



## System And Method For Adjusting The Volume Of Auditory Stimulation During Sleep Based On Sleep Depth Latencies

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### The Invention

The present disclosure pertains to a system configured to adjust a volume of auditory stimulation delivered to a subject during sleep. The system is configured to determine a deepening time indicative of a rate at which sleep of the subject deepens during the sleep session. The deepening time is determined based on (i) a ratio of power in a high frequency band of an EEG signal to power in a low frequency band, (ii) a density of slow waves, or (iii) a hypnogram, indicative of sleep depth in the subject during the sleep session. The system is configured to determine a rate of volume increase for auditory stimulation during a subsequent sleep session based on the deepening time; and control the one or more sensory stimulators to adjust the volume of auditory stimulation provided to the subject during the subsequent sleep session based on the determined rate of volume increase.

### Additional Information

#### For More Information About the Inventors

- [Giulio Tononi](#)

#### Tech Fields

- [Medical Devices : Neurological devices](#)

For current licensing status, please contact Jeanine Burmania at [jeanine@warf.org](mailto:jeanine@warf.org) or 608-960-9846