

Pulse-type portable recharger for electric devices

Abstract

The presented invention relates to a portable magnetic-inductive pulse-type recharger which exploits the mechanical motion that is manually triggered by the user to generate electricity and power portable electric apparatuses. In fact, the more intense use of those devices - such as tablets, smartphones, music players, photo and video cameras - is very often influenced by the lifespan of the related supply batteries.



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portable recharger

supply batteries

mechanical shock

electromagnetic transducer

pulse-type motion

Pulse-type portable recharger for electric devices



Description

The presented invention is a portable magnetic-inductive pulse-type recharger which exploits the energy generated by the mechanical shock between magnetic elements and their relative displacement. The device further comprises a managing means, an electronic card that is needed to rectify the current generated, a capacitor, a backup battery and a connecting interface - such as an USB port - which is plugged to the electric appliance that should be powered.



Applications

The increasing use of portable electric apparatuses - such as music players, smartphones, laptops, tablets, photo and video cameras - is very often influenced by the lifespan of the related supply batteries. The proposed invention allows to nevertheless perform a recharge of said portable devices even in the absence of a connection to the network, converting the repeated mechanical motion that is manually triggered by the user into directly usable electricity.



Advantages

Unlike traditional recharging devices that are currently available on the market, the developed system does not exploit the conversion of vibrational kinetic energy but the repeated impulsive action of the user on the managing means, amplified by the interactions between movable and fixed elements of an electromagnetic transducer. The presented invention may be developed in different shapes, sizes, arrangement of parts and components with equivalent functionality.