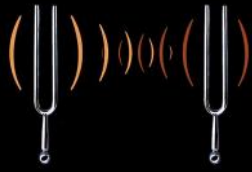


# FULL RANGE RESONANT FREQUENCY CAPABILITY!



*Capable of outputting all of Rife's frequencies!*



**Over 30'**

# WHAT COMBINED TECHNOLOGY DID THE

# ORIGINAL MACHINES USE?

## THEY USED A FREQUENCY GENERATOR WITH THE FULL FREQUENCY RANGE

An 18 million Hertz frequency generator will output all of the original frequencies that were used. A high-quality frequency generator will output accurate frequencies. It should be programmable and capable of holding many programmed channels. This will make it possible for the user to program a channel only once and then those frequencies can be run over and over again without the need of re-programming the frequencies every time the instrument is used.



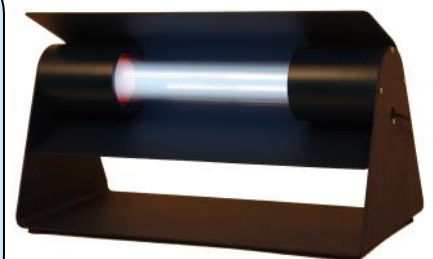
## THEY USED A RADIO "CARRIER" FREQUENCY IN THE 3MHz RANGE

All of the original machines used a "carrier" frequency. The 1936 machine used a "carrier" frequency in the 3 million Hertz range. A "carrier" frequency can be mixed or modulated with many different frequencies. The original instruments were used within a few inches to 2 feet for maximum power transfer. They also had a 30-foot diameter or greater useful range so the user could move around freely.



## THEY USED A PLASMA FILLED TUBE AS THE OUTPUT ANTENNA

The glass or Pyrex plasma tube is a noble gas antenna or emitter. Metal antennas work best when tuned to the frequency they emit. A plasma tube, unlike a metal antenna, has the capability of outputting frequencies over a very broad range without the need of being tuned. Unlike metal antenna's plasma tubes also make it so the user can safely touch them without any concerns.





# HOW DID THE ORIGINAL MACHINES WORK?

## FREQUENCY RANGE

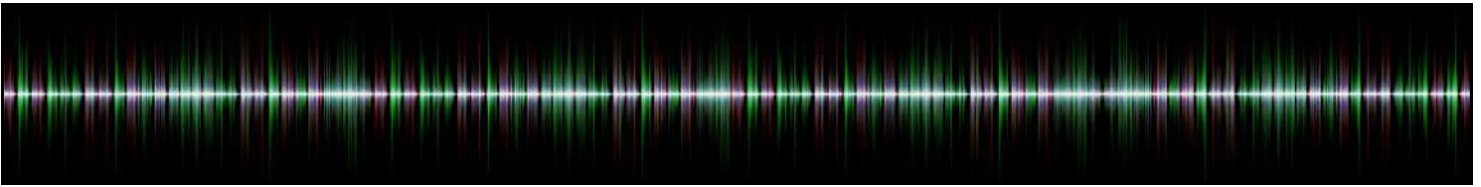
The most important information you need to know about any instrument you are considering purchasing is the frequency range of that instrument. Most people do not understand that the 63 original frequencies that were tested and used ranged from the audio range (1 to about 20,000 Hertz) to 17,033,000 Hertz. These frequencies were found over a 30 year period with the use of 4 machines. The number 2 machine became the number 3 machine when its power output was increased to 50-watts output. The actual range of the frequencies that were written down on laboratory notes and documents ranged from 15,779 Hertz to 17,033,000 Hertz. What many consider to be the most important frequency range of the written down frequencies covers from 15,779 Hertz to 1,607,450 Hertz.

The documents show that only 2 of the 63 original frequencies were in the audio range and 61 are in the RF or radio frequency range. Some people are under the incorrect assumption that you can separate radio frequencies from RF en-

ergy and then run them in an instrument. But RF means Radio Frequency so it is impossible to separate RF from a radio frequency. The range the frequency is in determines if it is a radio frequency or an audio frequency. This is important to understand because there are EM plasma tube instruments which use the Electro-Magnetic method to emit or output frequencies from their plasma tubes. These instruments are only capable of outputting audio frequencies. The EM method and RF method are like apples and oranges. They are two completely different methods of lighting the plasma tube. The EM method creates a high voltage electromagnetic field, which some people are very concerned about, to light the plasma tube. The original method uses RF to light the plasma tube. This method has a very low electromagnetic field which most people prefer to use once they understand this fact.

Many people purchase these EM type plasma tube instruments only to find out later the instrument they purchased can only output 2 of the 63





original frequencies because 61 of them are RF frequencies and 2 are audio frequencies. Because these EM plasma tube instruments are limited to audio frequencies no higher than about 20,000 Hertz this means their frequency range is at least 119,200 Hertz lower than the lowest original radio frequency of 139,200 Hertz. This is why the frequency range of an instrument is very important to understand or you will make the mistake of purchasing the wrong machine. The original machines were all RF instruments.

There are many RF instruments sold today that claim they are genuine machines but they can only output a few of the original frequencies. This becomes very confusing for people who are looking for an instrument. If a frequency instrument cannot output even the most important range of frequencies from 139,200 Hertz to 1,607,450 Hertz then you are not getting what you really want. Many of these instruments that cannot output this range try to get around this important fact by claiming they can produce all of these RF frequencies through audio frequency square wave harmonics.

Technically they are correct but in the real world the power in harmonics drops off so quickly this doesn't work as well as they claim. This is because their instrument's frequency range is so low, including their power output, that it makes it more wishful thinking than reality. If an instrument has sufficient power and it can output the actual

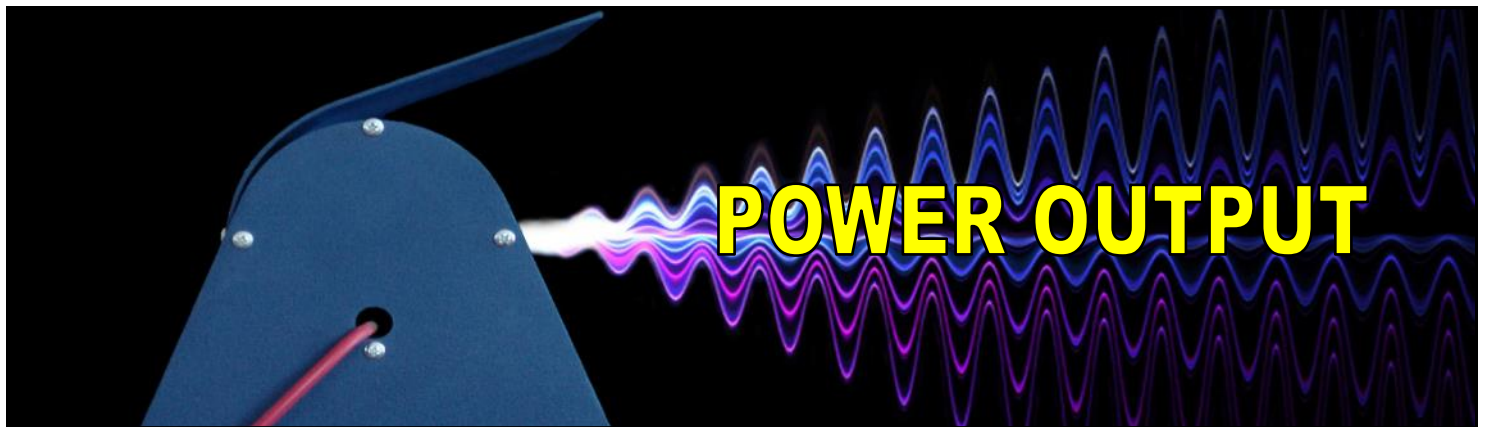
frequency range you want, then you will not have to waste power in harmonics hoping to get the frequency you want through audio frequency square wave harmonics.

There is a plasma tube instrument that claims it "*is the real deal.*" But it can only output through its plasma tube frequencies up to 180,000 Hertz at 100% modulation and up to 400,000 Hertz at only 5% modulation. This means it can only output 10 of 63 original frequencies which are within its frequency range capability and some of them with only 5% power.

How can they claim it is the "*real deal*" when it cannot output all of the original frequencies? They, like others, try to get around this important fact by claiming that their instrument can produce the original frequencies through the questionable audio frequency square wave harmonic method.

The majority of the machines on the market today fall into this category by making the same square wave harmonics claims. The GB-4000, SR-4 1 to 15-watt amplifier and the M.O.P.A. cover both frequency ranges without needing to use square wave harmonics. We do use square wave harmonics as the original machines did but not in trying to produce the original frequencies using that method. We built our instrument with the full range capability. This is why we can state our instruments cover the full frequency range of all 63 original frequencies and have the Full Range Resonant Frequency Capability.





When the first original machine was developed back in the early 1920s it had an output of 8 to 10-watts. By the late 1920s, the power output was increased to 50-watts. This 50-watt output was then considered the minimum power level needed for any machine which used a plasma tube. The next machine built in 1935 was increased to 500-watts output, but when the fifth machine was built in 1936 the power output was reduced back to 75-watts.

The 1936 number 5 machine was the only instrument that was ever sold or used by the public. It was sold in 1938 and 1939 by the Beam Ray Corporation. The 1950s model was an updated 1936 model which was limited to a 50-watt output, but it was capable of much greater power output. The plasma tube was always used within a few inches to 24 inches of the targeted area for maximum power absorption. But when the original 1936 machine was tested with its 75-watt output it had a range of well over a 30-foot radius. This fact is known because the 1936 machine, when tested, wiped out every specimen in the laboratory. This laboratory was over 50 feet long. Also, the laboratory instructions for the machines stated that all control specimens needed to be kept at least 80 feet from the plasma ray tube so they would not be affected by the frequencies. We point out this fact because some companies

today claim that their instruments have “the largest effective range of any plasma device” on the market. They make this claim because they have noticed effects over a 30-foot radius from their plasma tube. They incorrectly attribute this 30-foot distance to “Resonant Capacitive Coupling” due to their use of a 27 million Hertz RF “carrier” frequency. These claims are easily proven incorrect because the original 1936 machine used a “carrier” frequency in the 3 million Hertz range and it had the same effect at a 30-foot radius. Because the original 1936 number 5 machine documents clearly verify this 30 foot or greater radius range then this proves these claims are nothing more than just sales hype.

The GB-4000 and M.O.P.A. have a variable power output from 20-watts to a maximum power output of 190-watts. This makes it so our power output is variable and the user can choose the power level they would like to use.

We have a frequency range from 1 Hertz to 20 million Hertz with all of our instruments. This change was made May 1, 2015, but many of our competitors, even after 4 years, are still using our old M.O.P.A. plasma tube specifications of only 40,000 Hertz in their comparisons. It appears they are doing this because it is hard to compete with our current 20 million Hertz frequency range capability.

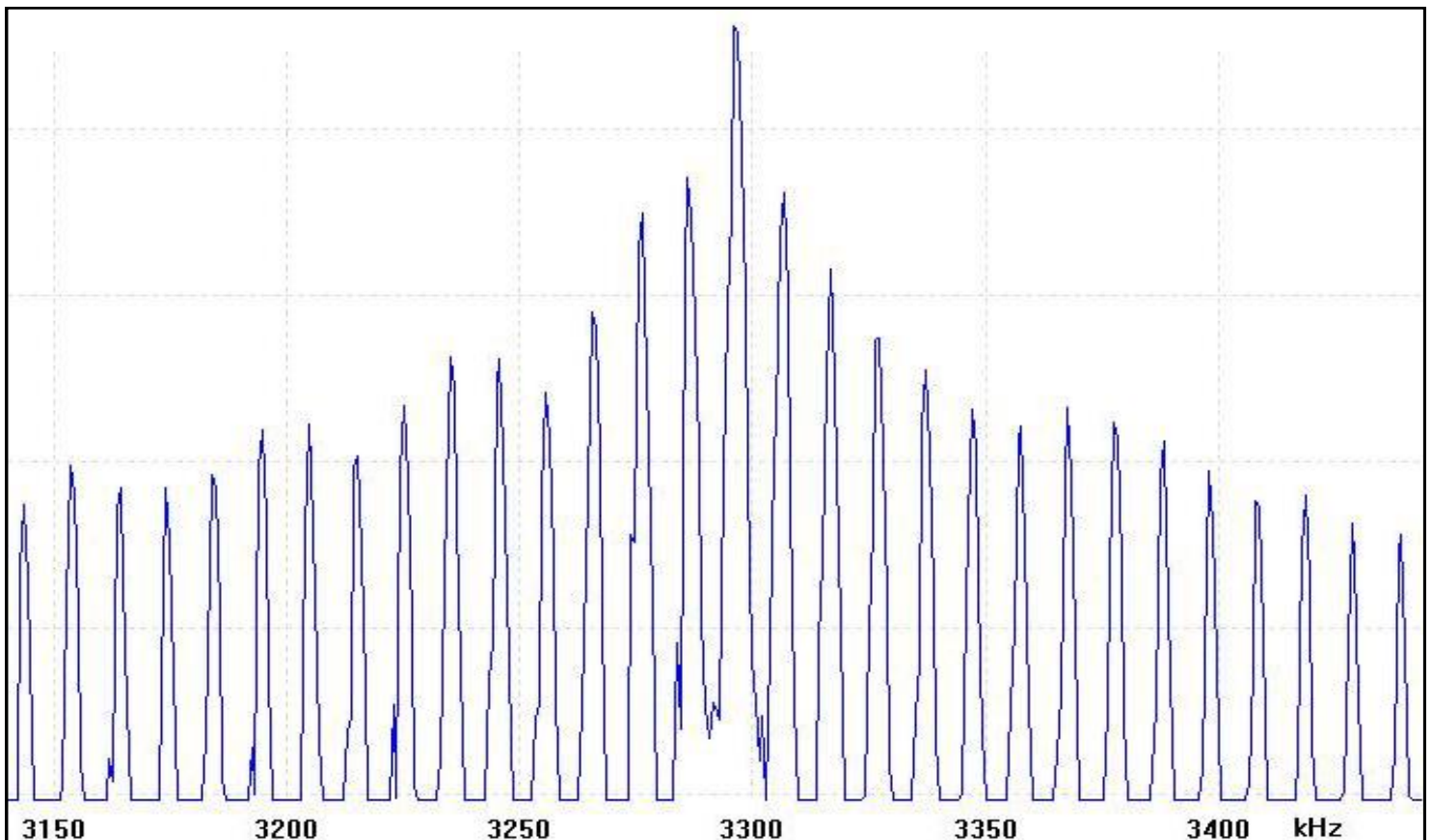
# RUNNING MULTIPLE FREQUENCIES

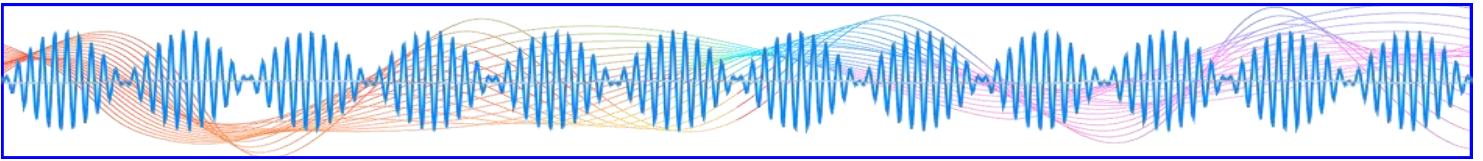


The GB-4000 is capable of outputting from 2 to 8 audio frequencies simultaneously. It can also output 2 radio frequencies simultaneously including the RF “carrier” frequency. The original machines from the number 2 to the number 4 had the capability of outputting 2 radio frequencies plus the RF “carrier” frequency including an audio “Gate” or pulsing frequency. The original number 5 machine was changed so it could output an audio frequency range up to 42,500 Hertz which could be modulated onto a fixed RF “carrier” frequency in the 3 million Hertz range. The combination of using audio frequencies with the RF

“carrier” frequency produced harmonic sideband frequencies. The original number 5 machine could produce from 20 to over 100 sideband frequencies simultaneously depending on the audio frequency used.

Below is a spectrum analysis graph of an original number 5 machine showing these harmonic sideband frequencies. The GB-4000, SR-4, and M.O.P.A. have this same capability. Using this method the number 5 instrument produced higher harmonic frequencies of the 139,200 Hertz to the 1,607,450 Hertz range. These higher harmonic frequencies were in the 3,000,000 Hertz





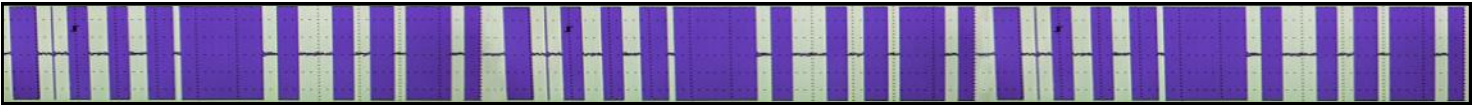
range. These higher harmonic frequencies were not square wave harmonic frequencies but were created using harmonic sideband frequencies. In our GB-4000, SR-4 and M.O.P.A. we have included all of the methods used in the original machines so the user can use any of these original methods. It is stated in the original documents that the number 5 worked better than any of the previous 4 machines. Even though the original number 5 had this multiple harmonic sideband capabilities when it was built in 1936, later in the 1950s they updated the number 5 machine so it could run and output 10 audio frequencies simultaneously. They certainly would not have done this if it would have negatively affected how well the original machine worked. This was done for the time-saving benefit it gave to the user. Today many programs that are used may have from 5 to over thirty frequencies and each frequency is run for 3 to 5 minutes. This could take up a lot of time which most people do not have. Consider this fact, if you had 8 frequencies to run for 3 minutes each it would take 24 minutes to run all 8 frequencies. With our instruments, it would only take 3 minutes, not 24 minutes. It is easy to see why in the 1950s they added this time saving multiple audio frequency capability.

Even though the original number 5 machine, which worked better than any of the previous 4 machines, successfully used this multiple harmonic sideband and audio frequency methods

this should have been sufficient proof these methods worked, but this is not the case. We have been successfully using these methods since 2000, running up to 8 audio frequencies simultaneously. Some competitors speak negatively about running multiple audio frequencies trying to convince potential customers it doesn't work. They claim two different things. We quote: "it reduces the power of the frequencies so they will not work" or it creates, "very inefficient noise like frequencies...like an orchestra where every instrument plays a different tune creating an incredible cacophony, taking away from the clarity of the signal."

The original number 5 machine had a power output of 75-watts and the use of these methods did not affect the power of the frequencies or how well those frequencies worked. The M.O.P.A. has a maximum power output of 190-watts which is almost 2.5 times more powerful than the original machine, so power in the frequencies could never be a problem. Clarity of frequencies could not be a problem either because they did not have this problem with the original number 5 machine. Today communication technology is capable of sending hundreds of frequencies simultaneously over copper or fiber optic transmission lines without the loss of "clarity with noise like frequencies." These claims are nothing more than a Red Herring. "A Red Herring" is something that misleads or distracts

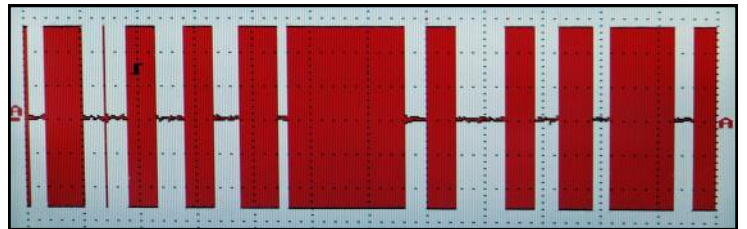
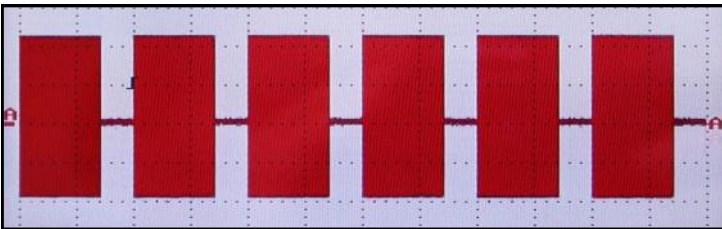




from a relevant or important issue that leads the readers towards a false conclusion.” Let us consider the square wave waveform which was produced by the original number 5 machine. It produces infinite harmonics and if we want “clarity of the signal” and no “noise” we certainly would not want to use this waveform. But this would mean that these instruments would not work very well and no one would purchase them. Here is the definition of a square wave: “Square waves are equivalent to a sine wave at the same fundamental frequency added to an infinite series of odd-

multiple sine-wave harmonics at decreasing amplitudes.” Below are two oscilloscope graphs of the GB-4000.

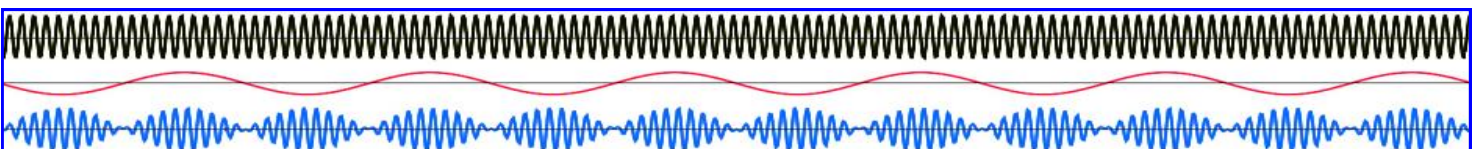
The one on the left shows a single square wave audio frequency running. The one on the right shows 8 running simultaneously. Notice there is no loss of clarity or noise using the original method developed in the 1930s/1950s. For all of the documented information about the original machines and running multiple frequencies go to [www.rifevideos.com](http://www.rifevideos.com). They have a Free 258-page report that covers all of the machines.



## HOW WE PRODUCE FREQUENCIES FROM 1 TO 20,000,000 HERTZ

We have tried to stay true to the original machine concepts while using modern technology. The GB-4000 can run 1 single frequency at a time or from 2 to 8 individual audio frequencies simultaneously up to 40,000 Hertz. In order to output up to 8 individual audio frequencies simultaneously, we use 1 Digital Synthesizing Processor (or DSP) and 2 Direct Digital Synthesizers (or DDS) for creating arbitrary waveforms from a single, fixed-frequency reference clock. The GB-4000 also uses a fixed crystal oscillator which is set at 3.1 MHz for our RF “carrier” frequency. The M.O.P.A. has its own variable “carrier” frequency that covers a range from about 2,200,000

Hertz to 3,800,000 Hertz. This gives much greater flexibility to the user so they have the option to use various “carrier” frequencies. The Digital Synthesizing Processor is capable of outputting 1 to 8 individual frequencies simultaneously up to 40,000 Hertz. These frequencies are then summed together so all of these frequencies are at the same power level. They are then converted to analog using a Digital-to-Analog Converter (DAC) and output from the GB-4000 into the M.O.P.A. or SR-4 1 to 15-watt amplifier. The 2 arbitrary Direct Digital Synthesizers are used to output up to 2 frequencies simultaneously from 40,000 Hertz to 20 million Hertz.





# Variable RF Carrier Frequency

The documents show that all of the original machines used an RF carrier frequency. This carrier frequency was either modulated or mixed with the original frequencies. If the frequency was in the low audio frequency range (below 100,000 Hertz) then it was modulated with the “carrier” frequency and if the frequency was in the higher RF frequency range (above 100,000 Hertz) it was mixed with the “carrier” frequency. In the original documents, it states about any frequency, *“one-tenth of one meter off and you have nothing. Its got to be absolutely correct.”* Since *“one-tenth of one meter”* off is the threshold margin for a frequency then a frequency range within one-twentieth of one meter, or one half the margin, logically should work. This margin is important to understand because the original frequencies ranged from 15,779 Hertz to 17,033,000 Hertz.

When the frequencies were re-measured in 1935 this range was lowered to below 2,000,000 Hertz. At 15,779 Hertz the frequency should be right on that frequency, but at 1,604,000 Hertz the frequency has a plus or minus margin (above or below the frequency) of 429 Hertz giving a total range of 858 Hertz. The higher you go up in the frequency range the greater the frequency margin increases. The final machine design was

built in 1936 and higher harmonic frequencies were used in that machine from about the 2,700,000 Hertz frequency range to the 3,500,000 Hertz frequency range. At 2,700,000 Hertz there is a 1,215 Hertz plus or minus margin and at 3,500,000 Hertz there is a 2042 Hertz plus or minus margin. Some people incorrectly believe that all frequencies must be exactly on the frequency within one Hertz to work but the *“one-tenth of one meter”* understanding dispels this thinking. Others think you have to be within 1/10th (0.10) of one Hertz for the frequency to work. If this thinking was correct none of the original machines would have worked because none of the electronic circuits back in the 1920s/1940s had the accuracy capability we have today.

With the additional understanding of the one-twentieth of one meter, we can talk about the M.O.P.A. plasma tube instrument. The M.O.P.A. has its own built-in variable “carrier” frequency that covers a range from about 2,200,000 Hertz to 3,800,000 Hertz. This gives the user much greater flexibility so they have the option to use various “carrier” frequencies. No other plasma tube instrument has this variable “carrier” frequency capability. About 90% of the M.O.P.A. circuit is solid-state components. The remaining 10% is the original vacuum tube technology used



in the number 5 original machine and this is required to have a variable “carrier” frequency. One hundred percent solid-state circuits work very well with a tuned fixed “carrier” frequency circuit but they will overheat if the tuning gets off even a few hundred thousand Hertz. This is the reason the M.O.P.A. uses the original vacuum tube technology so we can have a variable “carrier” without the overheating problem.

The GB-4000 and M.O.P.A. can output all of the original methods and frequencies used in the original machines. Like the original instruments, the “carrier” frequency many vary up or down one or two thousand Hertz when running, but this does not affect or change the accuracy of the audio frequencies or the higher RF frequencies when mixed in the circuit the same way the original machines’ frequencies were mixed.

The variable “carrier” frequency is mostly used for doing broadband sweeps using the harmonic sideband frequency method which was exclusively used in the original #5 machine. This type of harmonic sideband frequency sweep is mostly used when a frequency is not known, or the user just wants to do sweeps. This feature makes it so the user can possibly find a frequency range that may work for their situation. Having a variable “carrier” frequency gives the user a much greater sweep range that is not possible with a limited fixed “carrier” frequency. The M.O.P.A. has a

built-in frequency counter which can accurately read the un-modulated or un-mixed “carrier” frequency so the user can set the “carrier” frequency to the desired frequency. Once the “carrier” is set the counter is turned off because it cannot give an accurate reading while modulating low audio frequencies below 20,000 Hertz. Above 20,000 Hertz and in all higher frequency ranges it can give an accurate reading when mixing high RF frequencies with the carrier. This frequency counter information is given so people do not incorrectly think that the waver in the “carrier” frequency affects the accuracy of the modulated or mixed RF frequencies.

Another advantage of a variable “carrier” frequency is the user can adjust the “carrier” to a primary high RF frequency they want to use. They can then do a sweep that is large enough to cover the 1/20th of a meter or two or three thousand Hertz variance in the “carrier” using harmonic sidebands. Using this sweep method will more than cover the *“one-tenth of one meter off”* range guaranteeing the frequency is never missed. Using this method also puts a great deal more power in the desired frequencies. When the original harmonic sideband method was used they would always sweep the audio frequency so they did not miss the desired frequency. Sweeping gave them consistent results and this is why this method was used and worked so well.



THE MOST VERSATILE FREQUENCY GENERATOR

# THE GB-4000

4.7-Watts Digital/Analog Sweep Function Generator with 1/100th Hertz Resolution

*“Can run 2 to 8 frequencies at once. That's just one of the “GB-4000” differences!”*

The “GB-4000” is one of the most versatile 20 Megahertz sweep function generators ever built, with the average person in mind. It incorporates the very best function generator technology with the most advanced electronics for truly a superior design, yet it is so easy to use that anyone can operate it with its multi-function key pad.

The “GB-4000”'s frequencies are precise with a .01 resolution and guaranteed not to drift. Just enter a frequency to run and that is the exact frequency you will get.

The “GB-4000” has 2,000 programmable channels which can hold up to 48 frequencies each. These channels can be programmed in single frequency mode or multiple frequency mode. Single mode allows you to run the frequencies one at a time and multiple mode allows you to run up to 8 audio frequencies simultaneously saving you time. When programmed it only takes three easy steps to run any of the 2,000 programmable channels.

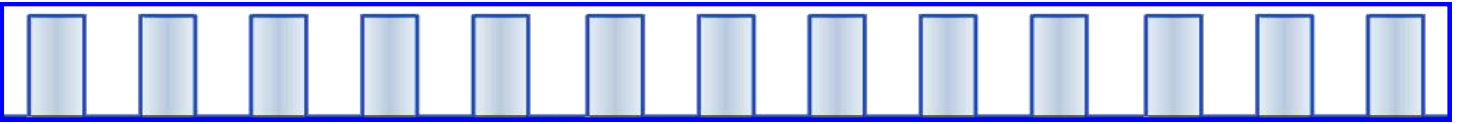


Step 1: Press the auto-channel button using the keypad.

Step 2: Using the key-pad enter the auto-channel number you want to use.

Step 3: Using the keypad press the run button. Then sit back and let the “GB-4000” automatically run all the frequencies which have been programmed into the auto-channel which you want to use.

The “GB-4000” can easily be custom programmed using the key-pad. For those who like computers, it comes with software that allows you to custom program it from your computer also. The “GB-4000” also has an optional channel sweep feature with a 2



to 20,000 Hertz sweep capability for any channel or frequency that may be run.

The “GB-4000” also has the ability to sweep up or down through hundreds or even millions of frequencies over a pre-selected period of time. The advantage to this is you can run through many frequencies one right after another.

Most generators only have one output circuit, but the GB-4000 has two for greater flexibility in running frequencies. The “Audio Mode” has a 0.75-watt power output for audio and RF frequencies from 1 Hertz to 400,000 Hertz used without an RF “carrier” frequency.

The other circuit, called “RF Mode” is for audio frequencies used with an RF “carrier” frequency including all higher RF frequencies up to 20 million Hertz. It has a 4.7-watt power output which means it not only has the power to run one frequency at a time but it is the only frequency generator, like the original 1950’s instruments, that can run up to 8 frequencies simultaneously to 40,000 Hertz with sufficient power for all 8 frequencies. This makes it up to 8 times faster to use than any other frequency generator on the market today.

No one wants to spend 24 minutes running 8 frequencies when you can spend only 3 minutes running them. Like most of us, your time is valuable to you. Why waste your time with other instruments that can only run 1 frequency at a time instead of up to 8 frequencies at one time.?

The “GB-4000” also has the capability to run 2 frequencies simultaneously from 1 Hertz up to 20 million Hertz for those who want to do broad range converging sweeps.

The “GB-4000” has both sine and square wave capabilities. The square wave has a 10 to 100% duty cycle capability.

The original 1930s/1950s instruments only used three waveforms called sine, damped and square wave. The damped waveform, which only has 11% power output, was replaced by the square wave waveform because it is the most powerful. This waveform is capable of 100% power output. All other waveforms such as triangle and trapezoid, ramp up and ramp down are just sales hype and do not have the power or harmonics that the square wave has. Because of this fact they were never used in the original instruments. This is the reason why we do not use them either even though we could.

The “GB-4000” has a 1 to 5000 Hertz gating or pulsing feature with a 10 to 90% duty cycle capability.

Many other frequency generators only have two connectors but the “GB-4000” has four, doubling its capability.

Each generator is a small unit weighing only two pounds. It can be run 24/7 without any concern of overheating.

If you’re one of the many people wanting to own a function generator with the capabilities of the “GB-4000” then this is the frequency generator you should choose.

# "GB-4000" FEATURES

20,000,000 FREQUENCIES FROM 1 "DSP" AND 2 ARBITRARY WAVEFORM "DDS's" FOR PERFECT ACCURACY

60-DAY NO RISK MONEY-BACK GUARANTEE TWO-YEAR WARRANTY ON PARTS AND LABOR

HAS A 3.1 MHz RF CARRIER FREQUENCY WHICH CREATES MANY SIDEBAND FREQUENCIES

LCD DISPLAYS FREQUENCY YOU ARE USING

LCD DISPLAYS AMOUNT OF TIME SELECTED WHEN CHANNEL IS RUNNING

"SQUARE/SINE BUTTON" ALLOWS YOU TO CHANGE FROM SQUARE TO SINE WAVE MODE

SMALL LIGHT WEIGHT DESIGN ONLY 2 POUNDS

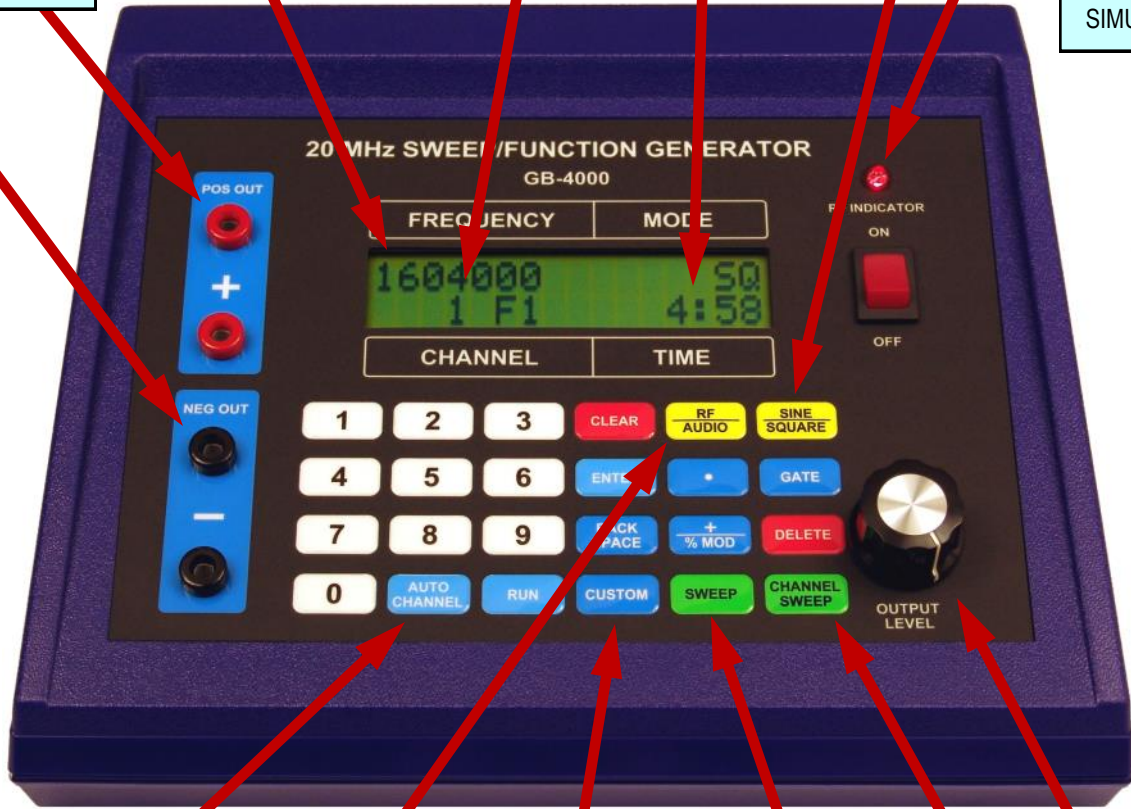
"#4 BUTTON" MUTES THE BEEPER

"RF INDICATOR LIGHT" LIGHTS WHEN RUNNING IN RF MODE

HAS FOUR CONNECTIONS DOUBLING ITS CAPABILITY

LCD DISPLAYS THE AUTO CHANNEL YOU ARE USING

CAN RUN FROM 2 TO 8 FREQUENCIES SIMULTANEOUSLY



"AUTO CHANNEL BUTTON" ALLOWS YOU TO RUN ANY OF THE 2000 CUSTOM PROGRAMMABLE AUTO CHANNELS OF WHICH 875 ARE PROGRAMMED

"RF/AUDIO BUTTON" ALLOWS YOU TO CHANGE FROM RF TO AUDIO MODE

"SWEEP BUTTON" ALLOWS YOU TO SWEEP THROUGH 1 TO 20,000,000 FREQUENCIES

"OUTPUT KNOB" MAKES IT EASY TO CONTROL THE POWER LEVEL

"#5 BUTTON" ALLOWS YOU TO PAUSE A PROGRAM

"CUSTOM BUTTON" ALLOWS YOU TO CREATE UP TO 2000 CUSTOM PROGRAMMABLE CHANNELS

"#6 BUTTON" ALLOWS YOU TO SKIP A FREQUENCY OR GROUP OF FREQUENCIES

"CHANNEL SWEEP" ALLOWS UP TO A 20,000 HERTZ FREQUENCY SWEEP IN AUTO CHANNELS

# 20 Million Frequencies

**30 MHz 1 to 15-Watt Linear Amplifier**

# **SR-4 Amplifier**

*Now increased to 15-Watts power output.*

*4 hookups - Built to work exclusively with the "GB-4000"*



Even though the "GB-4000" works great alone, many people have asked if it was possible to increase the 4.7-watt power output of the "GB-4000."

With this in mind, we developed the "SR-4" amplifier with a 1 to 15-watt variable power output capability controlled by the "GB-4000." It can be run 24/7 without any concern of overheating.

Function generators cannot put out 15-watts but a separate connectable amplifier can. To get the power output of the "SR-4" amplifier all you have to do is connect the "GB-4000" to it with a BNC cable. The amplifier then amplifies the "GB-4000's" frequencies from 1 to 15-watts output.

One of the great features of the "SR-4" is more hookups. The "SR-4" now has four sets of hookups for multiple users. All of the positive out hookups are connected together and all of the negative out hookups are connect together so it does not matter which one you use.

If you are considering purchasing the "GB-4000" and want to have the advantages of the "SR-4" 1 to 15-watt power output amplifier then all you have to do is order it when you purchase the "GB-4000."

# M.O.P.A. Amplifier

**For those who want more Power! "M.O.P.A."  
190-Watts - Works exclusively with the "GB-4000"**



The "M.O.P.A." (Master Oscillator Power Amplifier) is a variable 20-watt to a maximum of 190-watts RF plasma tube amplifier. It is an updated replica of the original vacuum tube equipment that was manufactured during the 1930's/1950's era. It can be run 24/7 without overheating.

Though it has been updated with modern electronics it still uses the RF tank coil and 812a vacuum tube needed to produce the original analog sine wave and square wave waveform output of the original 1936/1950's style equipment.

It has two variable frequency ranges. One is from about 2.2MHz to about 3.8MHz and when producing harmonic sidebands its frequency range goes from about 1.7 to 4.3MHz. The second frequency range covers the GB-4000's complete frequency range from 1 Hertz to 20MHz or 20 million Hertz.

Why have an instrument that only has a 180,000 to 400,000 Hertz frequency range when you can have an instrument with a 20 million Hertz frequency range and is less expensive?

# Over 60 Foot Diameter



## *360° - Over 30 Foot Radius All Around The Plasma Tube*

The “M.O.P.A.” is connected to the “GB-4000” through a BNC connector. When connected to the “GB-4000” the audio frequencies can be amplified by the “M.O.P.A.” and output through the gas filled plasma tube. The “M.O.P.A.s” RF output frequency then becomes the “carrier” or mixing frequency for all audio or RF frequencies output from the “GB-4000”.

The “M.O.P.A.s” RF output frequency can also be set to a specific frequency within its frequency range. That frequency can then be gated or pulsed with a duty cycle from a 10% to a 90% output from the “GB-4000.”

The “M.O.P.A.” is a non-contact 190-watt output instrument which allows the user to move around freely. It has a greater 360-degree range than the original 75-watts 1936/1939 machine did, which was over 30 feet.

With the plasma tube reflector, it has a 180-degree range well over 30 feet which is one of the largest ranges of any instrument on the market today. The additional 115-watts of power is what makes this possible.

In order to try and claim range superiority some companies, with less powerful instruments (100-watts or less), are attributing this over 30 feet range capability to their use of a higher RF “carrier” frequency. But this range capability, which the original 75-watts 1936/1939 machine had, is not based on a higher RF carrier frequency but is a natural plasma tube function based on the power output of the instrument. With the use of our removable reflector, which prevents a 50% loss of power going out of the backside of the plasma tube, this also increases the 180-degree range.



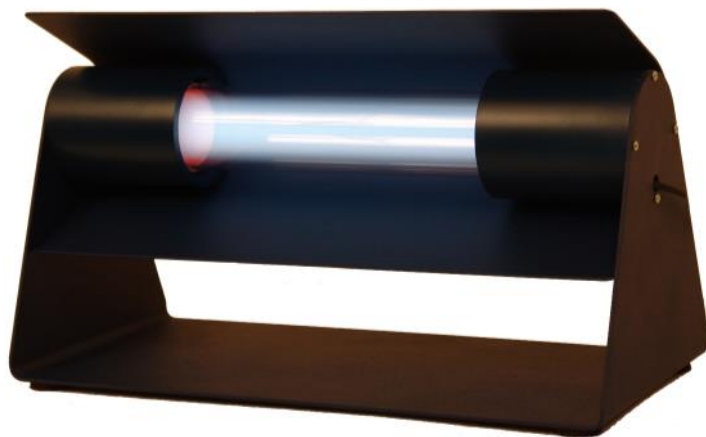
# Over 40 Foot Reflector Range



## *180° - Over 40 Foot Plasma Tube Range With Directional Reflector*

The “M.O.P.A.” has the ability to mix or modulate frequencies with its 20 Megahertz frequency range. It has the highest spectrum of any plasma device because it can produce over 100 harmonic sidebands simultaneously as the original 1936/1939 instrument did. Its variable RF “carrier” frequency makes it possible to put it on any frequency within its 2.2 to about 3.8MHz range for greater flexibility. Why have a fixed “carrier” frequency in a plasma tube instrument when you can have a variable one?

The “M.O.P.A.” not only has the ability to run a single frequency but it is the only instrument which uses the 1950’s capability to run 2 to 8 audio frequencies simultaneously up to 40,000 Hertz which is an enormous time-saving feature. It also has the ability to output two frequencies simultaneously from 1 to 20 Megahertz.



With this capability, it can run all the original frequencies which range from about 15,779 Hertz to just over 17 million Hertz. Why settle for only a three or four hundred thousand Hertz frequency range when you can have a 20MHz range (20 million Hertz). The GB-4000 with “M.O.P.A.” comes with a full 2-year warranty and lifetime support.

# GB-4000, SR-4 and M.O.P.A., Advantages

**MAXIMUM FREQUENCY OUTPUT** - 20,000,000 Hertz from GB-4000, SR4 and M.O.P.A.

**MAXIMUM SIMULTANEOUS FREQUENCIES** - 8 audio frequencies from .01 Hertz to 40,000 Hertz. Two RF frequencies from 40,000 Hertz to 20 million Hertz.

**AVAILABLE FREQUENCY SETS** - Over 8,000.

**PROGRAMMABLE CHANNEL CAPACITY** - 2,000 with 883 pre-programmed. The 2000 programmable channels can hold thousands of frequency sets.

**CHANNEL FREQUENCY CAPACITY** - 48.

**POWER INTENSITY KNOB** - One.

**2 POWER OUTPUT SECTIONS** - Audio Mode and RF Mode.

**ACCESSORY PORTS** - GB-4000 has 4. SR-4 has 8.

**WAVEFORMS** - Square, Pulsed Square Width, Hoyland and the sine wave waveform.

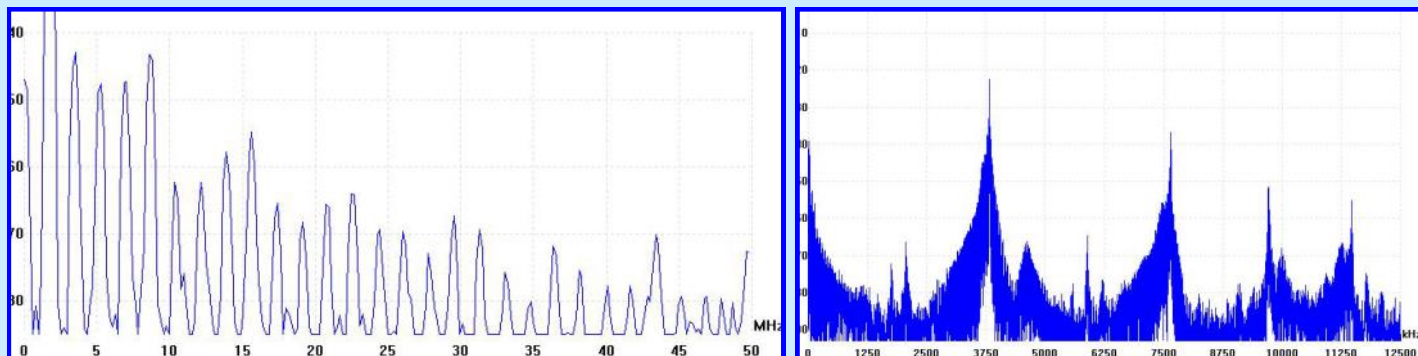
**KEYPAD** - Membrane.

**CONTACT OPTIONS** - The GB-4000 and SR-4 amplifier can be used as a contact device, meaning the frequencies can be delivered to the user through a variety of conductive electrode accessories.

**POWER OUTPUT** - The GB-4000 power output is 4.7-watts and the SR-4 is 15-watts. They have the highest power output of any contact instruments on the market. The M.O.P.A. power level is variable from 20-watts to 190-watts.

**PLASMA TUBE OPTIONS** - The GB-4000 is the control center of the SR-4 or M.O.P.A. and supplies the frequencies to either the SR-4 or M.O.P.A. The M.O.P.A. maximum power output is 190-watts and is one of the most powerful plasma tube instruments on the market.

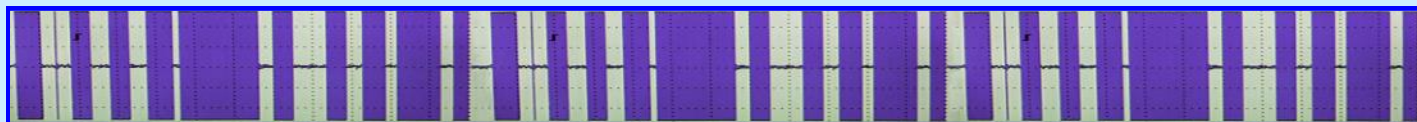
**NON-CONTACT** - You can freely move around the GB-4000 with M.O.P.A. enjoying the freedom of movement within its over 30-foot radius range. You can sleep doing overnight sets, watch TV, read, cook, eat or work while receiving the frequencies delivered from the plasma tube. Keep in mind that the closer you are to the plasma tube the greater the power that is received by the user.



**THE HIGHEST SPECTRUM** - The GB-4000 with SR-4 or M.O.P.A. plasma tube has the highest spectrum which exceeds 50 MHz. It can produce over 100 sidebands simultaneously.



**OVER 30-FOOT RADIUS RANGE** - We have the best range in the industry. The GB-4000 with M.O.P.A. uses a “carrier” wave to deliver the frequencies. Everyone within its range will receive the frequencies also. We use the original 3 Megahertz range RF “carrier” frequency which demonstrated this capability. Our power output is 190-watts and because of this, we have a greater radius range than 30-feet from the plasma tube. We also use a removable reflector with our plasma tube so that all of the power can be focused on the user, or it can be removed and used like any other plasma tube. The plasma tube is built for the M.O.P.A. and is perfectly balanced for the greatest output.



**SAVES YOU TIME** - The GB-4000 is the most versatile frequency generator on the market today with its powerful multi-frequency capability. Because it is capable of outputting 2 to 8 frequencies simultaneously it is up to 8 times faster and efficient to use. Why waste your valuable time? This capability shortens your run times considerably while elevating the impact of your frequencies to a much higher level. With 3 minutes being the average run time for each frequency why spend 24 minutes running 8 frequencies when you can spend only 3 minutes. Over the past 24 years, we have listened to our customers’ feedback and increased our power output and added more features.

## **ONLY ONE GENERATOR FOR 8 FREQUENCY MULTI-SIGNALING**

Only one other company has the multi-signaling capability. But you have to purchase a separate frequency generator for each additional frequency you run. This is very expensive. When you purchase the GB-4000 it is like getting 8 frequency generators for the price of one. This 8 frequency capability shortens run times considerably. With its 4.7-watts output, it is 23 to 47 times more powerful than the standard 1/10th or 1/5th of 1-watt power level used by our competitors. This makes it possible to run 2 to 8 frequencies simultaneously without frequency degradation or power loss.



**15-WATT SR-4 AMPLIFIER** - Even though the GB-4000 works great alone, many of our customers asked if it was possible to increase the 4.7-watt power output of the GB-4000. With this goal in mind, we developed the SR-4 amplifier with a 1 to 15-watts variable power output capability controlled by the GB-4000. It can be used with contact electrodes and is 75 times more powerful than other instruments on the market. It has four hookups for multiple users. The SR-4 1 to 15-watt amplifier cost only \$595 when purchased with the GB-4000.

**TRAVELS ANYWHERE YOU GO** - With the GB-4000 and optional SR-4 amplifier, you can take your frequencies with you. The GB-4000 is the compact portable frequency solution. Our premium quality carrying case can be put into any overhead compartment and makes it so you can carry your instruments and accessories with you wherever you go!



**HIGH QUALITY** - The GB-4000, SR-4, and M.O.P.A. are built in the U.S.A. Our technicians fully test and calibrate your instrument before it is shipped to you. We want to ensure the instrument you receive is quality built and will last for many years. We have a two-year warranty so you can purchase with confidence.

**60-DAY MONEY BACK GUARANTEE** - We offer a 60-day money back guarantee less a 10% restocking fee to cover shipping, handling, and repackaging. Returned equipment must be returned in original condition and sent back in the original boxes.

Other companies have a 90-DAY BUY-BACK warranty. Make sure you do the math for any BUY-BACK warranty from any company. Many buy-back warranties will cost you 10% for each 30 day period you keep their instrument. At the end of 90 days, you will lose 30% of your purchase price. The GB-4000 and M.O.P.A., 60-day 10% restocking fee is only \$422. If we charged 10% for two 30 day periods (60 days) it would cost you \$844. This is why most BUY-BACK warranties are not a very good deal.





**TWENTY-FOUR YEARS** - AAA Production Inc. has been in business for over 24 years. The GB-4000, SR-4 15-watt amplifier, and M.O.P.A. plasma tube amplifier are the result of 24 years of extensive work. During that time we spent 10 years searching for and obtaining original equipment so it could be tested to determine how it worked. The GB-4000, SR-4, and M.O.P.A. were developed from that research.



**TWO YEAR WARRANTY** - The GB-4000, SR-4 and \*M.O.P.A. amplifier have a full two-year \*limited warranty on parts and labor. (*Only exception: 90 days on 812a vacuum tube.*) This 812a vacuum tube should not be confused with the Pyrex Plasma Gas Filled Tube which will last for more than 15 to 20 years.



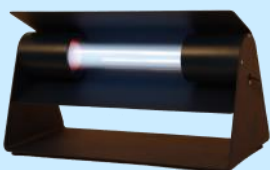
**LIFETIME SUPPORT** - We understand that you may need technical support. This is the reason why all of our products come with unlimited access to LifeTime support even if you are not the original purchaser. The LifeTime support is for the instrument, not the purchaser. If you have any questions after purchasing our instruments you can call and get professional help no matter what your needs may be, we are just a phone call away.



**PERFECT ACCURACY** - The GB-4000 is accurate to one hundredth (0.01) of 1 Hertz. The original instruments only had an accuracy within several Hertz and yet they worked very well, but they could never achieve the accuracy capabilities of today. When using square wave harmonics accuracy could be the difference between success or failure. The GB-4000 is one of the most accurate and reliable frequency generators available today.



**HIGHEST FREQUENCY RANGE** - The GB-4000 with M.O.P.A. plasma tube can emit frequencies from 1 Hertz to 20,000,000 Hertz. Not just 40,000 Hertz as incorrectly claimed by other companies. This is the highest range of any plasma tube instrument available today. Most plasma devices on the market are limited from 10,000 Hertz to 400,000 Hertz. Having access to the full range of the original frequencies means you are not limited to only producing harmonics of the original frequencies like those limited instruments.



**PYREX PLASMA TUBE POWERED** - The GB-4000 with M.O.P.A. Argon gas filled plasma tube technology allows for a non-contact delivery system which incorporates all of the frequencies used in the original machines. The original method had more than a 30-foot range, not just 6 feet as incorrectly claimed by other companies. Removable plasma tube reflector capability changes the output from 180° to 360° degrees output of frequencies. Over 30-foot range without the reflector and a 40-foot range with the reflector.

# Our "GB-4000" money-back guarantee makes your decision easy!



Try the "GB-4000", "SR-4" amplifier, or "M.O.P.A." amplifier for 60 days. You have 60 days to use them and decide if you want to keep them. Returned equipment must be in original condition. The "GB-4000", "SR-4" and \* "M.O.P.A." amplifiers have a full two-year \*limited warranty on parts and labor. (Exception: 90 days on 812a vacuum tube.) A 10% restocking fee applies to all sales.

The GB-4000 generator list price is \$1725.00. The SR-4 linear amplifier list price is \$595.00 if purchased together. The M.O.P.A. oscillator/amplifier is \$2495.00. The M.O.P.A. requires a signed purchase agreement and comes with a two-year \*limited warranty. To purchase the GB-4000, SR-4 amplifier or M.O.P.A. generator/amplifier please call MTC Industries at 1-877-743-3757. We accept all major credit cards, money orders or cashier checks. Personal checks allow up to two weeks to clear. Please add sales tax where applicable. Your ordered GB-4000 and SR-4 amplifier will be shipped in 1 to 3 days after the order is received at our office. The M.O.P.A. amplifier can be shipped within 1 to 3 days after receiving the purchase agreement. Allow up to 5 days for delivery. FedEx shipping FREE within the 50 states. Call for priority mail quote.



**Order Your  
"GB-4000"  
Today**

For the quickest ordering call:  
**1-208-703-1604**  
Or toll free:  
**1-877-743-3757**



**The Only Function Generator Capable Of Running  
8 Frequencies Simultaneously**

**MCT Industries      [www.thegb4000.com](http://www.thegb4000.com)**