

The Basics of Brainwaves

Brainwaves, like all waves, are measured in two ways. The first is frequency, or speed of the electrical pulses. Frequency is measured in cycles per second (cps or Hz), ranging from .5 cps to 38 cps. The second measurement is amplitude, or how strong the brainwave is. Brainwaves are categorized by frequency into four types: beta, alpha, theta, and delta. Each of these is explained below. The Mind Mirror displays these measurements of the brainwaves of the left and right hemisphere. Each bargraph represents the output of one filter. The bargraphs are centered on the frequencies shown in the diagram. The bottom bargraph, labeled EMG, measures muscle tension on the right and left side of the head. (Relaxation is a key step in creating an awakened mind.)

Above is a freeze-frame of a splayed beta pattern on the Mind Mirror – the brainwaves of normal waking thought. Below are a few seconds of actual brainwaves of someone meditating, as seen on the Mind Mirror (in a continuous loop).

While an entire session with the Mind Mirror III can be saved on a computer, it was not always so. The first incarnations of the Mind Mirror (I and II) did not have any session storage capacity. Therefore, Anna invented a "shorthand" for drawing the patterns that occurred to act as a synopsis of each session. However, while it is often useful to review the recorded sessions, it was soon discovered to be time consuming to review hour-long files from the Mind Mirror III in order to recall the patterns that were generated during a session. So, the use of the "drawing language" for communicating with students what patterns they generated, and to remember quickly what transpired with someone in a previous session continued. Anna teaches her students this technique of drawing patterns, and workshop participants take home a sheet of drawings of the patterns they generated during the meditations. The brainwave descriptions and corresponding drawings follow.

BETA brainwaves are the fastest frequencies ranging from 14 cycles per second up to 38 cycles per second. Beta is your normal thinking state, your active external awareness and thought process. Without beta you would not be able

to function in the outside world.

ALPHA brainwaves are the brainwaves of relaxed detached awareness, visualization, sensory imagery and light reverie. Ranging between about 9 cycles per second and 14 cycles per second, alpha is the gateway to meditation and provides a bridge between the conscious and the subconscious mind.

THETA brainwaves are the subconscious mind. Ranging from about 4 cycles per second up to 8 cycles per second, theta is present in dreaming sleep and provides the experience of deep meditation when you meditate. Theta also contains the storehouse of creative inspiration and is where you often have your spiritual connection. Theta provides the peak in the peak experience.

DELTA brainwaves are your unconscious mind, the sleep state, ranging from about 4 cycles per second down to 0.5 cycles per second. But when present in combination with other waves in a waking state, Delta acts as a form of radar – seeking out information – reaching out to understand on the deepest unconscious level things that we can't understand through thought process. Delta provides intuition, empathetic attunement, and instinctual insight.

The MEDITATION brainwave

pattern is a combination of alpha and theta where theta provides the depth and profundity of the meditation experience – the subconscious inner space from which creativity, insight, and healing spring – and alpha provides the bridge, or the link, to the conscious thinking mind so that you can actually remember the contents of your meditation.

The AWAKENED MIND™ brainwave

pattern combines the intuitive, empathetic radar of the delta waves, the creative inspiration, personal insight, and spiritual awareness of the theta waves, the bridging capacity and relaxed, detached, awareness of the alpha waves, and the external attention and ability to consciously process thought of beta waves, all at the same time. It is a brainwave pattern shared by people in higher states of consciousness regardless of their philosophy, theology or meditation technique. This brainwave pattern can be found during “peak experience” and in all forms of creativity and high performance. The awakened mind is also the “ah-ha,” appearing at the exact instant of solving the problem, or getting the insight.