ARTIFICIAL SLEEP INDUCER BY GENERATING ELECTROMAGNETIC WAVES

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Abstract:

Mental stress is the main problem in today's life. It is mainly due to work pressure addiction to something else. It will lead to the major problem called lack of sleep or insomnia. Sleepless may lead to various problems, Such as, mental disorder, restlessness, heart diseases and physical weakness. Magnets are used for various physical disorders for centuries. The patients got clear improvement in magnetic field therapy. Many researches were conducted to design a circuit which will produce the waves which are similar to the brain waves during sleep. This project is majorly concentrated to induce sleep artificially by generating the electromagnetic waves without drugs.

Key words: Insomnia electromagnetic waves, deep sleep and without drugs.

Introduction:

Let discuss about the human brain during sleeping. During the first stage of sleep, the electro-encephalogram (EEG) test consists of cycles from 7 to 12 hertz. In this stage, the attention level will be reduced and result in a wave called alpha wave. And next to alpha wave, the theta wave arises. The alpha wave ranges between 8 and 12 hertz, while the theta wave is between 4 and 8 hertz. When we awake from sleep, the EEG pattern changes, which result in the beta waves(12 to 18 hertz). During sleeplessness, the amplitude of sleep waves is low.

Methodology:

The waves which are produced by the brain are known as alpha, beta, theta and delta waves, these are named with its range of frequency. The electromagnetic waves which are surrounded us change these formations. Some example circuits which generate electromagnetic waves are mobile phones, television, radios and so on. The one fact is that earth is encircled by compiling many electric and magnetic fields. Most of them are created by earth rotation and the others are created due to climatic changes. The one another fact is that human body also produce its own magnetic and electric field. So that the external magnetic field can change both the physical and mental conditions of human beings. Now, scientist had discovered that the magnetic field ca n apply to the part of head which induce sleep effectively.

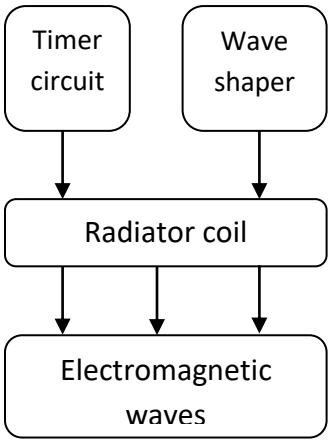
Design of the circuit:

Based on the researches conducted in the past, the circuit was designed. The major components are IC's which meet the aim of the circuit.

IC 4060: this IC was used to reset the operations and make the device to work on particular time. It contains one reset pin, 10 output pins and 3 oscillatory pins.

Another IC is IC 4093: this IC is wave and the shape are obtained by changing the values of resistors and capacitors.

Block diagram:



Features:

1. It supports to sleep without any drugs.
2. There is no side effect.

Limitation:

1. Theoretical value is greater than the practical value.
2. Due to lack of flux the accurate measurements are not possible.

Conclusion:

This circuit provides the natural environment to brain by generating natural electromagnetic waves. It helps to fight against insomnia without the use of any drugs. The output from my circuit is not satisfactory to meet the success because the magnetic field from the coil is limited.

Hence, more researches can do on this, so that we can make it more efficient and convenient.

and pulse shaper. The required frequency

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