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Load demodulation technique for communication in an inductive charging system

The invention relates to a method for exchanging data between an electronic device, in particular a hearing instrument, having a rechargeable battery and a charging device (charger) for wirelessly charging the battery. It also relates to an inductive charging system comprising the electronic device and the charger for wirelessly charging the battery.

Generally, a hearing instrument is an electronic device being designed to support the hearing of person wearing it (which person is called the user or wearer of the hearing instrument). In particular, the invention relates to a hearing aid, i.e., a hearing instrument that is specifically configured to at least partially compensate a hearing impairment of a hearing-impaired user. Other types of hearing instruments are designed to support the hearing of normal hearing users, i.e., to improve speech perception in complex acoustic situations. Furthermore, the term hearing instrument, as used herein, may relate to a device for streaming an audio signal such as speech or music, e.g. a headset, headphone, ear buds, etc.

Hearing instruments are most often designed to be worn in or at the ear of the user, e.g., as a Behind-The-Ear (BTE) or In-The-Ear (ITE) instrument. With respect to its internal structure, a hearing instrument normally comprises an (acousto-electric) input transducer, a signal processor and an output transducer. During operation of the hearing instrument, the input transducer captures a sound signal from an environment of the hearing instrument and converts it into an input audio signal (i.e., an electric signal transporting a sound information). In the signal