CONTACTLESS POWER TRANSFER

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ABSTRACT

In the present era of science and technology, everyone has a mobile phone or device such as MP3 or Powerbank for either business or personal use. Existing devices today can only be charged directly into electricity through a wire. Moreover, these devices need to be recharged or replaced periodically. The purpose of this project is to charge a low power device using contactless power transfer. The project is meant to charge a low power device quickly and efficiently by inductive coupling. This project will be useful towards the human around the globe as usage of a mobile phone especially with the invention of smart phone is increasing. It is not specifically for mobile phone only, other devices may also be charged. For a more efficient work, this project proposes the use of power source then transmitted contactless to the devices. Humans have those wired charger which will cause a certain accident where they trip over the wires. This project would eliminate the use of cables in the charging process. Moreover, this project would make it simple and easy to charge. This project also may ensure the safety of device which would reduce the risk of short circuit. This is done by using charging a resonant coil from AC and then transmitting subsequent power to the resistive load. The expected result is when the low power device is fully charged and the LCD will display 'Device is Charging'. On the contrary, the PIC 16F877A is used to write a program between the LCD and the receiver circuit. Contactless charging through inductive coupling is a one of the way for future energy transmission systems. Furthermore, this project actually enhancing the knowledge of an electrical student. Other than that, we learned on how to coding the of the microcontroller PIC 16F877A in order to control the LCD. We manage to design a circuit of contactless power transfer by using inductive coupling in hardware.

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