

ABSTRACT

Disease is something abnormal condition of the body that cause discomfort and dysfunction in human organs. But sometimes the disease is known by the patient after the disease spread and chronic. Today the development of technology is also used for the detection, treatment or cure various diseases. The discovery of a variety of sophisticated equipment has been used for health. One of them supporters of the findings are the microcontroller and electronica. In this final project have been combined between sience of traditional healthy and modern medical science.

This final project has purpose for design and realization device that for detection and treatment disease. The working principle tool for early detection of this disease based on the size of the resistance in the human body. Value of input resistance of the skin in the palm of the hand, then processed into digital for display to the LCD and PC. In addition to detecting, tools in this final project can be used for bio-electric therapy. Value of resistance in reflection points have low resistance than others area in skin. The function of treatment in this final project is give stimulation in reflecyion point. The purpose and benefits of this tool is to help diagnose health problems so the disease can be more easily and more quickly detected and cured, without having to wait for a thorough medical check-up process.

The result of measuring are specification maximum voltage of the system detection is 10.6 Volt, maximum voltage of the system stimulation is 21.1 Volt, frequency system is 9.43 Hz, wave amplitude is 5.1 V, duty cycle 51.1%, square wave and sawtooth waveform. Besides it in realization software Visual Basic also give information about this device, meridian and point reflection, and information about traditional medicion. According to all of device system, inferential that this device can good work for detection and treatment.

Keywords: reflection point hand, skin resistance, bio-electric therapy, microcontroller ATmega8535, Visual Basic