PORTABLE ELECTRIC SKATEBOARD AS ALTERNATIVE GREEN TRANSPORTATION

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ABSTRACT

In recent decades skateboarding has expanded from recreation into a form of transportation, by customizing a conventional skateboard into an electric skateboard. This research presents the design and methodology used in building an electric skateboard that has alternative solar power charging. The objectives of our design are to develop an alternative mode of transport that is high durability and reliable for daily commute with minimum maintenance needed. Foremost, this study focuses on the batteries and the circuit design of the electric skateboard. A wiring structure using wired connectors to connect the components of electric skateboard to the batteries and the controllers and also the wiring to the solar panel charger. Besides that, this study also set the electric skateboard into three type of speed that is beginner, intermediate and also expert level of speed to let user having a more better and interesting experience when using this skateboard. This electric skateboard also designed with the maximum 6 hours one cycle discharge time, which is equal to the electric skateboard ran around 57km. This project also sustainable based on the efficiency of speed of the electric skateboard and having a more faster charging time of its battery to achieve electric skateboard as one type of a main green transportation in the world.