

Electronics and ICT

Title

A stimulator with IOT-based function and Artificial Intelligence

Abstract

The stimulator proposed by this invention can be used in internal and external stimulation methods and can be used in different positions and organs. This simulator has both open and closed-loop systems and has the function of artificial intelligence machine learning. It can automatically adjust the stimulation parameters that meet the individual parameters according to the personal stimulation feedback, forming an exclusive closed-loop stimulation system. At the same time, it also has a friendly user interface (APP), allowing physicians and nursing staff to input stimulation parameters in a simple and safe manner to treat patients.

Benefits

The existing internal and external stimulators are all designed according to the stimulation position, and the exclusive stimulators cannot be adjusted for suitable usage due to the different positions. In addition, most external stimulators are bulky and difficult to carry. In terms of usage, due to the lack of closed-loop feedback, the stimulation size, frequency, and time can only be set up based on experience, so the result is less effective. Internal stimulators are also differentiated according to the different organs to be stimulated which lack a complete closed-loop feedback system. The interface is not friendly either, and there are considerable difficulties in using it.

1. Based on the system chip (System On Chip), the volume of the simulator is mm², which can meet the needs of implantation and can also be assembled into a wearable device for the convenience of users.
2. Both open and closed-loop systems, with a friendly user interface, can provide medical staff a manually adjustable stimulation parameters to complete the purpose of open-loop stimulation. The smart machine learning function can automatically adjust to suit the individual according to personal stimulus feedback and parameters to form an exclusive closed-loop stimulation system.
3. As a widely used stimulator, it can provide several different stimulation methods, including electric stimulation, magnetic stimulation, light stimulation, and others that provide corresponding stimulation sizes, and frequencies for different stimulation positions.

Industry Categories

medical equipment

Patent No.

TW I706776 · US 11,114,207

Contact Us

Department : NCKU Innovation Headquarters

Contact person : Yi-Yin Lin

Phone number : 06-2360524-111

Email : ainlin@mail.ncku.edu.tw