

## **Abstract**

The thesis consists of an introduction, three chapters, conclusions on each section and general conclusions, list of references, applications, and has 81 pages of main text, 41 figures, 5 tables, 5 pages of apps, a list of references with 21 titles. The total volume of 87 pages.

Investigated and created a system for control objects using multi scanning method based on phased antenna arrays, which will improve the speed and accuracy of control. The calculation parameters of phased antenna arrays that reduce the size of the matrix converter.

**The object of the research** - ultrasonic tract based on ultrasonic phased antenna arrays.

**Subject of the research** - OK multifrequency scanning method based on phased antenna arrays (FAA).