ABSTRACT

The current factory-generated inverters, typically use high power sources or energy sources, with a minimum input voltage of 12VDC, 24VDC, 48VDC with an effective voltage output of 220 VAC with a frequency of 50Hz/60Hz. These power sources are usually obtained from starting battery or deep-cycle battery. The problem of inverter currently that portable inverter using a low power source with a sine wave output is not available. So in this research conducted inverter design using power source/ energy source from powerbank 5 VDC 16000 mAh with 50 Hz 20 Vrms sine wave output. Inverter design method in this final project research using MOSFET as switching and using full-bridge as inverter topology. This final project research is expected to be an inverter using powerbank resources and become a portable inverter so in the future can be used for loads that require sinusoidal signals such as electric stoves, and can be used also for climbing purposes or for urgent need such as power outages.

Keywords : *inverter, sinusoidal, powerbank, low power source*