

# Brainwave Entrainment



# **My Interest In Brainwave Entrainment**

This is Asur'Ana again. Welcome to Section 4 of this course. In this section, we will discuss how brainwave entrainment technology can be used to optimize our meditation and lucid dreaming practices in the modern world.

On a personal note, I don't use brainwave entrainment technology to enhance my lucid dreaming or meditation experiences, because I have been a conscious dreamer since childhood, and I was trained in meditation by an Enlightened Master. Although it was a long journey to become an experienced meditator, I am very grateful for the all-encompassing training that has helped me to attain enlightenment in this lifetime.

Since achieving enlightenment, I wanted to contribute something to help make the planet a better place for everyone and for future generations to come. Having experienced the wonderful benefits of meditation, I firmly believe in and advocate for its practice everywhere and for everyone.

I researched brainwave entrainment methods and tested them to find out if they can help others who have a difficult time meditating to calm their mind so that they can achieve a deep, relaxed meditative state. The result of my research is the information contained in this section.

# **Science Meets Spirit**

We live in a time where science is better understanding the mind-body connection, leading us to a variety of solutions that we can use to better ourselves.



With increased awareness shedding light on the many life enhancing benefits, science and research has also been able to play an important role in providing us with the knowledge and technology for personal development and transformation.

Now more than ever we are able to experience the benefits of having access to healthy meditative states and enhanced energy. This is achieved through what can be referred to as spiritual technology.

With increasing interests in meditation, brainwave entrainment technology may be just the thing for the spiritual seeker aiming to enhance their practice. It is a comfortable way to attain full relaxation while accessing deeper meditative levels. The popularity of this spiritual technology is on the rise as more and more people embrace meditation.

#### **Brainwaves**

There are five different base brainwave states of the brain. These include Gamma, Beta, Alpha, Theta and the Delta frequencies. These states are determined by the degree of activity in the brain.

Different brainwave patterns correlate with our state of mind and also how our body is experiencing each moment. Alpha state is related to light relaxation; theta is present during the body's natural and spiritual healing process; delta is linked to deep meditative state or directly before sleep; beta is dominant in our waking state of consciousness; and gamma is where we enter a high energy state of super focused and inspired creativity.



#### What Is Brainwave Entrainment?

All of us understand the effect that sound waves can have on our body, mind and emotions. We've all been moved by a magnificent piece of music.

We all know how pleasant certain sounds can be – like the sound of ocean waves, falling rain, babbling brook or birds chirping – and what a profound effect they can have on our consciousness.

There are, of course, scientific reasons behind these effects. Once they're understood, it's possible to reproduce them and put their wonderful power to use.

In the early 1990s, a team of trained psychologists made a fascinating discovery; they found that sound waves, all by themselves, could improve your brain's ability to think, learn, create and solve problems.

Through further scientific and consciousness research, it has been shown that individuals can enter different brainwave states when influenced through stimulated audio patterns. This is the science that gives rise to brainwave entrainment.

Brainwave entrainment is generally considered any method by which the brain can be induced into altered states of consciousness by exposing it to controlled stimuli. Despite its modern sounding name, it dates back to ancient cultures: think bonfires, shamanic drumming, rhythmic prayers.

Today, it is possible to use sound waves to modify, regulate and improve one's brain chemistry by safely and beneficially moving the brainwaves into desirable patterns. Brainwave entrainment has been proven by countless scientific studies to:



- Open the door to realize your full potential
- Reach high levels of consciousness
- Quiet your mind to achieve a deep, relaxed meditative state
- Significantly reduce stress
- Overcome self-limiting beliefs
- Achieve the mindset to attract and manifest the life you want
- Improve sleep and reduce insomnia
- Enhance your intuition and creativity
- Fortify your immune system, physical health and longevity
- Improve memory and concentration
- Feel more happy, confident, inspired and motivated
- Optimize whole brain functioning

## **Methods of Brainwave Entrainment**

There are three main methods currently used for brainwave entrainment: Binaural Beats, Monaural Beats and Isochronic Tones.

#### **Binaural Beats**

Binaural beats are the oldest and most widely used technology. Discovered in 1839 by Heinrich Dove, but it wasn't until 1973 when Gerald Oster wrote "Auditory Beats in the Brain" that scientific research on binaural beats erupted.

Our brain produces different types of brainwaves. The frequencies of these waves range from delta waves (0.5-4 Hz) all the way to gamma waves (40 Hz+).



However, human ears are only able to pick up frequencies between 20 Hz-20,000 Hz. Since our ears can't grasp frequencies below 20 Hz, binaural beats work by fooling our brain.

How? When you listen to binaural beats with headphones, each ear is introduced to a different frequency.

When you hear these 2 different frequencies, your brain reacts by perceiving the difference, called a third auditory beat or binaural beat which can then be used to change your neural rhythm. For example, if you play 30 Hz in one ear and 25 Hz in another ear, your brain will perceive another auditory beat of 5 Hz. You subtracting one frequency from the other: 30 Hz - 25 Hz = 5 Hz.

Brainwaves and brain states impact each other in a type of "feedback loop". That means, when you introduce a sound which your brain picks up as 5 Hz (as in the example above) for a certain period of time, you trigger your brain to create that frequency (in this case a theta wave).

Headphones are required for this method. Some people get headaches when wearing headphones.

#### **Monaural Beats**

Monaural beats are combined into one sound before they actually reach the human ear, as opposed to formulated in part by the brain itself, which occurs with a binaural beat. In order for the brain to hear and interpret monaural tones, the different elements involved must be of the same frequency (for instance 50Hz in your left ear and 50 Hz in your right ear).



Although both types of tone are thought to be effective in entrainment therapy, monaural is a bit more flexible in that it doesn't require the use of headphones in order to be effective.

In a 1973 issue of Scientific American, Dr Gerald Oster noted that Monaural waves create a far greater entrainment effect than binaurals. The benefit of listening to monaural beats is that the body can absorb the sound (up to a certain depth), whereas binaural beats listened to only with headphones are only 'heard' by the brain.

#### **Isochronic Tones**

Isochronic tones are regular beats or pulses of sound of the same tone, with silence in between each pulse or beat. Similar to monaural beats, the beat is heard outside the brain, but it is not the result of an interference pattern between two different sounds. The same frequency of tones is output in each speaker and headphones are not required.

Isochronic tones are more pronounced than binaural or monaural beats, and as such produce arguably the strongest brainwave entrainment benefit.

#### Which Method Is Most Effective?

Studies that have compared the effectiveness of the three methods generally agree that each have their advantages and disadvantages.



## **Brainwave Entrainment For Meditation**

We all have heard of many extraordinary benefits of meditation. However, meditation can be challenging for beginners who struggle with concentration. Binaural beats (especially theta waves) can get you into a calm and clear mental state which will make it easier for you to practice meditation.

The main reason for the technology's positive reputation is its availability and ease of use. By availability we mean very affordable, hence why so many people are able to gain access. In fact, all you need is a good music player and a pair of headphones or earphones. These pieces of equipment are all you need to experience binaural entrainment, along with some dedicated time to yourself.

You should start by sitting comfortably, putting on the headphones and pressing play. Allow the embedded technology in the soundtrack to take over and work its magic. The infused soundtrack technology takes over and induces the desired brainwave level. All you need to do is surrender.

Different bandwidths correspond to various subjective experiences so, depending on what you're after, you could play an alpha track to enter a state of light relaxation, a theta track before or during a light meditation, a delta track for a deep meditative state or before sleep, or a gamma track to enter a high energy state of super focus and creativity.

Included with this lecture is a high quality audio MP3 from Magnetic Minds of **Zen Meditation - Deep Relaxation - Theta Isochronic Tones** that you can use to get into a peaceful, relaxed state to start meditating. You may download it in the Resources Folder.



The following frequencies are contained in the audio MP3: 7 Hz Isochronic Tones Deep Meditation, Carrier Frequency: 136.1 Hz ("OM")

**Final Note:** You don't have to use headphones because this meditation music contains isochronic tones. Please close your eyes and listen to the music as you tune inward.

# **Brainwave Entrainment For Whole Brain Synchronization**

Having meditated for many years, I discovered that it is one way to access whole brain synchronization. Another way is by using brainwave entrainment technology.

Whole brain synchronization occurs when the various parts of our brain begin to work together, resonating at the same frequencies and causing neural pathways to fire more rapidly. This is also sometimes referred to as "whole brain functioning" or "hemispheric synchronization".

The left and right sides of our brain begin to work in concert with each other. Electrical activity and energy patterns in our brain become more widespread throughout the brain instead of remaining confined to certain areas. Our brain reaches amazing levels of performance not normally attainable without years of meditation practice.



Research has indicated this type of synchronization is present in the brain at times of intense creativity, clarity and inspiration.

After almost two decades of clinical research, whole brain synchronization is revealing itself to be one of the greatest breakthroughs in healing and personal growth. There is more and more scientific evidence that proves meditative practices should be at the very heart of our healthcare system.

Scientific research has proven that advanced meditators develop the ability to use their whole brain and to live in a more balanced state characterized by brain synchronization and whole brain functioning.

Some of the most brilliant scientists, technologists and artists throughout history had a high degree of whole brain synchronization. Albert Einstein, Leonardo da Vinci, Nikola Tesla, Pablo Picasso, William Shakespeare and Lewis Carol are a few examples of the small percent of people who used whole brain thinking.

Included with this lecture is a high quality audio MP3 from Magnetic Minds of **Brain Hemisphere Synchronization - Activate The Entire Brain - 9 Hz Isochronic Tones** that you can use to synchronize the two brain hemispheres. When this occurs, the mid-brain activates, and a profound increase to consciousness and awareness may occur. You may download it in the Resources Folder.

The following frequencies are contained in the audio MP3: 9 Hz Isochronic Tones Brain Hemisphere Synchronization, Carrier Frequency: 140 Hz (Hyper-Gamma)



**Final Note:** You don't have to use headphones because this music contains isochronic tones. However, the binaural effect is increased if you do. For best results, you should listen to this with your eyes closed.

# **Brainwave Entrainment For Lucid Dreaming**

Lucid dreamers have been using binaural beats for years to induce lucid dreams. If you struggle with meditation or mental focus, binaural beats make it easier to maintain the conscious awareness when performing lucid dreaming techniques. All you have to do is lie down and be willing to relax.

A brainwave entrainment soundtrack played at the correct frequency will induce the frequency following response even while sleeping and your brainwaves will entrain to that frequency, stimulating and activating the associated areas of your brain. Entrainment methods included binaural beats are the best to use in this case as they can stimulate frequencies below the normal range of human hearing that are associated with slow brainwave states such as deep relaxation and most forms of sleep.

A lucid dream induction brainwave entrainment soundtrack works as follows:

It begins by entraining your mind to a low frequency associated with light sleep (about 3Hz); this will help you fall asleep quickly and easily allowing you to keep your mind focused on your intention to have a lucid dream. The last thoughts going through your mind the moment before you fall asleep can have a big effect on your chance of having a lucid dream that night.



About 70 to 80 minutes later the track will begin to raise its frequency. This timing is designed to correspond with the natural REM (Rapid Eye Movement) periods of your sleep cycle.

It is during these REM periods that dreaming most often occurs. The frequency will increase up to around 10Hz which normally corresponds to a relaxed but fully conscious state of mind. While asleep this will have the effect of increasing your level of awareness and making it much more likely that you will realize you are in fact dreaming.

The brainwave entrainment track will then repeat, with each 90 minute cycle matching up with your natural sleep cycles. This is useful as dream periods are longer and more likely to result in lucid dreams the longer you have been asleep.

This kind of brainwave entrainment works particular well when used in conjunction with the MILD technique (Mnemonic Induction of Lucid Dreams) that we've covered in Section 3.

Included with this lecture is a high quality audio MP3 from Magnetic Minds of **Deep Sleep For Lucid Dreaming**. You may download it in the Resources Folder.

The following frequencies are contained in the audio MP3: 3.4 Hz Monaural Beats / Isochronic Tones Deep Relaxation (Delta Frequency), Carrier frequency: 108 Hz

You don't have to use headphones, but the binaural effect is increased if you do.



# **The Ancient Solfeggio Frequencies**

In my research of brainwave entrainment technology, I discovered that you can use the ancient Solfeggio frequencies to align yourself with the rhythms and tones that form the basis of the Universe. By exposing yourself to the healing frequencies, you can easily achieve a greater sense of balance and higher consciousness.

## What Are The Solfeggio Frequencies?

Solfeggio frequencies make up the ancient 6-tone scale thought to have been used in sacred music of ancient civilizations in Egypt, Greece, Lemuria and Atlantis. Ancient civilizations understood the powerful benefit of sound and vibration. They composed music based on the perfect mathematical proportions that can be found in the construction of many sacred temples, space and time. You can tune yourself to the perfect rhythm by opening your inner ear to the healing music.

The chants and their special tones were believed to impart spiritual blessings when sung in harmony. Each Solfeggio tone is comprised of a frequency required to balance your energy and keep your body, mind and spirit in perfect harmony.

The main six Solfeggio frequencies are:



## 1. 396 Hz - UT - 'Liberating Guilt And Fear'

This frequency liberates the energy and has beneficial effects on feelings of guilt. It cleanses the feeling of guilt, which often represents one of the basic obstacles to realization, enabling achievement of goals in the most direct way. The 'Ut' tone releases you from the feeling of guilt and fear by bringing down the defense mechanisms. 396 Hz frequency searches out hidden blockages, subconscious negative beliefs, and ideas that have led to your present situations.

## 2. 417 Hz - RE - 'Undoing Situations And Facilitating Change'

This frequency produces energy to bring about change. It cleanses traumatic experiences and clears destructive influences of past events. When speaking of cellular processes, tone 'Re' encourages the cell and its functions in an optimal way. 417 Hz frequency puts you in touch with an inexhaustible source of energy that allows you to change your life.

## 3. 528 Hz - MI - 'Transformation And Miracles (DNA Repair)'

Tone 'Mi' is used to return human DNA to its original, perfect state. This frequency brings transformation and miracles into your life. The process of DNA reparation is followed by beneficial effects – increased amount of life energy, clarity of mind, awareness, awakened or activated creativity, ecstatic states like deep inner peace, dance and celebration. Tone 'Mi' activates your imagination, intention and intuition to operate for your highest and best purpose.



## 4. 639 Hz - FA - 'Connecting And Relationships'

This frequency enables creation of harmonious community and harmonious interpersonal relationships. Tone 'Fa' can be used for dealing with relationships problems – those in family, between partners, friends or social problems. When talking about cellular processes, 639 Hz frequency can be used to encourage the cell to communicate with its environment. This frequency enhances communication, understanding, tolerance and love.

## 5. 741 Hz - SOL - 'Cleaning And Solving'

Tone 'Sol' cleans the cell from the toxins. Frequent use of 741 Hz leads to a healthier, simpler life, and also to changes in diet towards foods which are not poisoned by various kinds of toxins. 741 Hz cleans the cell from different kinds of electromagnetic radiations. The frequency will also lead you into the power of self-expression, which results in a pure and stable life.

## 6. 852 Hz - LA - 'Awakening Intuition, Returning To Spiritual Order'

Tone 'La' is linked to your ability to see through the illusions of your life, such as hidden agendas of people, places and things. This frequency can be used as means for opening a person up for communication with the all-embracing Spirit. It raises awareness and lets you return to spiritual order. Regarding cellular processes, 852 Hz enables the cell to transform itself into a system of higher level.

Additional research conducted by Dr. Leonard Horowitz in his book (co-authored with Dr. Joseph Puleo), *Healing Codes for the Biological Apocalypse*, claims to have revealed three more Solfeggio frequencies:



#### 7. 174 Hz

The lowest of the tones appears to be a natural anesthetic. It tends to reduce pain physically and energetically. 174 Hz frequency gives your organs a sense of security, safety and love, encouraging them to do their best.

#### 8. 285 Hz

This frequency helps return tissue into its original form. 285 Hz influences energy fields, sending them a message to restructure damaged organs. It also leaves your body rejuvenated and energized.

#### 9. 963 Hz - SI

This tone awakens any system to its original, perfect state. It is connected with the Light and all-embracing Spirit, and enables direct experience, the return to Oneness. This frequency re-connects you with the Spirit, or the non-vibrational energies of the spiritual world. It will enable you to experience Oneness – our true nature.

# Why Were The Solfeggio Frequencies Lost?

Music and sound can be a very powerful transformational tool for the human body and soul. However, information has come to light in recent years that our modern day musical scale has been robbed of its vast potential for healing and transformation, and there was once an even more powerful, time-honored tonal scale known as, the "original Solfeggio frequencies" that we've covered in the last lecture.



These original Solfeggio frequencies, still have the capacity to transform your life in miraculous ways. Their origins date back to ancient times. But strangely, around 1050 AD, they mysteriously disappeared, presumably lost forever.

Another reason why the Solfeggio frequencies were lost was because throughout modern history different tuning applications have been used. Ancient tuning practices used a system of tuning known as "Just Intonation". The method of Just Intonation featured pure intervals between every note that were mathematically related by ratios of small whole numbers leading to a much purer sound.

The tuning practice adopted for western cultures from about the 16th century and used today is known as "Twelve-Tone Equal Temperament". According to Joachim Ernst-Berendt, the 12-Tone Equal Temperament mistunes all consonant intervals except the octave. Our modern scale can create situations such as 'boxed-in' thinking, stuffed and suppressed emotions, fear-based or lack consciousness, all of which then tend to manifest into physical symptoms called 'dis-ease' or disease.

Additionally, our modern music falls within the A 440 Hz frequency, which was changed from A 417 Hz, around 1914.

In essence, much of the music we hear today on the radio and what is sold in stores is atonal and counterproductive in comparison to the amazing transformational powers of the great Solfeggio tones.



#### **Tune Yourself Back To The Perfect Vibrations**

Our modern day musical scale is out of sync when compared with the original Solfeggio scale. If we want to bring harmony in our lives, then we may need to replace the dissonant western scale with a web of subtle and clear intervallic relationships of the Solfeggio music. Let the music become once again a tool to raise human nature and a method to connect you with the Source!

The Solfeggio frequencies are so powerful that they can literally bring you back to the original tones of the heavenly spheres and put your body into a balanced resonance. Solfeggio music is the key to the Universe. You can either throw it away or you can use it to find healing, harmony, health and well-being.

Included with this lecture is a high quality audio MP3 from Magnetic Minds of **Ancient Solfeggio Healing Frequencies - All 9 Tuning Forks Played Simultaneously.** You may download it in the Resources Folder.

The following frequencies are contained in the audio MP3: 174 Hz, 285 Hz, 396 Hz, 417 Hz, 528 Hz, 639 Hz, 741 Hz, 852 Hz, 963 Hz

For best results, you should listen to this with your eyes closed. However, you don't need to use earphones for Solfeggio frequencies to be effective.



## The Heartbeat Of Earth: 528 Hz Cosmic Love & Miracles

Some researchers claim that each of the six Solfeggio frequencies correspond to, not only a note on the tonal scale, but to a cycle per second Hz frequency number, and to a specific color, and, ultimately, to a particular chakra in the body.

For instance, middle C is related to the 528 Hz frequency tone, which is associated to the color green, which, in turn, is related to the heart chakra. It is the third note on the scale and relates to the note "MI" on the scale and derives from the phrase "MI-ra gestorum" in Latin meaning "miracle."

The 528 Hz frequency is known as, the "528 Miracle," because it has the remarkable capacity to heal and repair DNA within the body and is the exact frequency that has been used by genetic biochemists.

Green, of course, is the primary color of our Mother Earth, because our planet vibrates to the frequency of love or of the heart. Green also can be found in the middle of the color scale as seen in a rainbow.

528 cycles per second is literally the core creative frequency of nature. It is LOVE.

528 Solfeggio also is called the heartbeat of the Earth; it's what the Earth resonates to. It's what cellular repairs take place at.

According to Dr. Leonard Horowitz, 528 Hertz is a frequency that is central to the "musical mathematical matrix of creation." More than any sound previously discovered, the "LOVE frequency" resonates at the heart of everything. It connects your heart, your spiritual essence, to the spiraling reality of heaven and earth.



Let the Love 528 music play inside you!

The Love frequency is the "Miracle" note of the original Solfeggio musical scale. Independently confirmed by researchers, these core creative frequencies were used by ancient priests, healers and indigenous elders in advanced civilizations to manifest miracles and produce blessings.

## A Recipe For The Planet

528 Hz is the bioenergy of health and longevity. It is the harmonic vibration that lifts your heart and divine voice in harmony with heaven.

Can you imagine how beautiful the world would be with the Love vibration permeating the air? More and more people are awakening spiritually, mentally and emotionally and choose to be in tune with 528 Hz. This healing frequency helps you flow in perfect rhythm and harmony.

The powerful Sound of LOVE can end the problems on Earth today. I invite you to use the 528 Hz frequency to restore human consciousness to its full power and potential, which will shift our world to a state of peace and harmony.

Included with this lecture is a high quality audio MP3 from Magnetic Minds of **528 Hz Earth Heartbeat & Miracles**. You may download it in the Resources Folder.



For best results, you should listen to this with your eyes closed. However, you don't need to use earphones for Solfeggio frequencies to be effective.

# **My Personal Experiences And Recommendations**

When it comes to listening to the Solfeggio frequencies, you can either choose to listen to one particular frequency, according to requirements, or a musical composition including all 9 frequencies together.

Having listened to all the different Solfeggio tone frequencies individually, and together, I have personally felt that 528 Hz was by far the most pleasant and relaxing to listen to.

I have experienced slight headaches on occasions. You might or might not have slight headaches. It depends how used to the frequencies you are.

The slight headaches experienced from some of the frequencies or for first time listeners could perhaps be attributed to the brain needing to get used to these frequencies such as:

1. Brain synchronization and new blood circulation patterns being formed, in the same way that listening to too advanced or too long a duration of one frequency of binaural beats may result in a headache or



2. It could be attributed to the frequencies stimulating a variety of brainwave activity, including frequencies that the body does not really want at that given time.

After further listening, I have found that I have adjusted to the tones more and are able to listen to longer durations, with less headaches.

If you listen to too many in one session or in one day, a headache will ensue, a little like listening to too many binaural beats of a certain frequency in one day. One's brain has an optimum window of entrainment beyond which headaches will ensue.

However, with any type of brainwave entrainment, one should not exceed one's comfortable limits, and more may be better up to a certain point, after which it starts to become counterproductive. You can either be conservative about your use of such audio tools, or you can experiment and find what your comfortable limits are and stick within these limits.

To conclude, I have found Solfeggio tones very useful for well-being, mood enhancement and relaxation and believe that more people should try this for themselves. One should be aware however that a period of adjustment may be required, as described above. Feel free to experiment.



#### **Ethical Issues Associated With Brainwave Entrainment**

Use of brainwave entrainment in mediation is raising some concern among some of the spiritually enlightened practitioners. In the final lecture of this section, I will address the issue of whether brainwave technology in meditation is ethical and fair.

One argument is that those using this technology cheat their way through meditation by taking a short cut route and avoiding all the hard work. Although I didn't use brainwave entrainment technology on my journey to enlightenment, I cannot agree with this argument, after having researched and tested it myself.

Even though this technology has the capacity to get you almost instantly into achieving a meditative state, in the end, it's you who have to do the work. There are NO shortcuts to becoming more loving, more creative, more mindful, more passionate and compassionate and to positively transforming aspects of your life and contributing to our world, as this is not something that gets done on autopilot.

The truth is: brainwave entrainment technology improves your strength in the spiritual practice by eliminating incidences of external disturbances that would otherwise cause problems. We can conclude that an individual using this technology is like a meditator using modern tools.

With its help, those who have a difficult time concentrating find that they can sit longer without getting restless, and their chattering mind slides more readily into a quiet state. They look forward to their practice and feel a depth to their inner world they did not feel before.



The pull of the tracks can take them to states that might take years to experience otherwise and, over time, they find their stress threshold is higher and that they are able to bring up, confront and release limiting emotions more gracefully.

Brainwave entrainment is where science and spirituality interact. Embracing this technology can produce many life enhancing benefits of meditation practice.

