P3 Operation and Frequency Validation Process

Overview

The P3 is the latest generation in the Pulsed Technologies product line. This new device is the culmination of some 10+ years of detailed research, design and development. The P3 is firmly founded in the basics of what has become known as Rife Technology but incorporates concepts of physics not previously utilized in other more conventional designs. Utilization of these principles has provided new capabilities. The P3 is unlike other Rife devices and is capable of vastly extended ranges of operation. These extended operating ranges allows the user to no longer be limited to the lower audio frequencies, relying on harmonics at greatly reduced amplitudes (power levels) to affect the intended application, but to extend the operating frequency far closer to its intended target at exceptional power.

P3 Operation

PREREQUSITES:

It is assumed the new P3 user ALREADY has a working knowledge and proficiency with the PFG and PFG Lab software, as well as a practical knowledge of the wave sequencing/scripting capabilities. The user MUST understand the limits of the particular type of equipment being used.

With theses extended ranges comes the necessity for exceptional materials, exotic cooling, and intelligent self monitoring. These areas have been addressed by the designers to free the user to concentrate on practical and productive operations. For this reason, dangerous areas have been sealed to prevent accidental exposure to potentially fatal areas.

Under NO circumstances should any sort of user repair be attempted. Please return to manufacturer for any required repairs or upgrades.

As you have been made aware, the PFG technology and software is a requirement for proper use of the P3 unit and its extended capabilities. While conventional Rife frequencies can typically be accessed without much trouble, you are no longer restricted to use frequencies in the audio ranges. It has long been known that the effective resonances were actually harmonics, rather than the entered fundamental frequency. The P3 is capable of driving frequencies many times, even hundreds (or thousands) of times, higher than the limits of other devices.

The PFG allows for meticulious control over the waveform itself and this is often a key to the proper build up of high voltages in the coil which may exceed 150,000-200,000 volts. Triangle, ramps and various library waveforms (provided with your software) and proper manipulation make this possible. Depending on your unique needs, other waveforms, even user designed, may be even more beneficial.

Unlike using the Hi-Impedance/Contact capabilities of the PFG, *the P3 requires each of the frequencies in your proposed script to be manually tested, adjusted and validated before final use in your script use.*

Manipulation of Waveform

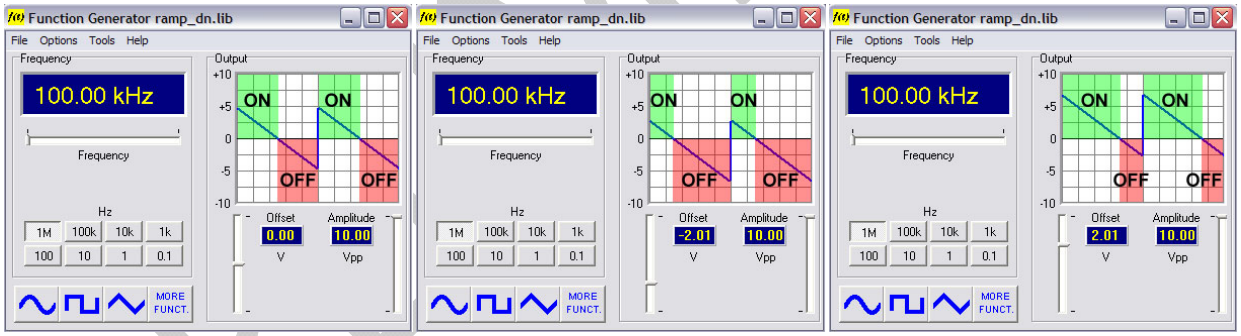
The P3 has been manufactured to practically operate to frequencies in excess of 100,000 Hz and those frequencies should be easily accessible to the average user. In the lab we have exceeded operational frequencies in excess of 200,000 Hz and have not yet discovered an upper limit.

Plasma requires a minimal amount of excitation time for proper activation. As frequency goes up, the length of time the waveform is on (pulse width) understandably becomes increasingly shorter. The P3 has been designed so that the user can visualize on the GUI display a relatively accurate representation of the selected function, (waveform), energizing the circuitry.

While the most harmonics are generated using the square waveform, it may be particularly advantageous to utilize other forms when manipulating the field of a coil which in turn releases the drive power to the plasma tube. Both low and high frequencies may in fact respond far better to a manipulation of various forms of ramps (a specific sub-form of triangle wave). Ramps may have especially advantageous effects when working with high voltage systems.

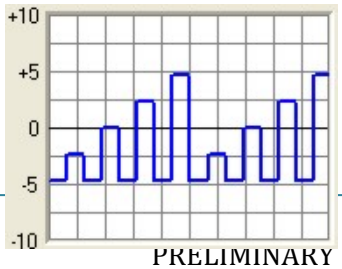
Circuitry within the P3 works with the PFG to allow for optimal triggering of the plasma in a manner not available in other devices as well as allowing the user a relative pictorial representation without unnecessarily elaborate or expensive measuring and monitoring equipment.

Frequency control is pretty much straight forward and follows the standard procedures in even simple contact applications.



Affecting relative triggered “on” to “off” time ratios can best be manipulated by use of the offset control which raises or lowers the waveform in relation to zero signal voltage. Although this may seem a bit confusing, the P3 equipment has been designed in a manner (for strictly technical reasons) to optomially uses the negative signal voltage to trigger the much higher drive voltages. (shown here as the area BELOW the “zero line”.) In this manner, positive voltage corresponds to “drive-off” time. Negative voltage corresponds to coil field ON time. As a note, the tube light actually comes on after the “on” time, during the off time, but it does not last the whole “off” time.

Depending on your unique applications, you may choose to design a waveform of your own choosing using the included waveform editor to construct a superior operating control for your particular. This should be



only attempted by those who understand the consequences of the implementation.

It is imperrative to manually try out and run each of your selections in advance, optimizing each, and then recording the settings for inclusion in your personal wave sequence.

Hint 1: If the user so chooses, the "repeat" check box may be selected to continually run the wave sequence until terminated by the operator.

Hint 2: If the basic waveform is identical to the previous, you may select function "0" for the previous waveform type to bypass reloading the mathematic description each step. Offset, voltage, and time (duration) can still be.

Note: In the sample shown here, lines 1, 2 and 6 are using a square wave signal. Line 3,4 and 5 are using the library defined "ramp_dn" waveform with the "0" designating to reuse/repeat the current waveform in processor memory. Line 2 could similarly been indicated to repeat the square waveform from line 1.

Temperatures and Heat

BOTH High and low frequencies and long durations may cause localized internal temperatures to rise quickly beyond normal parameters. These areas are not accessible to the user. The unit contains both peltier and strategic controlled air flow cooling which appears to the user as a seemingly open system. Noticeable warm temperatures are likely not sensed by the user. It is important that the system never be operated outside of its case. A "self-protective" mechanism will disengage the plasma drive temporarily to prevent overheating and damage. If you notice an un-programmed cycling of the tube, stop immediately and adjust your parameters (typically the offset) or frequency so this cycling does not occur.

With proper care, planning and attention to your user programs, the P3 and PFG should provide many years of regular daily use, even in a formal private or professional group setting.

Further Recommended Reading:

- Frequency Generation Consideration
- PulsedTech Device Considerations
- Bioenergetics Session Considerations
- Working with the PT Harmonic Frequency Calculator

These documents can be found on our website at www.PulsedTech.com/download/documentation/

Recommandations

Many of the users, especially those desiring to use the equipment directly in association with Rife related applications have asked for general guidelines.

Frequency	Offset	Voltage/Amplitude	Function Library/Waveform
1,000 Hz	_____	10	2 - Square
5,000 Hz	_____	10	2 – Square
10,000 Hz	_____	10	3 - Triangle

20,000 Hz	_____	10	4 – ramp_dn.lib
30,000 Hz	_____	10	4 – ramp_dn.lib
40,000 Hz	_____	10	4 – ramp_dn.lib
50,000 Hz	_____	10	4 – ramp_dn.lib
60,000 Hz	_____	10	4 – ramp_dn.lib
70,000 Hz	_____	10	4 – ramp_dn.lib
80,000 Hz	_____	10	4 – ramp_dn.lib
90,000 Hz	_____	10	4 – ramp_dn.lib
100,000 Hz	_____	10	4 – ramp_dn.lib

We do not recommend users operate above 100,000 Hz unless they are outfitted to properly monitor output and understand the implications of operating in the regions above 100,000 Hz. Similarly, very low frequencies also require a degree of care when utilizing the "old" conventional audio settings. Best P3 performance, operation and effective results are obtained when using frequencies **above 10,000 Hz and below 90,000 Hz**. Although far beyond the scope of this simple instruction sheet, this is especially true for those investigating biological and molecular applications.

Square waves can generally be used for the lowest frequencies, under 10,000 Hz. Ideally however, it is better to utilize frequencies much closer and concentrate your applied power much closer to the actual useful frequency.

While the triangle function (3) can be used for the upper ranges (10,000 Hz to 20,000 Hz), there are some distinct technical advantages to using one or more of the library waveforms.

The "ramp_dn.lib" is the preferred choice for most work with upper P3 frequencies (above 20,000Hz and below 1000). HIGH FREQUENCIES typically require a slight NEGATIVE (-) offset while very LOW FREQUENCIES usually require a POSITIVE (+) offset. The value typically needs to be increased slightly as you get closer to either edge of the operating spectrum.

The samples given in the above set are ONLY starting points. Your system may differ. Adjust your waveform and offset so that they can run for long periods of time without overload protection activating. With the proper programmed settings, the equipment can run for extremely long sessions.

It has been noticed that regular use of the system makes operation easier. The more a system gets used, the more forgiving it is on settings and the easier it becomes to access the higher and lower frequencies. All systems are shipped with NEW tubes that have only had very minimal *burn-in* time (burn-in means running the P3 system long periods of time). To provide completely burned in tubes could easily add several hundreds, even thousand dollars to the price of the system. Most people have opted for the lower price and to do this *burn-in* themselves via regular use.

It is important to note that, if the P3 system is not used for long period of times, values may need to be adjusted occasionally.

Pulsed Technologies strives to provide the very best experimental equipment for resonant frequency plasma research and education.

PFG Lab v1.0

Our new software, soon to be made publically announced, contains easier ways of working with wave sequences, now called SESSIONS, allows for the easy manipulation of sessions, importing old wave sequences (.txt files) and importing frequencies from different libraries with just a few clicks.

The program introduces 2 working modes, a PFG mode and a P3 mode. When switched to P3 mode, the program locks the amplitude (power/voltage) to the maximum 10 and allows using of the "P3 calibration" feature. The "P3 Calibration" can be accessed from the Options menu.

More information on using the new software will be included soon, along with the software public release.

Beta public preview version of the software (0.9.0.xx) can be downloaded from our website: www.PulsedTech.com/download/software/

Customer Support may be reached at 214-453-0095, 9 am to 3 pm EST.