

Introduction to the Neurophone® GRS

Imagine a time when trying to concentrate on learning a new activity or concentrating on work and think how easy it can be to become distracted by other noises such as coworkers, phones, television, etc.

Hearing is an amazing sense, however our ears are not selective to the content that they do or do not hear. It is sometimes difficult to focus on the task at hand. The Neurophone® effectively bypasses the ears to "hear without your ears." Martin Lenhardt's work at the University of Virginia clearly demonstrated that human beings have the ability to detect ultrasonic sound when it is transmitted through the skin, bones and liquids of the body, as published in *Science*, Vol. 253(5);1991,p82.

Lenhardt had duplicated Patrick's original 1958 Neurophone® using sophisticated ultrasonic transducers and discovered that a tiny organ in the inner ear that is normally associated with balance is also a hearing organ for ultrasonic sound. Information is able to be directly processed in the brain without the distractive input.

This ability to bypass the traditional auditory mechanisms allow new insight into hearing, neural pathways and brain encoding and processing.

Regular users of the Neurophone® notice:

- A harmonizing feeling of being grounded in thoughts and action
- Relaxation though listening to pink noise or Fibonacci noise
- Increased learning potential while listening to audio books or foreign languages
- Increased concentration and focus

The key to the Neurophone® GRS is the stimulation of the nerves of the skin with a digitally coded signal that carries the same time-ratio code that is recognized as sound by any nerve in the body.

The Neurophone® was invented by Dr. G. Patrick Flanagan in 1958 when he was 14 years old. It is a precision scientific instrument with an extensive digital signal processor that encodes sound and modulates it onto ultrasonic signals. Patrick was a child prodigy in electronics, chemistry and physics. He had discovered an entirely new way to transmit sound into the human brain. Patrick's profound invention has received two United States patents, #3,393,279 and #3,647,970. It took medical science 33 years to discover how the device works.

It has been said that great inventions take 50 years before they are understood. In 1991, Martin Lenhardt of the University of Virginia discovered

that human beings have the ability to detect ultrasonic sound when it is transmitted through the skin, bones and liquids of the body. His groundbreaking discovery was published in the prestigious journal Science and the discovery introduced the notion that a tiny organ in the inner ear that is normally associated with balance is also a hearing organ for ultrasonic sound.

The organ is called the saccule and is about the size of a pea. It contains nerve endings, called macula, and a gelatinous cap, called an otolith, containing fine sand-like particles of calcium carbonate named otoconia. When the head is tilted in relation to gravity, the macula signals the vestibulocochlear nerve in the nervous system so that balance can be regained. The saccule has nerve endings that are distributed throughout the brain. Some of these nerves go to the area of the brain that computes sound. Other nerves are distributed into areas concerned with long-term memory. The Neurophone[®] transmits modulated ultrasonic sound at 40,000 cycles per second (40 kHz). When we swim with dolphins or whales, we can hear the ultrasonic energy emitted by these mammals through our saccule. By using the Neurophone[®], we can train our brain pathways so that we can "hear" through the saccule pathway. It may be that our ancestors could communicate with whales and dolphins by the use of ultrasonic sound. When the Neurophone[®] is used as an experimental listening device, these pathways are developed and appear to expand consciousness balancing the left and right hemispheres of the brain, as objectively measurable by EEG.

People who have used the Neurophone[®] daily over an extended time find that it helps to relieve stress and imparts a feeling of well-being.

The Golden Ratio Series Neurophone[®] has been developed and engineered to provide a means for ultrasonic waves to be interpreted by our brain as "hearing". The technology bypasses the normal audio mechanisms used by the body to hear sound and provides a direct neural stimulation directly to the brain. By bypassing the ears to hear- reading, meditating, studying and learning in general may become easier to comprehend and retain.