ABSTRACT

The cause of the slow development of physiotherapy after the patient suffered a stroke caused by muscle contraction yng no longer optimal . Therefore, the author will design a tool that is used to treat patients with degeneration

Electro stimulator which the author created using the boost converter circuit to increase the voltage 70V, each increase in the voltage of the boost converter is set by the PWM microcontroller ATmega8535. The output of the boost converter is forwarded by the SSR to the patient who was contacted by the microcontroller ATmega8535 with 23Hz frequency 250US. Time spent in the stimulation of only 15 minutes in the biceps muscle.

Based on the measurement data output from the measurement five times with the same conditions obtained an average error of 10 Volt voltage is equal to 64.6%, the average error for 20 volt voltage is equal to 0.9%, the average error for voltage of 30 volts is equal to 3.7333%, the average error for a voltage of 40 volts is equal to 2.05%, the average error for a voltage of 50 volts is 0.36%, and the average error for a voltage of 60 volts is by 0.8%, the average error for a voltage of 70 volts is equal to 0.142% and 1.12%. After the tests the whole apparatus can be used in accordance with the function and purpose.

Keyword: Elektro Stimulator, Boost Converter, Atmega8535