

## Introduction to Alternative Bioelectronic Therapy Devices

Bioelectronic therapies include using a wide variety of devices which can be as simple as a Hulda Clark “zapper” that can be made oneself with a 9v battery and a few dollars of parts from Radio Shack® to a plasma tube Rife-Bare instrument complete with programmable function generator which sells for more than \$5000. These devices may have a beneficial effect in fighting some disorders if they are used in the correct manner.

There are two major types of electrotherapy devices – contact and radiant. A contact device is one where the user is connected to the machine. A radiant device is one in which the user is not in direct contact with the machine, but is nearby, usually within 3 to 10 feet. Radiant devices usually transmit their signal using a “plasma tube” – a glass or quartz tube filled with a gas such as argon, xenon, or helium. These are discussed in more detail in below.

Detoxification issues can be important when using bioelectronic devices and must be addressed when they are a problem. This is discussed in “Detoxification Reaction to Bioelectronic Device Therapies” which follows this chapter..

The term “zapping” has evolved among many in the bioelectronics world to not just describe the use of a Clark-style zapper, but of using any electrotherapy device including contact.or radiant devices.

Although described to some extent in this chapter, the use of zappers and function generators as pad devices, and especially the different types of electrodes which are used, are described in detail in the chapter Zapper and Function Generator Tips below.

### Contact Devices

A contact device, also known as a pad or electrode device, is one in which the user is connected directly to the instrument using wires connected to handholds, footplates, footbaths, actual pads such as TENS pads, or any other type of electrode which is use in contact with the body. These include zappers, function generators, and EMEM devices when used in contact mode.



**Fig 5.1**  
**Sota Instruments Zapper**

## Zappers

A zapper is a simple 555 timer circuit powered by a 9v battery. The circuit is described by Hulda Clark in many of her books and she gives instructions on how to build it. Due to their low cost and ease of use, zappers are the most popular devices that people use when they first start exploring alternative bioelectronic therapies. A zapper is all many people need to solve some health problems, even serious ones on occasion, and provide effective maintenance.



**Fig 5.2**  
**Auto-Zap Zapper**

Zappers are usually single frequency devices and when built to Clark's specifications produce about 30KHZ. They are contact devices, sometimes known as pad devices. This means that one must be directly connected to the device by wires (also called leads) and either handholds or footpads, usually copper or stainless steel, or pads, which can be sticky conductive pads which stick to the skin or straps which have a conductive area to transmit the current.

Shown in Fig. 5.1 is an advanced zapper that was once made by Sota Instruments in Canada. It was an excellent product that had 5 programs and could produce a few different frequencies. The reason for stopping production appeared to be political pressure from Health Canada (Canada's equivalent of the FDA) although Sota states that they only want to sell devices for which they can ensure support in the future. Whatever happened, this ended the production of the most advanced, easy-to-use, and cost-effective zapper on the market. It is odd that the only zapper which was manufactured to medical-quality standards, and was likely among the most effective, was taken off the market.

There are many fine zappers still available, though. One is the Auto-Zap Zapper (Fig 5.2) made by Arthur Doerksen. Although it is a basic single frequency model, it does have a built-in timing circuit to automatically run the Clark-recommended protocol of 7 minutes on 20 minutes off, repeated twice. It is also good in that it incorporates battery and output tests to ensure no



**Fig 5.3**  
**Croft Mini Zapper**



highly recommended by most rife researchers to use the keypad type, since it is an onerous task to dial in multiple frequencies during a session with knobs.

Despite having to dial in the frequencies with knobs, some people do in fact like the 4040A



**Fig 5.4**  
**BK Precision 4040A**

function generator since it is one of the few that can reach Rife's megahertz frequencies for under \$600 US (price as of 2007), and if one thinks that only a small number of frequencies need be run in a session, especially if these are Clark or original Rife frequencies in the 1 – 20MHz range, it is a good value. The frequency range of the 4040A is 0 to 20 MHz with voltage output from 0 to 20V plus it has sweep and variable duty cycle capabilities.

The Ramsey SG560WT, in Fig 5.5, is a keypad input function generator so is more convenient than a knob input generator when entering individual frequencies. Its range is 0 to 5MHz with 0 to 10V output. The frequency can also be adjusted with a knob on front, as can the voltage level. The SG560WT is the successor of the SG550, which was a popular function generator before programmable function generators were developed for Rife work.

### **Function Generators – Programmable**

Programmable function generators for alternative bioelectronic frequency therapy were common by the late 1990's. This was a great advance. Individual frequencies are most commonly run with a three minute duration. It was quite a task to run a long set of frequencies, entering a new one every three minutes often using a kitchen timer, and then entering the frequency on a keypad or, even worse, dialing in the individual digits of the frequency with a knob input generator. One of the first

programmable function generators for Rife work was made by Kinnaman (Fig 5.6). It held a maximum of 20 frequencies. Every time a new frequency set was desired to run, it would have to be reprogrammed



**Fig 5.6**  
**Kinnaman F1C**

via its telephone-like keypad. Then came the GENY, an ISA format PC card. It used a crude DOS interface to control it, but at least multiple program files could be stored and sets with many frequencies could be used. Neither of these generators are still being manufactured.

About this time other function generator programs for PCs were developed which used the PC's sound card to output the frequencies. Some of these were originally developed not for bioelectronic therapy, but as general sound synthesizers.

These are still available, including Ken Uzzel's specialized FreX software, which uses the CAFL as a database and allows the user to choose any frequency set in it to run ([www.heal-me.com.au](http://www.heal-me.com.au)).

The problem with using a sound card for Rife work, either in contact mode or to drive a plasma tube device, is that the fidelity of PC sound cards is poor. The square waves they produce do not have sharp enough edges (a fast enough rise time) to generate many harmonics, thought to be a vital part of the effectiveness of most frequency devices, plus they usually do not produce accurate frequencies, often many hertz or even as much as a kilohertz away from the programmed frequency. Some have tried to remedy this with PC cards which "square up" the wave so it will produce sufficient harmonics.

Another problem with soundcards when used for Rife work was their inaccuracy at producing signals of the correct frequency – they did not have enough resolution to produce, for example, 10,000Hz and might be as much as 100Hz or more off. Newer generation soundcards with their 24 bit accuracy are much better in this regard, but still require a wave-squarer to improve the square wave fidelity.

Despite these advances, this method of frequency production has never met with much long term success. This is probably due to the lack of portability of using a PC as a function generator. However, using a freeware frequency program with a PC sound card alone is very inexpensive and many have reported good results, so this method may serve as a good introduction to bioelectronic therapies.



**Fig 5.7**  
**Semoia Hammerhead**

A couple years after the Kinnaman was released came the Semoia Hammerhead function generator, shown in Fig 5.7. This was an advancement over previous generators in that it not only was a small, portable standalone function generator, it held up to 75 frequency sets (called banks) each of up to 50 levels, with levels being either discrete frequencies or small sweeps.

Programming the banks in a Hammerhead was quite a task, though. All the frequencies and their parameters had to be entered, like the Kinnaman, via the telephone-like keypad. It was not that difficult, just tedious and time-consuming. Resonant Light Technology (then known as Rife Technology, Inc.)



**Fig 5.8**  
**Resonant Light Progen**

used this function generator in their first few generations of Rife-Bare plasma tube devices (see below). The problem with the early Hammerhead was that it was susceptible to RF and the keypad could not be touched during a run, despite measures such as grounding plates being used to decrease its sensitivity. It also had (and still does) a 5v maximum TTL output, which limited its usefulness as a pad device.

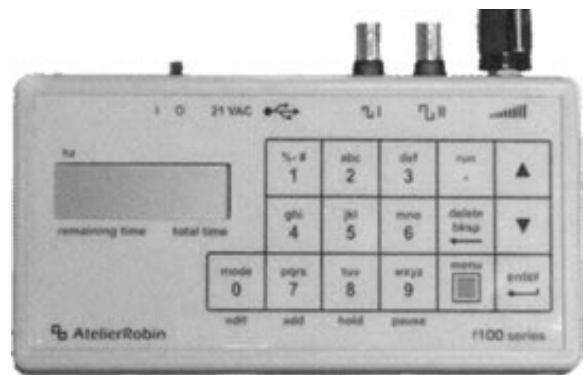
At this time, Resonant Light was looking for a replacement generator for use in their systems and helped develop the ProGen (Fig 5.8). Although the first generation ProGen only had the ability to hold 40 banks, instead of 75 like the Hammerhead, it was totally immune to RF so could be used in plasma tube systems like Rife-Bare and EMEM devices and for the first time ever, users could interact with a portable programmable function generator during a run without fear of resetting or locking up the generator. This also allowed discrete frequencies to be run one at a time instead of only inside frequency sets. The problem with the ProGen is, like the Hammerhead, it must be programmed via the keypad, a tedious task. The ProGen comes with over twenty of the most common and useful frequency sets already programmed so the user may be spared this task in many cases. The ProGen II, the latest model, has the benefit of being able to run its banks sequentially so that multiple sets can be easily set up to run. The ProGen II is also a fine generator for running as a pad device without a plasma tube device, too, and has a high enough adjustable voltage output that it can drive high intensity LED wands.

Atelier Robin came on the scene in the early 2000s with a line of programmable function generators. The first generation Atelier Robin used either a Palm computer, PC, or laptop computer to

control the separate function generator module. This appeared to be a step backward but proved very popular since for the first time frequency sets could be written in text files on a PC and run on the generator. Frequency sets were easily transferable and could be stored on one's PC, put on websites for download by others, and emailed. Users who wanted a small, portable device could opt to use a Palm to control the function generator. The number of sets that could be transported was limited only by the memory (and perhaps file system) of the Palm, but they could easily hold hundreds of sets on the most basic unit. Atelier Robin also put a lot of thought into the programming commands used for the generators and it was/is very easy to change the frequency sets.

In the Hammerhead and ProGen for example, to change every frequency in a bank to run 4 minutes instead of 3 requires changing every single frequency in that bank to run the specified time, which can mean over 500 button presses, while with the Atelier Robin software it is only necessary to change a single step in the frequency file which specifies the default time for all the frequencies in that file to run.

Due to the hassle of working with Palm computers with their constantly evolving operating systems and hardware and software interfaces, plus their unreliability, Atelier Robin developed a new line of function generators that operates in a standalone mode. The F125 is the basic model of this new type. They use the same efficient programming language as previous models so no conversion of older frequency sets is necessary. They hold up to 1500 frequency files with virtually no limit on the number of frequencies each one can run. Sweeps, scans, converges, varying duty cycle of the main signal as well as the gating frequencies, and many other features are included. Unlike when using a Palm to load frequency sets, conversion of the files to Palm database format is no longer necessary. Atelier Robin generators also work well in pad device mode, with 0 – 12v adjustable voltage output as well as biphasic capability. The one problem with the generators, as of 2006, is their susceptibility to RF when driving plasma tube devices. They work fine when the tube is turned off before buttons are pressed, and following precautions such as using RF chokes on signal and power lines help a great deal, but, unlike the ProGen, one cannot easily enter individual frequencies while running a tube device.



**Fig 5.9**  
**Atelier Robin F125**

Some of the first programmable function generators available for rife work were coded. That is, they hid the true frequency that was running from the user and instead had a limited number of codes that could be run, generally around 200. Besides the inconvenience of the user not knowing what actual frequency was running and comparing notes with researchers who were using real function generators, they had no ability to run frequencies for which there was not a code, so their utility was severely impaired, especially with many new and useful frequencies being constantly discovered. Despite the fact that they were severely crippled by this lack of functionality, they were quite expensive (but some proclaimed that they were the one “true” rife machine <ha> to justify their high price.)



**Fig 5.10**  
**EMR Labs GB-4000**

A modern offshoot of these early coded function generators is the EMR Labs GB-4000 (Fig. 5.10). EMR Labs decided to join the reputable frequency device market by reprogramming their version of the device to use (and display) the actual frequencies and giving it enough memory to store a large number of programs, including hundreds which are pre-programmed. Like the Atelier Robin function generators, the GB-4000 has the ability to produce a second channel RF carrier which increases penetration in pad device mode. It comes with handholds and foot pads. There is also an optional 10 watt amplifier available to boost the output as



**Fig 5.11**  
**Pacific Health Products**  
**Programmable Blaster**

well as the ability to run multiple frequencies at one time. Due to its good reputation, support, effectiveness, and reasonable cost, the GB-4000 has become a popular electrotherapy device.

A problem with buying an Atelier Robin function generator from Atelier Robin is that the cables and handholds or pads necessary to use it as a pad device are not included with the purchase. A company



called Pacific Health Products uses Atelier Robin function generators as a base for their “Programmable Blaster” line (see Fig. 5.11). They include the generator, handholds, footplates, a passive amplifier to boost the voltage output, and all the cables necessary to use an Atelier Robin function generator as a pad device out of the box. Pacific Health also offers a non-programmable model with a keypad input Intek function generator for a little less money, but it is certainly worthwhile to purchase the programmable model instead if one plans to run more than a few frequencies at a time on a regular basis.



**Fig 5.12**  
**BCX 411**

Another function generator used in frequency work is the F-Scan. Unlike other function generators, the F-Scan has the ability to first scan the body and detect resonances of (presumably) pathogens. These can be printed out as well as output with the F-Scan to the body as a pad device. Due to the very high cost of the F-Scan and the mixed reviews it has received, it is not a very popular machine, although it does have its proponents, including Richard Loyd, a well-respected Rife researcher.

EMEM devices, discussed further below, generally have a large single tube which can be held or put in a stand to use in radiant mode. A few EMEM-like instruments have small handheld tubes and are used only in contact mode. The BCX 411, shown in Fig 5.12, is probably the most popular model of this type. Note that the BCX411 is an attachment to the base unit BCX 211 and cannot be used without it. The BCX 211 provides the frequency input to the BCX 411. By itself, the BCX 211 is a function generator pad device of modest aspirations, with a range to about 40KHz and limited programming capabilities.

## **Radiant Devices - Plasma Tube Generators**

Royal Rife was a scientist who developed and tested most of his inventions in the early to mid part of the 1900's. He was persecuted for his work, his lab burned down, and most of his notes destroyed. However, there were some that survived. The story of Rife's inventions and legal troubles are detailed in the Barry Lynes' book called *The Cancer Cure that Worked*. The “Rife Bare” device was invented by Dr. James Bare in the early 1990s after studying Royal Rife's work. Bare's Rife generator

may produce some of the same beneficial effects of the original Rife device using modern electronic components. It may or may not be as effective as the original. It uses audio frequencies like many bioelectronic devices do, but instead of holding onto the outputs of a function generator or other pad device, the audio frequencies are combined with a radio frequency (RF) carrier signal, amplified, then output to a "plasma tube" which is a sealed glass tube usually filled with an argon or helium gas mixture.

James Bare published a book titled *Building the Rife Beam Ray Device* which is still available today. After he published it, Dr. Bare was a frequent visitor to the Rife internet mailing lists lending a hand as the early builders of Rife-Bare devices modified CBs, amplifiers, tuners, function generators, and other electronic equipment to make them suitable to operate in the RF environment of the machines. As time went on, a few companies developed components that were suitable to use out-of-the-box for RF plasma tube devices.

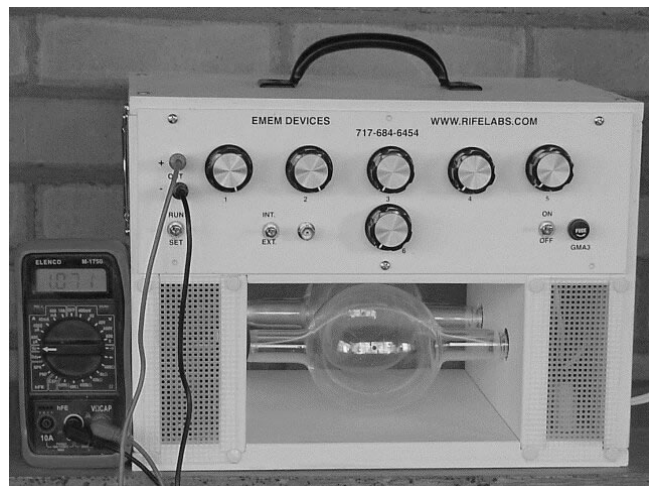
While this research was ongoing, some people looked for lower cost and easier to build plasma tube devices that would provide similar benefits.

### **EMEM Devices**

During these early days of internet Rife groups, another device became popular which also drove a plasma tube..This was the EMEM - the Electro-Magnetic Experimental Machine. EMEMs could be built for much less cost and many plans included a simple, built-in 555 timer-based square-wave generator so no discrete function generator was needed, which further reduced expenses. Two of the first manufacturers to offer commercial versions of the EMEM, that are still available today, were RifeLabs and Bruce Stenulson.

One benefit of EMEMs is that since they do not use radio frequency (RF) to stimulate the tube, the tube can be held. This may increase effects and certainly increases the sensation of using it. They can usually be cranked up to a high enough output that it is quite noticeable.

RifeLabs EMEM3D is shown in Fig. 5.13. It incorporates the tube in the same case as the circuitry which makes for a compact design. The knobs along the top are used to adjust the frequency



**Fig 5.13**  
**RifeLabs EMEM 3D**

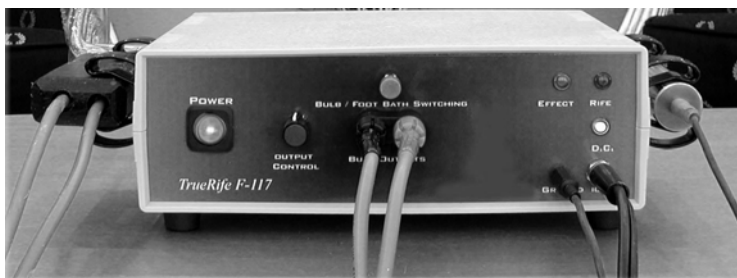
from the built-in square wave generator. A multimeter is used to display the frequency when turning the dials to adjust it.. This is even more tedious than using a knob-based function generator, but it is an inexpensive solution. The EMEM3D also has an input for function generator input, which can be used instead of the internal function generator and is much more convenient.



**Fig 5.14**  
**Stenulson System 6C EM+**

A problem with basic EMEM design is that the power to the tube varies greatly depending on the frequency being output due to the nature of the circuit and high voltage source. EMEMs already have relatively little frequency range, generally from 100 to 10,000Hz, but with little power in the upper and lower ranges. Bruce Stenulson, also a long-time EMEM manufacturer, addresses this problem by providing a number of patch jacks on the front panel of his device, called the EM+ and shown in Fig 5.14. Different jacks are used for different frequency ranges to provide the most effect in that range. Like the EMEM3D, the EM+ provides a jack for function generator input, or the knobs can be used to provide input from its internal frequency generator while using a multimeter to determine the frequency..

Another EMEM-type device is TrueRife's F-117. This is EMEM taken to the next level. Like other EMEMs, the output is limited to around 10 KHz when used with a plasma tube, but no rearrangement of patch jacks is performed. TrueRife machines use an Atelier Robin function generator



**Fig 5.15**  
**True Rife F-117**

board built into a PC case and the PC is used to control and run the device. The device is not portable, but does provide benefits such as being able to view comments and instructions in frequency sets which are otherwise unavailable when running an Atelier Robin function generator in standalone mode. The F-117 has the

ability to run in pad mode (without the tube), for effectrolysis (a term invented by TrueRife where the output is applied via a footbath), and like other EMEMs, the tube can be used in contact or radiant mode. Note that when used in effectolysis or in pad mode, there is no 10KHz limit on the effective output.

Michael Tigchelaar of TrueRife constantly updates their frequency lists and sends updates to its user group. Most of TrueRife's frequency sets are based on data from the CAFL, but they perform research into various pulse rates and duty cycles which may make them more effective in some cases. TrueRife also reseaches new frequencies based on their testing and some of their original sets are included in the CAFL (appended with a \_TR). TrueRife offers attachments to add functionality to ther F-117 system. These include a colloidal silver maker - any function generator of sufficient output can be used to make colloidal silver "imprinted" with frequencies which may increase its effectiveness. In addition, TrueRife offers a galvanic skin response attachment which may help indicate "hit" frequencies even if a sensation is not felt, an excellent innovation.

Due to their good support and innovative product line, TrueRife is poised to become a major player in the alternative bioelectronics field.

### **Rife-Bare Devices**

In the early to mid 1990s, Don Tunney worked closely with James Bare and built one of the first Rife-Bare devices and published results on his website from the public sessions he held in Canada. Note that unlike EMEMs which are effective to a distance of about 6 feet when used in radiant mode and are typically used on one or two people at a time, Rife-Bare machines can transmit to 30 feet or more and a large room full of people can perform a session at the same time. Tunney went on to form the first commercial company which produced these devices for sale to the public – Rife Technology, Inc. since renamed Resonant Light Technology, Inc.

A few other companies have also been licensed by Dr. Bare to build devices to his patent. One is Vibrnthealth, also known as Vibrant Health, a company owned by Dave Trebing in south Florida. Trebing has concentrated on producing the most powerful devices with the widest frequency range. They are well built into a stainless steel case. Vibrant Health offers many options in their unit, including various function generators such as Resonant Light's ProGen, Atelier Robin's F125, the Ramsey SG550, and others, although their 2007 top of the line model includes an Atelier Robin F125 mounted on the case. One can also choose tubes of various shape, gas content, and size. The IR/BPT-500 model is

shown in Fig 5.16. The Vibrant Health Rife-Bare devices include tuner knobs where the output must be tuned for best performance.

Tuners are a bane of Rife-Bare devices to all but the technically minded. When power is applied to the tube, especially a quartz tube, it often does not immediately light, so the knobs are turned to get it to ignite, then retuned so the device operates at the lowest possible standing wave ratio (SWR), which improves the effect as well as increases component life. When a device is not tuned well the components get hot and can fail. It is usually not necessary to tune a Rife-Bare device if a piezoelectric starter is used. A common gas grill lighter is an example of a piezoelectric starter. The spark it produces will usually stimulate a tube to light so no tuning is necessary. When this is done, it is not necessary to tune the device every time it is powered up unless the tuner knobs are inadvertently moved. A good solution for this is to construct a small wood rack that houses the tube and has a piezoelectric starter built into it to both secure the tube and keep the starter in place to make starting a simple matter. getting lost.

Early Rife-Bare devices produced by Resonant Light had this same limitation. Their first commercial device had discrete components – the tuner, power supply, modulator, and amplifier – stacked upon each other with a vertically mounted tube hanging on the side. Health Canada put pressure on them (possibly originating from the FDA) regarding selling these pre-built units for health purposes so they put them in kit form where the customer assembled the components before use. This was not an ideal solution.

Resonant Light continued research on their devices, and working with Health Canada as well as the ISO standards board, began producing a Rife-Bare device that once met Health Canada's criteria for a class II medical device, approved for pain control as a TENS device, but this was revoked when Health Canada later decided it did not meet the criteria for a TENS device, which are low frequency zapper - type contact devices commonly used in sports medicine. Their current device, as of 2007, is the PERL



**Fig 5.16**  
**Vibranthealth IR/BPT500**

model. It is professionally constructed into a steel case and has an innovative “stubby U” tube made especially for the device. The best feature, though, is that it is the first Rife-Bare device that does not have tuner knobs. Nothing to adjust, nothing to inadvertently bump, nothing for kids to fiddle with that can cause expensive equipment failure or ineffectiveness.

The Resonant Light PERL has a limited power output. Its maximum is around 100 watts. This makes it effective to about 30 feet away, good enough for a large room full of people, but unlike high powered units which may be felt to as much as 100 feet away or more (which may be a problem in some settings anyway). It is the ideal Rife-Bare device for clinical use as well as for in the home for those who prefer a machine that is simple to operate. The PERL comes with a ProGen II function generator, which does have its programming limitations as discussed above in the Programmable Function Generator section above. Each PERL is tested along with its ProGen to ensure effectiveness, though, and Resonant Light does not recommend that other function generators be used with it. Electroherbalism finds that it



**Fig 5.17**  
**Resonant Light Technology PERL**

appears to work just as well with others, such as the Atelier Robin F125, as long as RF interference issues are addressed by using quality, well-shielded cables which are choked appropriately. (choking involves snapping clamshell RF chokes around cables). Another benefit of using the ProGen with the PERL is that up to three ProGens can be ganged together to run three frequencies at once using an optional ganging kit from

Resonant Light. This can reduce session times by two-thirds, although it is quite an additional expense.

The Resonant Light PERL represents a pinnacle of research, development, and quality in the world of alternative bioelectronics and is highly recommended by Electroherbalism. Most of the companies in this field produce fine machines and the *reputable* ones are freely discussed on alternative health internet user groups, mailing lists, and web forums, with the owners or representatives of the various companies happy to answer questions about their devices.. There are usually plenty of users

willing to share their experiences and other unbiased sources of information are available so performing research is easy and highly encouraged.