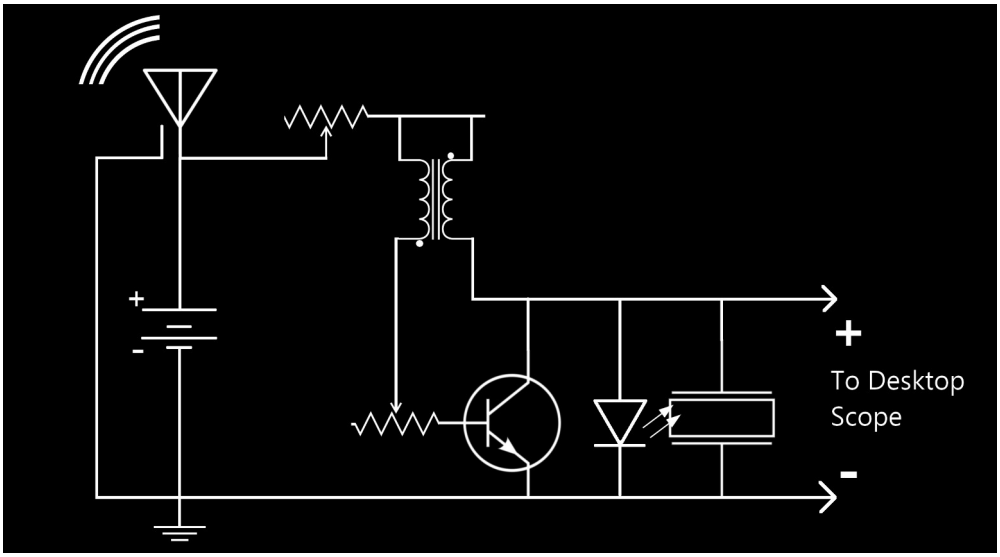
It is possible to produce a further amplification of power by modifying the original circuit to include an active power source. By adding an alkaline cell behind the standing wave oscillator, an even greater orgone pulse can be generated from the trigger of EM radiation. As the EM wave enters the antenna network, the positive pulse triggers the oscillator to cycle. The oscillator quickly charges and discharges the crystal, resetting for the next pulse of EM energy. The circuit uses the power from the alkaline cell to generate up to a 4.5V pulse through the quartz crystal. A pulse of this magnitude is 450x the RF harvesting circuit, and up to 4.5 million times more powerful than our model orgone pyramid. The inverse square law effective range of the powered amplifier is up to 11 miles. Below is a schematic of the powered orgone amplifier circuit.



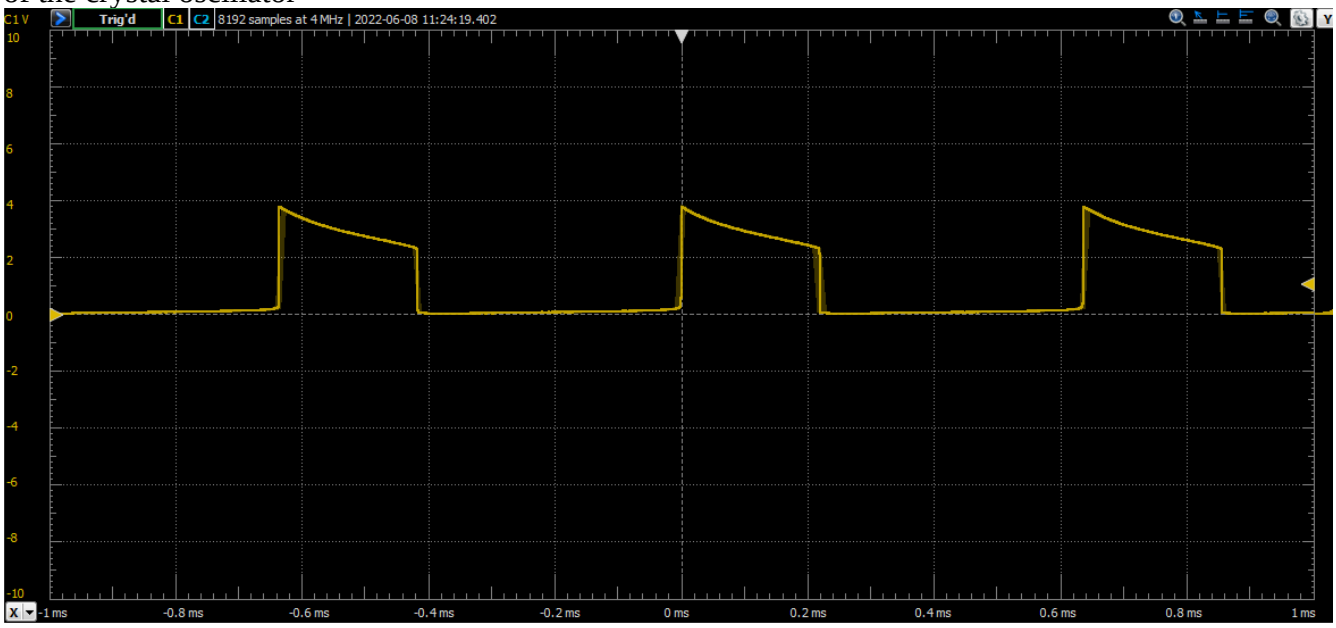
Testing the Orgone Amplifier

We understand there might be some controversy about the claims that are being made about the Orgone Amplifier circuit. I am prepared to understand everyone's point of view, but I have also taken the time to gather evidence that this circuit functions as intended. Below are some screen grabs of my desktop oscilloscope, and circuit simulations are available upon request.

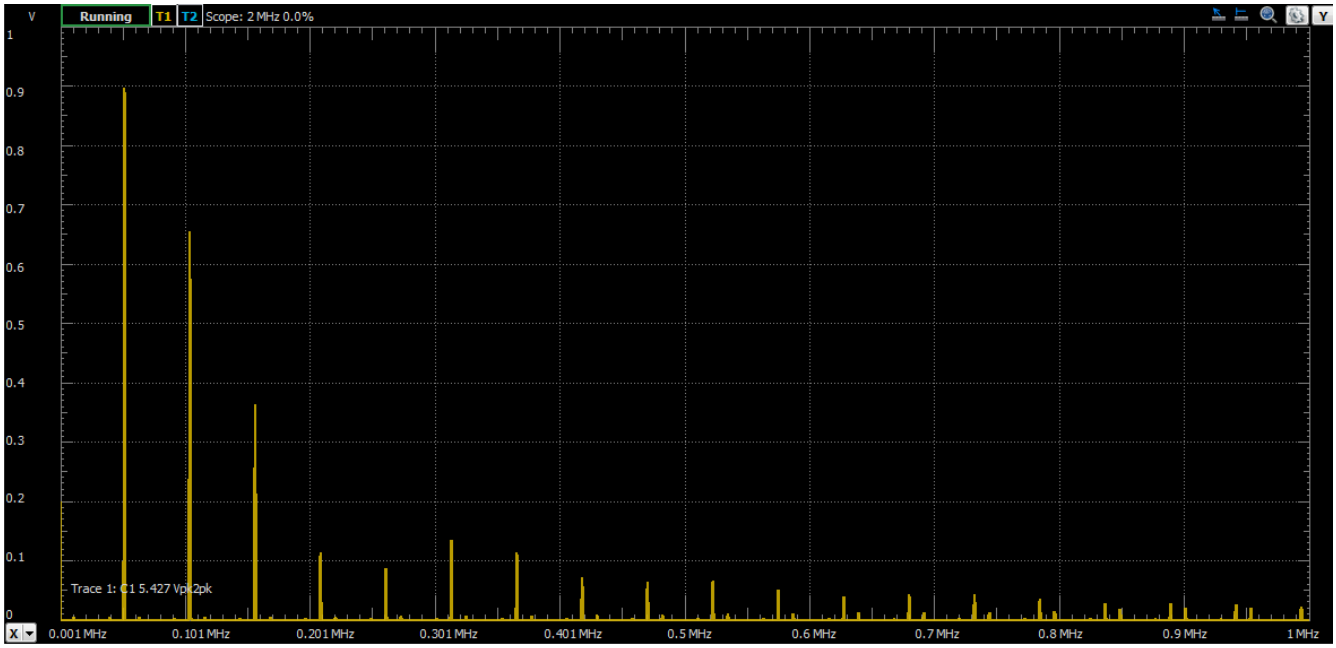
Below is the test set up:



The first screen capture that I will present is the time domain signal taken from across the two contacts of the crystal oscillator



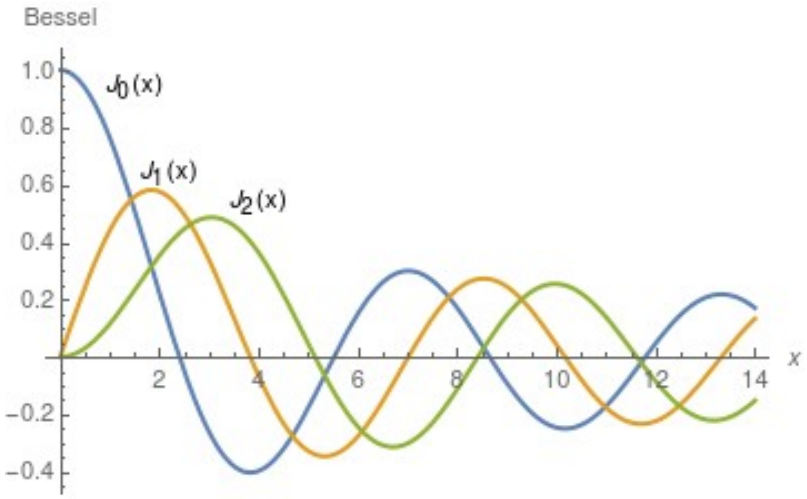
From looking at this graph, we can notice a few things immediately. The first is that we have a very regularly spaced set of waves affecting the crystal lattice. This indicates our oscillator is working well, and applying an ordered pulse-train to the crystal. The second attribute we notice is the amplitude of these waves, it is nearly 3x that of our alkaline cell voltage due to the positive feedback within the resonating circuit. The third attribute is the shape of the wave. There is a very fast application of energy to the crystal, seen in the near vertical rising edge. After the peak of the rising edge, the crystal accumulates charge and strain, which is seen in the downward slope towards the falling edge. The falling edge of the wave is also near vertical, indicating a very fast discharge and showing the relaxation of the crystal lattice.



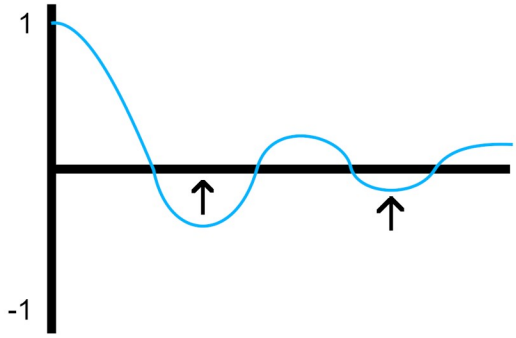
The next graph is the frequency response of the crystal to the periodic electrical pulses. The x axis is frequency from 0Hz to 1Mhz, which is the limit of this desktop oscilloscope. The Y axis is the amplitude, and when observing the frequency response plot of the crystal specimen, we see some very interesting properties. The first thing that can be noticed is the very regular and defined spikes of energy which appear to continue as frequency increases. This fractal pattern is not a coincidence. Even though the desktop oscilloscope can only sense frequencies up to 1Mhz, the crystal will oscillate with frequencies much higher. Theoretically the resonance modes continue in this fractal pattern up to and including light waves, but in practice the overtone modes will stop far below terahertz frequencies. The amplitude of these frequency spikes gets increasingly minuscule, but they are still present according to a mathematical concept called Fourier series.

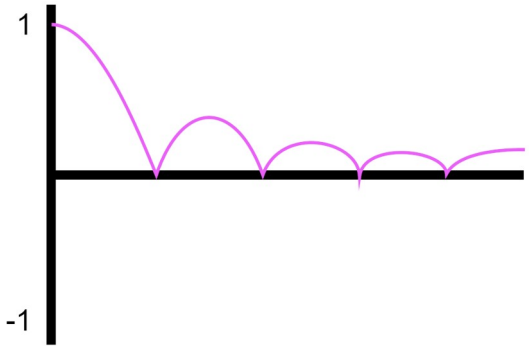
Another attribute that we notice is how the energy is distributed across the frequency spectrum. The energy is located in very narrow spikes, indicating the signal energy occupies a single local frequency, creating a pattern similar to a hair comb. This comb pattern is attributed to the resonant overtone frequencies discussed earlier in the article, with the largest and leftmost resonant frequency being the fundamental. From this plot we can see each overtone resonance mode placed at regular intervals, with very little energy at frequencies that fall in between the resonant modes. The comb-like frequency response is due to a property of quartz called the Q factor, which is the tendency for all frequencies between the crystal harmonics to cancel out, leaving only the resonant modes. Quartz has a Q factor of 10^6 which is very high compared to other materials. A typical Q factor in most other materials is 10^2 or 10^3. The high Q factor in quartz means that it is near 10^3 or 1000x more effective at canceling out frequencies that do not harmonize with the resonant set.

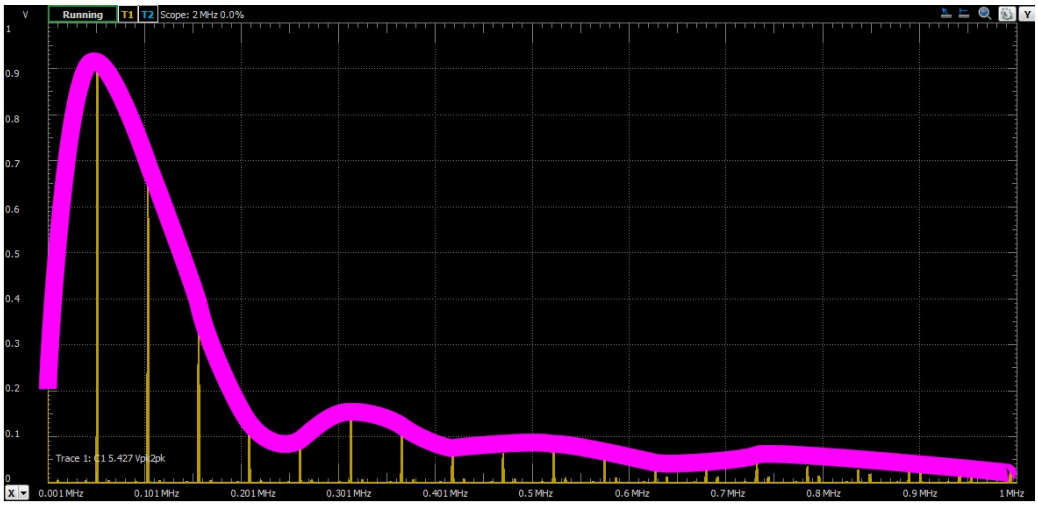
The last thing that we would like to observe is the envelope or shape of the crystal's frequency response. The amplitude of each harmonic follows the pattern of a Bessel function, the most convincing evidence that our crystal specimen is vibrating in accordance with the standing wave pattern described earlier. Below is a comparison of our frequency plot and a Bessel function, note the similarity.



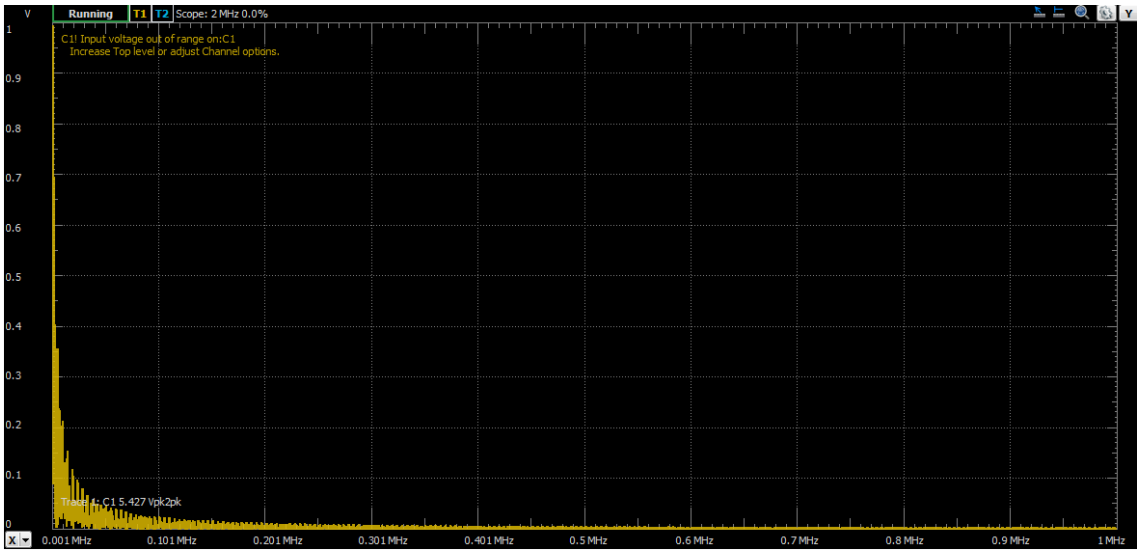
If we take the absolute value of the first order Bessel wave in blue, we get a plot with an envelope almost exactly like our crystal's frequency response:







Finally, to prove the crystal is creating the observed effect on the frequency domain, one electrical lead connecting the crystal to the driving circuit was removed, effectively disconnecting the crystal from the oscillator circuitry. The oscilloscope leads to the crystal specimen were left intact. Below is the waveform that was measured from the disconnected crystal, we can see the plot contains nothing but white noise. There are no observable pulses and no response from the crystal device. If you were to view this observed signal with a screen, it would look and sound like static noise.



I hope this is sufficient evidence to prove the operating principles of the orgone amplifier are correct and in line with all observed natural laws. All measurements were taken on the original powered Orgone Amplifier demo unit.

Conclusion

In this article we have explored the nature of crystal structures and explained how orgone is generated from the piezoelectric properties of certain crystals. We examined the reverse piezoelectric effect and how it is used in the Orgone Amplifier to generate orders of magnitude more power than a model orgone pyramid. We describe in detail how electromagnetic waves are captured and examine how the oscillator circuit applies these pulses to the quartz crystal. The circuit is then tested to prove the crystal is oscillating in accordance with theory. I hope that this document thoroughly explores the ideas that this device was built upon. I hope that it gives the reader enough information to come to their own conclusions, and to understand that there are many ways of achieving the stated effect, with this solution being just one. I hope many will be able to learn and utilize this information, and build further on the ideas presented here. In a part 2 of this article series, I will explain the more practical side of the Orgone Amplifier, including part selection, electrical circuit theory and construction.

Thank you for reading,
-Dr. Jaidon Chase

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Jaidon Chase received his doctorate at the College of Applied New Wellness out of Nederland, Colorado for his invention and defense of the Orgone Amplifier circuit. Jaidon has been studying semiconductors, electronics and electrical engineering for 15 years and has designed solar arrays, power supplies, stereo amplifiers, electronic synthesizers, communications equipment and computer simulations. Jaidon first came in contact with orgonite and orgone pyramids at Arise Music Festival in 2019, and researched these theories during the pandemic. The first Orgone Amplifier was built in 2022.

In recognition of Dr. Wilhelm Reich:

Wilhelm Reich was an Austrian doctor of medicine and a psychoanalyst, along with being a member of the second generation of analysts after Sigmund Freud. The author of several influential books, most notably The Impulsive Character (1925), Character Analysis (1933), and The Mass Psychology of Fascism (1933), he became known as one of the most radical figures in the history of psychiatry. Dr. Reich is the undisputed father of orgone theory and inventor of the orgone accumulator. The orgone accumulator is a large box made of alternating layers of metal and organic material. This is the foundational idea behind layers of alternating conductive and insulative material in orgonite. The subject would enter and sit in the box, sometimes without any clothes, up to hours on end, mediating and experiencing orgone energy. Curiously, the box did not contain any quartz. We now know that bone is piezoelectric, so we can theorize that upon barefoot contact with the metal floor, it was the bones of the subject themselves that were resonating with the power of orgone. Subjects had often claimed that they could feel the power of the accumulator “within their bones.” Thank you Dr. Reich for the work that allowed the Orgone Amplifier to be realized.

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