

Abstract

The master's project consists of 78 pages, 35 illustrations and 2 tables. In this project the methods of indication of heart diseases and already existing, according to their working principle of the device were analyzed. Their advantages and disadvantages were determined on the basis of which the working principle was chosen. On principle, the electrical circuit was created that works on the FPGA. The circuit elements have been calculated and selected so that small sensors can be measured. The paper proposed a system, the advantage of which is that measurements are made in the intercostal environment due to the sufficiently small dimensions of the sensor.

The marketing component of the startup project was analyzed to describe the possible implementation and market directions of the system implementation.

The object of the study is the process of automated detection of heart disease.

The subject of the study is the change in the amplitude of the reflected signal.

The purpose of the work is the development of an ultrasound introscope for the diagnosis of heart disease and analysis and processing of existing data.

Keywords: ultrasound, introscope, FPGA, intercostal environment.