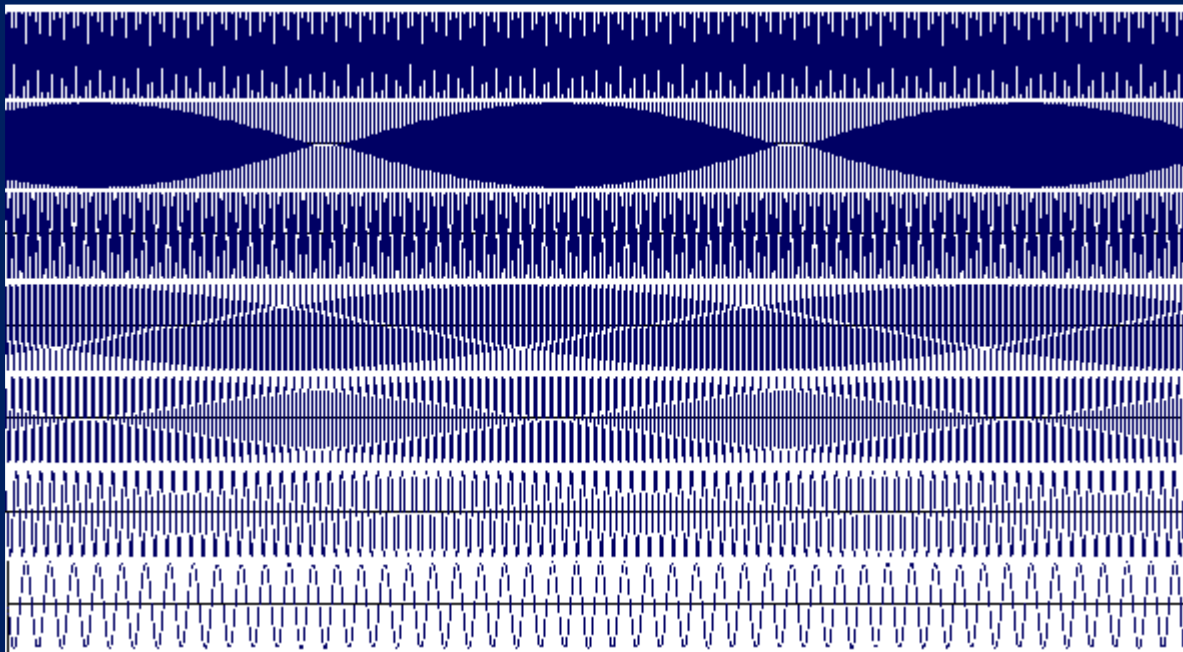


ESOTERIC HARMONICS

Tuning to the Occult Scale of Sound

January 24, 2010

Patrick Mulcahy



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Tuning to the Occult Scale of Sound

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[This research is still progressing.]

[Produced in A4 page format for easy printing.]

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This document is provided as a theoretical starting point
for experimenters in the occult use of sound.

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
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Cover Picture: Waveforms produced by the seven chakra tones.

Sound files included in this document are Windows® Media Audio files (WMA).

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NOTE: To play the sound files included in this document double-click the  icons.

The Occult Scale of Sound

“In the eternal music of the spheres we find the perfect scale corresponding to the colours, and in the number, determined by the vibrations of colour and sound, [and] which underlies every form and guides every sound,” we find the summing-up of the Manifested Universe.”¹

The standard chromatic equal-tempered musical scale may serve as a good basis for song writing, but how closely does it reflect the vibrational structure of the universe? This booklet reveals how to recalibrate the musical octaves so that they synchronize perfectly with the underlying metaphysical structure of our universe. The resulting tones can then be employed in practical esoteric work, or in music composition.

It is not generally known, but the standard Western system of musical pitch (i.e. note frequency), in part, approximates to the same frequency pattern as our solar system (i.e. as taught by Theosophy). This should come as no surprise since the universe can be thought of as an enormous cluster of interwoven vibrating (or oscillating) energy waves. Indeed, it could be said that the vibrations that compose our universe (and everything in it) represent the reverberating sound of the Voice of God.

Therefore, it is important for us to have a musical scale that resonates sympathetically with the All-pervading divine song. The internationally recognized scale of musical pitch falls short of the mark however, and needs some fine-tuning to bring it into perfect alignment with the natural structure, order, and harmony of the universe.

Our first step during this treatise will be to establish the so-called **major** scale of note frequencies. These are represented by the white keys of a piano keyboard. In the standard equal tempered system the frequencies of these seven major notes form part of an equal twelve-fold division of the octave which includes five other notes called sharps (or flats). The sharp (or flat) notes are represented by the black keys of a piano keyboard. The sharps/flats are included in the esoteric harmonic scale, but instead of being produced as part of a mathematical system based on the number twelve, they grow out of (or are by-products of) the seven-fold major scale. These extra five sharp/flat notes are thus viewed as ‘supplemental’ to the seven notes of the esoteric major scale. In other words, the twelve notes of the esoteric X49 scale are fundamentally based on a seven-fold division—or rather, a seven times seven-fold division. This important fact, makes the esoteric X49 scale essentially different in structure to the standard equal-tempered musical scale, and aligns it with the basic metaphysical structure of our universe.

¹ H.P. Blavatsky. Collected Writings. Vol. II. Pg. 561.

According to Theosophical teachings the number of sub-planes within each of the seven planes of our solar system is 49. Similarly, the frequencies of the natural notes of our musical system (i.e. as represented by the white keys of a piano keyboard) can be re-calculated so that they fit neatly into a framework that is based on multiples of the number 49. And this can be done without varying the notes significantly from their original values in the standard system.

#	Note	Esoteric	(x49)	Standard
1.	C1			
2.	D1			
3.	E1			
4.	F1			
5.	G1	49 Hz	1 x 49	49 Hz
6.	A1			
7.	B1			
8.	C2			
9.	D2			
10.	E2			
11.	F2			
12.	G2	98 Hz	2 x 49	98 Hz
13.	A2			
14.	B2			
15.	C3			
16.	D3	147 Hz	3 x 49	146.83 Hz
17.	E3			
18.	F3			
19.	G3	196 Hz	4 x 49	196 Hz
20.	A3			
21.	B3	245 Hz	5 x 49	246.94 Hz
22.	C4			
23.	D4	294 Hz	6 x 49	293.66 Hz
24.	E4			
25.	F4	343 Hz	7 x 49	349.23 Hz
26.	G4	392 Hz	8 x 49	392 Hz
27.	A4	441 Hz	9 x 49	440 Hz
28.	B4	490 Hz	10 x 49	493.88 Hz
29.	C5	539 Hz	11 x 49	523.25 Hz
30.	D5	588 Hz	12 x 49	587.33 Hz

In the table above, column three lists the frequency values of some of the musical notes of the esoteric scale, while column five shows their conventional² values. The conventional values are based on an international standard of tuning that assigns a frequency of 440 hertz³ to the note A4.

² The conventional values vary slightly in their decimals depending on the source consulted.

³ A hertz is a unit of frequency equal to one cycle per second.

From the fixed value of A4 the other note frequencies are then determined using a standard mathematical formula (or logarithm) that defines a twelve-fold division. If the creators of the conventional system were aware of the esoteric sub-stratum that underlies the formation of our musical universe they might have assigned A4 the esoteric frequency value of 441, or 9×49 .^{4 5}

The similarity between the esoteric musical model and the standard musical scale becomes obvious when we examine the frequencies of the natural notes from F4 to E5...

Note	Esoteric	(x49)	Standard
F4	343 Hz	7	349.24 Hz
G4	392 Hz	8	392 Hz
A4	441 Hz	9	440 Hz
B4	490 Hz	10	493.92 Hz
C5	539 Hz	11	523.28 Hz
D5	588 Hz	12	587.36 Hz
E5	637 Hz	13	659 Hz

As you can see, the differences between the esoteric and standard note frequencies are relatively small, suggesting that the creators of the standard tuning system did **subconsciously** base their system on the All-pervading universal esoteric structure. They appear to have sensed it intuitively, but were unable to precisely reproduce it.⁶ The esoteric note values that I present in this short treatise however, conform precisely to the same esoteric formula that underscores the manifestation of our universe. This formula is simple, and yet profound.

All the note frequencies below F4 can be calculated using the esoteric values in the table above because the parallel notes of the lower octaves are half the value of the corresponding higher note. So for example, the note E4 is precisely half the frequency value of E5. Similarly, the parallel notes of the higher octaves are exactly double the values of the corresponding lower notes, so for example, the frequency value of E6 is precisely double the value of E5.

Even though the frequency variations between the esoteric and standard systems are quite small, there is likely a major difference in the perceptible (and imperceptible) effects of the esoteric frequencies when compared to the conventional note frequencies. Vibrations are subtle and need to be finely tuned in order to achieve the desired physical and/or psychological effect or response.

⁴ Note the interesting synchronicity—that A4 is the 49th key of the standard piano keyboard.

⁵ The natural resonance of the human body is also based on the number seven. See the chapter: Harmonic Heart-Brain Resonance.

⁶ That is, because of their dependence on the number twelve in their calculations.

The Doubling of the Octave

You will notice (in these tables) that the note F4 begins the series of adjacent notes with frequencies that are **whole number** multiples of 49. The frequency of F4 is 343 (i.e. 7 x 49) hertz which is the exact number of sub-planes that constitute the seven planes of our solar system. The notes of the octaves below F4 have frequencies that are mainly fractional multiples of 49. In other words, there is a dimensional shift in the musical scale that occurs after the note F4 is reached.

F4	G4	A	B	C5	D	E	F5	G5	A	B	C6	D	E	F6	G6	A	B	C7	D	E	F7	G7	A											
7	8	9	10	11	12	13	14	16	18	20	22	24	26	28	32	36	40	44	48	52	56	64	72											
							+1							+2							+4							+8						

The esoteric values of the note frequencies that follow after F4 are based on a numerical series involving the doubling of whole numbers. As the series progresses an incremental increase occurs between the multipliers of the notes F and G of each octave. The middle row of numbers (in the table above) represent the multipliers that are applied to the key number 49 in order to determine the esoteric frequency of each note.

The multipliers in each group of seven are precisely double the multipliers of the previous group. The incremental jump is due to a natural process that occurs when a series of numbers is doubled and redoubled.

	G	A	B	C	D	E	F
+1	8	9	10	11	12	13	14
+2	16	18	20	22	24	26	28
+4	32	36	40	44	48	52	56
+8	64	72	80	88	96	104	112

When seven is doubled the result is 14. When eight is doubled the result is 16. This incremental jump of two units between 14 and 16 begins the second series of frequency multipliers. Thus, the second series of numbers is characterised by a two unit difference between them. When 14 is doubled the result is 28—which is two units more than the previous number in the series, but when we double 16 we get 32. The difference between 28 and 32 is four units, and thus the third series of frequency multipliers is characterised by a four unit difference.

Note	Esoteric	(x49)	Standard	
G1	49 Hz	1	49 Hz	Octave 1
A1	55.125 Hz		55 Hz	
B1	61.25 Hz		61.74 Hz	
C2	67.375 Hz		65.41 Hz	
D2	73.5 Hz		73.42 Hz	
E2	79.625 Hz		82.41 Hz	
F2	85.75 Hz		87.31 Hz	
G2	98 Hz	2	98 Hz	Octave 2
A2	110.25 Hz		110 Hz	
B2	122.5 Hz		123.48 Hz	
C3	134.75 Hz		130.82 Hz	
D3	147 Hz	3	146.84 Hz	
E3	159.25 Hz		164.82 Hz	
F3	171.5 Hz		174.62 Hz	
G3	196 Hz	4	196 Hz	Octave 3
A3	220.5 Hz		220 Hz	
B3	245 Hz	5	246.96 Hz	
C4	269.5 Hz		261.64 Hz	
D4	294 Hz	6	293.68 Hz	
E4	318.5 Hz		329.64 Hz	
F4	343 Hz	7	349.24 Hz	
G4	392 Hz	8	392 Hz	Octave 4
A4	441 Hz	9	440 Hz	
B4	490 Hz	10	493.92 Hz	
C5	539 Hz	11	523.28 Hz	
D5	588 Hz	12	587.36 Hz	
E5	637 Hz	13	659 Hz	
F5	686 Hz	14	698 Hz	
G5	784 Hz	16	784 Hz	Octave 5
A5	882 Hz	18	880 Hz	
B5	980 Hz	20	988 Hz	
C6	1078 Hz	22	1047 Hz	
D6	1176 Hz	24	1175 Hz	
E6	1274 Hz	26	1319 Hz	
F6	1372 Hz	28	1397 Hz	
G6	1568 Hz	32	1568 Hz	Octave 6
A6	1764 Hz	36	1760 Hz	
B6	1960 Hz	40	1976 Hz	
C7	2156 Hz	44	2093 Hz	
D7	2352 Hz	48	2349 Hz	
E7	2548 Hz	52	2637 Hz	
F7	2744 Hz	56	2794 Hz	
G7	3136 Hz	64	3136 Hz	

This mathematical pattern is also represented in the lower frequency scales, but in a different format.



Note	Esoteric	(x49)	Standard
G1	49 Hz	1	49 Hz
A1	55.125 Hz		55 Hz
B1	61.25 Hz		61.74 Hz
C2	67.375 Hz		65.41 Hz
D2	73.5 Hz		73.42 Hz
E2	79.625 Hz		82.41 Hz
F2	85.75 Hz		87.31 Hz
G2	98 Hz	2	98 Hz
A2	110.25 Hz		110 Hz
B2	122.5 Hz		123.48 Hz
C3	134.75 Hz		130.82 Hz
D3	147 Hz	3	146.84 Hz
E3	159.25 Hz		164.82 Hz
F3	171.5 Hz		174.62 Hz
G3	196 Hz	4	196 Hz
A3	220.5 Hz		220 Hz
B3	245 Hz	5	246.96 Hz
C4	269.5 Hz		261.64 Hz
D4	294 Hz	6	293.68 Hz
E4	318.5 Hz		329.64 Hz
F4	343 Hz	7	349.24 Hz

The three lower scales of frequencies (colour-coded green, blue, and red in the table above) each contain at least one frequency that is a whole number multiple of 49. The number of these major tones in each group is based on the pattern 1, 2, 4. Thus there is one major tone in the first group, two in the second, and four in the third. This is the same mathematical pattern on which the higher note frequencies (i.e. beyond F4) are based.

As you can see (from the table above) the note G begins each esoteric octave. The series of notes from G1 to F4 represents a complete esoteric cycle that extends from 1 (x 49) to 7 (x 49). The final note (i.e. F4) of this important series symbolizes the totality of our universe because its frequency is 343 Hz. This number (i.e. 343) is the exact number of sub-planes of the cosmic physical plane—i.e. within which our universe exists.

The ancient musical seers (and some scientists) recognized the importance of ‘middle F’ (i.e. the note F4) and saw it as the key-note of nature.

“The aggregate sound of Nature, as heard in the roar of a distant city, or the waving foliage of a large forest, is said to be a single definite tone of appreciable pitch. This tone is held to be the middle F of the piano-forte, which may therefore, be considered the keynote of nature.” (Principles of Physics, by Prof. B. Siliman.) The Chinese recognised it some thousands of years ago, by teaching that ‘the waters of the Hoang-ho, rushing by, intoned the kung’ called ‘the great tone’ in Chinese music, and one which corresponds exactly with our F, now considered by modern physicists to be the actual tonic of Nature.”⁷

Interestingly, this note F4 is also associated (in the esoteric scale) with the crown chakra of the human energy system. (See below.)

In the standard scale of pitch the note F4 is tuned to 349.24 Hz, but in the esoteric scale it is calculated to be precisely 343 Hz (i.e. 7 x 49). The numerical difference between these two frequencies is relatively small, but metaphysically speaking, the difference is extremely significant. Accuracy is essential if we wish to generate a sound that reflects the esoteric structure of the universe, and that therefore harmonizes perfectly with the divine cosmic Blueprint.

“Just as each plane has its seven sub-planes, so likewise each sub-plane can be subdivided, thus making forty-nine fires on every plane, or the three hundred and forty-three fires of the solar system. Herein can be found the clue to the mystery of the “fourth between the three” which has at times bewildered students of the occult records. There are several ways of reading these figures, 3 4 3, but the only occult method which can be hinted at here, lies in the recognition of the three higher planes, the three lower planes, the fourth plane of meeting between them. This fourth plane has occultly been called ‘the meeting place.’”⁸

“It must be remembered that every scheme has seven chains; that each chain has seven globes, making a totality of forty-nine globes; that each globe is again in turn occupied, by the life of the Logos during what we call seven rounds, making literally three hundred and forty-three incarnations, or fresh impulses to manifest.”⁹

⁷ The Theosophist. Vol. I. No. 2. November, 1879. From a note in an article called Hindu Music.

⁸ A Treatise on Cosmic Fire, by Alice Bailey. Lucis Press. Pp. 905-906.

⁹ Ibid. Pp. 366-367.

An Alphabet of Sound

There is a similarity of structure that exists between the esoteric heptatonic musical scale and the Jacob's Wheel spiral-cycle. This is due to the fact that both systems are based on multiples of the number 49. For example, there are 147 phases (3 x 49) within each arc of the Jacob's Wheel spiral, and there are a total of 147 spokes (or radiating arms) within the twenty-one minor mandalas of Jacob's Wheel. Also, there are 441 phases (9 x 49) in the complete spiral-cycle of Jacob's Wheel.

The Jacob's Wheel system is based on the twenty-two letters of the Hebrew alphabet, and for the purpose of using sound to assist us in communicating with the devas of the planes¹⁰ we can also assign the Hebrew letters to the 22 musical notes from G1 to G4.

Note	Esoteric	(X49)	Chakra	Hebrew	Vowels	Hebrew (SY)	Alice Bailey
A4	441 Hz	9		(All letters) ¹¹		Earth Logos ¹²	
G4	392 Hz	8		Alef (א)		Air	
F4	343 Hz	7	Crown	Bayt (ב)	Ê	Saturn	Pluto/Vulcan
E4	318.5 Hz			Heh (ה)		Aries (1)	
D4	294 Hz	6	Ajna	Gimel (ג)	E	Jupiter	Venus
C4	269.5 Hz			Vav (ו)		Taurus (2)	
B3	245 Hz	5	Throat	Dalet (ד)	I	Mars	Earth/Saturn
A3	220.5 Hz			Zayn (ז)		Gemini (3)	
G3	196 Hz	4	Heart	Kaf (כ)	O	Sun	Sun/Jupiter
F3	171.5 Hz			Het (ח)		Cancer (4)	
E3	159.25 Hz			Tet (ט)		Leo (5)	
D3	147 Hz	3	Solar Plexus	Peh (פ)	A	Venus	Mars/Neptune
C3	134.75 Hz			Maym (מ)		Water	
B2	122.5 Hz			Yud (י)		Virgo (6)	
A2	110.25 Hz			Lamed (ל)		Libra (7)	
G2	98 Hz	2	Sacral	Raysh (ר)	U	Mercury	Uranus
F2	85.75 Hz			Nun (נ)		Scorpio (8)	
E2	79.625 Hz			Sameck (ס)		Sagittarius (9)	
D2	73.5 Hz			Ayin (ע)		Capricorn (10)	
C2	67.375 Hz			Shin (ש)		Fire	
B1	61.25 Hz			Tzaddie (צ)		Aquarius (11)	
A1	55.125 Hz			Qof (ק)		Pisces (12)	
G1	49 Hz	1	Base	Tav (ת)	Ô	Moon	Pluto

¹⁰ The Jacob's Wheel mandala derives the names of the Ophanim angels using the same 49-based mathematical formula.

¹¹ The complete Hebrew alphabet.

¹² This attribution is based on the supposed occult use of A4 (441 Hz) by the ancient Egyptians in the King's Chamber of the Great Pyramid. (See below.)

I think the most meaningful way of associating the Hebrew alphabet with the esoteric note frequencies is by firstly assigning the seven Double letters to the seven major frequencies as per the table above, and then allowing the other Hebrew letters to fall naturally into place around them.

In the table, the seven Hebrew Double letters are listed in their natural order from Bayt to Tav. The twelve Simple letters are also listed in their natural order, as are the three Mother letters. The Mother letter Shin is assigned to the middle frequency of the lowest octave, while the Mother letter Maym is assigned to the middle frequency of the middle octave. The Mother letter Alef is placed one note above the three octaves because it represents the transition into a higher universe. The Simple letter Vav falls naturally into the middle frequency of the highest octave (which is quite appropriate since it is esoterically associated with Alef¹³).

We can look at the three octaves of this table as symbolically portraying the three lowest planes of our solar system—the mental, astral, and physical planes. Each of these planes has seven sub-planes which, in the table, are associated with the seven natural notes of each octave.

The next level of development (or universe) is represented by the dimensional shift from F4 (343 Hz) to G4 (392 Hz) because the frequency value of F4 (the ‘Great Tone’) reflects the vibratory extent of the 343 sub-planes our solar system. The shift to G4 thus represents a quantum jump into a higher level of existence.

Astrologically and microcosmically, this shift also reflects the transition from a house-based (i.e. personality-based) conscious focus to a zodiac-based (i.e. group-based) conscious focus. This is an evolutionary shift that involves the redirection of consciousness from the three lowest planes of our solar system into the higher planes. This symbolism is, of course, based on the view of the three esoteric scales as representing the three lowest planes of our solar system.

Below F4 the seven major esoteric tones are separated by fourteen tones that are fractional multiples of 49 Hz. These fractional tones reflect (and symbolize) the dominant presence of the form principle as it shapes the three lowest planes of our solar system. Like the seven major chakra/planetary tones, all the esoteric frequencies above F4 are whole number multiples of 49 Hz. This lack of fractional multiples above F4 is an indication of the more ethereal nature and quality of the plane of buddhi (and those beyond), and the relative lack of ‘gross substance’ within those higher planes.

The astrological correspondences of the seventh column of the table are based on a system described in the ancient Hebrew metaphysical text—the *Sefer Yetzirah*.

¹³ According to the *Sefer Yetzirah*.

The eighth column lists the planet-chakra correspondences as presented by Alice Bailey in her book *Esoteric Astrology*.¹⁴ Where a chakra has two planets assigned to it, the first planet is the correspondence for 'average humanity' while the second planet is applicable for disciples and initiates.

¹⁴ *Esoteric Astrology*, by Alice Bailey. Lucis Press. Pg. 517.

The Seven Major Esoteric Tones

In the table above, the Hebrew alphabet sequence (of column five) symbolizes the descent of consciousness (and spirit) into the depths of the form principle.

The seven Double letters (and their associated planets) represent the submergence of the consciousness principle into the substance of the lower planes (i.e. which latter is represented by the twelve Simple letters, and their corresponding twelve terrestrial houses). The spirit principle is symbolized by the three Hebrew Mother letters and the three esoteric elements, Air, Water, and Fire.

The table also aligns the seven major chakras with the seven major frequencies providing us with a series of key tones that can be used when working to bring the chakras into balance.










Note	Esoteric	(X49)	Chakra	Sefirah ¹⁵	Planet ¹⁶		
F4	343 Hz	7	Crown	Da'at	Saturn	Higher	Mental Plane
E4	318.5 Hz						
D4	294 Hz	6	Ajna	Hesed	Jupiter	Lower	
C4	269.5 Hz						
B3	245 Hz	5	Throat	Geburah	Mars		
A3	220.5 Hz					Astral Plane	
G3	196 Hz	4	Heart	Tifaret	Sun		
F3	171.5 Hz						
E3	159.25 Hz						
D3	147 Hz	3	Solar Plexus	Hod	Mercury		
C3	134.75 Hz						
B2	122.5 Hz						
A2	110.25 Hz					Physical Plane	
G2	98 Hz	2	Sacral	Netzah	Venus		
F2	85.75 Hz						
E2	79.625 Hz						
D2	73.5 Hz						
C2	67.375 Hz						
B1	61.25 Hz						
A1	55.125 Hz						
G1	49 Hz	1	Base	Yesod	Moon		

¹⁵ These sefirotic correspondences are my own.

¹⁶ These planetary correspondences are my own. They follow the standard Hebrew Double letter order except that the positions of Peh (Netzah/Venus) and Raysh (Hod/Mercury) are interchanged. This slight rearrangement brings the Hebrew Double letter archetypes into alignment with the Eastern chakra system.

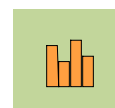
The seven chakras are naturally associated (or have an affinity) with the esoteric octave in which they are found. The Crown, Ajna, Throat, and Heart chakras are all associated with the highest octave (i.e. G3 to F4) representing the mental plane. The Solar Plexus and Sacral chakras are associated with the middle octave (i.e. G2 to F3) representing the astral (or emotional) plane. The Base chakra is associated with the lowest octave (i.e. G1 to F2) representing the physical plane.

During practical esoteric work the seven key tones can be sounded in sequence, or as one chord (i.e. combining the seven notes), or singly when one chakra is the desired focus. (But please proceed with caution!)

	Base	Sacral	Solar Pl.	Heart	Throat	Ajna	Crown
Note (Hz)	G1 (49)	G2 (98)	D3 (147)	G3 (196)	B3 (245)	D4 (294)	F4 (343)
Single							
Scale							
Chord							

[Double-click the icons above to hear the seven chakra tones from G1 to F4. Note however, that you may not hear G1 on account of it being such a low frequency.]¹⁷

[Click the following icon to hear a less pure, but audible, synthesised G1 tone.]



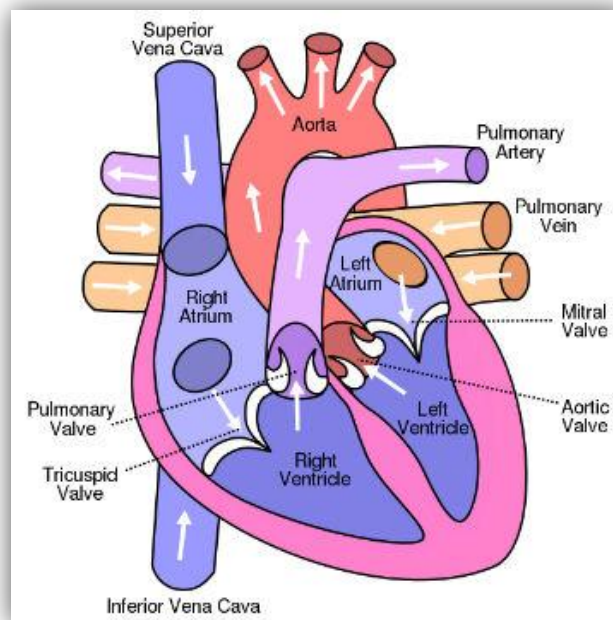
[On the 11th May, 2009, it was communicated to me in a dream that consistent use of these tones during meditation will produce experiences not unlike those felt during planetary transits to natal planets in your astrological chart. Apparently, when a transiting planet aligns with a natal planet, vibrations emanating from the transiting planet impact upon the chakra associated with the natal planet and impress upon it (for a short time) a higher vibration that seeks to raise the existing vibration of the chakra. This ‘entrainment’ process occurs in periodic stages (throughout many lifetimes) during which time the chakras are gradually tuned to the higher frequencies of the overshadowing planetary Logoi. The periodic imposition of these divine planetary harmonics upon the chakras produces physical and psychological experiences that need to be undertaken, processed, and reconciled as part of the evolutionary vibration-raising process.]

¹⁷ The frequency values of these audio tones are precise. They were created using specialized frequency oscillation software.

Harmonic Heart-Brain Resonance

The human mind and body enters a meditative state through the process of relaxation and breath control. As the breathing rhythm slows, the resonant frequency of the human body is adjusted towards the fundamental esoteric frequency of 7 Hz. This physical attunement occurs both in the heart and in the head.

When the frequency rate of 7 Hz is reached the usual resistance of the heart's aorta to the flow of blood in the heart is greatly diminished and a mysterious standing wave is established.¹⁸



“When a subject is totally relaxed and has achieved a deep meditative state, a slow, rhythmic sine wave pattern can be registered by a cardiograph-type sensing device. What is being measured is a standing wave in the aorta. There is a heart-aorta resonating oscillator which affects other parts of the body, including the brain.”

“Resonance occurs when the natural vibration frequency of a body is greatly amplified by vibrations at the same frequency from another body. Oscillators alter the environment in a periodic manner. When in a deep meditative state the regular movement of the body indicates that a standing wave is set up in the vascular system, specifically in the aorta.”

¹⁸ The following image of the human heart is courtesy of [Wikipedia](#).

This standing wave affects several other resonate systems in the body, all of which are driven by this large signal.

“A paper by Paul F.J. New, and several current papers, indicate the presence of a major resonate cavity oscillator located between the heart and the bifurcation, where the aorta divides itself. When the timing of the pressure pulses travelling down the aorta coincide (in phase) with the reflected pressure pulse, a standing wave is achieved. When this frequency approaches 7Hz, a progressively amplified wave form is created by resonance, resulting in a large oscillation affecting every other circuit in the body tuned to this frequency.”¹⁹

Interestingly, the Earth also has a fluctuating resonant frequency that approximates 7 Hz, called the Schumann Resonance. This is a measure of the electromagnetic field that stands between the Earth’s surface and its ionosphere.

The human brain also functions within a frequency range that oscillates around 7 Hz. In normal waking consciousness the brain operates at a level of 14 Hz or above. This is known as the Beta wave frequency. Medical science divides the wave frequencies of the brain into four basic ranges:

1. Delta waves (1-3 Hz) : dreamless deep sleep and coma.
2. Theta waves (4-7 Hz) : dream sleep.
3. Alpha waves (8-12 Hz) : relaxed awake condition.
4. Beta waves (13-40 Hz) : normal waking consciousness.

As you can see, the 7 Hz frequency level marks the transition point between the Theta and Alpha wave states, and therefore represents the middle frequency range (i.e. between 1 Hz and 13 Hz) of the four basic states of human consciousness.

By analogy then, it is possible that the fluctuating Schumann Resonance field of the Earth represents the changing state of the Earth’s consciousness. If this is the case, then the interaction between the two wave-forms—i.e. the human brainwave and the Earth’s electromagnetic standing wave, might represent the merging of microcosmic human consciousness with the macrocosmic consciousness of the Earth. Because we are all immersed in the Earth’s electrostatic field, our brainwaves are therefore necessarily interwoven with it.

“All biological processes are a function of electromagnetic field interactions. EM fields are the connecting link between the world of form and resonant patterns.

¹⁹ [Meditation and Resonance Effects](#), by Richard Alan Miller.

“The patterns are arbitrary forms which are non-physical. Archetypal forms are based on inherent characteristics and correspondences. This provides a basis for what we would call resonant phenomena in archetypal systems. EM fields embody or store gestalts, patterns of information. An archetype may then be seen as a specific geometrical system of standing waves occurring in the brain as a space-time shape ("key")...

“A human being, immersed in the galactic hydrogen-helium field, may also utilize the pulsing feedback between man and the galaxy to build up the resonance effects, much like we would tune a radio. These primary frequencies are multiples of the base frequency 7 Hz.”²⁰

Because the notes of the esoteric scale are based on the multiplication of 49 Hz, they are vibrationally attuned to the base-7 frequency of the human body and mind, and therefore have the potential to stimulate consciousness to greater levels of awareness.

But to take full advantage of the power of these frequencies a rhythmic breathing exercise should be undertaken (i.e. during the sounding of the tones) so that the 7 Hz heart resonance frequency is established in union with the 7 Hz brainwave frequency. The mutual resonance set up between the heart and the head is an essential prerequisite for a successful meditation. Thus, not only do the head and the heart need to be harmonized within the psyche, but also within the physical body.

²⁰ Ibid.

Chakra Tone Meditations

The seven chakra tones should be used carefully during the practice of meditation. I suggest beginning with a short five minute chakra tone session—that is, a five minute sounding of each of the seven chakra tones, sounding one per day, perhaps for a few weeks. You should allow your own intuition to be your guide in this matter. I also suggest that you finish each individual chakra tone meditation with a sounding of the seven-chakra chord as this will tend to bring the chakras back into equilibrium as the meditation ends.

There is no need to consciously focus on the individual chakras during these meditations. Indeed, that could prove hazardous. Again, let your intuition be your guide. The tone itself should stimulate changes in consciousness, and have a purifying effect on its associated chakra. Relax your mind and allow each tone to naturally stimulate those aspects of your psyche and physical being that respond to its resonance. Take note of any visions that arise in your mind's eye and record the results of each session in a meditation diary.

As mentioned above, a full program of chakra meditations would begin with a series of five minute meditations and then, after a few weeks, progress to a series of ten minute meditations. Then after a few more weeks the meditation time can be increased to fifteen minutes, then twenty minutes, and finally thirty minutes. These times only refer to the actual sounding of the chakra tones. The meditative process can, and should, continue after the tone has ended.

Here follows an example timetable for the chakra tone meditations.

	Duration	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	5 Mins	Crown	Heart	Base	Throat	Solar Plexus	Ajna	Sacral
Week 2								
Week 3								
Week 4	10 Mins	Crown	Heart	Base	Throat	Solar Plexus	Ajna	Sacral
Week 5								
Week 6								
Week 7	15 Mins	Crown	Heart	Base	Throat	Solar Plexus	Ajna	Sacral
Week 8								
Week 9								
Week 10	20 Mins	Crown	Heart	Base	Throat	Solar Plexus	Ajna	Sacral
Week 11								
Week 12								
	30 Mins	Crown	Heart	Base	Throat	Solar Plexus	Ajna	Sacral

Perhaps an easier alternative to the program described above is to perform an X49 chakra tone meditation that moves sequentially through each of the chakras from the base to the crown. A series of seven five minute chakra tones equates to a 35 minute meditation.

For this purpose, I have produced a high quality X49 sound file that can be downloaded from the following internet folders...

[Chakra Tone Download Folder](#)

[Chakra Tone Download Folder](#) (Mirror)

You will notice (in the folder) that there are two other tones available. These additional tones append higher X49 frequencies to the original seven, extending the meditation to higher realms of possibility. (See the text files included in the zip downloads for more information.)

To help facilitate your further meditations I have created a DVD that contains a selection of chakra tones of various durations. The sound files are high-quality Windows® Media Audio (WMA) files that can be played directly through your computer as you meditate. These files can also be transferred to most brands of MP3 players (though not the Apple® iPod, or Sony® brand, I don't think), or you can use the files to make personalized audio cd-roms that are playable on any cd-rom player.

The sound files included on the DVD are as follows:

- The Base Chakra Tone (49 Hz) – 5, 10, 15, 20, & 30 minute files
- The Sacral Chakra Tone (98 Hz) – 5, 10, 15, 20, & 30 minute files
- The Solar Plexus Chakra Tone (147 Hz) – 5, 10, 15, 20, & 30 minute files
- The Heart Chakra Tone (196 Hz) – 5, 10, 15, 20, & 30 minute files
- The Throat Chakra Tone (245 Hz) – 5, 10, 15, 20, & 30 minute files
- The Ajna Chakra Tone (294 Hz) – 5, 10, 15, 20, & 30 minute files
- The Crown Chakra Tone (343 Hz) – 5, 10, 15, 20, & 30 minute files
- The Chakra Chord Tone – 5, 10, 15, 20, & 30 minute files
- The Uranus Tone (392 Hz) – 5, 10, 15, 20, & 30 minute files
- The Earth Logos Tone²¹ – A4 (441 Hz) – 5, 10, 15, 20, & 30 minute files
- The Pluto Tone (490 Hz) – 5, 10, 15, 20, & 30 minute files
- The Trans-Pluto Tone (539 Hz) – 5, 10, 15, 20, & 30 minute files
- The Solar Logos Tone – D5 (588 Hz) – 5, 10, 15, 20, & 30 minute files
- Miscellaneous Tones – E.g. YHVH, and OM – 5, 10, 15, 20, & 30 minute files

²¹ Also called the King's Chamber tone, and the Neptune tone. (See below.)

These files are pure tones of precise sine-wave frequencies created using specialized frequency oscillation software. I chose to use the WMA sound format because I found that it produces a higher quality sound when compared to the MP3 format.

If you would like to order a copy of my Esoteric Harmonics DVD please visit my [AstroQab](#) web-site, or click the following icon to place your order. The cost of the DVD is USD \$12. (Includes P&H.)



[Download Sample Tone](#)

(OM Tone 5 Mins)

The King's Chamber Tone²²

During the last century sonic engineers discovered that the King's Chamber (i.e. within the Great Pyramid of Giza) resonates very closely to the frequency of the note A4. This note is today conventionally recognised as having a frequency value of 440 Hz, but the true esoteric value of the note is 441 Hz (i.e. 9×49). One researcher who agrees with this proposition is the Russian author Valery Uvarov.

“The wands held in the left hand of the priest who is depicted on the first main panel are shown in a ratio connected with the frequency of A. The standard value accepted for the pitch of A today is 440 Hz, but 441 Hz is more precise. It is astonishing that no-one particularly noticed that if you place the figures 441 after a decimal point, i.e. 0.441, what you get is a function of the Golden Section...”

“...Today it is possible to say with complete certainty that the knowledge encoded on the Hesi-Ra panels formed the basis for the construction of the pyramids. It represents the missing link that was needed in order to be able to state that the pyramids were built on the level of exact science.

“It is very important that the ratio between the dimensions of the two [measuring] rods in the priest's left hand is such that their product is 0.441, or the frequency of A [divided by a thousand]. The calculation is quite simple. The two rods measure 0.5 and 0.882 [units]. Multiplying those two values, $0.5 \times 0.882 = 0.441$.”

“It would seem that what is on the table is not sacrificial loaves but some sort of tuning device set to the pitch of A. Confirmation of this is the fact that the distance between the table-top on which the device stands and the floor is precisely 0.441 of the corresponding standard length. The device stands on a base, and that base is equal to 441. The measuring instruments used by the Ancient Egyptian architects were set using the tuning device.”²³

It is Uvarov's hypothesis that this A4 frequency—441 Hz—was considered very significant by the ancient Egyptians. And if he is correct, then it seems to have played an important (even central) role in the occult rituals that were conducted in the King's Chamber.

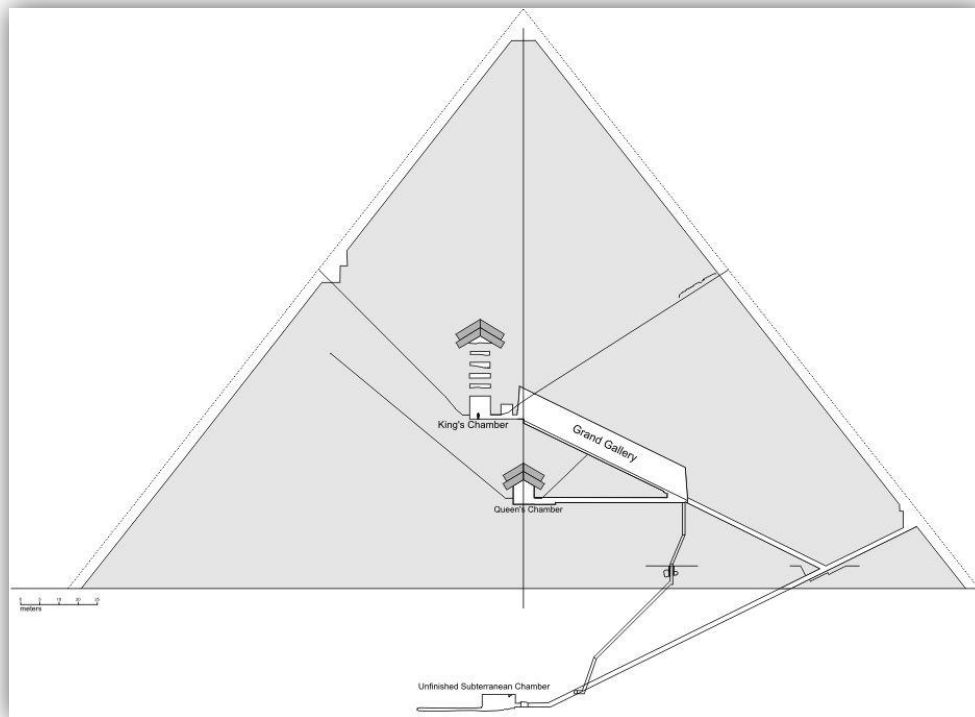
According to Uvarov...

²² Otherwise called the Earth Logos tone.

²³ *The Wands of Horus*, by Valery Uvarov. Third Edition. 2001. Pp. 4-5.

“The pyramid, being simultaneously both antenna and resonator, is a re-transmitter of certain energy flows arising from processes taking place in the cosmos, flows that are in turn focused on the “Energy Source” inside the pyramid. The influence of this complex and its correct interaction with human consciousness produced the effect of “Intercourse with the Gods”. The immense pyramid complex at Giza was, in essence, a “Deep Meditation Structure” enabling the pharaoh or priest to make contact with the Noosphere, the Earth’s informational systems, and on occasion...even with representatives of other planetary systems.”²⁴

I’ll leave it to the reader to ponder this possibility.



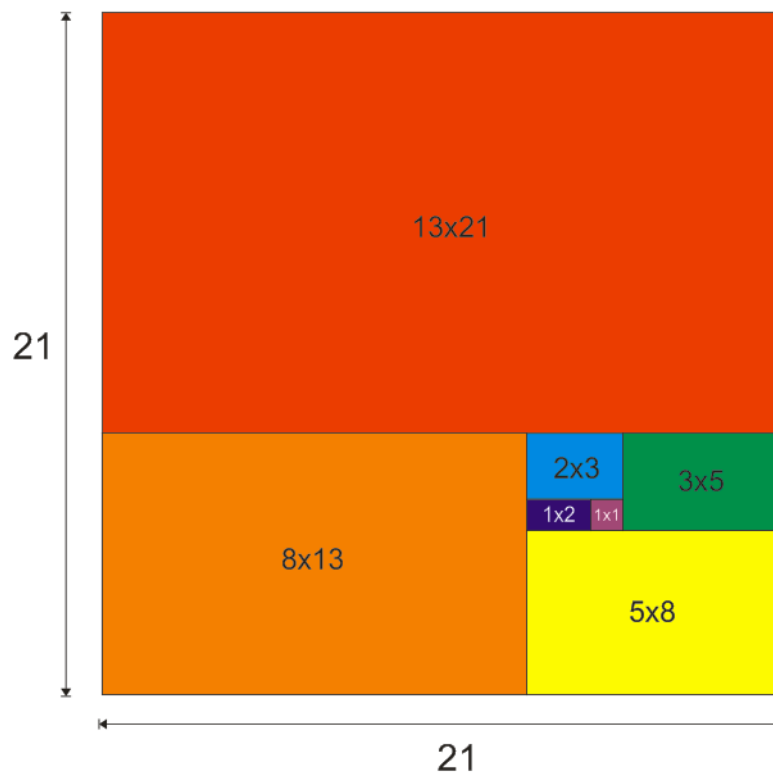
If Uvarov is right, then the esoteric A4 note frequency (i.e. 441 Hz) may have the potential to connect us consciously with the sphere of collective consciousness that surrounds the Earth. In other words, it could (perhaps with the aid of a pyramid) link us consciously to the plane of Buddhi, and to the divine Intelligence that is our Earth Logos.²⁵

²⁴ Ibid. Pg. 9.

²⁵ For this reason I also call A4 the Earth Logos tone.

This concept aligns well with the esoteric function of the Jacob’s Wheel mandala—which is to help us tune consciously into the creative-evolutionary cycles of the Earth Logos. These cycles (of varying durations) are each composed of 441 phases and therefore the Jacob’s Wheel mandala can be said to have a frequency value of 441 (9 x 49).

An interesting way to show the special relationship that exists between the numbers seven and 441, and the ‘Fibonacci sequence’²⁶ is via the following diagram...



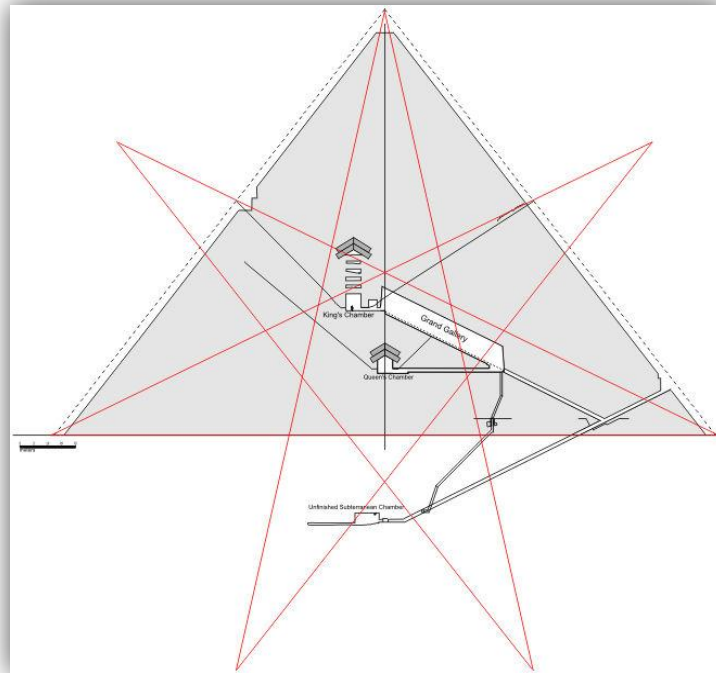
The diagram shows seven rectangles arranged adjacent to each other in a spiral pattern with side lengths that follow the first numbers of the Fibonacci sequence: 0, 1, 1, 2, 3, 5, 8, 13, 21. The resulting composite square figure has an area of 21 x 21, or 441 units.

The powerful significance of the interrelationship between the numbers seven and 441 is thus demonstrated by this arrangement of the first seven ‘Fibonacci rectangles’.²⁷

²⁶ “The mathematics of the golden ratio and of the Fibonacci sequence are intimately interconnected.” (See: [Wikipedia](#).)

²⁷ See the book: *The Golden Ratio*, by Mario Livio, for more information on this subject.

A special connection between the Great Pyramid and the number seven (and 7×7) is also suggested by the theory that, like the Jacob's Wheel mandala, it was constructed using the geometry of a heptagram.



“The steeper angle of the heptagram is 51.428 degrees. This is very close to the angle of slope of the sole surviving Wonder of the ancient world, the Great Pyramid of Giza, Egypt, which is about 51.8 degrees. Further, the lesser slope of the heptagram is essentially the same as the slope of the internal passageways in the Great Pyramid, about 26.5 degrees. If a double heptagram (fourteen point star) is constructed, then the form of the Great Pyramid is found in the center of interfacing lines, with a 51.428 degree angle of slope. Many ancient Greek temples (such as those dedicated to Athena, Minerva, and Neith) were based on seven-fold geometry. All this is suggestive of the importance ancient architects attached to this number seven.”^{28 29}

The emphasis placed on the number seven by the creator of the Great Pyramid supports Uvarov's proposal that the lengths of the ancient Egyptian architects' measuring rods were based on the number 441 (9×7^2).

²⁸ *Sacred Geometry and the Design of Existence*, by Philip Teertha Mistlberger.

²⁹ See Appendix Two for some of my own observations regarding the architecture of the Great Pyramid.

It seems quite plausible to me that the smooth casing stones that originally covered the now exposed rough stone surface of the pyramid might have been fashioned in such a way that they rectified the small difference between 51.8° (the existing angle of slope) and 51.428° (the angle derived from the heptagram). This would have required the casing stones near the base of the pyramid to be slightly thicker than those positioned further up. Thicker casing stones at the base would have provided firm support for the many higher casing stones pressing down upon them.

Generally speaking, the number 49 was obviously considered a very important number by the ancient seers. For example, the Jubilee Cycle of the ancient Hebrews is composed of 7 x 7 year cycles.

“And thou shalt number seven sabbaths of years unto thee, seven times seven years; and the space of the seven sabbaths of years shall be unto thee forty and nine years.”³⁰

The end/beginning of each Jubilee period (i.e. the 50th year, or the 1st year) was marked by the blowing of the Shofar—a ceremonial ram’s horn trumpet. It was not however, the appearance of the horn itself that was emphasised in the ritual, it was the sound that the horn made. That is why in the Mishna and the Talmud it is stated that no modifications to the Shofar that might effect its tone are permitted. Thus, in this ancient rite we see again how the number 49 is linked esoterically with the use of sound.

³⁰ Leviticus 25:8. King James Bible.

The Solar Logos Tone

One of the reasons I have associated the A4 (441 Hz) tone with the Earth Logos is because the Great Pyramid of Giza is said to be a symbolic representation of planet Earth³¹, and the A4 tone appears to have played an important esoteric role in the arcane rituals that were conducted by the Egyptian priests and pharaohs in the King's Chamber. Another reason is because this number 441 (i.e. 9×49) is connected with the Jacob's Wheel mandala, and therefore is thought to be associated with the energy body of the Earth Logos.

The reason I have chosen to assign the note D5 (588 Hz) to the Solar Logos is because of information provided by Master Djwal Khul in Alice Bailey's *Treatise on Cosmic Fire*.

“The solar system is (from the higher cosmic planes), seen as a vast blue lotus, and so on down the scale; even the tiny atom of substance can be so considered. The distinction between these various lotuses exists in the number and arrangement of the petals. The solar system is literally a twelve-petalled lotus, each petal being formed of forty-nine lesser petals.”³²

This statement gives us the precise information we need to determine the symbolic ‘frequency’ value of our solar Logos. I mentioned at the very beginning of this treatise that there are a total of 343 (i.e. 7×49) sub-planes in our solar system, but that figure relates to its manifestation within the cosmic physical plane. The number 588 (i.e. 12×49) is associated with the manifestation of the Solar Logos as he exists on the higher cosmic planes.

Of course, the use of this tone doesn't guarantee that you'll experience a conscious link with the solar Logos during your meditations, but it may stimulate an increased sense of awareness of his energy and influence.

I believe that all these esoteric frequencies, because they are derived from multiples of the sacred number 49, have the potential to help us tune into the vibrations of the higher-planes, and with entities who exist upon those planes.

I have included on the Esoteric Harmonics DVD a series of solar Logos tones (i.e. 588 Hz) that can be sounded during meditation sessions. (For more information see above, or visit my [web-site](#).)

³¹ Many researchers have demonstrated how the physics of the Earth are encoded in the dimensions of the Great Pyramid.

³² *A Treatise on Cosmic Fire*, by Alice Bailey. Lucis Press. Pg. 1018.

Angel Meditations

The following table includes all the esoteric as well as conventional frequency values for the entire series of natural notes from G1 (1 x 49) to D5 (12 x 49). In this table I've also included the 26 letters of the English alphabet.

These Hebrew letter correspondences can be used, for example, to derive the sound signatures of the 72 angels of the Shem Ha-Meforash, or the Jacob's Wheel angels, or any other angel whose name has its roots in the Hebrew language.

Note	Esoteric	(X49)	Hebrew	English
D5	588 Hz	12		A
C5	539 Hz	11		B
B4	490 Hz	10		C
A4	441 Hz	9	(All letters)	D
G4	392 Hz	8	Alef (א)	E
F4	343 Hz	7	Bayt (ב)	F
E4	318.5 Hz		Heh (ה)	G
D4	294 Hz	6	Gimel (ג)	H
C4	269.5 Hz		Vav (ו)	I
B3	245 Hz	5	Dalet (ד)	J
A3	220.5 Hz		Zayn (ז)	K
G3	196 Hz	4	Kaf (כ)	L
F3	171.5 Hz		Het (ח)	M
E3	159.25 Hz		Tet (ט)	N
D3	147 Hz	3	Peh (פ)	O
C3	134.75 Hz		Maym (מ)	P
B2	122.5 Hz		Yud (י)	Q
A2	110.25 Hz		Lamed (ל)	R
G2	98 Hz	2	Raysh (ר)	S
F2	85.75 Hz		Nun (נ)	T
E2	79.625 Hz		Sameck (ס)	U
D2	73.5 Hz		Ayin (ע)	V
C2	67.375 Hz		Shin (ש)	W
B1	61.25 Hz		Tzaddie (צ)	X
A1	55.125 Hz		Qof (ק)	Y
G1	49 Hz	1	Tav (ת)	Z


The English alphabet can be employed when tones are required that express English names and words.

The frequency values of the notes of the esoteric heptatonic musical scale are based on a universal occult principle, but their use in practical esoteric work remains experimental. Conceivably, there is no limit to their possible applications

Theoretically, these frequencies could be used to tune into the vibrations of the devas of the planes and thus open one's consciousness to a sympathetic rapport with them. Certain meditative states would need to be achieved to facilitate this process however.

The names of the Ophanim (i.e. the angels of the Wheels of God's Chariot) are written in Hebrew upon the [Jacob's Wheel](#) mandala. These Hebrew names can be converted to sounds composed of the esoteric frequencies of their letters. The resulting tones (or chords) can then be sounded (or played) during meditation to establish contact.

For example, as I write this booklet I am nearing the end of a Taurus-Jupiter [3/5] four month phase of Jacob's Wheel. As indicated, this phase lasts for four months during which time I wish to remain in a positive rapport with the angel of the phase whose name is Gikasiel (pronounced Jeekahsiel). To establish this connection I can combine the note frequencies of the three primary Hebrew letters (Gimel, Kaf, and Sameck) that compose the name Gikasiel. These notes are: D4, G3, E2.³³ The result is a three note sequence that can be used to formulate a sound signature for the Ophanim angel Gikasiel. One method is to play the three notes in sequence and then end with the chord (i.e. that combines all three notes into one tone). Here's the result...

Gikasiel		
G4	D3	E2
		

The same process can be applied to, for example, the names of the 72 angels of the Shem Ha-Meforash, the angels of the planets, the zodiacal signs, etc.³⁴

³³ The angel suffix 'el' (Alef, Lamed) can be ignored during this practice.

³⁴ Recommended reading: *Summa Angelica*, by Leo Vinci. 2006.

Astrological Meditations

Note	Esoteric	(X49)	Hebrew	Alice Bailey	Other ³⁵
D5	588 Hz	12	Solar Logos ³⁶		(?)
C5	539 Hz	11			Trans-Pluto (?)
B4	490 Hz	10			Pluto
A4	441 Hz	9	Earth Logos ³⁷		Neptune
G4	392 Hz	8	Air		Uranus
F4	343 Hz	7	Saturn	Pluto/Vulcan	Saturn
E4	318.5 Hz		Aries (1)		
D4	294 Hz	6	Jupiter	Venus	Jupiter
C4	269.5 Hz		Taurus (2)		
B3	245 Hz	5	Mars	Earth/Saturn	Mars
A3	220.5 Hz		Gemini (3)		
G3	196 Hz	4	Sun	Sun/Jupiter	Sun
F3	171.5 Hz		Cancer (4)		
E3	159.25 Hz		Leo (5)		
D3	147 Hz	3	Venus	Mars/Neptune	Mercury
C3	134.75 Hz		Water		
B2	122.5 Hz		Virgo (6)		
A2	110.25 Hz		Libra (7)		
G2	98 Hz	2	Mercury	Uranus	Venus
F2	85.75 Hz		Scorpio (8)		
E2	79.625 Hz		Sagittarius (9)		
D2	73.5 Hz		Capricorn (10)		
C2	67.375 Hz		Fire		
B1	61.25 Hz		Aquarius (11)		
A1	55.125 Hz		Pisces (12)		
G1	49 Hz	1	Moon	Pluto	Earth/Moon


Another way of using these esoteric octaves is to combine the frequency of a planet in a natal astrological chart with its house/zodiacal frequency to produce a tone (or chord) that symbolizes the placement (and key sound signature) of that planet/house/sign combination.


The generation and sounding of these chords may promote certain meditative states that are useful to the owner of the chart. For example: The Sun in Capricorn in the third house...


³⁵ These planetary correspondences are my own. They are based on a particular understanding of the evolution of consciousness in our [Solar System](#).

³⁶ This correspondence is based on information provided by master Djwal Khul in Alice Bailey's book: *A Treatise on Cosmic Fire*.

³⁷ This correspondence is based on numerical associations with the Great Pyramid and Jacob's Wheel.

Personality	
Sun	3 rd House
G3	A3
	

Soul	
Sun	Capricorn
G3	D2
	

Personality & Soul		
Sun	3 rd House	Capricorn
G3	A3	D2
		

It is, of course, up to you to decide what astrological correspondences you will use when composing these chords. Those listed in the table above are merely suggestions. Further research and much experimentation is needed to discern the correct symbolic frequency correspondences of the zodiacal signs, planets, and houses.

My preferred **planetary** correspondences (i.e. as listed in column six of the table above) possess the following numeric relationships...

Planet	(x49)	Frequency	Higher Octave (x2)	(x49)	Frequency
Earth/Moon	1	49 Hz	Venus	2	98 Hz
Venus	2	98 Hz	Sun	4	196 Hz
Mercury	3	147 Hz	Jupiter	6	294 Hz
Sun	4	196 Hz	Uranus	8	392 Hz
Mars	5	245 Hz	Pluto	10	490 Hz
Jupiter	6	294 Hz	(?) (+Solar Logos)	12	588 Hz
Saturn	7	343 Hz	(?)	14	686 Hz
Uranus	8	392 Hz	(?)	16	784 Hz
Neptune (+Earth Logos)	9	441 Hz	(?)	18	882 Hz
Pluto	10	490 Hz	(?)	20	980 Hz

The question marks (?) in the above table indicate astrological correspondences that are as yet undetermined.

The table above makes it clear that, for example, the Jupiter tone is a higher octave of the Mercury tone, the Uranus tone is a higher octave of the Sun tone, and the Pluto tone is a higher octave of the Mars tone. Similarly, there is a special relationship between the Saturn tone (F4) and the higher octave tone of 686 Hz (F5), but the cosmic body that is associated with that frequency is unknown.

The Pluto Tone

An interesting biblical reference that relates to the Pluto tone (i.e. B4 = 490 Hz) is from the *Book of Daniel*...

“Seventy septets [490 time-periods]³⁸ have been decreed upon your people [i.e. Israel] and upon your holy city to terminate transgression, to end sin, to wipe away iniquity, to bring everlasting righteousness, to confirm the visions and the prophets, and to anoint the Holy of Holies.”³⁹

The process of purification described in the above quote resonates quite well with the astrological meaning and influence of the planet Pluto, and suggests that the B4 tone may be associated with purging and purification.

Here is another biblical reference to the number 490—this time from the Christian Bible...

“Then came Peter to him, and said, Lord, how oft shall my brother sin against me, and I forgive him? till seven times? Jesus saith unto him, I say not unto thee, Until seven times: but, Until seventy times seven.”⁴⁰

The statement by Jesus re-emphasises the supposed function of the 490 Hz vibration “to terminate transgression, to end sin, to wipe away iniquity”⁴¹, or in other words, to effect a condition of purity.

Interestingly, the Hebrew word for ‘perfection’ has the numerical value 490.

תמים [taw-meem'] = 400 + 40 + 10 + 40 = 490

“תמים [taw-meem'] from 08552; TWOT - 2522d; adj. AV - without blemish 44, perfect 18, upright 8, without spot 6, uprightly 4, whole 4, sincerely 2, complete 1, full 1, misc 3; 91 1) complete, whole, entire, sound 1a) complete, whole, entire 1b) whole, sound, healthful 1c) complete, entire (of time)

³⁸ This is usually interpreted as being 490 years.

³⁹ The Book of Daniel. 9:24. Mesorah Heritage Foundation translation.

⁴⁰ From: Matthew 18:21.

⁴¹ From: Daniel 9:24 (quoted in full above).

1d) sound, wholesome, unimpaired, innocent, having integrity 1e) what is complete or entirely in accord with truth and fact (neuter adj./subst.).”⁴²

“And when Abram was ninety years old and nine, the LORD appeared to Abram, and said unto him, I am the Almighty God; walk before me, and be thou perfect [תמים]. And I will make my covenant between me and thee, and will multiply thee exceedingly. And Abram fell on his face: and God talked with him, saying, As for me, behold, my covenant is with thee, and thou shalt be a father of many nations. Neither shall thy name any more be called Abram, but thy name shall be Abraham; for a father of many nations have I made thee.”⁴³

The stated ‘perfection’ of Abram (i.e. in Genesis 17:1) alludes to a major initiation involving his reception of the ‘covenant’ of YHVH. The initiation is sealed with the changing of his name from Abram to Abraham.

Coincidentally, Abram’s name change to Abraham produces the numerical value 248...

$$\text{אברהם (Abraham)} = 1 + 2 + 200 + 5 + 40 = 248$$

This is synchronicitous because the value of the initiatory title ‘Abraham’ reflects the 248 year orbit of Pluto around the Sun. Remember, this B4 tone is thought to be associated with the planet Pluto.

⁴² Strong Number H8549. From: Strong’s Hebrew Lexicon.

⁴³ Genesis 17:1-5.

The Esoteric Sharps and Flats

You may be surprised to learn that the frequency values of the five sharp/flat notes of the esoteric musical scale can also be determined using the X49 octave formula. This is significant because the generation of the sharps/flats brings the X49 musical system into perfect alignment with the basic structure of the standard Western musical system.

The frequency values of the sharps/flats⁴⁴ of the **esoteric** musical system are calculated using five unused⁴⁵ X49 multipliers within the fifth esoteric octave. These five 'secondary' X49 multipliers are: 15, 17, 19, 23 and 25.⁴⁶

Note	Esoteric	(x49)	Standard ⁴⁷	
F5	686 Hz	14	698.46 Hz	
G5 ♭	735 Hz	15	739.99 Hz	Fifth Octave (G5 to F6)
G5	784 Hz	16	783.99 Hz	
G5 #	833 Hz	17	830.61 Hz	
A5	882 Hz	18	880 Hz	
A5 #	931 Hz	19	932.33 Hz	
B5	980 Hz	20	987.77 Hz	
C6	1078 Hz	22	1046.5 Hz	
C6 #	1127 Hz	23	1108.73 Hz	
D6	1176 Hz	24	1174.66 Hz	
D6 #	1225 Hz	25	1244.51 Hz	
E6	1274 Hz	26	1318.51 Hz	
F6	1372 Hz	28	1396.91 Hz	
G6 ♭	1470 Hz	30	1479.98 Hz	

The resulting 'fifth octave' esoteric sharp/flat frequencies are then used as a basis to calculate all the corresponding esoteric sharp/flat note frequencies of the lower and higher octaves. This is achieved via the typical method of halving and doubling (as per the standard mathematical law for parallel note frequencies within the hierarchy of musical octaves).

The inclusion of the sharp/flat note frequencies within our esoteric X49 musical octaves means that existing musical compositions (and new compositions) that are based on the standard Western system of musical notation can now be played using the esoteric note frequencies. Musical pieces that employ these X49 frequencies can be said to resonate in harmony with the underlying

⁴⁴ That is, as represented by the black keys of a piano keyboard.

⁴⁵ That is, they are present, but not used in the calculation of the seven notes of the fifth major scale.

⁴⁶ The sharp/flat notes have been highlighted using a red font in the table.

⁴⁷ From: Frequencies for equal-tempered scale. <http://www.phy.mtu.edu/~suits/notefreqs.html>

metaphysical structure of the Universe, and they will tend to influence in a very positive way (i.e. through a process of sonic entrainment) the vibration of all entities within the sphere of their influence.

Note	Esoteric	(x49)	Standard ⁴⁸	
G1 ♭	45.9375 Hz	0.9375	46.25 Hz	Octave 1
G1	49 Hz	1	49 Hz	
G1 #	52.0625 Hz	1.0625	51.91 Hz	
A1	55.125 Hz	1.125	55 Hz	
A1 #	58.1875 Hz	1.1875	58.27 Hz	
B1	61.25 Hz	1.25	61.74 Hz	
C2	67.375 Hz	1.375	65.41 Hz	
C2 #	70.4375 Hz	1.4375	69.3 Hz	
D2	73.5 Hz	1.5	73.42 Hz	
D2 #	76.5625 Hz	1.5625	77.78 Hz	
E2	79.625 Hz	1.625	82.41 Hz	
F2	85.75 Hz	1.75	87.31 Hz	Octave 2
G2 ♭	91.875 Hz	1.875	92.5 Hz	
G2	98 Hz	2	98 Hz	
G2 #	104.125 Hz	2.125	103.83 Hz	
A2	110.25 Hz	2.25	110 Hz	
A2 #	116.375 Hz	2.375	116.54 Hz	
B2	122.5 Hz	2.5	123.47 Hz	
C3	134.75 Hz	2.75	130.81 Hz	
C3 #	140.875 Hz	2.875	138.59 Hz	
D3	147 Hz	3	146.83 Hz	
D3 #	153.125 Hz	3.125	155.56 Hz	
E3	159.25 Hz	3.25	164.81 Hz	Octave 3
F3	171.5 Hz	3.5	174.61 Hz	
G3 ♭	183.75 Hz	3.75	185 Hz	
G3	196 Hz	4	196 Hz	
G3 #	208.25 Hz	4.25	207.65 Hz	
A3	220.5 Hz	4.5	220 Hz	
A3 #	232.75 Hz	4.75	233.08 Hz	
B3	245 Hz	5	246.94 Hz	
C4	269.5 Hz	5.5	261.63 Hz	
C4 #	281.75 Hz	5.75	277.18 Hz	
D4	294 Hz	6	293.66 Hz	
D4 #	306.25 Hz	6.25	311.13 Hz	
E4	318.5 Hz	6.5	329.63 Hz	
F4	343 Hz	7	349.23 Hz	

⁴⁸ From: Frequencies for equal-tempered scale. <http://www.phy.mtu.edu/~suits/notefreqs.html>. Other sources provide different (but closely proximate) decimal values. See for example: http://www.techlib.com/reference/musical_note_frequencies.htm

G4 b	367.5 Hz	7.5	369.99 Hz	Octave 4
G4	392 Hz	8	392 Hz	
G4 #	416.5 Hz	8.5	415.3 Hz	
A4	441 Hz	9	440 Hz	
A4 #	465.5 Hz	9.5	466.16 Hz	
B4	490 Hz	10	493.88 Hz	
C5	539 Hz	11	523.25 Hz	
C5 #	563.5 Hz	11.5	554.37 Hz	
D5	588 Hz	12	587.33 Hz	
D5 #	612.5 Hz	12.5	622.25 Hz	
E5	637 Hz	13	659.26 Hz	
F5	686 Hz	14	698.46 Hz	
G5 b	735 Hz	15	739.99 Hz	
G5	784 Hz	16	783.99 Hz	
G5 #	833 Hz	17	830.61 Hz	
A5	882 Hz	18	880 Hz	
A5 #	931 Hz	19	932.33 Hz	
B5	980 Hz	20	987.77 Hz	
C6	1078 Hz	22	1046.5 Hz	
C6 #	1127 Hz	23	1108.73 Hz	
D6	1176 Hz	24	1174.66 Hz	
D6 #	1225 Hz	25	1244.51 Hz	
E6	1274 Hz	26	1318.51 Hz	
F6	1372 Hz	28	1396.91 Hz	
G6 b	1470 Hz	30	1479.98 Hz	Octave 6
G6	1568 Hz	32	1567.98 Hz	
G6 #	1666 Hz	34	1661.22 Hz	
A6	1764 Hz	36	1760 Hz	
A6 #	1862 Hz	38	1864.66 Hz	
B6	1960 Hz	40	1975.53 Hz	
C7	2156 Hz	44	2093 Hz	
C7 #	2254 Hz	46	2217.46 Hz	
D7	2352 Hz	48	2349.32 Hz	
D7 #	2450 Hz	50	2489.02 Hz	
E7	2548 Hz	52	2637.02 Hz	
F7	2744 Hz	56	2793.83 Hz	
G7 b	2940 Hz	60	2959.96 Hz	
G7	3136 Hz	64	3135.96 Hz	
G7 #	3332 Hz	68	3322.44 Hz	
A7	3528 Hz	72	3520 Hz	
A7 #	3724 Hz	76	3729.31 Hz	
B7	3920 Hz	80	3951.07 Hz	
C8	4312 Hz	88	4186.01 Hz	
C8 #	4508 Hz	92	4434.92 Hz	
D8	4704 Hz	96	4698.64 Hz	
D8 #	4900 Hz	100	4978.03 Hz	
E8	5096 Hz	104		
F8	5488 Hz	112		

The table above includes all the esoteric note frequency values—including the values of the sharp/flat notes⁴⁹—for the first seven octaves of the esoteric X49 musical system.

You will notice in the table, that the esoteric X49 frequencies are consistently represented by **whole number** values (at least in the high octaves), and therefore the X49 system can be said to exhibit a numerical harmony (or simplicity) that is not present in the standard equal-tempered series of frequencies.⁵⁰ Like the higher frequencies, the lower frequencies of the esoteric scale are also based on multiples of the number 49, but the majority of them are fractional multiples of 49.

In the above table, all the blue coloured rows contain esoteric X49 frequency values that are decimal (i.e. fractional), while all the red coloured rows contain whole number X49 frequency values. These two basic classes are differentiated because (symbolically speaking) the whole number X49 frequencies are associated with the esoteric Consciousness principle, while the decimal value frequencies are associated with the esoteric Form principle.

It is symbolically significant that the **fifth** octave is used to generate the sharp/flat notes of the lower octaves in the X49 system.

When we align the seven octaves with the seven planes of our solar system (or universe), the fifth octave represents the plane of Atma—the abstract plane of the Great Mother (or ‘Active Intelligence’) principle.

The Seven Octaves	The Seven Planes
Octave 7	1. Plane of Adi
Octave 6	2. Monadic Plane
Octave 5	3. Plane of Atma
Octave 4	4. Plane of Buddhi
Octave 3	5. Mental Plane
Octave 2	6. Astral Plane
Octave 1	7. Physical Plane

The plane of Atma is known as the ‘Mother of Form’ because, although having no ‘form’ itself, it governs the framework and substance for all forms that manifest within the lower four planes of our solar system.

⁴⁹ Indicated using a black font in the table.

⁵⁰ The vast majority of note frequencies (i.e. expressed in Hertz, or ‘cycles per second’) of the standard equal-tempered scale are represented by decimal values. (See the table above.)

As previously mentioned, it is theorized that the decimal notes⁵¹ of the X49 system are associated with the Form principle, while the whole number note frequencies are associated with the Consciousness principle. It is clear, by examining the frequency values of the X49 musical octaves that the Consciousness principle dominates within the higher planes (or octaves) while the Form principle is dominant in the lower planes (or octaves). The three lowest octaves symbolise the lowest three planes of our solar system—the mental, astral, and physical planes.

We saw earlier that some of the original notes of the three lowest major (i.e. seven-fold) scales are decimal, and therefore are strongly expressive of the Form principle. They exceed by a factor of 2:1 the whole number frequencies of the Consciousness principle which latter, in turn, symbolize the seven chakras of the human psycho-spiritual organism.

With the inclusion of the decimal sharp/flat note frequencies (i.e. stemming from the fifth octave, or plane of Atma) we are adding another aspect of the Form principle to the X49 system.

I mentioned previously that the Great Mother “governs the **framework** and **substance**” of the lower planes. And that She does so from Her place of ‘formlessness’ within the Atmic plane. My speculation is, that the fourteen original decimal notes of the three lowest octaves represent the **substance** aspect of the physical, astral, and mental planes, while the twenty sharp/flat notes (i.e. also being decimal) symbolize the **framework** (or ‘**form**’) aspect that the Great Mother has established within the four lowest planes of our solar system.

The Seven Octaves	The Seven Planes	Form (# / b)	Substance	Totals	Ratios
Octave 7	1. Plane of Adi	0	0	0	0:12
Octave 6	2. Monadic Plane	0	0	0	0:12
Octave 5	3. Plane of Atma	0	0	0	0:12
Octave 4	4. Plane of Buddhi	5	0	5	5:12
Octave 3	5. Mental Plane	5	3	8	8:12
Octave 2	6. Astral Plane	5	5	10	10:12
Octave 1	7. Physical Plane	5	6	11	11:12
Grand Totals:		20	14	34	34:84

The difference between the form and substance aspects of the Great Mother principle is analogous to the distinction we can make between the skeleton and the fleshy parts (respectively) of the human physical body.

The **substance** aspect exists inherently within the three lowest planes of our solar system. It represents material left over from the previous solar manvantara, and that is now being transmuted

⁵¹ In other words, notes whose frequencies are not whole number values.

through the action of the Consciousness principle (i.e. the latter represented by the seven human chakras, and symbolized by the seven whole number major scale notes of the three lowest octaves).

In the Teachings of Master Djwal Khul (i.e. as recorded by Alice Bailey) the substance aspect is said to be embodied by the 'lunar pitris' (i.e. also called 'lunar devas', 'lunar angels', or 'lesser builders') who inhabit the three lowest planes of our solar system.

*“The lunar Pitris, the builders of man's lunar body and their correspondence in the other kingdoms of nature, are the sum-total of the dense physical body of the Logos, or the substance of the mental, astral and physical planes (the gaseous, liquid and dense bodies which form a unity, His physical vehicle, viewing it apart from the etheric).”*⁵²

The fourteen major decimal notes of the three lowest octaves can therefore be said to be symbolically associated with the 'lunar devas' of the physical, astral, and mental planes.

The **form** (or 'framework') aspect of the Great Mother represents a basic structural scaffolding around which the substance aspect coheres, and within which the Consciousness principle is embedded. These twenty structural elements (i.e. as symbolized by the twenty decimal sharp/flat notes of the lowest four octaves) are relatively permanent, and are established at the beginning of the formation of every manifested form.

The twenty decimal sharps/flats are associated (in theory) with a particular class of devas whose divinely appointed task is to provide the deeper structural component (i.e. the substructure) of the manifested universe.

Five of the twenty decimal sharp/flat notes exist within the fourth octave (i.e. representing the Buddhic plane) giving it also a structural form. But the fourth octave does not contain any decimal notes of the **major scale** (i.e. signifying an absence of the **substance** aspect). That is because the Consciousness principle within the Buddhic (i.e. fourth) plane has already transmuted its quota of material substance in previous cycles of manifestation (i.e. during which time it was embedded within the lower three planes). It has since been raised to the Buddhic plane and assumed a new role in the present great cycle of the divine Creation.

The devas who embody the Form principle on the Buddhic plane are of a higher order than the lunar devas of the three lowest planes of our solar system (or universe).

⁵² A Treatise on Cosmic Fire. Alice Bailey. Pg. 618.

"...On this plane [i.e. the Buddhic plane] also the "devas of the shadows" who are concerned in the building of the planetary scheme, pursue their work, and thus parallel the work done in the three worlds by the lesser builders who work with the etheric body of man." [CF. 329.]

The three highest planes (shaded red in the table above), although defined as 'formless', do have a structural component that is represented by the five sharp/flat notes of each of the three higher octaves. These notes correspond with very highly evolved devas, and because their note frequencies are whole number values, they are not considered as expressions of the Form principle—at least not in the same sense as it is expressed within the lower planes. The type of form that characterizes the three highest planes is a higher order expression of the Form principle and is actually perceived as 'formless' by beings of the lower planes.

We need to keep this esoteric symbolism in mind when we are working with the frequencies of the X49 musical system because it suggests that each class of note frequencies fulfil a different function in the esoteric X49 musical scheme.

The table below presents the four lowest octaves as they parallel the four lowest planes of our solar system. The 48 notes (i.e. 4 x 12) of these four octaves are differentiated into two basic classes—Form (shaded blue) and Consciousness (shaded red). The 34 notes associated with the Form principle are further divided into two sub-classes—Form (black font) and Substance (blue font).

The notes that correspond to the seven major chakras (of the human body) are indicated in the fourth column by seven red circles. The seven chakras embody and focus the Consciousness principle within the three lowest planes of our solar system. The seven expressions of the Consciousness principle within the fourth (or Buddhic) plane are termed 'the Seven Heavenly Men' in the Teachings of Theosophy. They are associated with the seven 'sacred planets', and are esoterically linked to, and higher correspondences of, the seven chakras of the human system (i.e. located in the lowest three planes).

The seven major scale notes⁵³ of the fourth octave correspond to the seven 'Heavenly Men' as they exist within the Buddhic plane.⁵⁴

*"The seven sacred Planets are composed of matter of the fourth ether and the planetary Logoi (the seven Heavenly Men) whose bodies the planets are, function normally on the fourth plane of the system, the buddhic plane."*⁵⁵

⁵³ That is, the notes within the fourth octave that represent the Consciousness principle.

⁵⁴ This interpretation of the fourth octave is likely to appeal especially to students of the Teachings of Master Djwal Khul (as recorded by Alice Bailey in her books).

⁵⁵ A Treatise on Cosmic Fire. Alice Bailey. Pg. 121.

	Note	Esoteric	(x49)	Principle	Key	
Octave 4	F5	686 Hz	14	Vn	Vulcan	Buddhic Plane
	E5	637 Hz	13	♀	Venus	
	D5 #	612.5 Hz	12.5	Form ⊕	Earth	
	D5	588 Hz	12	♃	Saturn	
	C5 #	563.5 Hz	11.5	Form ⊙	Sun	
	C5	539 Hz	11	♃	Jupiter	
	B4	490 Hz	10	♆	Neptune	
	A4 #	465.5 Hz	9.5	Form ♂	Mars	
	A4	441 Hz	9	♅	Uranus	
	G4 #	416.5 Hz	8.5	Form ♃	Pluto	
	G4	392 Hz	8	♁	Mercury	
G4 ♭	367.5 Hz	7.5	Form ☾	Moon		
Octave 3	F4	343 Hz	7	♃ ♁ Vn	Crown	Higher &
	E4	318.5 Hz	6.5	Substance		
	D4 #	306.25 Hz	6.25	Form		Lower Mental Plane
	D4	294 Hz	6	♀ ♁ ♀	Ajna	
	C4 #	281.75 Hz	5.75	Form		
	C4	269.5 Hz	5.5	Substance		
	B3	245 Hz	5	♃ ♁ ♃	Throat	
	A3 #	232.75 Hz	4.75	Form		
	A3	220.5 Hz	4.5	Substance		
	G3 #	208.25 Hz	4.25	Form		
G3	196 Hz	4	♁ ♁ ♃	Heart		
G3 ♭	183.75 Hz	3.75	Form			
Octave 2	F3	171.5 Hz	3.5	Substance		Astral Plane
	E3	159.25 Hz	3.25	Substance		
	D3 #	153.125 Hz	3.125	Form		
	D3	147 Hz	3	♂ ♁ ♆	S. Plexus	
	C3 #	140.875 Hz	2.875	Form		
	C3	134.75 Hz	2.75	Substance		
	B2	122.5 Hz	2.5	Substance		
	A2 #	116.375 Hz	2.375	Form		
	A2	110.25 Hz	2.25	Substance		
	G2 #	104.125 Hz	2.125	Form		
G2	98 Hz	2	♅ ♁ ♅	Sacral		
G2 ♭	91.875 Hz	1.875	Form			
Octave 1	F2	85.75 Hz	1.75	Substance		Physical Plane
	E2	79.625 Hz	1.625	Substance		
	D2 #	76.5625 Hz	1.5625	Form		
	D2	73.5 Hz	1.5	Substance		
	C2 #	70.4375 Hz	1.4375	Form		
	C2	67.375 Hz	1.375	Substance		
	B1	61.25 Hz	1.25	Substance		
	A1 #	58.1875 Hz	1.1875	Form		
	A1	55.125 Hz	1.125	Substance		
	G1 #	52.0625 Hz	1.0625	Form		
	G1	49 Hz	1	♃ ♁ ♃	Base	
G1 ♭	45.9375 Hz	0.9375	Form			

The influence of the seven sacred planets is largely responsible for the creation of human consciousness within the lowest three planes of our solar system. Seven streams of energy (i.e. seven ‘rays’) issue from the seven Heavenly Men (i.e. from the Buddhic plane) and are stepped down and diffracted into the three lower planes wherein they become focalized and localized within each human-being as major chakras of the human energy system.

Besides the seven ‘Heavenly Men’ there are also five other planetary Logoi whose influence extends from the Buddhic plane into the three lower planes. These Logoi are represented by five ‘non-sacred’ planets—so-called because, unlike their elder brothers, they have not yet achieved the spiritually liberating third cosmic initiation.

The seven sacred planets within the Buddhic plane each embody one of the seven major chakras of the Solar Logos—thus representing an expression of His divine Consciousness.⁵⁶

“The Son, the Grand Man of the Heavens... manifests through the Sun and the seven sacred planets, each of whom embodies one of His seven principles...”⁵⁷

And as such, they are associated with the seven notes of the major scale (i.e. within the fourth octave.)

The five ‘non-sacred’ planets are associated with the five decimal sharps/flats of the fourth octave because they are still (to a certain extent) identified with the Form principle within the body of the Solar Logos. Most human-beings are strongly influenced by the non-sacred planets because most of us haven’t yet passed through the third initiation (i.e. on the path of human evolution).

In column four of the table above, the seven human chakras are each associated with two planets. The planetary symbol to the left of each chakra indicates the influence received (and expressed) by average humanity. The symbol to the right of each chakra indicates the planetary influence received by disciples and initiates of the Path. Sacred planet symbols are drawn in a red font, and non-sacred planet symbols are drawn in a blue font.⁵⁸

It is not until a human-being enters the periphery of Earth’s Spiritual Hierarchy (i.e. after the first human initiation) that the influence of the non-sacred planets begins to wane, and the force of the sacred planets is felt more strongly within the chakra system.

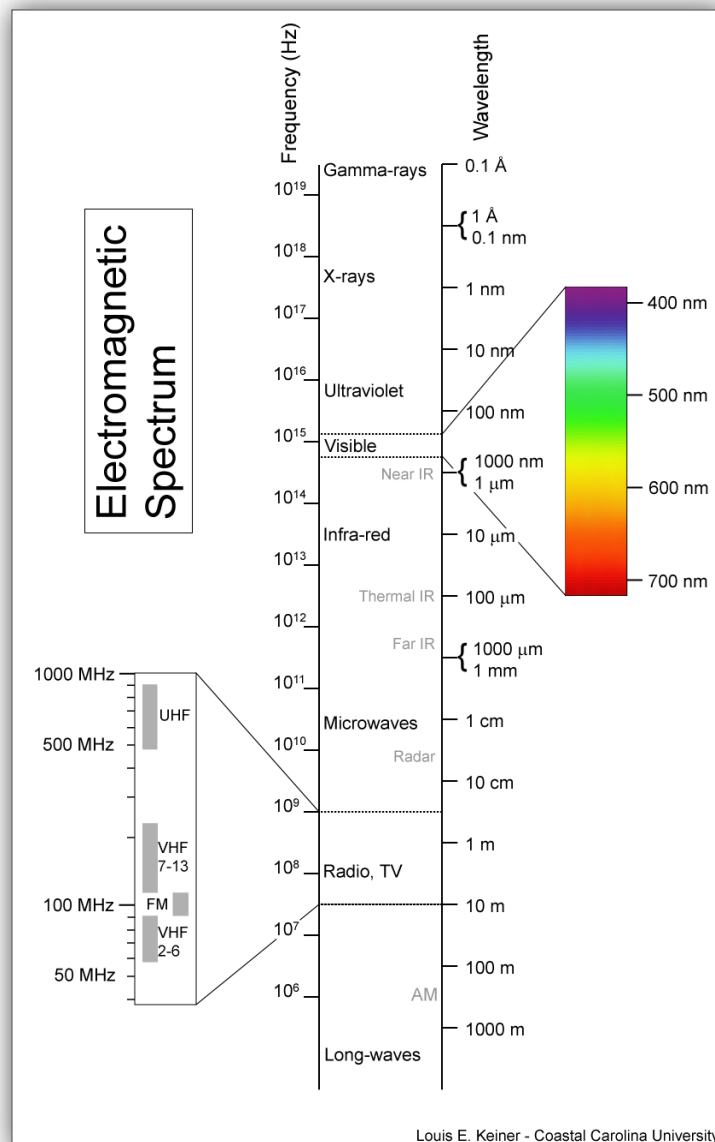
⁵⁶ The arrangement of the seven sacred planets in the fourth octave of the table above is based on the planetary correspondences for the human chakra system. The chakra correspondences for the Solar Logos are, however, different. For example, Master DK assigns Venus to the Heart chakra of the Solar Logos.

⁵⁷ Ibid. Pg. 234.

⁵⁸ Note: According to Master Djwal Khul’s teachings, neither the Moon or Mercury are directly associated with any of the chakras of the human system.

The 49th Octave

As previously explained, the conventional means for calculating the progressive series of octaves is to double the frequency values of the previous octave. This provides us with a series of numbers that follow the pattern: 1, 2, 4, 8, 16, 32, (etc). If we continue this progression we eventually arrive at the 49th number in the series (i.e. the number 562,949,953,421,312) which corresponds to the mid-range frequency⁵⁹ of the 49th octave. Amazingly, the 49th octave consists of the narrow band of frequencies that produce the visible light spectrum (i.e. including all the colours of the rainbow).



[Image provided by Wikipedia.]

⁵⁹ This very large frequency value derives a wavelength of 533 nm (nanometres). It corresponds with a shade of green in the middle of the colour spectrum. (See images.)

As you know, the X49 Hz interval forms the basis of our esoteric system of octaves. This interval is thought to symbolize the transition from one state of consciousness to the next. Esoterically, multiples of the number 49 represent thresholds that when crossed lead to new higher states of awareness. This esoteric symbolism is reinforced by the larger scale 49-octave interval that produces at its first X49 increment (or first transition point) the visible light spectrum.

The appearance of visible light (and the seven colours, or rays) symbolizes the birth of human consciousness. “*And Elohim said ‘Let there be Light’, and there was Light.*”⁶⁰ This verse from the first chapter of *Genesis* announces the creation of the 49th octave of vibration. Similarly, on a smaller scale, the 49 Hz frequency interval (upon which each esoteric octave is based) represents a progressive series of awakenings to new levels of awareness within human consciousness.

Our esoteric octave system begins with the note G1 (i.e. whose major frequency value is 49 Hz). The five lower octaves, although they are part of the mathematical octave series, are omitted from our esoteric system because they consist solely of frequencies that are **fractional** multiples of our key 49 Hz frequency value.⁶¹ They therefore symbolise levels of existence that are below and beyond the realm of ‘consciousness’. This esoteric concept is based on the premise that only **whole number** multiples of 49 Hz derive frequencies that symbolize the consciousness principle in its many and various modes (or levels) of expression. Thus also, it is not until the 49th octave that the visible light spectrum comes into manifestation. The decimal frequencies, on the other hand, represent manifestations of ‘darkness’, and the Form principle.

Thus, we begin our esoteric system within the sixth octave of the **mathematical** series because the sixth octave includes the note G1 (i.e. whose frequency value is 49 Hz).⁶²

The fourth octave⁶³ of the **esoteric** series corresponds symbolically with the fourth plane of our solar system—i.e. called the Buddhic plane. The Buddhic plane is where the twelve planetary Logoi have their lowest conscious manifestations. Seven of these planetary Logoi are termed ‘sacred’ because they represent the seven major chakras within the body of the Solar Logos.

We examined in the previous chapter the Theosophical idea that the planetary Logoi on the Buddhic (i.e. fourth) plane are the root-source of the seven chakras of the human energy system—i.e. the latter being manifested within the three lower planes (or ‘octaves’) of our solar system. The fourth (or ‘middle’) plane is important because it is the place of union between the three highest planes (i.e. of Spirit) and the three lowest planes (i.e. of Form). The central fourth plane basically

⁶⁰ *Genesis* 1:3.

⁶¹ And they are also, for the most part, below the normal range of human hearing.

⁶² The note G1 (49 Hz) is associated with the human Base chakra. The Base chakra effectively anchors human consciousness within the lower levels of the physical plane.

⁶³ That is, the ninth octave of the mathematical series.

exemplifies the consciousness principle in our solar system, and is the monadic source from where human consciousness is projected down into the lower three planes.

	Note	Esoteric	(x49)	Logos	
Octave 4	F5	686 Hz	14	Vn	Buddhic Plane
	E5	637 Hz	13	♀	
	D5 #	612.5 Hz	12.5	♃	
	D5	588 Hz	12	♄	
	C5 #	563.5 Hz	11.5	♅	
	C5	539 Hz	11	♆	
	B4	490 Hz	10	♇	
	A4 #	465.5 Hz	9.5	♁	
	A4	441 Hz	9	♂	
	G4 #	416.5 Hz	8.5	♂	
	G4	392 Hz	8	♀	
	G4 ♭	367.5 Hz	7.5	♃	

Similarly, the middle octave is considered important as a central point of reference in our esoteric musical system, and appropriately, the esoteric ‘middle C’ (i.e. C5⁶⁴) is the middle note of the major scale of the esoteric middle octave. On the fourth (or Buddhic) plane it corresponds with the sacred planet Jupiter (i.e. Who is especially linked with the human Heart chakra).⁶⁵

There is an important correspondence (or link) that exists between the seven major notes of the fourth esoteric octave (i.e. representing the seven sacred planets) and the seven major notes that are located in the three lower octaves (i.e. and that represent the seven chakra sound tones). This interrelationship is important because the seven chakra colour tone associations are based on it.

The seven chakra **sound** tones are the seven major X49 notes that are arranged within the three lowest esoteric octaves. The seven chakra **colour** tones, on the other hand, are based on their higher ‘planetary’ correspondences in the fourth esoteric octave.

The fourth octave is special because it is the first octave wherein all seven adjacent notes of the major scale are whole number multiples of 49 Hz. The three lower octaves are dominated by notes that are fractional multiples. In the lower octaves only seven of a total of twenty-one major scale notes are whole number multiples of 49 Hz. It is these seven widely separated notes that are

⁶⁴ In the exoteric (or standard) musical system the note C4 is generally considered as ‘middle C’.

⁶⁵ Note that Master DK says that Venus actually represents the Heart chakra of the Solar Logos. (See: Cosmic Fire. Pg. 182.) He also states (on the same page) that Saturn corresponds with His Throat chakra. Unfortunately however, the other Solar Logos chakra correspondences are not divulged. In this table the **human** chakra-planet correspondences (as described by Master DK) are given.

associated with the seven chakras of the human energy system. The seven major scale notes of the fourth octave, on the other hand, are associated with planetary influences (i.e. coming from the seven 'planetary Logoi') that flow through the chakras and link them to the Buddhic plane (i.e. the fourth plane of our Solar System).

This relationship between the fourteen major notes of the first four esoteric octaves is demonstrated in the following table...

Chakra	Three Lowest Octaves (Human Chakras)			Fourth Octave (Planetary Logoi)		
	Note	Hz	X49	Note	Hz	X49
Crown	F4	343	7	F5	686	14
Ajna	D4	294	6	E5	637	13
Throat	B3	245	5	D5	588	12
Heart	G3	196	4	C5	539	11
S. Plexus	D3	147	3	B4	490	10
Sacral	G2	98	2	A4	441	9
Base	G1	49	1	G4	392	8

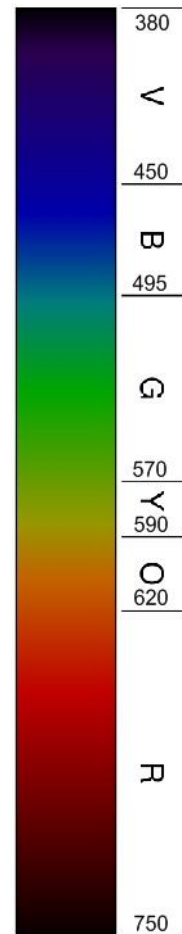
It is a simple matter of consulting the 'Three Lowest Octaves' section of the table above to determine the sound tones that are used to entrain the chakras. This has been explained in previous chapters. The derivation of the seven chakra colour tones however, requires further explanation...

Located forty octaves above the fourth esoteric octave⁶⁶ is an octave of frequencies that constitutes the visible light spectrum (i.e. as perceived with the human eye). This spectrum falls within a frequency/wavelength range that varies slightly depending on the academic source consulted, but the variations are very minor. The image (below right) portrays one such series of values (based on wavelengths) that divide the light spectrum into six colours—i.e. red, orange, yellow, green, blue, and violet. As mentioned, there are several other variations of these demarcating wavelength values, but they all fall within the approximate range of 380 nm⁶⁷ to 770 nm. The table below lists three example colour spectrum bandwidth ranges that I encountered during my researches.

⁶⁶ It is the 49th (in the mathematical series of octaves).

⁶⁷ Nanometres. It is standard practice in physics to measure light by wavelength rather than by frequency.

Colour	Example 1	Example 2	Example 3
Violet	390 - 455	400 - 450	380 - 450
Blue	455 - 492	450 - 490	450 - 495
Green	492 - 577	490 - 560	495 - 570
Yellow	577 - 597	560 - 590	570 - 590
Orange	597 - 622	590 - 635	590 - 620
Red	622 - 770	635 - 700	620 - 750



The fact that our octave system is based on a numerical series means that the twelve notes of the fourth esoteric octave are mathematically related to twelve corresponding 'notes' of the visible light spectrum. The musical note frequencies can be understood as being sub-harmonics of the light frequencies of the 49th octave (i.e. of visible light).

Thus, we can mathematically determine the fourth octave sub-harmonics of the seven colours of the rainbow, but first we must convert the light wavelengths into frequency values.

The frequency values of the various colours of the light spectrum are calculated using the following formula...

$$f * \lambda = c$$

f = frequency in Hertz (Hz = 1 cycle/sec)

λ = wavelength in meters (m)

c = the speed of light (approx. $3 * 10^8$ m/s)

After the frequency value for a particular colour tone has been calculated the standard octave formula can be used to determine its fourth octave sub-harmonic frequency value. However, because we already know the esoteric sub-harmonic frequencies, we will be working in the reverse direction (i.e. using the fourth esoteric octave frequencies as our starting point). What we need to determine are the corresponding visible light wavelength values for the seven major notes of the fourth esoteric octave. Using the formula we will be able to see where the seven esoteric note frequencies (or rather their super-harmonic equivalents forty octaves above) fall within the visible light spectrum. The results are given in the table below.

Of course, there are many different subtle hues (actually an infinite palette) of the colours red, orange, yellow, etc, just as there are potentially an infinite⁶⁸ number of musical note frequencies within one octave of sound. The third column of the table (below) lists the light wavelength values (i.e. corresponding to colour tones) that are higher correspondences of the seven major note frequencies of the fourth esoteric octave.

Note	Frequency	Super Harmonic ⁶⁹	Range (nm) ⁷⁰	Colour	Chakra ⁷¹	Logos
F5	686 Hz	398 nm	380-450	Violet	Crown	Vn
E5	637 Hz	428 nm	380-450	Indigo	Ajna	♀
D5	588 Hz	464 nm	450-495	Blue	Throat	Ἦ
C5	539 Hz	506 nm	495-570	Green	Heart	♃
B4	490 Hz	556 nm	495-570	Lime	S. Plexus	♃
A4♯	465.5 Hz	586 nm	570-590	Yellow	(S. Plexus) ⁷²	♂
A4	441 Hz	618 nm	590-620	Orange	Sacral	♃
G4♯	416.5 Hz	655 nm	620-750	Red	Base ⁷³	E
G4	392 Hz	695 nm	620-750	Dark Red	Humanity ⁷⁴	♀

Unfortunately, I don't have access to technology that will produce a precise visual representation of the seven colour tones that parallel the seven notes of the fourth esoteric octave [Update: Rectified. See below.], but we can gain an intuitive appreciation by looking at approximately where the light wavelength values fall in our rough spectrum diagram.

The diagram below provides rough colour estimates, but adequately demonstrates how the seven notes of the major esoteric scale align with the seven colours of the visible light spectrum.

It is important to remember that these fourth octave chakra colour/note correspondences are associated with the Logoi roots of our previously derived chakra tones—i.e. which latter are arranged amongst the lowest three esoteric octaves. In other words, these colour tones are associated with the planetary Logoi who are the energy sources of the human chakras, and who exist within the domain of the fourth (or Buddhic) plane of our solar system.

⁶⁸ The use of decimal frequency values opens up this infinite possibility.

⁶⁹ Calculated super-harmonic visible light wavelengths associated with corresponding notes.

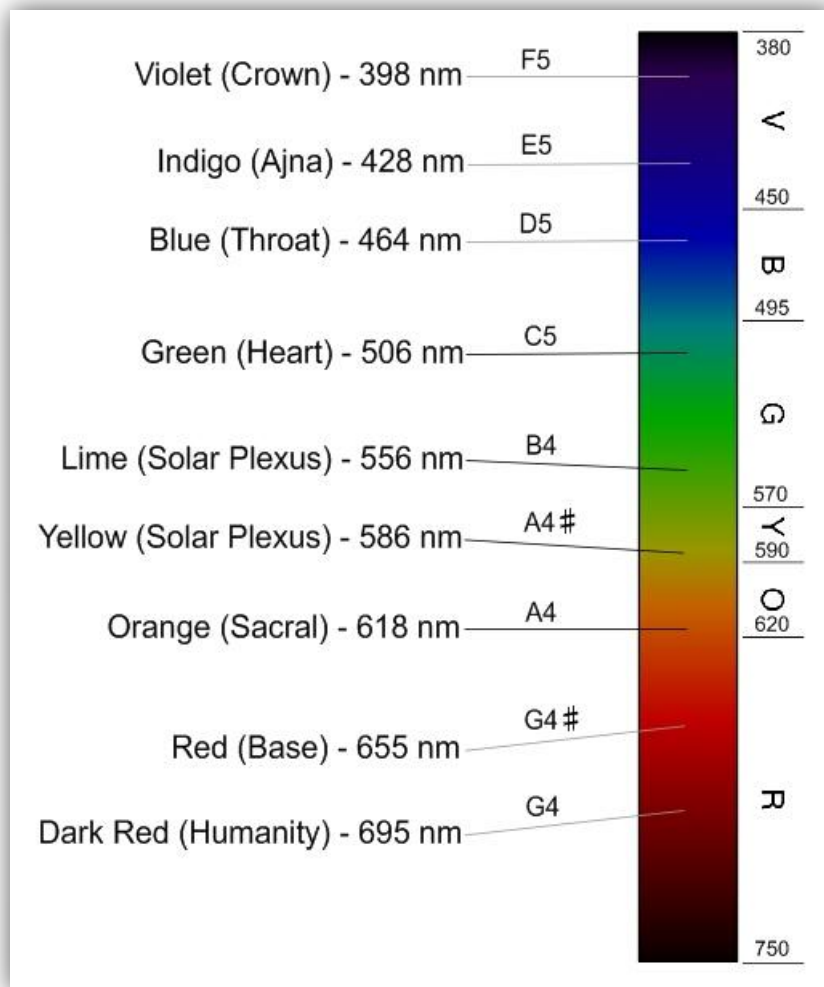
⁷⁰ Wavelength ranges for selected colour bands.

⁷¹ Chakra associations are for disciples and initiates unless otherwise noted. (As per Master DK.)

⁷² According to Master DK: The non-sacred planet Mars is associated with the Solar Plexus chakra of average humanity.

⁷³ Master DK: The non-sacred planet Pluto is universally associated with the human base chakra.

⁷⁴ Master DK: The sacred planet Mercury is not associated with any particular human chakra. Rather, it is linked to Humanity as a whole.



You will notice that only the note A4# falls inside the very narrow yellow colour band, whereas the major B4 Solar Plexus chakra note (i.e. that we would normally associate with the colour yellow) is associated with a colour that is close to lime green. The note A4# is associated with the non-sacred planet Mars, and thus by extension the Solar Plexus chakra for average humanity^{75, 76}.

Update: I am pleased to report that I have now gained access to a free software program that produces colour tones based on wavelength values.⁷⁷ This means that we can now convert the esoteric wavelengths (listed above) into definite shades of colour. This is useful because these colours can be employed during X49 sound tone meditations to assist in aligning one's consciousness with the seven X49 chakra frequencies.

⁷⁵ As per the Theosophical system of Alice Bailey and Master Djwal Khul.

⁷⁶ And thus, the lime green colour is more correctly associated with the solar plexus chakra of disciples and initiates.

⁷⁷ Thank you Romek for supplying me with the link to this program.

Here is the link to the software...

WavelengthToRGB

<http://miguelmoreno.net/sandbox/wavelengthtoRGB/default.aspx>

The *WavelengthToRGB* program produces the following colour hues for the X49 light wavelengths (see row #4)...

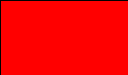















1.	Base	Sacral	Solar P. ⁷⁸	Solar P. ⁷⁹	Heart	Throat	Ajna	Crown
2.	G4#	A4	A4#	B4	C5	D5	E5	F5
3.	655nm	618nm	586nm	556nm	506nm	464nm	428nm	398nm
4.								
5.	R: 255 ⁸⁰ G: 0 B: 0	R: 255 G: 106 B: 0	R: 255 G: 231 B: 0	R: 168 G: 255 B: 0	R: 0 G: 255 B: 51	R: 0 G: 122 B: 255	R: 34 G: 0 B: 255	R: 93 G: 0 B: 199
6.	#FF0000	#FF6A00	#FFE700	#A8FF00	#00FF33	#007AFF	#2200FF	#5D00C7
7.								
8.	R: 46 G: 206 B: 12	R: 12 G: 140 B: 206	R: 79 G: 13 B: 204	R: 255 G: 0 B: 69	R: 255 G: 34 B: 0	R: 255 G: 148 B: 0	R: 255 G: 210 B: 0	R: 199 G: 190 B: 0
9.	#2ECE0C	#0C8CCE	#4F0DCC	#FF0045	#FF2200	#FF9400	#FFD200	#C7BE00

Table Key:

1. Chakra (or 'Energy Centre')
2. Note of the X49 Scale (4th Esoteric Octave)
3. Light/Colour Wavelength
4. Corresponding Light/Colour Hue
5. Colour RGB Value (i.e. Red, Green, Blue)
6. Colour HEX Value (i.e. HTML colour code)
7. Complementary Colour⁸¹
8. Complementary Colour RGB Value
9. Complementary Colour HEX Value

⁷⁸ Average Humanity. It is probably best to use the B4 Solar Plexus colour-tone during chakra tone meditations because it represents the higher vibration associated with Disciples and Initiates.

⁷⁹ Disciple.

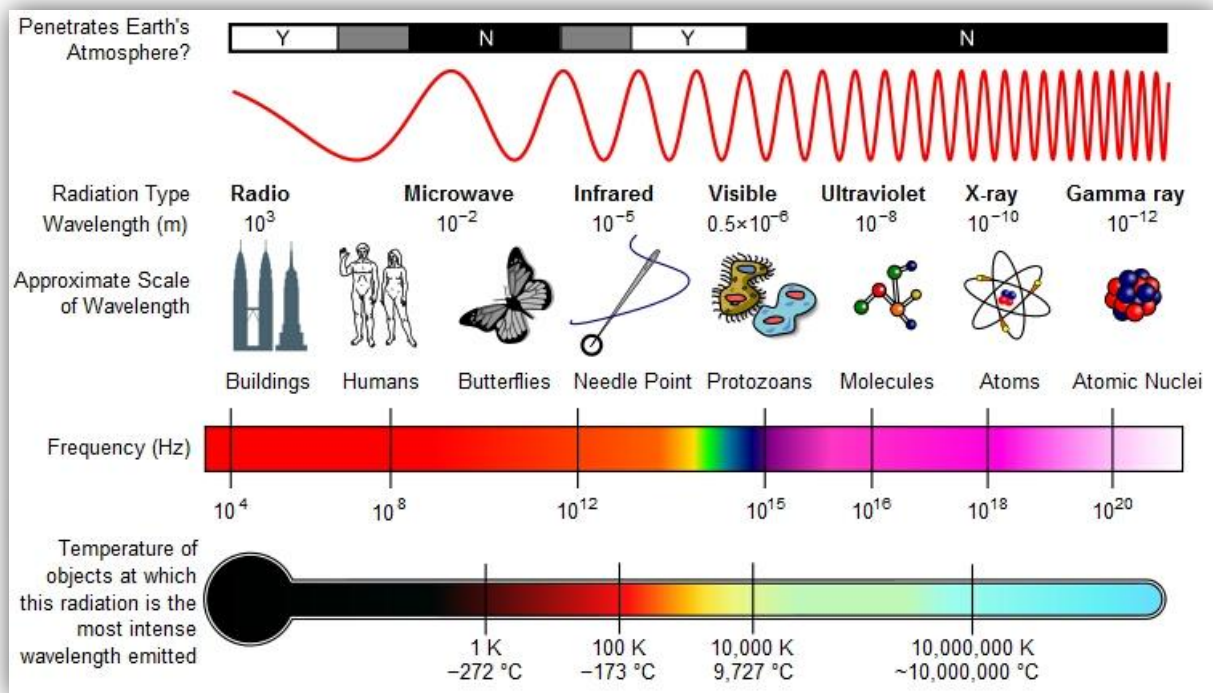
⁸⁰ According to the *WavelengthToRGB* software this shade of red is part of a rather wide band that extends between the wavelengths 645nm and 700nm. In other words, the very subtle shade nuances of these particular red zone wavelengths is impossible for the software program to reproduce.

⁸¹ These complementary colours were generated using a different software program. I have included them as a curiosity, and also for the purpose of future research.

During the esoteric X49 sound tone chakra meditations the associated colour hue can be displayed on your computer screen for use as a focussing tool. To assist you I have produced a series of A4-sized X49 colour-tone pages as an appendix to this book. [See Appendix Four.]

The 98th Octave

The next major interval in the esoteric octave series (i.e. after the 49th) is the 98th octave. This octave is a reflection at a higher dimensional level of the second major note (i.e. G2 at 98 Hz) of the esoteric musical scale. This very high octave thus represents the next major evolutionary expansion of human consciousness (and the consciousness principle in general). The 49th octave produced the visible light spectrum, symbolising the appearance of the seven rays, and the dawn of the light of consciousness as we know it. Consequently then, it may be that the 98th octave represents an equally significant shift in consciousness—perhaps to beyond the universe as we currently perceive it.

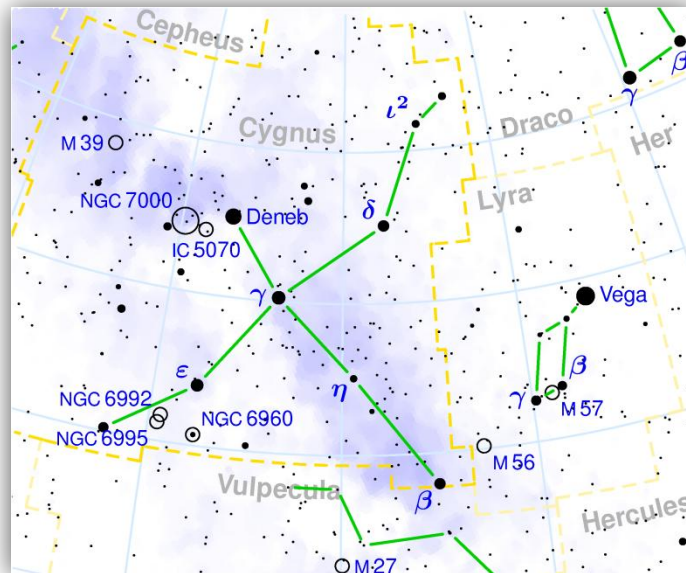


[Image provided by Wikipedia.]

It has taken many millions of years for the human eye to gradually evolve into its current physiological form. The eye manifested in response to the frequencies of the 49th octave, with the result that we now perceive those frequencies as visible light and colour. Therefore, it is also quite possible that another organ of perception is slowly evolving within the body of Homo Sapiens—a sense organ whose designated future purpose is to perceive the higher 'light' of the 98th octave.

The frequency range of the visible light spectrum (i.e. of the 49th octave) is of the order of 10^{15} Hz, and thus we can determine that the frequency range of the 98th octave is double that, or 10^{30} Hz. This frequency range is off the map as far as current physics is concerned. The highest frequency impulse that science has so far detected is 10^{27} Hz. This signal was recently⁸² detected emanating from the region of the Cygnus constellation⁸³, and falls within the frequency range of the 89th octave.

The constellation Cygnus is significant because (back in 1946) it was the source of the first discrete radio wave emissions detected outside our own solar system. Thus, symbolically and actually, it was responsible for guiding human consciousness, using very high frequency vibrations, beyond the domain of our solar system and into the larger cosmos.



[Image provided by Wikipedia.]

⁸² In circa 2006.

⁸³ Otherwise known as the 'Northern Cross'.

The Pineal Gland

It has been hypothesized (by many ancient and modern esoteric thinkers) that the human pineal gland is the 'seat of the soul', and that it has the potential to be used as an organ of higher perception. If this is true, then just as our mundane sense of physical sight evolved naturally in response to the frequencies of the 49th octave, so is it possible that the pineal gland is a rudimentary internal 'third eye' that is gradually evolving (and opening) in response to the 'light' of the 98th octave.

The pineal gland's sensitivity to visible light is well-known by science. For example, it is known that production of the chemical melatonin within the pineal gland is inhibited by sunlight. This physiological reaction to light relates to the gland's function as a circadian (i.e. day/night) rhythm regulator. There is much concerning the function of the pineal gland however, that is still unknown to science.

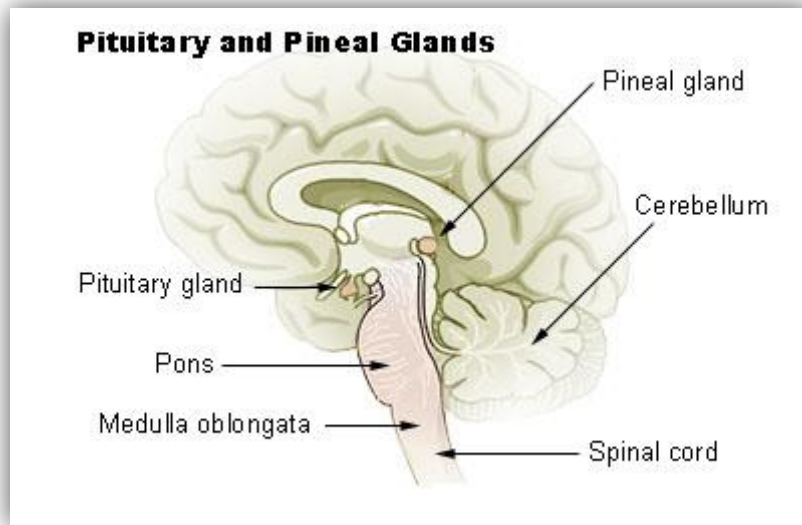
What is also very significant (but perhaps not surprising) is that the pineal gland has a special connection with the number 49. This fact was revealed to me in a book called *DMT : The Spirit Molecule* wherein the author writes...

[...] as a medical student in the mid-1970s, I learned of a startling coincidence involving the pineal gland and Buddhist beliefs about reincarnation. [...] I already knew that the Tibetan Buddhist Book of the Dead teaches that it takes forty-nine days for the soul of the recently dead to "reincarnate". That is, seven weeks from the time of death of one person elapses until the life-force's "rebirth" into its next body. [...] I discovered this same forty-nine day interval marking two landmark events in human embryo formation. It takes forty-nine days from conception for the first signs of the human pineal to appear. Forty-nine days is also when the fetus differentiates into male or female gender. Thus the soul's rebirth, the pineal, and the sexual organs all require forty-nine days before they manifest.⁸⁴

The physical emergence of the pineal gland within the human foetus at 49 days symbolically parallels the emergence of visible light at the 49th octave of vibration.

And the fact that the pineal gland manifests within the foetus at the same time as the sex organs is also significant. As you know, the 98th octave represents a higher expression of the note G2 (i.e. 98 Hz) which latter is associated with the human sacral (or sex) chakra. The implication is that the pineal gland is (biologically speaking) a higher order manifestation of the sex organ, and that it may have a natural affinity with the vibrations of the 98th octave.

⁸⁴ *DMT : The Spirit Molecule*. Rick Strassman. M.D. Park Street Press, 2001. Pp. 81-82.



[Image provided by Wikipedia.]

The notion that the pineal gland might establish an interface between the human soul and its physical human vehicle is reinforced (albeit symbolically) by the Tibetan esoteric theory that the soul reincarnates after 49 days.

The theory I am proffering here is a further development and elaboration of these ideas concerning the esoteric nature of the human pineal gland. I propose that the pineal gland's biological response to the presence of visible light is preliminary to (and the first stage of) an awakening response to the higher vibrations of the 98th octave. In other words, I believe it is possible that the pineal gland is gradually focussing human consciousness towards a new critical threshold of 'light' frequencies contained within the 98th octave of vibration, and that these frequencies are opening us to an awareness of a new realm of psycho-physical experience.⁸⁵

Located within the pineal gland are deposits of calcite micro crystals that some esoteric researchers believe might make it possible for the pineal gland to react to the presence of an electromagnetic field. Perhaps the catalyst for the evolution of the pineal gland are very high frequency emanations (i.e. of the order of 10^{30} Hz) not yet detected by science, coming from, for example, the constellation Cygnus, and elsewhere.

The natural development of our human sense of sight revealed to us a universe of light and colour that formerly was hidden from our view. This major evolutionary transition occurred as the human

⁸⁵ For a fun fictional (and macabre) exploration of this esoteric theme please see Stuart Gordon's wonderful 1986 cult horror movie: *From Beyond*. (Warning: Not for the squeamish!)

brain slowly tuned into the frequencies of the 49th octave. Theoretically then, our next major transitional octave is the 98th (i.e. because $2 \times 49 = 98$) and it is the frequencies of this very high octave that we are all individually (and as a species) now straining to perceive through the gradually widening iris of our 'third eye' vision.

Conclusion

Another interesting scale of frequency in musical theory is called the natural harmonic scale.⁸⁶ It is based on the natural division of a vibrating string into seven harmonic parts as per the following ratios...

Note	C4	D4	E4	F4	G4	A4	B4	C5
Ratio	1/1	9/8	5/4	4/3	3/2	5/3	15/8	2/1
Natural	261.62557	294.329	327.032	348.834	392.438	436.043	490.548	523.251
Equal	261.62557	293.665	329.628	349.228	391.995	440.000	493.883	523.251

The equal tempered scale and the natural harmonic scale are fundamentally different to each other because they are constructed using different mathematical formulae. The equal tempered scale was adopted in 1939 as an international standard for the sake of convenience. It was chosen instead of the natural harmonic scale because of the latter's impracticality of use in regard to some popular instruments, such as the piano. Unlike the natural harmonic scale the frequency values of the equal tempered scale are not derived from anything 'organic'. The calibration frequency 440 Hz is a purely arbitrary value. In past centuries the value of A4 has varied considerably—from 309 Hz to 455 Hz.⁸⁷

In the table above I have calibrated the starting point to the equal-tempered frequency value for C4—that is, 261.62557. But if we instead use the X49 esoteric C4 frequency value (i.e. 269.5 Hz) we can compare more closely the resulting natural harmonic frequencies with their esoteric X49 counterparts.

Note	C4	D4	E4	F4	G4	A4	B4	C5
Ratio	1/1	9/8	5/4	4/3	3/2	5/3	15/8	2/1
Natural	269.5	303.1875	336.875	359.333	404.25	449.166	505.3125	539
X49	269.5	294	318.5	343	392	441	490	539

Looking at the table above, it is clear that the natural harmonic scale ratios (or musical 'intervals') produce frequencies that don't align very closely with the esoteric X49 scale, but this apparent disparity is deceptive because the X49 major scale has a different starting note (i.e. the note G rather than the note C). Therefore, we will achieve a better understanding of the differences and similarities between these two systems if we compare their parallel octave interval ratios.

⁸⁶ Also technically called the Ptolemy "Intense Diatonic Syntonon" scale.

⁸⁷ See: [Standard Pitch or Concert Pitch for Pianos](#).

The following table lists the musical interval structure upon which the X49 octave system is based. It turns out to be a subset of the harmonic series '16 – 32'.

#	Ratio	Musical Interval Names	Octave Note	X49 Octave Freq. (Hz)	Major Scale	Sharps & Flats
0	1/1	unison, perfect prime	G2	98	G2	
1	17/16	17th harmonic	G2 #	104.125		G2 #
2	9/8	major whole tone	A2	110.25	A2	
3	19/16	19th harmonic	A2 #	116.375		A2 #
4	5/4	major third	B2	122.5	B2	
5	11/8	undecimal semi-augmented fourth	C3	134.75	C3	
6	23/16	23rd harmonic	C3 #	140.875		C3 #
7	3/2	perfect fifth	D3	147	D3	
8	25/16	classic augmented fifth	D3 #	153.125		D3 #
9	13/8	tridecimal neutral sixth	E3	159.25	E3	
10	7/4	harmonic seventh	F3	171.5	F3	
11	15/8	classic major seventh	G3 ♭	183.75		G3 ♭
12	2/1	octave	G3	196		

To help you better understand this table: The data shows that, for example, the X49 note C3 (134.75 Hz) is precisely 11/8 of the note G2 (98 Hz). It also shows that the note D3 (147 Hz) is precisely 3/2 of G2 (98 Hz). All the notes of this X49 octave are shown as ratios of the base frequency value 98 Hz (G2). This harmonic pattern is repeated through the higher octaves of the X49 system.

Now, for a more meaningful comparison, we can compare the musical intervals of the X49 major scale with those of the 'natural' diatonic scale.

Note #	1	2	3	4	5	6	7	8
Natural	1/1	9/8	5/4	4/3	3/2	5/3	15/8	2/1
X49	1/1	9/8	5/4	11/8	3/2	13/8	7/4	2/1

As you can see there is, in fact, some harmonic similarity in the structures of these two systems. The natural diatonic scale is a subset of 'Harmonic Series 24 – 48', whereas the X49 scale is a subset of 'Harmonic Series 16 – 32', but there is an intersection between these two harmonic scales. (See the comparison table below.)

Among other things, this comparison between the 'natural' and the X49 scales demonstrates that, like the natural diatonic scale, the X49 scale is based on the principle of 'just intonation'—unlike the

conventional 'equal tempered' scale which is based on a purely mathematical rather than a geometrical principle.

“In music, just intonation is any musical tuning in which the frequencies of notes are related by ratios of whole numbers. Any interval tuned in this way is called a just interval; in other words, the two notes are members of the same harmonic series...”

“Just intonation can be contrasted and compared with equal temperament, which dominates western orchestras and default MIDI tuning. Equal temperament starts by arranging all notes at multiples of the same basic interval, but the intervals themselves are altered slightly, relative to just intonation. Each interval possesses its own degree of alteration. The process results in a tuning system where all intervals will have exactly the same character in any key.”⁸⁸

The following table shows the overlap between the natural diatonic scale (right columns) and the X49 major scale (left columns). The intervals common to both are highlighted in red. You will notice that the musical notes of the respective scales differ. That is because the scales begin from different points in the alphabetic note sequence. Another thing to notice is that the X49 major scale follows the even numbers in the series from 0 to 16, whereas the natural scale consists of a mixture of odd and even numbers in its series from 0 to 12.

Harmonic 16 – 32			Harmonic 24 – 48		
#	16 – 32	X49	#	24 – 48	Natural
0	1/1	G	0	1/1	C
1	17/16		1	13/12	
2	9/8	A	2	9/8	D
3	19/16		3	7/6	
4	5/4	B	4	5/4	E
5	21/16		5	4/3	F
6	11/8	C	6	11/8	
7	23/16				
8	3/2	D	7	3/2	G
9	25/16				
10	13/8	E	8	13/8	
11	27/16		9	5/3	A
12	7/4	F	10	7/4	
13	29/16				
14	15/8	F # / G b	11	15/8	B
15	31/16				
16	2/1	G	12	2/1	C

⁸⁸ Quoted from: http://en.wikipedia.org/wiki/Just_intonation

Interestingly, during my researches I found one musician (and there may be more) who decided to use this harmonic scale (i.e. the same one upon which the X49 octave system is based) in his music.

*“To guide my choices out of the infinitude of possible intervals, I knew I wanted a harmonic scale of overtones 8-16: 1/1, 9/8, 5/4, 11/8, 3/2, 13/8, 7/4, 15/8, 2/1.”*⁸⁹

I’m not sure why he chose this scale in particular, but it’s an interesting choice!⁹⁰

You might now be wondering: If the ‘natural’ harmonic frequencies are based on the physics of ‘nature’—i.e. on the natural harmonic ratios of a vibrating length of string, then why do they differ from the esoteric X49 frequencies? Aren’t the esoteric frequencies supposed to mirror the metaphysical structure of our solar system?

I think the answer to these questions is related to the idea that our world (i.e. planet Earth) is not itself in complete harmony with the spiritual forces that infuse our solar system. The Earth (and everything within its sphere) is still evolving towards perfection, and therefore the natural harmonic scale is also currently imperfect.

The Earth’s relative imperfection is symbolically indicated by the fact that there are no perfect circles found in the natural world. And also, by the fact that its orbit around the sun is a 365.25 day cycle instead of a perfect 360 day cycle.

Presumably, as the Earth evolves, the natural harmonic scale ratios will change and the natural note frequencies will gradually move into alignment with the esoteric scale of sound. In other words, I am suggesting that the influence of the harmonic series 24 – 42 will possibly eventually be superseded by the growing influence of harmonic series 16 – 32.

It is because of the Earth’s relative imperfection and its evolutionary position in the cosmos that we are forced to experience the process of cosmic ‘entrainment’. This occurs on many levels—physical and psychological, individual and collective.

“Entrainment in the biomusicological sense refers to the synchronization of organisms to an external rhythm, usually produced by other organisms with whom they interact

⁸⁹ [A Justly-Tuned Guitar](#), by David Canright.

⁹⁰ Note that the music software Scala also identifies this harmonic series as “Tom Stone’s Guitar Scale”. Stone was the inventor of ‘interchangeable fingerboards’ for guitars.

socially. Examples include firefly flashing, mosquito wing clapping as well as human music and dance.”⁹¹

Just like an average human-being, our Earth Logos can be imagined as being part of a social group. His social group consists of cosmic friends and neighbours of varying degrees of evolution, and it is natural for him to be influenced by their vibrations when he is in their company.

Contact with enlightened divine Entities (i.e. for example, the seven ‘Heavenly Men’) results in a mingling of cosmic vibrations, and this has the effect of entraining the Earth’s vibration towards the enlightened Being’s greater level of perfection.

The re-alignment of the Earth as it responds to these externally applied stimuli is a long and slow process, but will result eventually in a more perfect world.

The occult application of the esoteric tones upon the human energy/vibration system is based on this same principle of ‘entrainment’.

Because the esoteric tones are part of a 7x7-based scale of frequency they are thought to mirror the basic metaphysical structure of our universe, and therefore, to vibrate at a frequency rate of relative perfection.

Thus, it is surmised that we can use the esoteric tones to assist in the entrainment of our individual physical and psychological vibrations towards a greater level of perfection.

The fact that the esoteric scale is based on the multiplication of the number 49 means that after each 49 Hz interval the threshold of a new dimension appears and a new ‘initiation’ must be undertaken in order to make the quantum leap to the next higher vibrational level. This results in a freedom from the limitations of the past (i.e. of the lower dimension), and it is this process of liberation that was symbolized by the blowing of the Shofar by the ancient Hebrews during the Jubilee year at which time all slaves were set free.

“This most extraordinary of all civil institutions, which received the name of "Jubilee" from a Hebrew word signifying a musical instrument, a horn or trumpet, began on the tenth day of the seventh month, or the great day of atonement, when, by order of the public authorities, the sound of trumpets proclaimed the beginning of the universal redemption. All prisoners and captives obtained their liberties, slaves were declared free, and debtors were absolved. The land, as on the sabbatic year, was neither sowed nor reaped, but

⁹¹ From: [Wapedia](#).

allowed to enjoy with its inhabitants a sabbath of repose; and its natural produce was the common property of all. Moreover, every inheritance throughout the land of Judea was restored to its original owner.”⁹²

By working with the major X49 sound tones, which are all exact multiples of 49 Hz, we open ourselves to the possibility of crossing new thresholds of personal awareness and experience. This may, of course, also involve the letting go of old thought-forms, emotional complexes, and personal behaviours, and this can be quite challenging (as all initiations tend to be).

It has been hypothesized by Uvarov that A4—the ninth major esoteric tone (i.e. the ‘King’s Chamber’ tone), was used by the ancient Egyptian priests (and Pharaohs) to cross a **major** cosmic vibrational threshold. It is thought that the ritual may have involved a temporary death, or out-of-body experience. He suggests that while the physical body lay in stasis in the King’s Chamber sarcophagus the Ka (i.e. ‘spirit double’) would visit other realms before returning again to the physical body.

It is as yet unknown whether or not the esoteric A4 tone will produce a similar ‘out-of-body’ experience during meditation. It is however, located within the ‘buddhic plane’ octave (symbolically speaking) which corresponds to a very high state of consciousness.

To achieve maximum results, the sounding of these tones should, of course, also be accompanied by a meditation procedure. The colour plates included in Appendix Four can be used in conjunction with their associated major X49 tones during meditation.

⁹² Jamieson-Fausset-Brown Bible Commentary. Lev. 25:8-23. The Jubilee.

Note	Esoteric	(X49)		
F5	686 Hz	14	Buddhic Plane	Mental Plane
E5	637 Hz	13		
D5	588 Hz	12		
C5	539 Hz	11		
B4	490 Hz	10		
A4	441 Hz	9		
G4	392 Hz	8		
F4	343 Hz	7	Higher	
E4	318.5 Hz		Lower	
D4	294 Hz	6		
C4	269.5 Hz			
B3	245 Hz	5		
A3	220.5 Hz			
G3	196 Hz	4	Astral Plane	
F3	171.5 Hz			
E3	159.25 Hz			
D3	147 Hz	3		
C3	134.75 Hz			
B2	122.5 Hz			
A2	110.25 Hz			
G2	98 Hz	2	Physical Plane	
F2	85.75 Hz			
E2	79.625 Hz			
D2	73.5 Hz			
C2	67.375 Hz			
B1	61.25 Hz			
A1	55.125 Hz			
G1	49 Hz	1		

The Research Continues!



Many Thanks For Your Support!

Appendix One

Music—A Divine Art⁹³

“All sounds are a part of Him who wears a garment of Sound.” – *Vishnu Purana*

BOTH man and his universe are one, all parts are but the various players and their instruments. The law of harmony holds all united, each slightest tone having its related sub- and overtones, its essential modulations. The universe is a temple of eternal symphonic harmony, composed of *seven* Tones. This is the doctrine of the Music of the Spheres, from Lemuria to Pythagoras, showing that there are seven powers of terrestrial and sublunary nature, and seven great Forces. According to this doctrine the world was itself called forth out of Chaos by Sound or Harmony, and constructed according to the principles of musical proportion. Evolution, above and below, proceeds in seven ways; these seven ways or tones are also the seven notes of the musical scale, which are the *principles* of Sound.

The Secret Doctrine avers that ancient peoples knew more of the secret side of music than has passed to posterity. Adept-kings and divine teachers, at periods too remote for the historian, were the first Instructors of the human family in the arts and sciences. Every ancient legend ascribes magic power to music, "the most divine and spiritual of the arts," asserting that music is a gift and science "coming straight from the gods." The Hindus, more especially, attribute to divine revelation all the arts and sciences. But with them music stands at the head of everything else. Their *Mantra Shastra* has for its subject matter the force or power of letters, speech, or *music* in all its manifestations. Sound (tonal modulations) may be produced of such a nature that the pyramid of Cheops could be raised in the air ... or a dying man be revived and filled with new energy and vigor.

"What," asks Scipio in his ancient vision, "is this mighty and sweet harmony which fills my ears?" The voice replies, "This melody of unequal intervals, yet proportionately harmonized, is produced by the impulse and motion of the spheres themselves, which by blending high and low tones produces uniformly divers symphonies. Mortals have become deaf to those sounds, by having their ears continually filled with them ... and so this sound, which is generated by the exceedingly rapid revolution of the whole Cosmos, is so stupendous that mortal ears cannot contain it." Two millenniums later, in our own time, the Vision of Scipio is restated in scientific terms: "Vibration which controls the forms into which matter shapes itself is considered as the common factor for the appearance of the Cosmos in all its details. The Cosmos may with exactness be considered an acoustical phenomenon, only an infinitesimal fraction of its full scope of vibration being within the range of our hearing or other senses. The material world is the pattern of a cosmical orchestral score in progress of being performed. Truly the 'night is filled with music' and the 'stars sing together'.

⁹³ From: THEOSOPHY, Vol. 42, No. 4, February, 1954. Pp. 175-179. ([Website](#))

They are all indeed held, revolved, and rotated by the vibrations of a great song." (New York *Herald-Tribune*, 1941.)

With the elder Chinese, music was in close affinity with religion. They built their world upon the harmonious action of heaven and earth. They regarded the animation of all nature, the movement of the stars and the changes of seasons, as "grand world-music," in which everything keeps steadfastly to its appointed course. This, they felt, taught to mankind a wholesome lesson. "Would'st thou know if a people be well governed, if its manners be good or bad?" asks Confucius. "Examine the music it produces!" The *Yao Chi* states that "In the ancestral temples, rulers and ministers, high and low, listen together to music, and all is harmony and deference. Within the gates of the family, fathers and sons, brothers and cousins, listen together, and all is harmony and affection. In this way fathers and sons, rulers and subjects, were once united in harmony, and the people of the myriad states were associated in love. Such was the method of the ancient kings when they framed their music."

Said the Egyptian Hermes: "As for true music, to know this is to have a knowledge of the order of all things. For the order of each separate thing when set together in one key for all, by means of skilful reason, will make the sweetest and truest music." In Plato's Academy, music was the first subject presented to his pupils, as he considered this art to be the one offering the best preparation for the study of philosophy. In the *Republic* (III) he says, "Musical training is a more potent instrument than any other, because rhythm and harmony enter into the inward places of the soul, on which they mightily fasten, imparting grace, and making the soul of him who is rightly educated, graceful." Again, in the *Shu-King*, the Emperor commands his minister: "K'wei, I appoint you to be director of music, and to teach our sons, so that the straightforward shall be mild; the gentle, dignified; the strong, not tyrannical; the impetuous, not arrogant."

The music of nature has everywhere been the first step to the music of art. In the Indian system, their melodies allow no sounds that cannot be classified among the living voices of nature. Indian music is, in the highest sense, pantheistic; but at the same time it is highly scientific. They of the early Aryan races, first to attain to manhood, listened to the voice of nature, and concluded that melody, as well as harmony, are both contained in the great common mother. The Hindus, the Northern Buddhists, and all the Chinese, some thousands of years preceding the discoveries of modern Western science, found that all the sounds of nature make only *one tone*, which is the middle F, the fundamental tone of nature. This we can all hear, if we know how to listen, in the eternal rustle of the foliage of great forests, in the murmur of waters, in the roar of the storming ocean, and even in the distant roll of a great city. In the Hindu as in Chinese music, the middle F, called *Kung* or Emperor tone, is the keynote, the starting point, around which are grouped all the other sounds.

It is stated that thousands of years ago the Chinese possessed a system of octaves a "circle of fifths." Beginning with Hwang-ti, who reigned in 2697 B.C., Chinese music assumes its characteristic form. Hwang-ti sent one of his ministers, Ling Lun, to a place west of the Kuen Lun mountains. There he

found Indian musicians who knew the secret he was seeking. He took a bamboo rod, tuned to the *kung*, and found that the proportion 2:3 gave him the next tone (the perfect fifth). Taking two-thirds of each successive tone, he discovered that twelve tones could be made, the thirteenth leading him back to the original *kung*. (In their 2:3 proportions as "fifths" the seven notes appear as F, C, G, D, A, E, B.) According to Chinese ideas, music rests on two fundamental principles, the *shin-li*, or spiritual, immaterial principle, and the *chi-i-shu*, or substance. Unity is above, it is heaven; plurality is below, it is earth. Some inkling of the part played by music in the life of ancient China may be seen from the following statement found in the book called *The Yellow Bell* by Chao-mai-pa: "In 1100 B.C., under the Dynasty of Chou, the orchestra was the Festival Orchestra, called Yen-yo. History tells us that the musicians (more than ten thousand in number) were divided into nine groups, playing simultaneously upon 300 different kinds of instruments.)"

Ancient Greece had its Orpheus, who was the son of Apollo, and from the latter received the lyre of seven strings. The seven-stringed lyre symbolizes the *sevenfold mystery of initiation*. In China the favorite instrument of Confucius was the *seven-stringed ch'in*. To all the demi-gods, heroes and teachers of the Past, Mythology ascribes wondrous powers in the use of sound. Orpheus played to such perfection that nothing could withstand the charm of his music. Not only his fellow mortals but wild beasts were softened by his strains, and gathering round him laid by their fierceness, entranced by his play. The trees and rocks were sensible to his charm. Kui, a Chinese musician, says: "When I play my *kyng* the wild animals hasten to me, ranging themselves in rows, spell-bound by my melody." The *Bhagavata Purana* speaks of Krishna as the "Eternal Boy, first Master of all the Arts." He began as a flute-player, fascinating the village maids and youths and the animals of the jungle. He ended by giving lessons to great Narada in the art of playing the *vina*. The *Mahabharata* describes his complete course of education, saying that he learned the "64 fine arts" including music, in 64 days. "Krishna used often to play his flute in the woods. He made his appearance manifold and danced with the Gopis, he playing the flute and the Gopis their lutes. And as they played, all the gods came down from heaven to see the dancing, and wind and water stood still to listen."

Orpheus came from India, and Orpheus also is the type of the Egyptian Thoth, inventor of the arts and sciences, including music, for Egypt. The Greeks thus owe their knowledge of music primarily to the Hindus. It is also pointed out that the Chinese have a system of music essentially the same as the Greeks, "a scale consisting of two conjunct tetrachords—the keynote being the fourth of the scale. Other details seem to point to a time in the far-distant past when both races were in contact with one source. Then came a day of disruption -- one race eastward, the other westward, each pursuing their own way." However, as shown in Theosophical works, both nations had recourse to India; in addition to the other fact that "both the Greeks and the Chinese belonged to the seventh sub-race of the Atlanteans." It was the Egyptians who were considered to be the best music teachers *in* Greece. "There can be no doubt as to the character of Egyptian music. It must have been both solemn and majestic. This would correspond to all the philosophical notions entertained by the Egyptians."

Plato tells us that amongst the melodies sacred to Isis were songs of immense antiquity, as he believed that good music had existed among the Egyptians for 10,000 years without suffering any change. "In their possession," says the Greek philosopher, "are songs having the power to exalt and ennoble mankind, and these could only emanate from gods and god-like men." The Egyptians themselves entertained similar thoughts concerning the origin of these melodies. In the temple of Dakkeh is a picture of Ptah playing on a harp. Osiris was also looked upon as a patron deity of song. In many representations Osiris is accompanied by the nine female singers whom the Greeks subsequently transformed into the "nine muses."

The priests of ancient nations understood the secret power of music not only upon the human spirit, but as well upon the health of the body. They understood, perhaps, that "the vibrations constituting the notes of the musical scale are strictly analogous to the scale of chemical elements, and also to the scale of colour ..." Our modern temples of healing have, in this regard, much ground still to recover. The ancients quite evidently knew what to avoid and what could be safely used in these hidden realms of the new Physics; that "certain kinds of music throw us into frenzy; other kinds exalt the soul to religious aspirations. Some colors excite, others soothe and please." The *Odyssey* (Book XIX) tells us that after a hunting episode "the wounds of the noble Odysseus they bound up skilfully, and stayed the black blood with *a song of healing*."

And now, as then: "When we think of music, how it reaches to the height of heaven and embraces the earth; how there is in it communication with the spirit-like processes of nature, we must pronounce its height the highest, its reach the furthest, its depth the most profound, its breadth the greatest. When one has mastered completely the principles of music, the natural, gentle and honest heart is easily developed, and with this development comes joy. This joy merges in a feeling of repose. The man in this constant repose becomes heaven-like, his actions spirit-like. So it is when mastering music. One regulates his mind and heart." (*Yao Chi*.) Nor is it probable that our dynamic times would suffer from such occasional "repose."



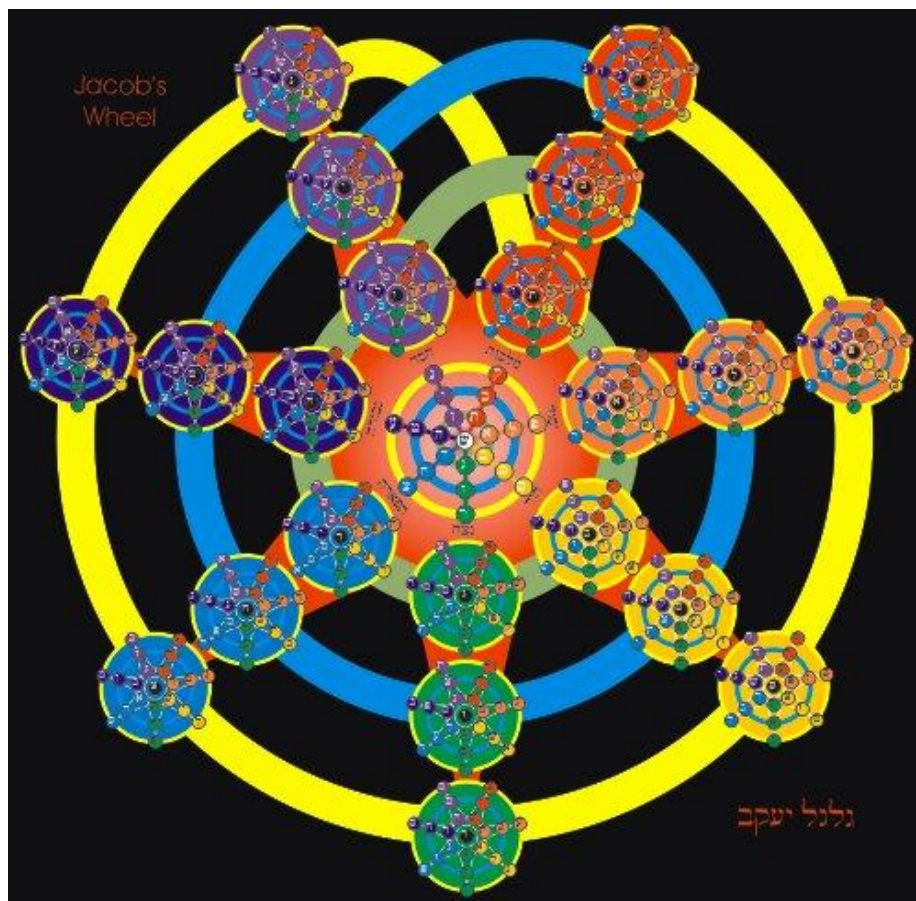
Appendix Two

The Sacred Number Forty-nine

By Patrick Mulcahy

The number forty-nine is greatly emphasized by Master Djwal Khul in the writings of Alice Bailey. It recurs again and again in her theosophical writings, as does the number seven—the square root of 49. It is clear that Master DK considered these two numbers of very special occult significance.

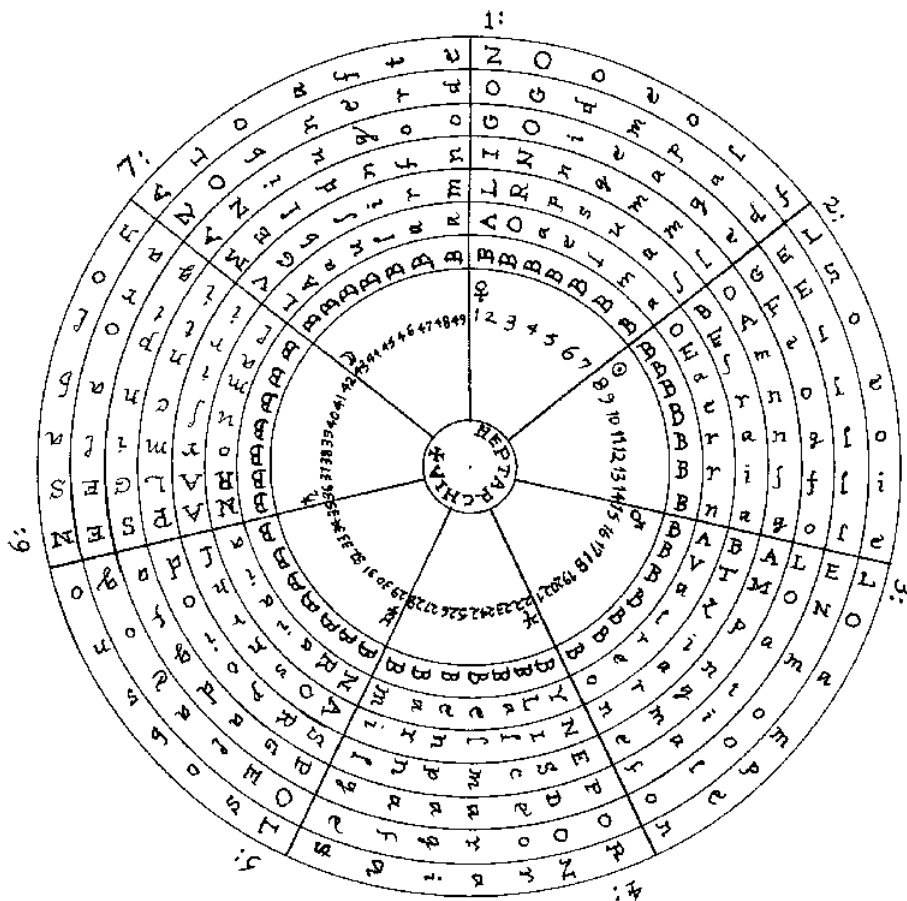
My own awareness of the significance of the number 49 came via my discovery of the Jacob's Wheel mandala and the mysterious esoteric system associated with it. The Jacob's Wheel mandala consists of a complex geometric arrangement of the twenty-two letters of the Hebrew alphabet.



The main body of the Jacob's Wheel mandala is composed of three concentric rings (or spiral arcs) with seven heptagrams positioned on each arc. Each of the twenty-one heptagrams contains a unique array of twenty-one Hebrew letters. This overall pattern derives a spiral cyclic pathway that consists of 441 (i.e. 21 x 21) individual steps (or phases). The number 441 can also be expressed as: 9

$x 49 = 441$. The seven heptagrams on each arc of the Jacob's Wheel mandala produce forty-nine 'star points', or 'radiating spokes' giving an overall total of 147 (i.e. 3×49) 'rays'.

It is thought that the twenty-two Hebrew letters, as they are positioned within the construct of the Jacob's Wheel mandala, spell out the names of a hierarchy of angels known traditionally as the Ofanim. The word 'ofan' is Hebrew for 'wheel' and thus the Ofanim angels are said to be associated with the 'wheels of God's chariot'.⁹⁴ These 'wheel' angels seem to rule over the various cycles of circulating energy that move through the Earth's energy field. We are all, of course, energetically attached to these cycles because our own physical and subtle bodies are immersed within, and interwoven with, the field of divine Intelligence that surrounds the Earth sphere. In other words, our own personal consciousness is part of the global energy-field that embodies the consciousness of the Earth Logos.



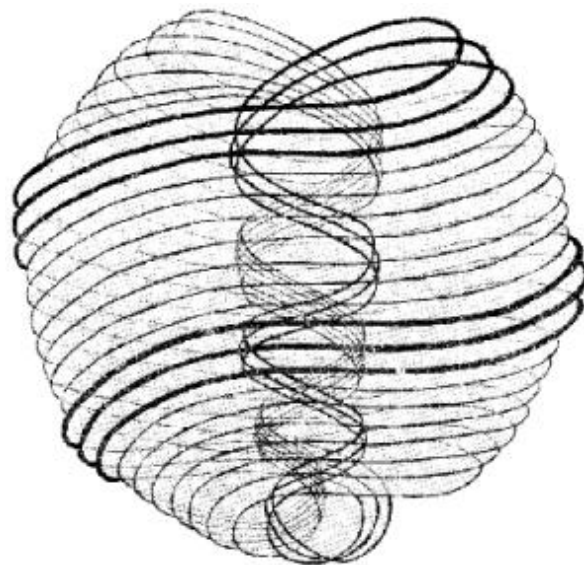
Like the Jacob's Wheel system, the Enochian magical system (i.e. as clairvoyantly received by Dr John Dee in the 16th Century) is also constructed on the basis of the numbers seven and forty-nine. The transmissions (purportedly communicated by angels) include 95 tables that each contain forty-nine

⁹⁴ That is, as described in Ezekiel, Chap. 1 (etc).

letters in a series of 7 x 7 grids. Forty-nine 'calls' (i.e. prayers, or invocations) were also received by Dee from the angelic messengers, as well as seven tables of forty-nine letters each that derived the names of forty-nine 'angels of Light'. John Dee subsequently arranged these angelic names in a circular format as per the diagram above.

It is not known why the angels transmitted the Enochian system of magic to John Dee, but the system is thought to provide a means of communication between human-beings and the hierarchy of divine intelligences who oversee the evolution of humanity. The fact that the structure of the Enochian system is based on the numbers seven and forty-nine further reinforces the idea that these two numbers are of prime importance to the processes of creation and manifestation in our universe.

The clairvoyant investigations of C. W. Leadbeater in the early 20th Century suggest that the primal fabric of the universe is built according to a pattern based on multiples of the number 49. He described fundamental particles that are composed of groups of bubbles in the absolute aether of space (i.e. which latter he termed 'koilon'). He described seven interpenetrating planes of existence that are each composed of atoms whose number of bubbles are functions of the base number forty-nine. What he termed the 'Anu' (or primordial 'atom') is the fundamental unit. Each physical plane atom is composed of (or linked to) forty-nine astral plane atoms. Each astral plane atom is linked to forty-nine mental plane atoms, etc, until the ultimate unit of manifestation is reached. Leadbeater depicted the shape of the Anu as follows...



Thus, according to Leadbeater each physical plane atom is attached to forty-nine astral atoms, 49^2 mental atoms, 49^3 buddhic atoms, etc. Each of the seven 'atomic levels' forms the basis of one of the seven planes of our universe.

Let's return now to the teachings of Master Djwal Khul. Here are a few significant quotes (from Alice Bailey) that emphasize the importance of the number forty-nine.

"The wheel of life turns within the wheel of outer form. The matter of Fohat circulateth, and its fire hardeneth all the forms. The wheel that is not glimpsed moveth in rapid revolution within the slower outer case, till it weareth out the form. The forty-nine fires burn at the inner center. The thirty-five circulating fiery vortices extend along the circle of the periphery. Between the two passeth in ordered sequence the various colored flames."⁹⁵

+++

"The solar Logos forms one center in the body of a still greater cosmic ENTITY. Human beings therefore, find their place within one of the forty-nine centers (not groups, for a center may be made up of many groups, corresponding to the different parts) of the seven Heavenly Men."⁹⁶

+++

"*The material* through which the life proposes to manifest. This material, as we know, is found within the ring-pass-not in seven grades, and in forty-nine sub-grades."⁹⁷

+++

"These records are mostly used by the Lord of the World and His pupils to ascertain information in connection with the planetary centers. They are arranged in such a way that the entire record of any group, however vast and extensive, is embodied in seven sheets of symbols, each containing forty-nine symbols. These sheets are changed and corrected once every seven years, and are precipitated on astral matter by an effort of will by the Chohan responsible for the particular group involved."⁹⁸

+++

"The logic etheric centers become active. The etheric body of the solar system is now complete, though it will not be perfected till the end of another manvantara. The greater body of vitality is ready to energize the dense physical vehicle. The seven centers with their forty-nine major petals are vibrant, and consciousness thrills through every atom in the system."⁹⁹

+++

"*A cosmic wheel*, or a group of seven constellations... These cosmic wheels, according to the esoteric books, are divided into forty-nine groups, each comprising millions of septenary constellations. For purposes of study by the Adepts, they are each known by a symbol, and these forty-nine symbols embody all that can be apprehended anent the size, magnitude, quality, vibratory activity, and objective of those great forms through which an Existence is experiencing. The Chohans of high degree know the forty-nine sounds which give the quality of the consciousness aspect of these great

⁹⁵ A Treatise on Cosmic Fire. Alice Bailey. Pg. 31. From: Stanza XI of The Stanzas of Dzyan.

⁹⁶ Ibid. Pp. 272-273.

⁹⁷ Ibid. Pg. 447.

⁹⁸ Ibid Pp. 856-857.

⁹⁹ Ibid. Pg. 927.

Beings Who are as far removed from the consciousness of our solar Logos as the consciousness of man is removed from that of a crystal.”¹⁰⁰

‡‡‡

There are **many** more fascinating passages in the Alice Bailey books that refer to the number forty-nine, and it has been difficult for me to choose which ones to quote here, but judging from all the above, it appears that the vibrational structure of our universe is based on the numbers seven and forty-nine (and multiples thereof).

Speaking of vibrations, the Western musical scale, like the occult substrata of our universe, is based on the number seven. It consists of a series of octaves, progressively rising in frequency, each containing seven notes.

Considering all that has been detailed above, ideally, if we wish our musical system to fully reflect the esoteric structure of the universe, then the frequency values of the notes of our musical scale should be based on the numbers seven and forty-nine.

Interestingly, this is almost true of the seven notes of the equal tempered **major** scale (i.e. that correspond to the white keys of a piano keyboard). Amazingly, the frequency values (i.e. ‘pitch’) of these notes only require a small tweak to bring them into line with the fundamental metaphysics of our universe.

A minor adjustment sees the notes of the major scale fall precisely into a pattern that is based on multiples of 49 Hz¹⁰¹. But even though the adjustments are relatively small, the physical and psychological effects of these 49 Hz-based vibrations are potentially very significant.

Experiments are currently being undertaken to determine the effects of these esoteric frequencies on human consciousness. It is thought that through the process of ‘entrainment’ or sympathetic ‘resonance’ (i.e. during meditation) certain frequencies of the esoteric scale might assist in the elevation of human consciousness, and/or the tuning of the human psycho-physical organism to other planes of awareness. This possibility is suggested by the esoteric theory that the structure of our universe, at a very fundamental level, is based on the numbers seven and forty-nine.

Further information on the Jacob’s Wheel system can be accessed here...

[An Introduction to Jacob’s Wheel](#)

¹⁰⁰ Ibid. Pp. 1085-1086.

¹⁰¹ That is, 49 cycles per second.

Some Quotes Concerning the Number 49

Theosophy – C. W. Leadbeater

“When the Solar Deity begins to make His system, He finds ready to His hand this material—this infinite mass of tiny bubbles which can be built up into various kinds of matter as we know it. He commences by defining the limit of His field of activity, a vast sphere whose circumference is far larger than the orbit of the outermost of His future planets. Within the limit of that sphere He sets up a kind of gigantic vortex—a motion which sweeps together all the bubbles into a vast central mass, the material of the nebula that is to be.

“Into this vast revolving sphere He sends forth successive impulses of force, gathering together the bubbles into ever more and more complex aggregations, and producing in this way seven gigantic interpenetrating worlds of matter of different degrees of density, all concentric and all occupying the same space.

“Acting through His Third Aspect He sends forth into this stupendous sphere the first of these impulses. It sets up all through the sphere a vast number of tiny vortices, each of which draws into itself forty-nine bubbles, and arranges them in a certain shape. These little groupings of bubbles so formed are the atoms of the second of the interpenetrating worlds. The whole number of the bubbles is not used in this way, sufficient being left in the dissociated state to act as atoms for the first and highest of these worlds. In due time comes the second impulse, which seizes upon nearly all these forty-nine bubble-atoms (leaving only enough to provide atoms for the second world), draws them back into itself and then, throwing them out again, sets up among them vortices, each of which holds within itself 2,401 bubbles (49^2). These form the atoms of the third world. Again after a time comes a third impulse, which in the same way seizes upon nearly all these 2,401 bubble-atoms, draws them back again into their original form, and again throws them outward once more as the atoms of the fourth world—each atom containing this time 49^3 bubbles. This process is repeated until the sixth of these successive impulses has built the atom of the seventh or the lowest world--that atom containing 49^6 of the original bubbles.”¹⁰²

¹⁰² A Textbook Of Theosophy, by C. W. Leadbeater. 1912. [Chapter III](#).

Osiris

“Of the many supreme gods, this Egyptian conception [Osiris] is the most suggestive and the grandest, as it embraces the whole range of physical and metaphysical thought. As a solar deity he had twelve minor gods under him—the twelve signs of the Zodiac. Though his name is the "Ineffable", his forty-two attributes bore each one of his names, and his seven dual aspects completed the forty-nine, or 7×7 ; the former symbolized by the fourteen members of his body, or twice seven. Thus the god is blended in man, and the man is deified into a god. He was addressed as Osiris-Eloh.”¹⁰³

Counting the Omer

“The origins of the omer count, enumerated in the Midrash Rabbah Parashas Emor, explains that when the Children of Israel left Egypt they were told by Moses that 49 days after the exodus, they would be given the Torah. The populace was so excited at the prospect of a spiritual liberation, following the physical emancipation from Egypt, they kept a count of the passing days that ended with the giving of the Torah at the foot of Mount Sinai. The Torah itself, in Leviticus 23:15-16, states that it is a commandment to count seven complete weeks from the day after Passover night ending with the festival of Shavuot on the fiftieth day. Shavuot is the festival marking the giving of the Torah to the Jewish nation on the 6th of the Hebrew month of Sivan.

“The period of Omer is considered to be a time of potential for inner growth—for a person to work on one's middot or good characteristics through reflection and development of one aspect each day for the 49 days of the counting.

In Kabbalah, each of the seven weeks of the Omer-counting is associated with one of the seven lower sefirot (#4-10): Chesed, Gevurah, Tipheret, Netzach, Hod, Yesod, and Malchut. Each day of each week is also associated with one of these same seven sefirot, creating forty-nine permutations. The first day of the Omer is therefore associated with "chesed that is in chesed", the second day with "gevurah that is in chesed"; the first day of the second week is associated with "chesed that is in gevurah," the second day of the second week with "gevurah that is in gevurah," and so on. Symbolically, each of these 49 permutations represents an aspect of each person's character that can be improved or further developed.”¹⁰⁴

¹⁰³ [Spiritual Theosophical Dictionary](http://www.experiencefestival.com/a/Osiris/id/202180). [http://www.experiencefestival.com/a/Osiris/id/202180]

¹⁰⁴ [Wikipedia](http://en.wikipedia.org/wiki/Counting_of_the_Omer). [http://en.wikipedia.org/wiki/Counting_of_the_Omer]

The Jubilee Year

“The Jubilee (Hebrew Yovel יובל) year, is the year at the end of seven cycles of Sabbatical years (Hebrew Shmita)...

“The biblical regulations concerning the Jubilee year form part of the Holiness Code, which appears in the Torah as part of the collections of laws given on Mount Sinai or Mount Horeb. According to these regulations, the Jubilee was to be sounded once 49 years had been counted...”¹⁰⁵

The Buddha

“After asceticism and concentrating on meditation and Anapana-sati (awareness of breathing in and out), Siddhartha is said to have discovered what Buddhists call the Middle Way—a path of moderation away from the extremes of self-indulgence and self-mortification. He accepted a little milk and rice pudding from a village girl named Sujata, who wrongly believed him to be the spirit that had granted her a wish, such was his emaciated appearance. Then, sitting under a pipal tree, now known as the Bodhi tree in Bodh Gaya, India, he vowed never to arise until he had found the Truth. Kaundinya and the other four companions, believing that he had abandoned his search and become undisciplined, left. After 49 days meditating, at the age of 35, he attained Enlightenment...”¹⁰⁶

Esoteric Buddhism – Mantra

“The human mind has so far experienced/recognized about forty-nine different kinds of natural phonemes swaras – seven of which are regarded as the basic vowels and the others are komal (soft) and tivra (high notes) configurations of them. Various combinations of these swaras have been compiled into eight basic ragas (classical tunes of shastriya music) and so on..... The gamut of phonemes and varieties of sounds (musical or otherwise) have been generated thereby.”¹⁰⁷

¹⁰⁵ [Wikipedia](http://en.wikipedia.org/wiki/Jubilee_(Biblical)). [http://en.wikipedia.org/wiki/Jubilee_(Biblical)]

¹⁰⁶ [Wikipedia](http://en.wikipedia.org/wiki/Gautama_Buddha). [http://en.wikipedia.org/wiki/Gautama_Buddha]

¹⁰⁷ Eternity of Sound and the Science of Mantras. Pt. Shriram Sharma Acharya. First Edition 2003, Pg. 26.

Enochian Magic of John Dee

“In 1581, Dee mentioned in his personal journals that God had sent "good angels" to communicate directly with prophets. In 1582, Dee teamed up with the seer Edward Kelley, although Dee had used several other seers previously. With Kelley's help as a scryer, Dee set out to establish lasting contact with the angels, which resulted in, among other things, the reception of the Enochian or Angelical language...

“...The reception of Enochian started on March 26 1583, when Kelley reported visions in the crystal of the twenty-one lettered alphabet characteristic of the language. A few days later, Kelley started receiving what became the first corpus of texts in the purported Angelic language. This resulted in the book *Liber Loagaeth* (“Book [of] Speech from God”). The book consists of 49 "calls" or prayers in the Angelic language, but also of 95 great letter tables, or squares made of 49 by 49 letters. Dee and Kelly said the angels never bothered translating the texts in this book.

“The other set of Enochian texts was received through Kelley about a year later, in Krakow. These are more important since they come with English translations, thus providing the basis for the Enochian vocabulary. The texts comprise 48 poetic verses, which in Dee's manuscripts are called “*Claves Angelicae*”, or “*Angelic Keys*”. The Keys are assigned certain functions within the magical system. Dee was apparently intending to use these Keys to "open the 49 Gates of Wisdom/Understanding" represented by the 49 magic squares in *Liber Loagaeth*:

“I am therefore to instruct and inform you, according to your Doctrine delivered, which is contained in 49 Tables. In 49 voices, or callings: which are the Natural Keys to open those, not 49 but 48 (for one is not to be opened) Gates of Understanding, whereby you shall have knowledge to move every Gate...”

“But you shall understand that these 19 Calls are the Calls, or entrances into the knowledge of the mystical Tables. Every Table containing one whole leaf, whereunto you need no other circumstances.”¹⁰⁸

+++

“In the Dee manuscripts, the functions of the 49 Angels of Light (of the Bonorum) are explained in the following manner. The dictating Archangel, Michael, tells Dee:

“Now you touch the world; the Governors that work, rule under God; By whom you may have power to work such things, as shall to God profit of your country and the knowledge of his crettures.”

¹⁰⁸ [Wikipedia](http://en.wikipedia.org/wiki/Enochian_language). [http://en.wikipedia.org/wiki/Enochian_language]

“At this point, Michael explains to Dee that the Angels work in the world (which we would call Assiah) and that they are good Angels under God. Furthermore, he hints that material power can be gained from them, if one possesses the knowledge to direct them. Michael then reveals a set of tables and says:

“Behold, these tables; herein by their names that work under God upon the earth: Not of the wicked but the Angels of Light. The whole government doth consist in the hands of the 49 whose names are here evident, excellent and glorious. Mark these tables and record them . . . This is the first knowledge. Here you shall have wisdom.”

“The Dee manuscripts then show seven tables, joined together in the form of a cross, which are collectively called the “Tabula Collecta.”¹⁰⁹

Aleister Crowley

“There comes first into the stone the mysterious table of forty-nine squares. It is surrounded by an innumerable company of angels; these angels are of all kinds—some brilliant and flashing as gods, down to elemental creatures. The light comes and goes on the tablet; and now it is steady, and I perceive that each letter of the tablet is composed of forty-nine other letters, in a language which looks like that of Honorius; but when I would read, the letter that I look at becomes indistinct at once...

“...And now he shows the tablet again, and he says: As there are 49 letters in the tablet, so are there 49 kinds of cosmos in every thought of God. And there are 49 interpretations of every cosmos, and each interpretation is manifested in 49 ways. Thus also are the calls 49, but to each call there are 49 visions. And each vision is composed of 49 elements, except in the 10th Aethyr, that is accursed, and that hath 42.”¹¹⁰

‡‡‡

“... and there cometh a peacock into the stone, filling the whole Aire. It is like the vision called the Universal Peacock, or, rather, like a representation of that vision. And now there are countless clouds of white angels filling the Aire as the peacock dissolves.

“Now behind the angles are archangels with trumpets. These cause all things to appear at once, so that there is a tremendous confusion of images. And now I perceive that all these things are but veils

¹⁰⁹ Golden Dawn Enochian Magic, by Pat Zalewski. Llewellyn. 1990. Pg. 77.

¹¹⁰ The Vision & the Voice. Aleister Crowley. Weiser. 1998. Pp. 78-80.

of the wheels, for they all gather themselves into a wheel that spins with incredible velocity. It hath many colours, but all are thrilled with white light, so that they are transparent and luminous. This one wheel is forty-nine wheels, set at different angles, so that they compose a sphere; each wheel has forty-nine spokes, and has forty-nine concentric tyres at equal distances from the centre. And wherever the rays from any two wheels meet, there is a blinding flash of glory. It must be understood that though so much detail is visible in the wheel, yet at the same time the impression is of a single, simple object.

“It seems that this wheel is being spun by hand. Though the wheel fills the whole Aire, yet the hand is much bigger than the wheel. And though this vision is so great and splendid, yet there is no seriousness with it, or solemnity. It seems that the hand is spinning the wheel merely for pleasure – it would be better to say amusement.

“A voice comes: For he is a jocund and ruddy god, and his laughter is the vibration of all that exists, and the earthquakes of the soul.”¹¹¹

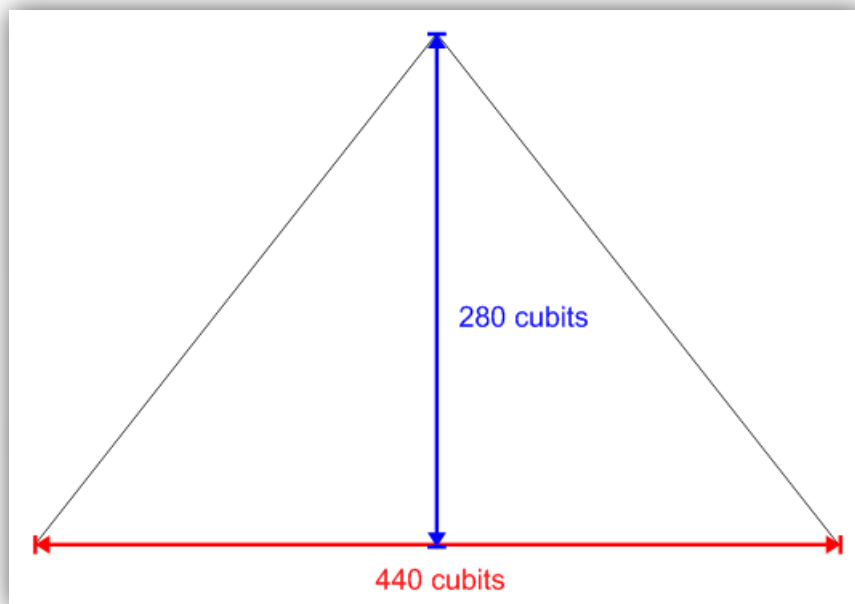
¹¹¹ Ibid. Pp. 92-94.

Appendix Three

The Great Pyramid & the Heptagram

There is little disputing the hypothesis that the basic physical proportions of the Great Pyramid are based on the ratio 22:7, or 3.142857—the ancient Egyptian approximation for Pi.

The original design of the pyramid appears to have intended a base-side length of 440 royal cubits and a vertical height of 280 cubits.



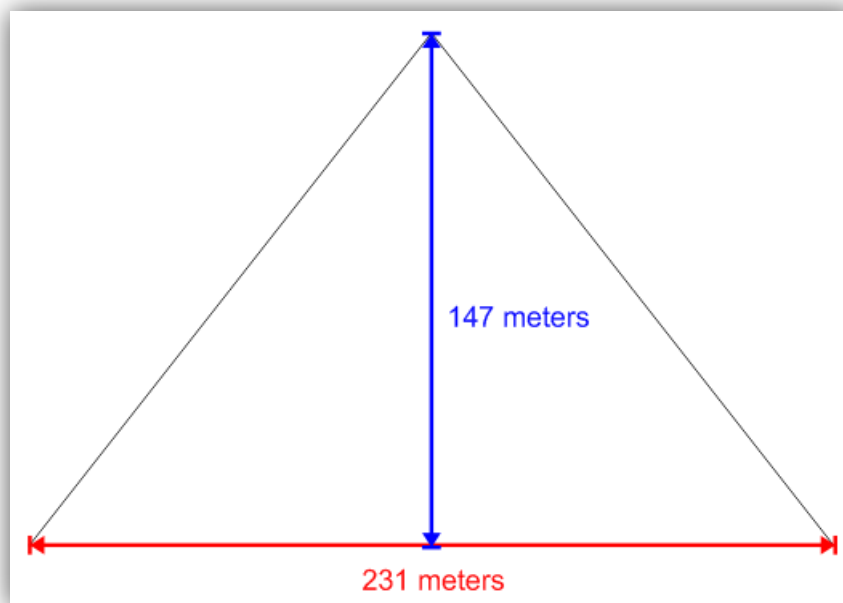
$$\frac{440 (\times 2)}{280} = \frac{22}{7} \cong \pi$$

The metric equivalent of these measurements gives a base-side length of 231 meters, and a vertical height of 147 meters.¹¹² Interestingly, these numbers (i.e. 231 and 147) are both key numbers of the Kabbalah.

¹¹² The precise conversion results are: Base-side = 230.362 m, and Height = 146.594 m—i.e. assuming a royal cubit length of 523.55 mm.

Most notably, the number 231 is a key number mentioned in an ancient metaphysical treatise called the *Sefer Yetzirah*. (This ancient book is seminal to the Holy Kabbalah.) The *Sefer Yetzirah* describes ‘231 Gates’—that is, 231 pairings of the twenty-two letters of the Hebrew alphabet.

The *Jacob’s Wheel* kabbalistic system is derived from information cryptically encoded within the *Sefer Yetzirah*. Significantly, the numbers 231 and 147 are **both** central to the Jacob’s Wheel system. In the Jacob’s Wheel system the number of gates is doubled because it includes the mirrored pairings (i.e. permutations) of the Hebrew letters thus bringing the total number of gates to 462. To put it simply, in the Jacob’s Wheel system the Hebrew letter pairing Alef-Bayt (for example) is counted as a separate gate to its mirrored counterpart Bayt-Alef.



The 22:7 ratio is retained in the metric version of the Great Pyramid as per the following formula:

$$\frac{231 (\times 2)}{147} = \frac{22}{7} \cong \pi$$

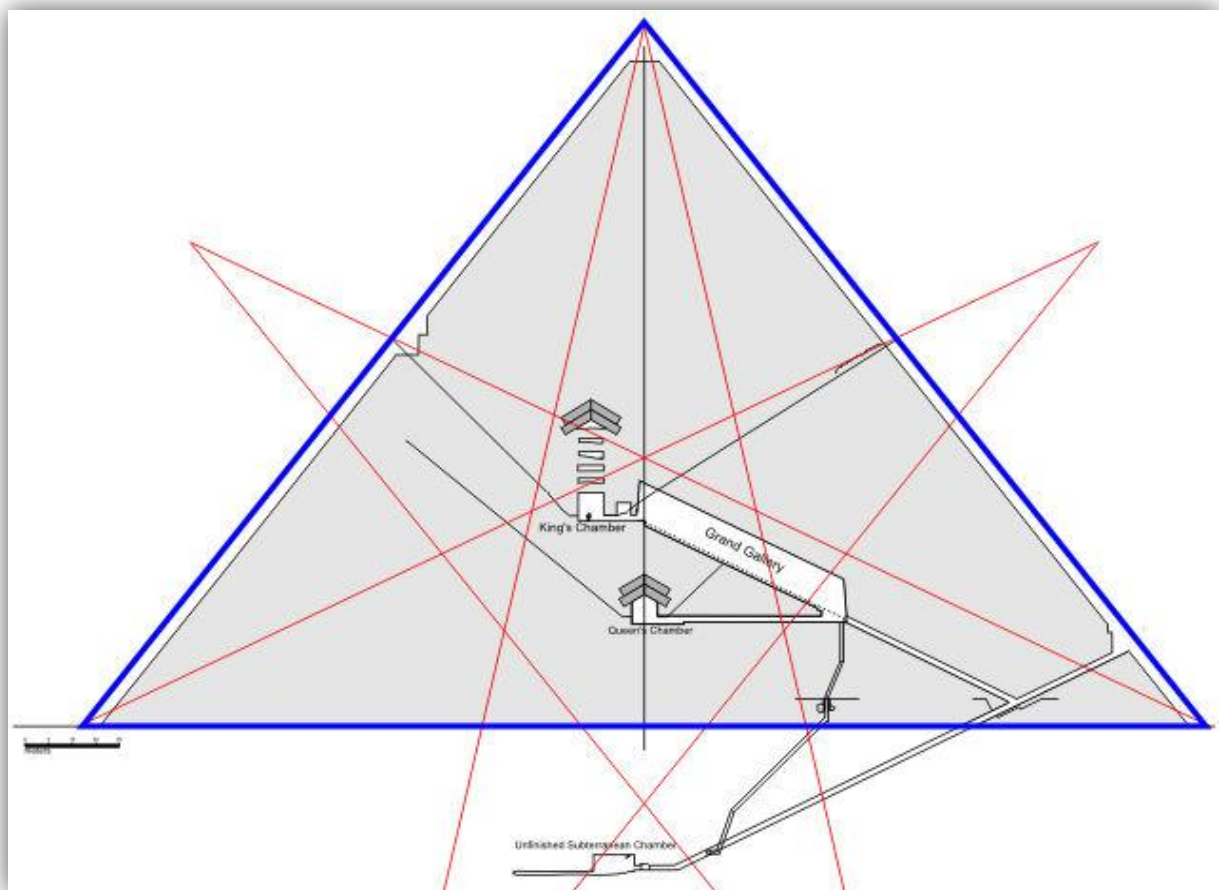
Thus, the architect of the Great Pyramid could have chosen to build a smaller scale pyramid 231 cubits (121 m) wide by 147 cubits (77 m) high and retained the same Pi ratio, but apparently this smaller scale did not suit his purposes.

It is obvious when looking at a cross-sectional plan of the Great Pyramid of Giza that its design is also based **to a considerable extent** on the geometry of a heptagram.

One must assume therefore that the ancient builder of the pyramid intended its architecture to express something of the esoteric meaning of the number seven.

That the Great Pyramid has a major connection with the number seven is supported by the important fact that the fundamental and very ancient¹¹³ Egyptian measuring unit—the cubit—was equal to **seven** hand-palms. The cubit was the unit of measure used to build the Great Pyramid. Also, as we have seen, the number seven is evident in the acoustics of the King's Chamber because its resonant frequency is equivalent to 441 Hz (i.e. 9×7^2).¹¹⁴

But the heptagonal geometry of the Great Pyramid becomes really obvious when a heptagram is overlaid upon its cross-section.



¹¹³ It seems to have existed long before the construction of the Great Pyramid.

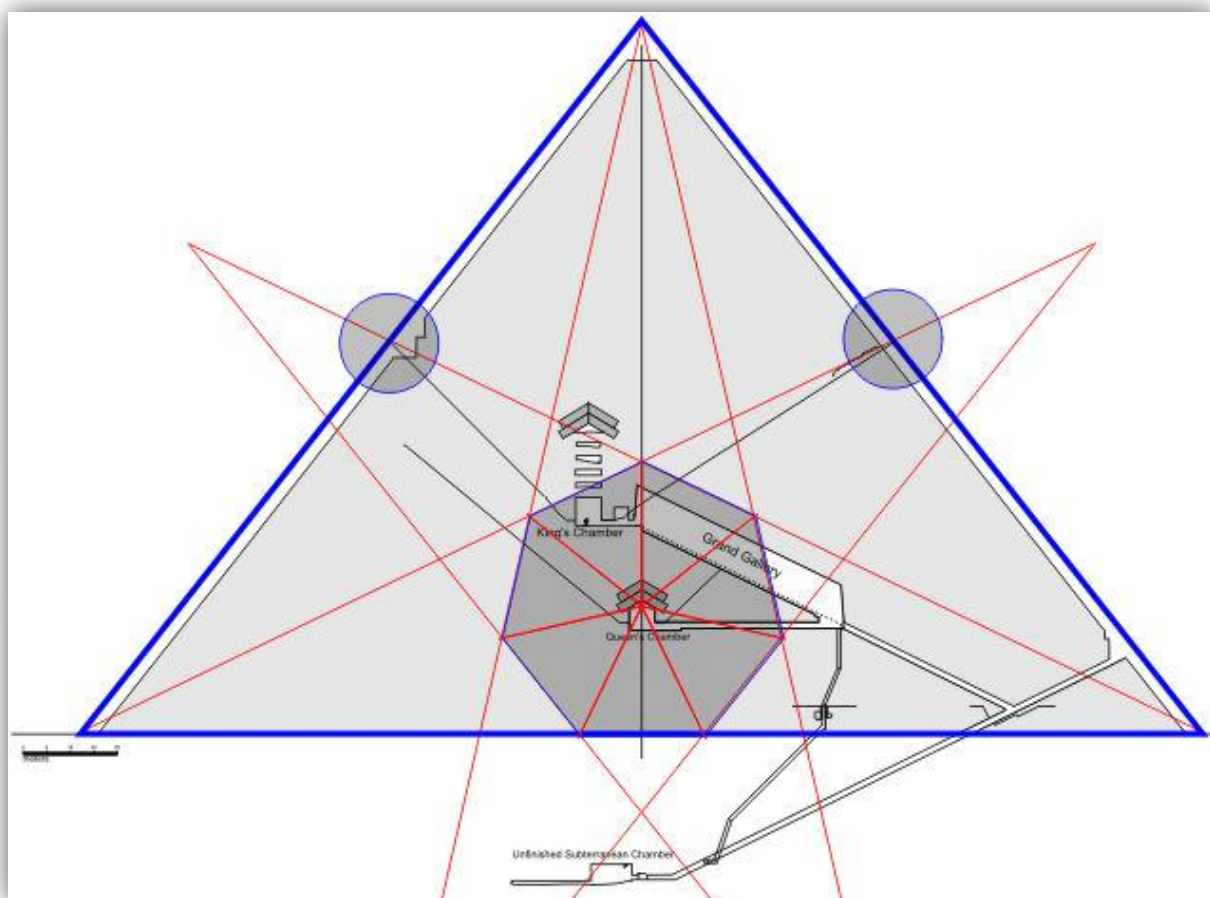
¹¹⁴ And which in our X49 musical scale corresponds to the note A4.

The first thing to notice is that three points of the heptagram when connected form the precise geometric shape of the pyramid. This shape is represented by the blue triangle in the diagram above.

The gap that you see (i.e. in the diagram) between the blue triangle and the sides of the pyramid represents the space that was once occupied by the (now missing) casing stones that used to cover the pyramid's surface.

The angles of the sloping sides of the pyramid have been estimated by surveyors of the site to be greater than 50° and less than 52° . Therefore the angle produced by the three points of the heptagram (as per the diagrams) is a definite possibility—it being precisely 51.428° .¹¹⁵

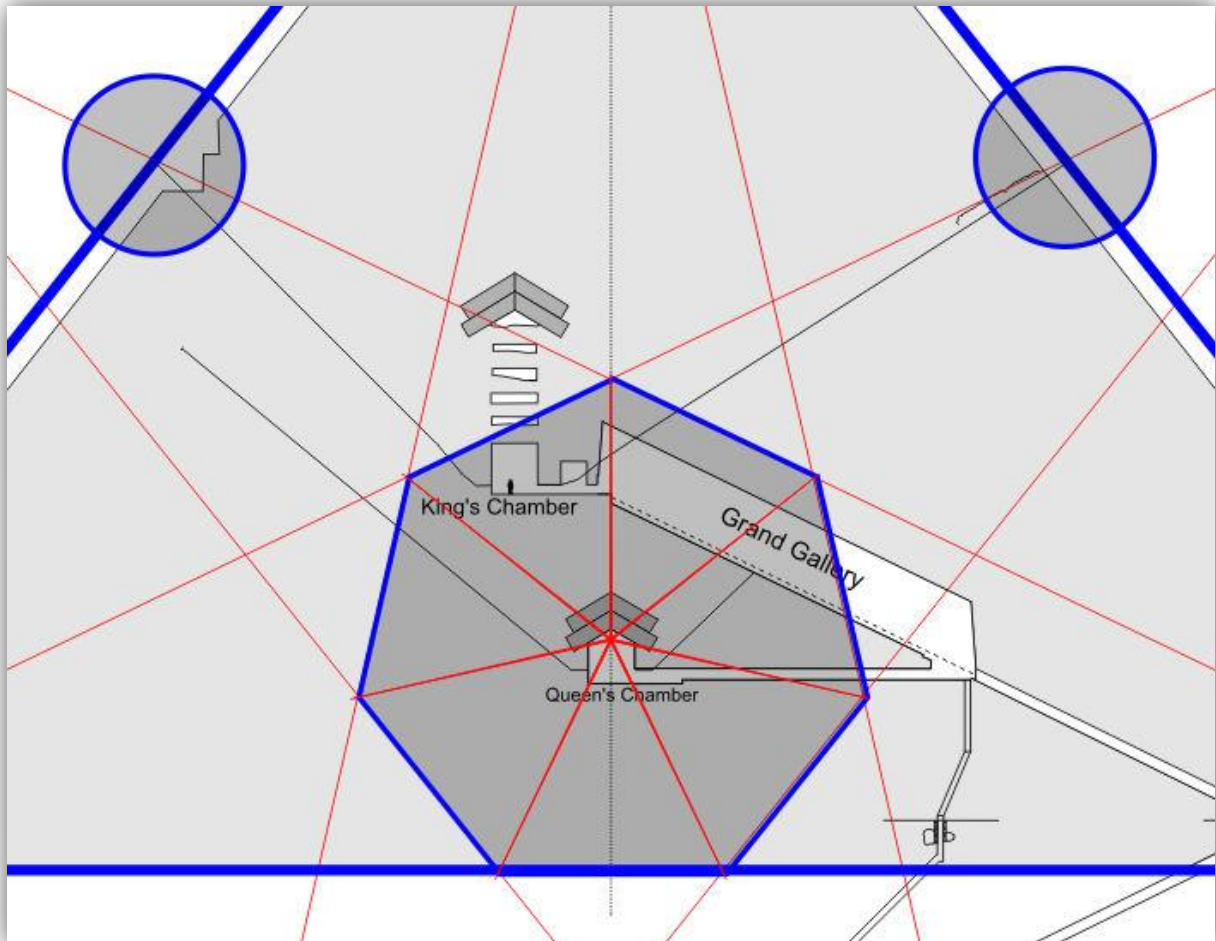
The next thing to notice is that the 'air vents' (or 'star shafts') that extend from the King's Chamber to the outside surface of the pyramid are precisely intersected by the upper left and right arms of the heptagram.



¹¹⁵ But note that an angle of 51.8° is produced by the 440:280 cubit pyramid mentioned above.

These points of intersection are highlighted by the two small circles in the diagrams above and below.

Now also notice that the Queen's Chamber is located precisely at the centre of the heptagram. Is this a mere coincidence?



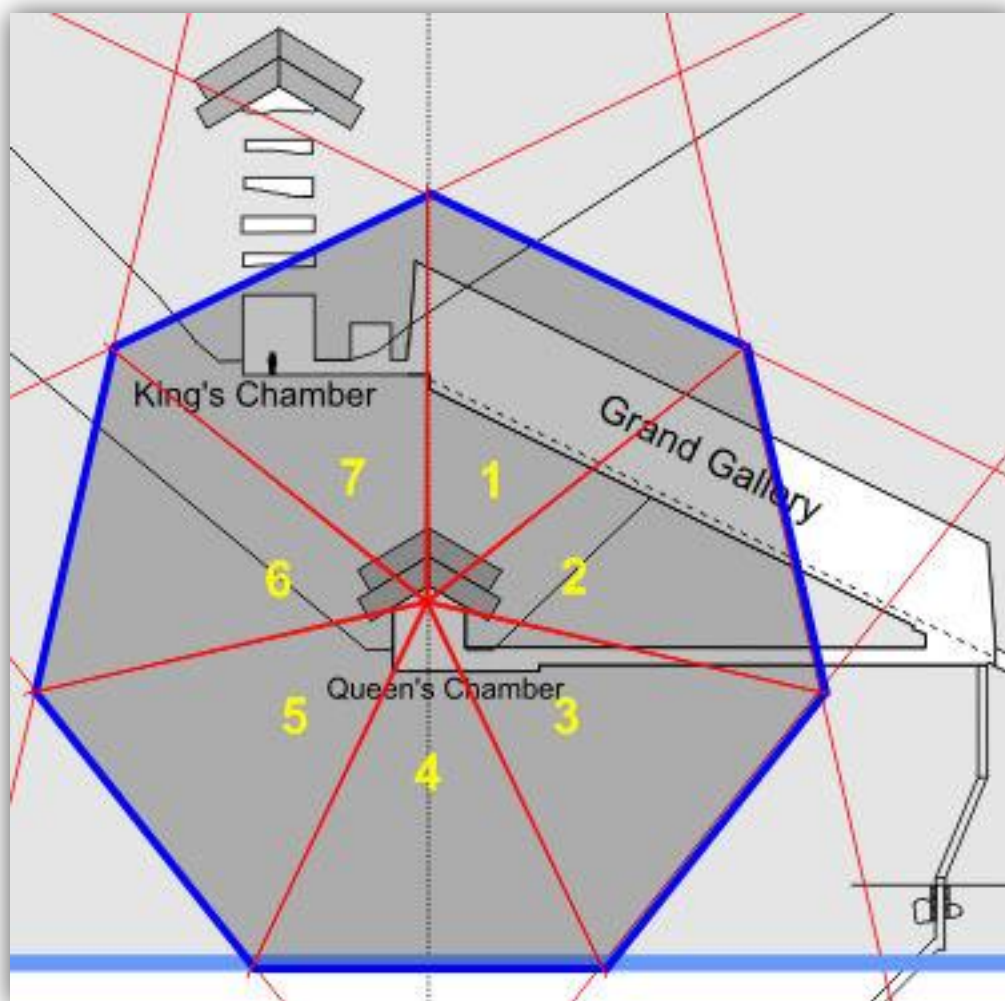
As shown in the diagram above, the Queen's Chamber sits at the very centre of the heptagram.

Notice also, that the King's Chamber is contained within the seventh segment of the central heptagon. (See the diagram below.)¹¹⁶ This might be relevant because of the apparent function of the King's Chamber as a resonator of the seven-fold vibration—and especially, the esoteric X49 frequency of A4 (i.e. 9×7^2 Hz).

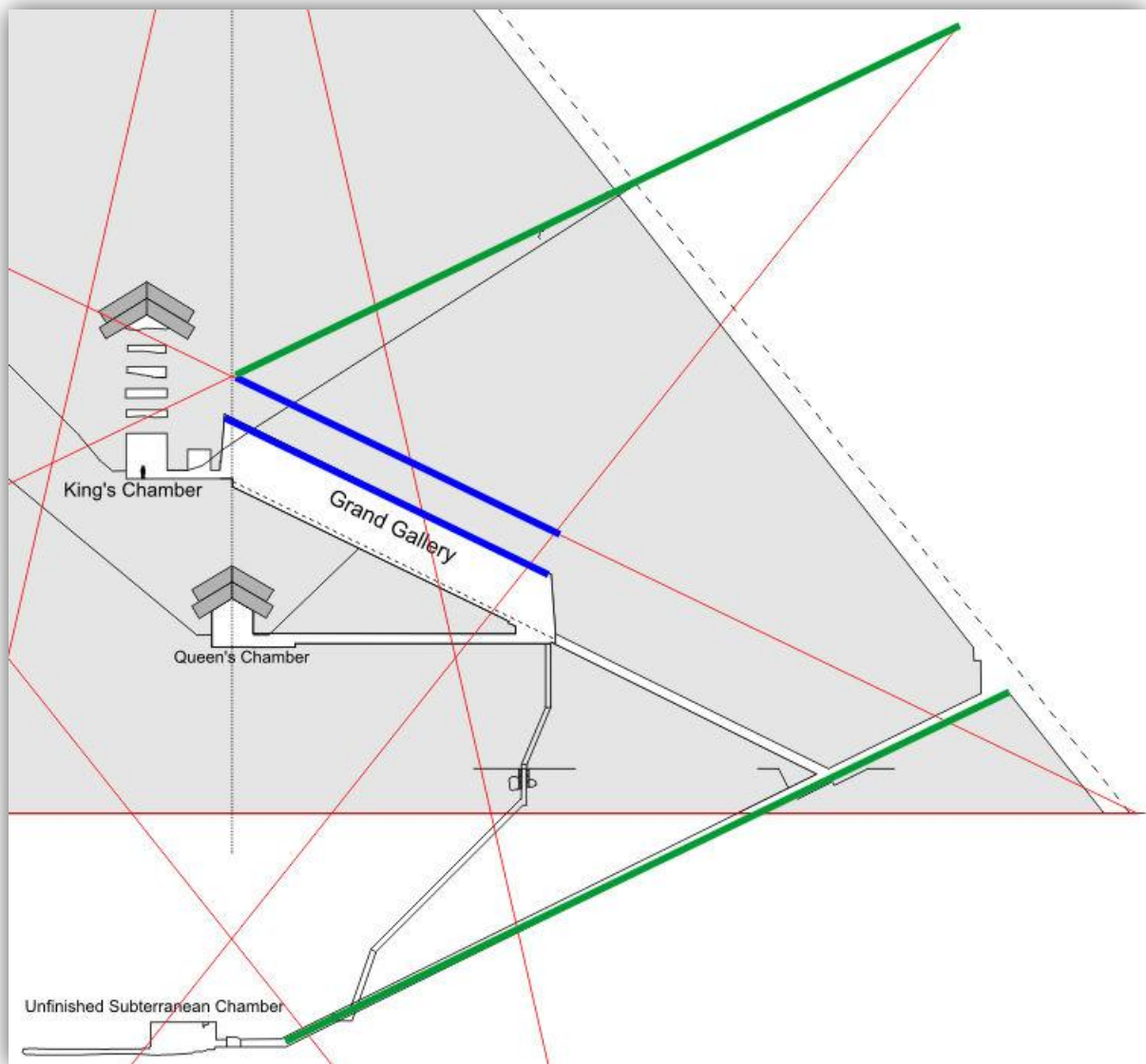
¹¹⁶ I'm not sure whether or not this was intended by the architect to be something significant, but I mention it just in case.

(Note: The small black mark inside the King's Chamber in these diagrams shows the relative height of a human-being when compared with size of the pyramid.)

I suspect that various places and points within the geometric structure of the heptagram have a specific resonance, symbolism, and meaning. And these geometric locations may translate to physical locations within the pyramid. Consequently, the physical locations may carry the same vibrations as their abstract counterparts in the plan of the heptagram.



It is also interesting to see how closely the major passageways within the Great Pyramid complex align to the sloping angles and lengths of the lines of the heptagram. (See the image below.)



In the diagram above, the two dark blue lines are precisely the same length, and have precisely the same angle of slope. The same is also true of the two green lines. Surely this is beyond coincidence!

Pyramid scientists can and do quibble over fractions of degrees, and tiny units of length, but can this quibbling be justified when the size of the Great Pyramid is so vast? Should we not leave some small room for human error in its physical construction, and/or allow for some slight structural changes wrought by the ravages of time? Shouldn't the more obvious and simpler elements of the pyramid's design be our focus?

I think the extraordinarily close **approximation** of the geometry of the heptagram to the actual physical structure of the Great Pyramid is extremely significant. It indicates that the heptagram is an important key to the symbolic and esoteric knowledge that the ancient Egyptian architects concealed within the pyramid's design. And this is yet to be fully deciphered and explained.

I think I have demonstrated quite clearly in this Appendix that (for some arcane reason) the pyramid architects have employed both the $\frac{22}{7}$ Pi formula, as well as the geometry of a heptagram to formulate the blueprint of the Great Pyramid.


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Appendix Four

The following colour tone pages can be used during meditation in conjunction with the X49 chakra sound tones.

Update: Unfortunately, during the conversion process to a PDF document (i.e. to an e-book) the tone of these colours changes ever so slightly. The difference in tonality is imperceptible to the human eye, but may be significant as regards the intuitive perception of the subconscious (or super-conscious) mind. Therefore, I have created a Windows HTML 'help' document that reproduces precisely the colour tones of the seven chakra meditation X49 light wavelengths.

You can access this document by clicking on the following icon: 

Base Chakra (G1 – 49 Hz)

Sacral Chakra (G2 – 98 Hz)

Solar Plexus Chakra (D3 – 147 Hz)

Heart Chakra (G3 – 196 Hz)

Throat Chakra (B3 – 245 Hz)

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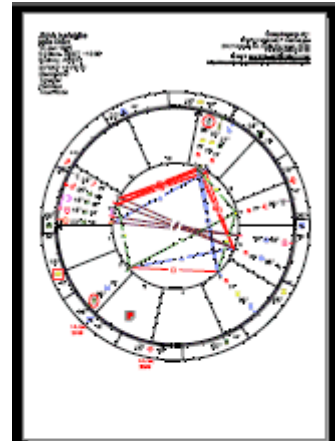
(Looks at Major Transits for Period)

Duration: 20+ minutes

Cost: Donation



More
Information



Planet	Sign	House	Phase
Sun	Aries	1	11:00
Moon	Virgo	8	18:30
Mars	Scorpio	10	15:00
Jupiter	Pisces	12	09:00
Saturn	Capricorn	10	21:00
Uranus	Scorpio	10	15:00
Neptune	Sagittarius	11	12:00
Pluto	Scorpio	10	15:00
Ascendant	Virgo	8	18:30
Midheaven	Capricorn	10	21:00

Planet	Sign	House	Phase
Sun	Aries	1	11:00
Moon	Virgo	8	18:30
Mars	Scorpio	10	15:00
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Saturn	Capricorn	10	21:00
Uranus	Scorpio	10	15:00
Neptune	Sagittarius	11	12:00
Pluto	Scorpio	10	15:00
Ascendant	Virgo	8	18:30
Midheaven	Capricorn	10	21:00

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