

ABSTRACT

Electronics development is a challenge for us to always be able to compete in creating products or creation that supports daily life. It influences the development of electronic appliances, one of them is inverter. By using good control system, this inverter will be used as backup power supply of a house.

This final task aims to expand renewable energy usage by using an inverter. This inverter use battery as voltage input, arduino as square wave resources, and MOSFET to changes the DC voltage to AC voltage that will be step-up by using a transformator to 220V. Quad channel relay is used for the switching control.

The result of this final task is, inverter is able to produces 220V with square wave and 50Hz frequency as the output. Relay is able to do a switching control to determine the voltage resources. Writer wishes that DC to AC inverter in the future has the important role on changing DC electrical voltage to AC electrical voltage that can be used to fulfill AC electricity daily needs.

Keywords : inverter, relay, microcontroller, square wave