

Abstract

The knee therapy with a power tool therapy wave infra red rays of 700-50000 nm and to dissipate heat in the knee joint, ease pain in the knee and heal the symptoms immediately. This tool can be used at a hospital usually in the rehabilitation room, office, or in the home for use whenever desired.

Therapy tool in the Internet that is: "The knee therapy." With the complete lack of some of the tools, the author can expect to improve their performance. To design a tool that the author "Infrared knee therapy Based Mikrokontoller AT89s51".

The module is made this time was The knee therapy equipped with timer, halogen, and as a source of infrared heat with the temperature selection of 45 °C, 50 °C, 55 °C, 60 °C and 65 °C, the election and 15-minute timer, 30 minutes and 45 minutes with indicator buzzer when time has run out.

Based on the results of temperature measurement error factors 45⁰C (error) 2.66667%, temperature 50⁰C factor measurement error (error) 0.8%, the measurement of temperature 55⁰C factor error (error) 0.72727%, the measurement of temperature 60⁰C factor error (error) 1.666667%, temperature 65⁰C measurement error factor (error) 2.769231%, and measurements on the transistor base voltage 1.2 V.

From the results it can be concluded that halogen and infrared can be used to therapy on knee.

Keywords : halogen, infrared, Microcontroller.