

11-9-2008

Discover Magazine

re: Your Article Dec 2008, A  
Homebuilt Tumor-Killer P 42

To Whom it May Concern:

I read, with great interest, your article, which told of Mr. **Kanzius'** use of micro-waves to destroy cancer tumors. It brought back many fond memories of my discovery, use and exploitation of **Radio Frequency (R F)**, devices, which I experienced, in the **1950's**.

I was involved in manufacturing Picture Tubes for approx. **(25)** years. A part of that process, was to heat up the **Electron Gun**, (while under vacuum), to a visible yellow-hot appearance.

The Picture Tube (**CRT**), was fitted in an oven, capable of heating the **CRT** to **400** Degrees Centigrade, (**752**) Degrees Fahrenheit. The neck of the tube was loosely-fitted, inside a coil, while the **CRT** had means, to be connected to vacuum pumps.

After the **CRT** was baked, in the oven, (for about an hour), the Electron Gun, had to be processed. One of the steps, involved the use of a "**Bombarder**". The **Bombarder**, (the **DADDY** of the **micro-wave oven**, in your kitchen), was activated for **(2)** minutes. **NOTE: Kitchen Micro-wave Ovens**, typically operate at **(2,500,000,000)** Cycles per second, .... **(2.5 GHz)**.

**Note:** The **Bombarder** was also called an "**R F Generator**". It **WAS** specifically designed to heat metal. **WARNING ! Be careful**, any metal you might put into your kitchen microwave, can have serious consequences. **NEVER**, put any metal, in your **kitchen, Micro-wave oven**.

In effect, the **Bombarder** heated up the metal, to elicit all gasses absorbed, in the manufacture, of the **Electron Gun**. Then the vacuum pumps pulled those gasses, which were generated, out of the vacuum system, (including the **CRT**). They were then expelled into the air, (also termed "**Degassing**").

When the **CRT** was fully processed, it was then separated from the Vacuum System, for further processing. One of the steps, involved the use, (again), of the **Bombarder**.

Those micro-waves, (RF), heat another piece of metal, (for approx (25) seconds) called a “GETTER”. It is a part of, and attached to, the top (crown), of the Electron gun, (which is under vacuum). The RF penetrates the glass, with little or NO apparent effect on the glass, (more later), but heats the metal, so that a chemical (barium), embedded in the metal is (heat)-activated.

That chemical action, causes it to absorb any residual gasses. In doing so, it leaves tell-tale signs on the inside neck, (opposite where the GETTER resides), that in effect, shows that the process, indeed, has taken place. If there is a shiny mirror-like deposition, ... such indicates a high vacuum. If there is a black or dirty-brown deposition, that indicates a ... poor vacuum.

A hand-held coil, (insulated from the user), which had only a special single coil, was shaped, in a spiral configuration. It went from a smaller diameter (approx 2”), then went to an ever -increasing diameter, to about (4”). The small diameter part of the coil had the ability to project/direct, the micro-waves, (invisibly emanating from the coil), in a forward direction.

In the years following, the “Getter”, (on some CRT’s), was placed on the inside of the CRT, attached to the “Anode Button”. The split coil, two continuously-round coils, (but separated from each other), could NOT accomplish this. Whatever was to be heated, had to be in between them. But, the single coil could easily do so.

The “Anode Button” was a specially-designed small piece of metal, which the manufacturer of the bulb, melted into the side of the bulb. In effect, it was common to both the inside and the outside of the bulb.

This is the way that that the T.V. set could send electricity, (high voltage), into the gun, which was sealed into the neck and under vacuum, so that a picture would be seen, on the screen. If you have further interest, in why or how it all works, see: the following link(s):

[http://en.wikibooks.org/wiki/Television\\_Manufacture\\_and\\_Repair](http://en.wikibooks.org/wiki/Television_Manufacture_and_Repair)

OR

See GOOGLE, cifaldi,carmine, Klik on Television Manufacture and Repair:

OR

See [cifaldi.org](http://cifaldi.org) ... Go to Home Page .... Klik on files .... then klik on ....

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## **BACK TO John Kanzius & MICROWAVES**

Having said earlier herein, that glass exposed to **RF** waves, in kitchen units, has **NO** effect on the glass, let us examine special circumstances, which contradict said assertion.

The micro-waves, **MAY** indeed, significantly **heat the glass**, (after many minutes, (**NOT** seconds), of micro-wave bombardment and storage, in the glass. With continuous, persistent, bombardment by the micro-waves, the glass, **CAN/DOES**, start to warm up.

As the glass becomes warmer and warmer, it becomes better and better/easier, to be heated, by what is termed, the process of **“Ionic Conduction”**. (see **“Ionic Conduction”**), next.

**“Ionic Conduction”**), is a process where current is transported by ions moving around, {and possibly **ELECTRONS**, (-) charge and **“HOLES”**, (lack of any charge ... but opposite of the (-) charge)}, such that, it constitutes current-flow, **AND** ... the direction of same.

**“HOLES** per se: are empty spaces, between Electrons. As such they do **NOT** have any charge. But, in relation to the electrons, which have a negative charge, there is a **“Difference of Potential”**. The **“Holes”** provide an impetus, in conjunction with **Electrons**, for current, to continue flowing.

The **“Difference of Potential”**, is a term used to describe how electric current moves through a conductor, or between **(2)** electrodes, (generally from the Negative, towards the Positive.

As the **R F** continues to be supplied, (dependent on a number of variables), the glass will continue to get hotter and hotter. The **Ionic conduction**, will tremendously assist the supplier of the microwaves, to accelerate the heating process. That way, eventually, it **CAN** occur, (dependent on a number of variables).

If, the R F ... **IS** ... left **ON**, in your kitchen **Micro-wave Oven**, for **HOURS**, then, it **IS** possible to actually melt the glass, (without assistance of any supplemental heat, from any other source).

**NOTE:** Conductors of electricity have the ability to accept micro-waves energy, then called “Kinetic Energy”, and store them up, for later use. The more micro-wave energy they absorb, the **greater** the amount of heat, is **accumulated**.

**NOTE:** **TOO** many years ago, as a student, I was taught that everything, conducts electricity. Some things, (such as rubber, glass), are very poor conductors, and therefore, are termed “**insulators**”.

NOW **PROOF**, that glass indeed conducts, electricity is **TRUE** .... (without electrocuting anyone), can be confirmed by the “**Ionic Conduction**”, reaction!

**NOTE:** It is interesting to see, that projecting the single micro-wave coil at your hand, produces **NO** immediate effect. But, if you have a ring on your finger, the ring will get very hot, very quickly.

**NOTE:** If Mr. Kanzius, uses the single-coil approach, I am sure that he would be able to project the micro-waves even deeper into the human body, rather than, just those nearest the surface. Perhaps, in conjunction with lo-voltage X-rays, he would be better able to target, and eradicate, localized or clumped tumor cells.

**NOTE ALSO:** Medical Science, indeed confirms Mr. **Kanzius'** claim that heat, approx **(95)** Degrees **C** ... **(203)** Degree **F**... range, for **(15)** minutes, **DOES indeed** kill cancer cells, while normal cells are little effected!

Relative to the usefulness and diversity of usage, of **microwaves**, please be aware of the following: The **Dew Line**, (**Distant Early Warning System**), (**RADAR**), was officially erected, (started **1954**), & completed in **1957**. It was to provide an early warning, against the possibility, that **Russian Bombers**, were flying over the North Pole.

Presumably, at that point, they were going to perpetrate, a “**First-Strike**”, nuclear attack on the U.S., like the **Dec 7, (1941)**, Pearl Harbor scenario .... only **thousands of times worse!**

That was/**is**, the shortest possible distance between **Russia** and the **U.S.** If **Russia** wanted to attack the United States, we would have very little warning,

that such attack would take place. With the then, current speed of the Russian bombers, we could have only about a (40 ) minute warning. We could then scramble fighter jets and/or send missiles to intercept them, or even launch our own inter-continental missiles, to strike their cities, or other Russian interests.

However, now in retrospect, I SUSPECT, that Dew Line started in Alaska only, before 1947....

The reason for my suspicion was BECAUSE, I had a friend, who served in an Army Air Force station, (S A C), Strategic Air Command, which operated in Alaska. It was a modest start of testing, whether or NOT there could be an efficacious aspect, to an early-warning system.

In secret,(1946?), the U.S. military erected the first unit, which constituted the incipient stage, of the erection of the complete network. Later on, the system was expanded to include the Northern Canadian Arctic regions, Newfoundland, Greenland, British Columbia, and several other places.

The final complete system, stretched over (3,000 ) miles, and constituted some (63) stations, (WITH MUCH PUBLICITY AND FANFARE). The final cost, in (1958 ), was computed as (1.342.5) Billion (\$1,342,500,000.00) + , +, +, .... WHO KNOWS ?

Eventually, with the advent of ICBM's, (Inter-continental Ballistic Missiles AND Submarines capable of delivering atomic bombs, the system was all but abandoned.

### Back to my friend :

He told me the following story, (mystifying, at that time). That, NO matter how cold it got outside, (OR any type of weather), that when he stood in front of the large Microwave Antenna, he could do so, with NO discomfort whatsoever.

In fact, he could be in a short-sleeve shirt, with NO heavy outer-wear, AND, he still felt warm! .... Little did he, (we) realize, that the micro-waves, were attempting to cook him!

### Back to Bombarders and Micro-waves.

EXPLANATION: for a lay person, how a Bombarde r/microwave unit works.

All molecules have **North**, South, magnetic poles, (alignment). When the **R F** is turned on, the current flows from **North** to **South**, forcing **ALL** the molecules to face (alignment), in **(1)** direction.

Then the **R F** wave **reverses** the direction, of the magnetic field, which is emanating from the unit, (from **South** to **North**), many times, (depending on the frequency controlling the unit).

In this case, we will assume the frequency is **30** KHz, (**30,000**, times a second), forcing the molecules to re-align themselves repeatedly, always in the opposite directions. Re-alignment is thereby changed (**30,000**) times a second. This, then forces the molecules to rub against each other, back and forth, back and forth, etc., creating a lot of friction, thereby creating heat.

That heat, **plus** the storing of the continuing **Micro-wave Energy**, (cumulatively), does the following:

It now shows up in the form of ever increasing heat, in the object, the micro-waves are impinging on. As the molecules, in the material being heated, (get hotter), the material becomes even hotter yet, enabling the Ions to hop more quickly. See the **“ionic-conduction”** process next.

### **IONIC CONDUCTION**

The purpose of this **EXPLANATION**, is to teach lay persons, about some of the intricacies of physics, electronics. They are taken for granted, when we use some of the marvelous inventions, which make our lives easier. Case in point, the **MICROWAVE** oven.

#### **Definitions:**

*The terms following herein, shall have the following meanings, (unless otherwise expressly provided herein)*

**IONS**, generally are known as a cohesive group of atoms, in any material, containing **EITHER**, a positive **or** negative charge.

**IONIC CONDUCTION** consists of the movement of **IONS**, (a group of **ATOMS** of either positive or negative charge), **hopping/moving**, from one site to another, generally classified as **“ION-HOPPING”**, in the lattice(s), of any material, via **“point defects”**, also called **“vacancies”**.

A **Lattice** is defined, as the composition of the internal sections of any material, arranged like a trellis, (upon which vines grow). There are many existing, different directions/sections/layers, (**lattices**), in all materials, depending on the atomic composition of the material in question.

**“Point defects”**, exist, where an atom is **missing**, or is in an irregular place, in a **lattice** structure.

**“Vacancies”** are empty spaces in any **material/structure**, where an atom should be, but is missing. They are common, especially at high temperatures, where atoms frequently and randomly, change their positions, leaving behind empty **lattice** sites. In most cases, “diffusion”, (mass transport by atomic motion), can **ONLY** occur, because of **vacancies**.

**NOTE: “Vacancies”**, heretofore, similarly discussed in electronics, were there addressed as **“Holes”**, [absent of any electrical charge], in any material. These were **“empty”** spots (**SPACES**), between **positive** and **negatively**-charged particles).

**Radio Frequency ( R F )** waves, are alternating-current electrical signals, used to produce and detect electrical signals, (radio waves), through/in, the air. The frequency rate, (signals going from **left-to-right**, then going from **right-to-left**), can **cause/effect work/output**, by and in, electrical equipment. **R. F.** signals may also cause work to be done, in **NON**-electrically connected equipment, such as a **kitchen Microwave oven/Radar/ Bombarder/ T.V. Set/ MRI's**, etc.

Generally the signals may range from **(3)** cycles per second (**3 Hz**) to **300 Billion** cycles per second (**3 GHz**). Since most of this range is beyond the vibration rate that most mechanical systems can respond to, they generally refer to oscillations, (**back and forth**), in electrical circuits **or** electro-magnetic radiation.

At normal ambient operating temperatures, very little **ION-hopping** takes place, since the atoms are at **relatively low-energy states**. **ION-hopping** refers to **Ions** moving in coordinated fashion, toward the next **vacancy**. As temperatures, go higher, **Ions** seeking **vacancies**, become **MORE** mobile, generating even **MORE** heat, etc.

**NOTE:** Even “micro-wavable” containers **ARE** subject to this effect, over the long-term, (after several hours of exposure). But for ordinary home-cooking use, ... minutes, ... the containers appear, **NOT**, to be unduly affected.

However, the hotter the material gets, the **MORE** rapidly the **Ions** move, causing a **run-a-way increase** of temperature. As the **(R. F.)** continues its assault, on the material being bombarded, that material goes into its melting point. If the **(R.F.)** is **NOT** terminated, the material may degenerate further yet, ... into a cloud of particles .... or ... even gas, **(plasma)** !

The foregoing, is an explanation, why certain materials **(insulators)**, may actually be impacted by **(R.F.)** waves, when normally, over the short term, the insulating materials appear, **NOT**, to be affected.

That lends credence, to the fact, that **ALL materials conduct electricity**, but some are **LESS able** to do so. This proves, there is **NO** electrical insulator which is **100 %** effective !

Later, during the inception of my Television Tube Manufacturing business, as a side endeavor, I was able to sell **Five, (5) KW Bombarders**, manufactured by my company, to both **France and Italy**. This was done, by successfully mitigating the difference, in AC current, **(U.S. 60 Cycle)** vs. **(European 50 Cycle)**, [by the use of a “**SWINGING CHOKE**”].

“**Swinging Choke**”, is an electronic device, much like a transformer, which enables equipment to accept **60 cycle** electricity, as well as that of **50 cycle**.  
**Note:** “**Cycle**”, in those days, now termed “**HERTZ**”

**NOTE:** Normally, an American manufactured electric shaving razor, was **NOT** able to be used in Europe. An adapter, much like a swinging choke, now allows normal operation, in **Europe AND the U.S.**

### **NEXT: A FIRST COUSIN OF BOMBARDERS**

The **mitigation technique**, [coupled up with more powerful cathode-ray power tubes, **(304 TL)**], also worked with “**Ultrasonic Drilling**” Machines.



This involved a drill bit, imperceptibly vibrating, at **30** KHz, (**30,000** times a second). There was **NO** visible movement, but when you tried to get a firm hold on it, you could **NOT**. It felt very slippery. This was caused by the “**piezoelectric**” effect/movement .... imperceptibly ... **UP AND DOWN!**

“**Piezoelectric**”, describes the effect, a piece of equipment undergoes, by which an application of electricity to a device called a (“**transducer**”), makes an attached piece of equipment, do work. A (“**transducer**”), is a device, which converts one form of energy (**electricity**), to another form of energy, (**motion**).

The net effect is that it makes a tool, (in this case, a **drill-bit**), vibrate, the amount of times, equal to the amount of the applied frequency. When the drill is attached to it, the unit is now called an “**Ultra-sonic Drill**”.

These **ultra-sonic drills**, could drill the **proverbial square hole**, **star-shaped hole**, or any other **unusual hole-shape**, you could fashion a bit for. The secret was, that the drill bit ... **NEVER ...** touched, the material being drilled.

The hole, (in Glass, ceramic, stone, tile or any other substance, which was **NOT** easily drillable), was being made by an **abrasive slurry**. The particles in the slurry, did the actual hole-making. It was liberally put on the material, where the hole was to be drilled.

**Note:** My company also made a **3,000** Watt output unit, for **Sheffield Corporation**, a Division of Bendix Aviation, in **Ohio**.

This document was written for **(3)** reasons.

The **first** was to thank **Discover Magazine**, for writing about Mr. **Kanzius'** wonderful foray, into a serious medical malady (cancer). It has been, and continues to be, afflicting, **far too many people**, for ... **far too many years!**

The **Second**, was for the dissemination of information about micro-waves and its potential usages for man's benefit, that otherwise might **NOT** have been known about, (including my anecdotal asides).

The **Third:** This document will be published on my **Website**, [cifaldi.org](http://cifaldi.org),

so that the information contained herein, would **NOT** be lost. It will be listed in the “**Files**” of my **Homepage**, under the heading of, (appropriately entitled), **Tumor Killer**.

**Final Note:** My article, in **NO** way, is **meant** to diminish **Mr. Kanzius’s** work, but rather, his use of **R.F.**, should be looked upon, as **another weapon**, in the **cancer-fighting** arsenal.

**Unfortunately**, the cancer-fighting process is **NOT** the long sought-for cure for **ALL** cancers. I believe that his work should **NOT** give **FALSE HOPE**, to all who have this deadly disease. **ANY PUBLISHED ARTICLE, SHOULD CONTAIN, SUCH A DISCLAIMER.**

In another article, **Mr. Kanzius** demonstrated that by the use of **R.F.**, he could also **dis-associate** water, (break the water into its hydrogen/oxygen elements), and actually burn the hydrogen emanating from the water, in a visible flame.

This process does **NOT** solve the energy crisis, because **more energy** is required to be put into the process, than can be extracted from burning the hydrogen. Having said that ..... if the input electrical energy, was derived from inexhaustible sources, (**solar, wind, tidal, geothermal**), there **WOULD** indeed, **ultimately**, be a **net gain**.

All material contained herein, is only meant to indicate, that I have much experience with micro-wave energy, and that I am qualified to critique any article, which might be written, about **Micro-wave (R.F.)** usage!

Sincerely submitted,  
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