The vestibular system, which contributes to our balance and our sense of spatial orientation, is the sensory system which provides the dominant input about movement and equilibrium. Together with the cochlea, a part of the auditory system, it constitutes the labyrinth of the inner ear, situated in the vestibulum of the inner ear. As our movements consist of rotations and translations, the vestibular system comprises two components: the semicircular canal system, which indicates rotational movements; and the otoliths, which indicate linear accelerations. The vestibular system sends signals primarily to the neural structures which control our eye movements, and to the muscles that keep us upright. The projections to the former provide the anatomical basis of the vestibulo-ocular reflex, which is required for clear vision; and the projections to the muscles that control our posture are necessary to keep us upright.

1) The main Principle of the Instrument's natural function: Natural, confusional disturbance is naturally reducing and changing all the natural functions of only one ear, through natural and mechanical, functional manipulation and disturbance, including its reception of auditory signals and ambient air pressure in different strengths. (Natural Modification of the Anatomy). The theoretical result, natural confusional disturbance, through Labyrinth of the Inner Ear, including both Vestibular System and Cochlea, is transmitted into the brain through Vestibulo cochlear Nerve in form of electronic signals. This is the nerve along which the sensory cells (the hair cells) of the inner ear transmit information to the brain. It consists of the cochlear nerve (also auditory or acoustic nerve), carrying information about hearing, and the vestibular nerve, carrying information about balance. The Instrument's theoretical goal, at the same time, is to act as a none reachable "confusional problem" for the body's (ears, ear canals) cells, neurons, nociceptors and immune response system and theoretically keep the confusing activity alive. This is to theoretically increase its ability to lower the body's sensors functional level and measuring sensibility for external movements as the result. ***CELL: SIGNAL TRANSDUCTION: (signal transduction pathway) Response to external and internal stimuli such as changes in temperature, pH or levels of nutrients. ***A NOCICEPTOR is a sensory receptor that reacts to potentially damaging stimuli by sending nerve signals to the spinal cord and brain. This process, called nociception, usually causes the perception of pain. ***NOCEITION (synonym: nocicception or nociperception) is defined as: the neural processes of encoding and processing noxious stimuli. It is the afferent activity produced in the peripheral and central nervous system by stimuli that have the potential to damage tissue. This activity is initiated by nociceptors, (also called pain receptors), that can detect mechanical, thermal or chemical changes, above a set threshold. Once stimulated, a nociceptor transmits a signal along the spinal cord, to the brain. Nociception triggers a variety of autonomic responses and may also result in the experience of pain in distant tissues. ***IMMUNE RESPONSE n (1953) : a bodily response to an antigen that occurs when lymphocytes identify the antigenic molecule as foreign and induce the formation of antibodies and lymphocytes capable of reacting with it and rendering it harmless called also Immune reaction. The Instrument has been developed for having an influence in lowering the level of human motion sensitivity and while all known forms of the Motion Sickness are in general created mainly or partly by motion sensitivity; it logically and theoretically affects all of its forms by only having effect in lowering the motion sensitivity with its natural means. The Instrument forms a totally natural modification of the human anatomy by naturally restricting the functions of a human ear. And the main effect for this is its theoretical goal in lowering the vestibular systems measuring ability/sensitivity for external movements and through this simple action the Instrument's goal is to function for its purpose.

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anti MOTION SICKNESS ear plug
Theoretical Schematic picture (1b) of human balance systems and its sensors maximum measuring capability and its edge (4) with the disturbance (1a) and the Instrument's theoretic and functional goal of reductive effect (1-2-3) to lower its measuring capability when in use with its different mouthpieces.

External turbulent movements (5) which human balance sensors cannot fully read and which theoretically may create conflicts. These movements are on the edge of the human balance systems maximum measuring capability (4).

The Theoretical Reductive Effect (1-2-3) in this Schematic Picture is purposely shown larger than it is and may be in reality only for the purpose of visual effect for the reader to understand the basics of the theory in the functional goal of the Instrument that it follows.

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We cannot extend the human balance system’s sensors capability to measure the movements outside their maximum reading capability, while every organ and system in a human body have a maximum limit to function. The disturbing movements are on the edge (almost can but finally cannot) of its maximum functional measuring capability/limit and therefore, while unreadable and uncontrollable for human sensors, triggering conflicts-intoxication, when body’s sensors get overloaded with information it cannot read. As a result the brain responds by inducing vomiting, to clear the supposed toxin. The Instruments theoretical goal is to reduce human balance system’s sensors (vestibular system) measuring sensitivity with different volumes and strengths in an effort to avoid the conflicts, using the ear plug itself, instruments different precision made mouthpieces in different combinations with each others and its cap: See the: USER GUIDE, how to use the Instrument and its different mouthpieces with its cap in an effort to reach this goal to avoid the conflicts.

The Instrument comes with 6 different precision made mouthpieces and its cap for this specific purpose, providing the Instrument the core of its intelligent function together with precision-wise tunability and adjustability, which allows the user to adjust its functional strength for individual need of protection: The Instrument have 9+9 (18) different levels of adjustments (offering 18 instruments in one).

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