

ELECTRONIC ROULETTE WHEEL

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ABSTRACT

The aim of this project is to design and construct an 'Electronic Roulette Wheel'. It's a game of luck played in casinos where the wheel is spun and a ball is thrown in, when the wheel stops, the number in the slot of the wheel where the ball rests decides the winner.

In this project the wheel is designed with a series of LED's placed in a circle. It will emulate the mechanical roulette wheel used in casinos. And the LED's light-up one after the other to produce an illusion of a rotating wheel and the last LED that glows indicated the winning number.

The project has helped to learn how to plan a schedule to do the project. All the systematic steps and procedures involved in a designing, constructing, testing and successfully displaying a good project has become a valuable experience. Also, it was a good opportunity to gain a lot of hands-on experience in Electronics-laboratory to complete the project.

The basic concept to design an 'Electronic Roulette Wheel' unit is using the IC CD4017 [1] as a MOD-counter, used to light up the 36 LEDs and the seven segment display to indicate the number.

This project report will provide a detailed description on the entire project. It will cover everything from the general conceptual design to the detailed circuitry works. It is divided into a few main parts including the introduction, the body, the conclusion, the PCB designing process log and the list of references and appendices.

The introduction will give readers a general idea on the product while explaining its application. Block diagrams and circuit diagrams are used to increase understanding. The body elaborates on the concepts and show how it could be done using digital engineering methods. The conclusion will summarize the whole report with a few recommendations and how problems were solved.

Reference and appendices will be placed at the back of the report for those interested in understanding the circuitry works of the project.