Riccardo Tristano Tuis

432Hertz:
The Musical Revolution

- The Golden Tuning that tunes the music to our biology

Music is higher Wisdom than Philosophy and Theology
Ludwig van Beethoven

Dedicated to
Ananda Bosman,
Lyndon H.LaRouche Jr.
to the Schiller Institute
and to all researchers of the science of frequencies that made the making of this book possible.

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Preface (**page 9 & 10)**

Here lies an adventurous project and important venture. Riccardo Tristano Tuis has managed to captivate the essence of the uprising harmonic music revolution in a nutshell, that encompasses the vast complexity involved in a singular and understandable manner for the general reader.

He is to be commended for this noble effort, in which complex musical principles, that lie at the heart of what we have termed the harmonic AUMega Music Revolution, are conveyed to the reader in a readily absorbable manner that inspires comprehension of these vital principles, to become the inevitable standard of our future music — a metamorphosis now well underway.
Well thought out in comprehensive subject sections, and finely graphically illustrated for added cognition, this book marks the beginning of a new literature field of harmonic music science and artistic culture.
This is the very first effort in true book form, in Italy, on this notably novel subject to emerge in the entire world!
When we first envisioned the harmonic AUMega Music Revolution in 1996, to utilise harmonic tuning like 432Hz and 256Hz, and other key and important harmonic structuring, applied throughout each musical composition and grafted into modern music, we were envisioned to see this as the means for a new form of technology for global cultural events. Whereby, harmonic music, utilising coherent transcendental principles such as the golden ratio, would not only create a new experience of sound in the experiencer, but would also enable coherent effects to the audiences' nervous system, health, well-being, and increased creative cognition & inspiration.

Remarkable precise research of the exact frequency (8Hz) on cells and the healing of twenty-seven diseases was already engaged by Dr. Puharich in the years of 1970-80.
Whereby the precise frequencies (and their associated cascades), that we utilise in the AUMega Music Revolution, have been studied with intricate precision, in their effect upon biology, with overwhelming results on the remission of diseases, and other important effects.
Whilst we have lectured and written extensively about this since 1999 (including an internet book), here lies the first true book on this subject to be published in the global literature community, embodying the independent research effort of Riccardo Tristano Tuis, par excellence.
Whereas, classical musician Jonathan Tennenbaum founded the use of the harmonic equal tempering scale tuning based on 432Hz and 256Hz within classical music, we were to found this into modern electronic and popular music.

This book and project is to be commended for making available as it contains many keys to reach a truly exciting and coherent future for mankind.

This book cannot be taken lightly, I heartily congratulate Riccardo for this tremendous and diligent effort, forwarding mankind onwards online with the cosmic symphony of creation.

Ananda Bosman,
9/9/09

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Currently there are two active movements for the promotion of the 432Hz tuning, which was already used by classical music composers like Verdi and other illustrious composers of the past. The first is that of the Schiller Institute (which we have already detailed in previous chapters) and represents the world of classical and scholar music; the second is that of a more heterogeneous group of musicians of various musical genres that refer to the research of Ananda M. Bosman. This visionary researcher promotes the new musical Renaissance, which he called AUMega Music Revolution, for over fifteen years by now. The aim of the AUMega Music Revolution is to create a community of musicians of various genres who make music, mostly electronic, with a real scientific tuning and a specific musical protocol. Beginning in November 1992, Bosman began to hold seminars on 432Hz-tuned music in countries like Germany, Switzerland, Austria, Norway, Italy, Belgium, France, Greece, and Slovenia.

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Unlike the Schiller Institute, Bosman, based on his studies on exogeometry, not only promotes a pitch based on the C-tone at 256Hz and the A-tone at 432Hz, but a music completely based on the numbers of Sierpinski Pentahedron: that is 36, 54, 72 , 108, and 144. Bosman called this music AUMega Music. AUMega Music is not only 432Hz tuned music, but uses a specific protocol to compose it. Before going into the more technical aspects of this music, I would like to talk briefly about some preliminary experiments done on Bosman's music. In a previous chapter, I mentioned the fact that the 90-degree angles, with which our houses are unfortunately built, give a magnetic imbalance to the human body.
If you touch specific points in the corners of your home, these biological imbalances are instantly identifiable due to a weakening of muscle tension. Even if the person is not immediately aware of the fact that his/her central nervous system is inhibited together with the important neurotransmitter called acetylcholine, but in its place its antagonists such as, for example, atropine, takes over. The latter, in the long run, causes muscle fatigue and weakness on the central nervous system and at low doses causes slight restlessness, while at high doses causes agitation and disorientation
One of the first tests being done with Ananda Bosman’s music in 2005 was to see if the 432Hz music influenced the central nervous system. The test was done in a private way by a university professor who is an expert in biophysics linked to environmental biopathologies [Dr. Nicola Limardo]. The teacher, who currently prefers to stay anonymous, discovered that AUMega Music was able to counteract the damaging effects due to the electromagnetic fields of the environment that lower the presence of acetylcholine. In that moment, when the person listened to Bosman's music, the release of acetylcholine into the body was stimulated, bringing the muscle tone to an optimal level. But when the music stopped, instantaneously the muscle tone dropped and the person returned to be subject to the decrease of acetylcholine. A quick test on muscle tone or blood sampling done, before and, while listening to Bosman's 432 Hz music could empirically demonstrate how it is able to influence your central nervous system.

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From these first tests one would think that all music tuned at 432Hz has those beneficial properties for the central nervous system. Unfortunately, in another test with other music at 432Hz, including nothing less than the *Andiantino* from Mozart, it was discovered that the intonation at 432 cycles per second only, was not enough to create a positive feedback to the central nervous system. We emphasize this detail to point out that, the simple music at 432Hz could have positive effects in the brain, but for the central nervous system of the listener this pitch only is not enough. In Italy there is already someone in the network to advertise their music at 432Hz as music prepared for bi-hemispherical balancing, energy rebalancing and anything else using it in expensive seminars without having undergoing preliminary tests on its validity.
At the moment, as I understand it, only Bosman's AUMega Music has been tested showing that it is able to influence the central nervous system and the cardiogram.
Perhaps the secret of the real beneficial effects of the AUMega Music from Bosman on the central nervous system is due to its specific protocol based on the mathematical construction of the numbers of the Sierpinski Pentahedron.
This protocol can be divided into three steps:

- intonation of each single tone with specific frequencies based exclusively on the multiple of 8 (which will be explained how to do in the following pages)
- the bpm (beats per minute) of each single song must be based exclusively on the multiple of 8
- the parameters of the effects and spatial arrangement of each individual sound of an instrument must be based exclusively on the multiple of 8

Therefore the parameters of the *delay*, of the *phaser*, of the *ADSR*, of the *LFO (Low Frequency Oscillator)*, etc, and of the *panning* must work with these multiples. Completely following this protocol can be difficult in the second step, and consequently in the third, because many times a melody line especially the voice can lose *pathos* in following only the multiple bpm of 8, for example 72bpm may be too slow for the vocal line and 80 bpm too fast.

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In these cases you have to make a choice between having a music functional to the listener's well-being or creating a song based entirely on the *pathos*. It is up to you to create music conceived on mathematics and the harmony of life or as a channel with which to transmit specific moods and emotions. But the composer should not see the protocol as an expressive limit or as "cold" compositional mathematics to which he must adapt, since AUMega Music is a music based on the heart both in a literal and figurative sense. As promised we will now go into a bit more technical aspects to make real music at 432Hz, with which it seems the sublime *Stradivari* were conceived and tuned.
The musicians who favour 432Hz and the 256Hz use intonations based on one of these two frequencies. This is because an A-tone at 432Hz and a C-tone at 256Hz is very difficult to coexist in the same scale. In order to obtain an A-tone in 432Hz coherence consistent with a C-tone at 256Hz it is necessary to use the Pythagorean diatonic scale or even better the Pythagorean chromatic scale (in which it is always equal to 27/16 (multiplied 256x27: 16 = 432), or 905.865 cents, the 6th largest Pythagorean above the 256Hz.
For electronic music, on the other hand, it is possible to overcome this problem; the AUMega Music Revolution, at the moment, uses the equal tempered scale (since now the Western ear has been "educated" to listen to this scale) obviously shifting the fundamental A-tone from 440Hz to 432 cycles per second. This lowering of 8Hz corresponds to a lowering of 31 or 32 cents. So, once the A-tone is lowered to 440 at minus 31 cents it will vibrate at a frequency of 432.19 Hz and the C-tone on a frequency of 256.98Hz. The pitch frequencies of this particular equal tempered scale, measured with a spectrogram and a oscilloscope, gave the following results:

DO (C-tone) = 256.98Hz
DO# / REb = 272.26 HzRE = 288.45Hz
RE# / MIb= 305.61 HzMI = 323.78 Hz

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FA = 343.03 Hz
FA#SOLb = 363.43 HzSOL = 385.04 Hz
SOL# / LAb= 407.93 HzLA = 432.19Hz
LA# /SIb= 457.89 Hz
SI = 485.12 Hz

Bosman has repeatedly said that, in general, the music does not need to be based on precise 432Hz because it is almost impossible to obtain them in a constant and perfect way, but, as I said earlier, for those who make electronic music you can avoid not having a pure C-tone at 256hz and pure a A-tone at 432Hz thanks to special software. In fact, thanks to modular electronic instruments used in AUMega Music, it is possible to generate pure sinus waves and to intone them (through a process of tuning each individual key of the keyboard) so as to choose at which frequency vibrates every single note of the equal tempered scale. This procedure can be performed by different VSTs; this application makes the scale the most mathematically perfect one. So the pitch frequency of each single key on the equally tempered scale is:

DO =256hz
DO# /REb = 272 HzRE = 288 Hz
RE# /MIb = 305 HzMI = 323 Hz
FA = 343 Hz
FA# /SOLb= 363 HzSOL = 385 Hz
SOL# /LAb=407HzLA= 432Hz
LA# /Slb =457 Hz
SI = 485 Hz

Page 88 (end sentence) & page 90:

After further experiments I personally modified this scale, presented some years ago, to create a mathematically perfect musical scale which is completely based on the golden proportion and which I present for the first time properly in this book (see the table of the Golden Scale at the end of this chapter), thus perfecting the current protocols to make real music consistent with the frequencies of 432Hz and 8 Hz.
The AUMega Music not only intones the A-tone and the C -tone at a multiple of 8Hz, but also the bpm must be multiples of 8 (see next page). Bosman puts great importance to 72bpm, 144 bpm and 108 bpm (although the latter is not a multiple of eight) because these tempos, according to his research, work with the fractal geometry of Sierpinski's Pentahedron. Of course, other studies have shown that the use of too fast tempos can increase the heart rate and blood pressure, due to the stimulation of the sympathetic system and therefore it is better not to use rhythms with a bpm that is too high if you want to create a cathartic music that stimulates mental states with higher neural coherence. But the current problem of electronic music is that the sampled sounds obtained on other tones and brought to the frequency of 256/432 Hz (through the pitch shifter / pitch corrector) generate non-coherent sounds as the waveform is altered. The acoustic music (although it can directly generate a sound at 432Hz) with the use of live strings, has the problem to not generate mathematically perfect sounds, which electronic music manages to do. In fact, the voltage by mechanical means is not stable and depends on the materials used, the humidity and temperature of the environment and the various refractions due to the resonance to record the acoustic wave through a microphone.
Electronic music does not need to be recorded through a microphone and therefore, the signal can remain intact until the end of the recording. It also has the advantage of being able to work with analog as well as with digital oscillators. The cyclic frequency of a signal generated by a modular oscillator remains mathematically perfect, except for voltage drops in the electrical system. This can not be achieved with any other acoustic percussion instrument played by hand because of the margins of error due to a reduction in tension of the mechanical means that keep the strings in tension. In the AUMega Music Revolution it is recommended to use a high sampling frequency in recording from 48kHz upwards.

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The best binomial is 96kHz / 24bit which can only be transferred to a media DVD. It does not matter if the ordinary ear / awareness is able to perceive at most 20kHz, there is a hidden listening of the body which in reality exceeds 96kHZ of a video DVD or 192 kHz of an audio DVD; therefore, formats such as CDs working only at 44.1kHz /16 bit, or even lower quality MP3, omit part of the instrument sinus wave information while limiting the *Ananda Effect*.
There is a profound and general indifference about the audio quality with which we consume music due to the fact that developing a hearing and a subtle perception of sound is much more difficult than visual perception. Currently the widespread use of poor music media such as the compact disc and, above all, MP3, are comparable to the "junk food" of today.
The nutrients of a food are specific frequencies and the "junk food" (GMO food, microwaved or frozen food), vibrates several tones below, if not an octave, compared to fresh or freshly picked food. "Frozen" music in 44.100Hz / 16bit formats is a music of millions of bits of information, mutilated harmonics that our ear and our body will never be able to assimilate. The MP3, MP3pro, MP4 or CD format can be compared to low resolution images that do not allow you to "see" the entire harmonic photograph of the music you are listening to.
Listening to music based on non-scientific intonations such as music with the A-tone at 440Hz, which stimulates the beta state, inevitably leads the listener's nervous system to a state of vigilance and shallow thinking, disabling higher cognitive capacities; therefore a musician who wants to make real music at 432Hz / 256Hz must respect the protocol. In my personal experimentation of how to make music at 432Hz I use binaural beats with infrasonic subliminal experiments based on a continuous tone at a rate of 8 cycles per second (avoiding any other frequency on the infrasound band which is notoriously harmful). This is because I assume that from this tone consistent with our biology a constant stimulation of the small neuroendocrine gland is created.

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The “Ananda effect” is related to the famous “Mozart Effect”. With the Mozart Effect we mean the effect of neural coherence that Mozart’s music and Baroque music play (this music works in a bandwidth where the high frequencies are more pronounced) in the listeners' brains. Some researchers found that after listening to Mozart, people's memory and IQ increased significantly for short periods, whereas in animal studies this neural augmentation continued for days as well.

The “Ananda Effect” is nothing more than this effect implemented by an exact bi-hemispherical synchronization stimulated by the use of instruments tuned to 432Hz / 256Hz. This intonation stimulates the brain to work with 8Hz, a frequency that balances the synchrony of the two hemispheres. If the sampling frequency of the recording is high, the harmonics are not compressed or cut, thus allowing the harmonic cascade working with the Sierpinski Pentahedron to be integral; in this way the effect is much more pronounced for the listener. In the figure above you can see how the Mozart Effect behaves physically.

The acoustic wave (phonon) impacts on the skin, ears, bones and tongue causing an additional signal boost within the neuron structure (cytoskeleton formed by microtubules).

This greater signal transfer (like a computer transfer) is propagated by the tubulin dimers (in action also the dinein, the nexin and the protein spoke interact.

The qubit signal (quantum binary bits) modifies the microtubules (the brain of neurons) and its dimers are reassembled coherently to the dimers of other neurons vibrating in unison (synchronization) thus enhancing parallel processing and cytoskeletal self-organization.
The synchronisation of the brain breaks down the "background noise" of the beta state, which is the de-synchronization of neurons in the different areas of the brain that fail to communicate with each other during this neural handicap state (beta state).

Harmonic and coherent sounds stimulate the tenth cranial nerve in contact with the nervous system, amplifying the flow of electrons in the brain and thus increasing the capacity of the latter. About 4000 hertz of music are required for our health in order to stimulate the cranial nerves and produce a stable flow of electrons. Sound becomes essential for the electrical flow in our body.

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The Overview of the Golden Scale : you can see the Golden Scale based on the golden ratio and on the mathematics of 8. Such scales will make the protocols of the authentic music at 432Hz more rigorous, without any single note vibrating at frequencies not compatible with the multiples of 8.
At present in the world market there are dozens of musical compositions that state to use the intonation at 432hz, many of which are suggested as "therapeutic" music. But most of the 432Hz musicians do not use Ananda Bosman's AUMega Music protocols, either because they do not know the protocol or because for a series of technical and compositional reasons they use solutions that are not compatible with authentic 432Hz music.
Advertising ones music as therapeutic music, or with new age terms such as “the divine frequency", just because it's tuned to a A-tone at 432Hz, is simply a marketing act. Such works if they use a scale in which only the the A-tone is tuned to a multiple of 8 while all the other notes are not consistent with the frequency at 432hz does not bring the music to 432Hz to be consistent with the mathematics of 8; the frequency of 432Hz has value only because it is a direct multiple of 8 and not vice versa. For this reason, these works on a concrete level bring only marginal improvements compared to the 440Hz tuning pitch, as they remain amateur and incomplete works.
For those who want to make authentic music at 432Hz and make use of an appropriate software can use the Golden Scale designed by me to have all the notes consistent with the mathematics of 8 and not only partially like those of figure 21.
Before the 432Hz tuning can be ridiculed due to businessmen and amateur musicians and / or disseminators lacking scientific-musical notions, it will somehow protect musicians who seriously use the protocols of AUMega Music and the Golden Scale which leads to complete consistency of these protocols.
Of course this will be only valid for those who use electronic instruments, because those who use acoustic instruments (except piano forte and related instruments) will not have the possibility of using this new musical scale at the moment, due to the fact that most of the instruments are built on the standard equal tempering scale.
To overcome this impasse one should have a musical instrument custom made as a trustworthy instrument using the new frequencies / proportions published in this table.
For this series of reasons the musicians who will strictly follow the new 432hz music protocols will be able to display a certification logo of their music, perhaps with the obligation to sell their works at least in the minimum format necessary: the 44.100khz / 16bit of the audio CD.
While for those who will use formats where the wave compression loses too much information, such as MP3 or MP3Pro formats - which are certainly convenient for self-made Internet sales - it should be decided to lose the right to display this certification.
Finally, it should always be stressed to the listeners that are having an audio CD should listen through proper loud speakers as if they are listening through headphones or on the computer speakers, both can be sources of reducing the frequency band for listening (of course it aggravates further sel the work was purchased in MP3 formats)
Of course this will be valid only for those who use electronic instruments because those who use acoustic instruments (except piano and related instruments) will not have at the moment the possibility of using this new musical scale due to the fact that most of the instruments are built on the standard of fair tempered staircase. To overcome this impasse one should have a musical instrument build a trustworthy instrument using the new frequencies / proportions published in this table. For this series of reasons the musicians who will strictly follow the new 432hz music protocols will be able to display a certification logo of their music, perhaps with the obligation to sell their works at least in the minimum format necessary: the 44.100khz / 16bit of the audio CD. While for those who will use formats where wave compression loses too much information, such as MP3 or MP3Pro formats - which are certainly convenient for self-made Internet sales - it is decided to lose the right to display this certification. Finally, it should always be stressed to the listener that having an audio CD is not based if then there is a listening on headphones or on the

computer speakers, because both are sources of signal that reduce the frequency band of listening (of course it aggravates further when the composition was purchased in MP3 formats).