



## BINAURAL BEATS WAKE UP ALARM

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**Abstract:** How we can increase the performance of people after waking up it means how we can maximize the accretion of human brain performance after wake up. Every single person in this world wakes up each morning, some of them wake up very sleepy but they force themselves to get up, but some of them cannot. Anybody wants to wake up with maximum efficiency. After waking up some people can start their duty with good power, on the other hand number of people are not able to attend their daily job accurately. Simply when we are deeply sleeping our intellectual power of thinking is in Delta level and when we are awake it is in the Beta level. By a shock of the alarm or other sounds our blood pressure must be increased very fast to change Delta level to Theta, Then Theta to Mu and finally Alfa level to Beta which is a situation of completely awakens. But these changes in the body cannot take place immediately. In the case this action get place rapidly it can cause damage and diseases. We can prevent ourselves from this problem by the help of Binaural beats science and the new generation of wake up alarms.

**Index Terms:** Binaural beats,

### 1. INTRODUCTION

The brain of human during 24 hours of the day have different states of waves, these waves change like the rate of the blood flow in vessels and the hart bites. Generally, our brain has five states of waves. When we decide to sleep our brain start to change its state from Gamma wave to Delta. It has five steps. When we wake up by an alarm or a sound, we wake up by a shock which can make damages for our hart. In other hand we wake up when we still feel sleepy and not been refreshed. It is because of the reason that our brain must be changed from Delta level to Beta level in a very short time. But when we wake up by ourselves our brains have few minutes to we wake up completely. The new generation of wake up alarms can be design to help people wake up without feeling exhausted. They can use an audio twenty minutes before the required wake up time. This audio starts with Theta and gradually be changed to Beta and Gamma. This way of waking up helps brain to become ready without feeling exhausted. By using this method the rate of blood flow and hart bites will change gradually. It protects us from any health problem, as well as be shocked by rapid action. When people wake up by themselves their brain and body feel better and fresh.

### 2. RELATED WORKS

Binaural beats has been used in many cases. Meditation is one of those, since it takes very long time for people to meditate and change the state of their brains' waves. To change brain wave from Gamma or Beta to Alfa takes long time, because of the existence of noises. This is the reason which forces the [1] companies to make some audios for people who are meditating, to listen while they are meditating.

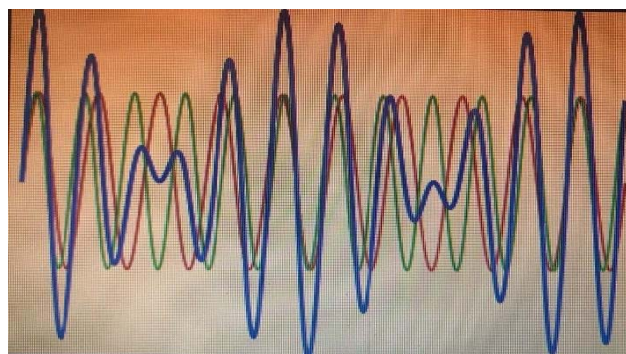


Fig 1. Figure shows the music and theta waves playing together. [2]

Figure 1 shows the relaxation music waves with blue color and theta waves are playing through the left and right earphone with color of green and red, which are playing

altogether at same time. The audios used for meditation helps people to decrease the required time to spend in the meditation procedure. There is number of people around the world whom cannot sleep well, [3] some companies made products (by using audio frequencies) to change people’s brains to deeper states of waves like Delta or Theta. These products help people to sleep faster and deeper. People in this world wake up every day to go to the schools, to the jobs or to the universities, but mostly they feel sleepy, because they did not wake up properly. This is the main reason, for us to offer the new idea of wake up alarms, which helps people to wake up at the wanted time but by feeling fresh and full of energy.

### 3. DISCUSS

In typical version of alarm or clocks which help people wake up, gives them a shock at the time they had planned to wake up but in new generation of wake up alarms a smote relaxation music start to play twenty minutes before the time to wake up, The music will play by Theta waves which has 4Hz different from each earphone, the color of this state of wave is orange. The audio doesn’t start from Delta waves because the person how sleep might not be slept deeply so if he/she listen to Delta waves he/she will fall sleep even deeper. Since they start to play the audio the difference between hertz in each ear will increase by 1Hz in each 1.6s of audio playing so the type of the waves will change, from Theta to Mu waves after two minutes from when they start to listen to audio, as the time will pass the difference Hz between the ears will increase and the state of the waves will change from Mu to Alfa and to Beta which most of people wake up between Beta state of waves to Gamma state of waves, Beta waves will play after ten minutes has passed from playing the audio, to fifteen minutes which they reach to Gamma waves. This audio has 2 kinds. First one is playing music while Binaural beats wave are playing. Second type playing only Binaural beats waves. Each state of waves has a color and also rate of hertz which are shown in table 2.

Wave type	Delta	Theta	Mu	Alpha	Beta	Gamma
color	red	orange	Yellow	green	Blue	Purple
Hz range	1-3	4-7	8-10	11-13	14-29	30-50

Table 1. Show the color and rate of the Hz of each state of waves as commonly thinking.

Wave type	Delta	Theta	Mu	Alpha	Beta	Gamma
color	red	orange	yellow	green	Blue	Purple
Hz range	0-4	4-8	?	8-12	12-40	40-100

Table 2. Show the color [4] and rate of the Hz [5] of each state of waves as scientific researches.

At the end of audio the person might not wake up for any reason, so a normal wake up alarm start to play and give him/her a shock to wake up. This new generation of alarm has many advantages such as economic benefits for societies for example when the employees and workers attend their jobs they have almost ninety present efficiency to start they job. This instrument has other advantages such as using different frequencies to cure diseases. Some example of different frequencies and their effect on the body.

#### Frequency List [6]

The function of frequency	Hertz
Neuralgias[AT]	0.16 – 10
Mod. therapy [AT]	0.18 – 10
Dental pain [AT]	0.20 – 0.26
Post-traumatics [AT]	0.20 – 10
Alcohol addiction [AT]	0.28 – 2.15
Arthritis [AT]	0.28 – 10
Depression [AT]	0.30 – 0.15
Cervobrachial syndrome [AT]	0.30 – 10
Drug addiction [AT]	0.37 – 2.15
Confusion [AT]	0.40 – 10
Muscle pain [AT]	0.45 – 10
Influences physical vision [SS]	3 – 4
Sound sleep	3.4
(a remedy for) anger & irritability [ESR]	3.6
attitude & behavior change [MH]	4-6
Skeletal muscle resonances [SS]	4-12
Associated with kidneys (Effects=strength)	4.11

[TOS]	
Wakeful dreaming, vivid images [SS]	4.5-6.5
Relaxation [NEU]	5.0 – 10.0

Table 3.

The function of frequency	Hertz
Associated with lungs (Effects=Oxygen, Heat) [TOS]	5.35
(reduce) Fear, Absent-mindedness, Dizziness [ESR]	5.8
Somatic Responses, tingling, pressure, heat [SS]	6-9.6
Associated with heart (Effects=love, warmth) [TOS]	6.15
Stimulates ESP, paranormal [SS]	7.8-8
Reduced Stress/Anxiety [SS]	8-8.6
Qi Gong and infratonic Qi Gongmachine[QG]	8-14
Induces sleep, tingling sensations [SS]	8.6-9.8
[bad] documented calcium ion migration (brain tissue) [SS]	9.0, 11.0, 16.0
Pyramidfrequency(outside)	9.41
Alertness [SS]	9.8-10.6
Dream/sleep spindles [SS]	10-14
Catecholamines	10.2
Relaxed & alert	10.6
Focused alertness [SS]	11-14
(Used to) achieve “relaxed yet alert” states. [PWM]	11.0
Slows conditioned reflexes [SS]	14-15

Table 4. Tables 3 and 4 contain some frequencies and they functions. [6]

We only use five of this Deta,Theta,Alpha,Beta,Gamma waves in this version of wake up alarms but in later new generation of alarms we will also use more state of waves to remove pain or protect you from diseases.

	Total samples	Wake up with sense well	Do not wake up
Man	100	76	24
Woman	100	79	21
Child	100	83	13

Table 5.Show the experiment result.

#### 4. CONCLUSIONS

In this paper, we tried to explain a new generation of waking up alarms which help people wake up at the time they plan to wake up and feel completely awake and fresh without even making other people around them wake up. This new generation of alarm has many advantages such as economic benefits for societies, for example, when the employees and workers attend their jobs they have almost ninety present efficiencies to start their job. This instrument has other advantages, such as using different frequency instead to cure diseases, which will be explain in later new generation of wake up alarm.

#### 5. REFERENCES

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