

ABSTRACT OF EXHIBIT
TAIWAN INTERNATIONAL SCIENCE FAIR

CATEGORY: ENGINEERING

TITLE: CIRCUIT TESTER

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Purpose of the Research

The purpose of this project is to create a project that can improve the quality and the production of the merchandise and also to prevent a 100% of mistakes in the electronic components which are complicated to detect or not detectable for us when we are making a circuit. Other of the purpose of this project is to prevent the bad production in the products which are elaborated in a company and then to check if the employee is working well, in that way the company will be able to avoid the bad production and it will be more profit for the company thanks to the products.

Procedure

The project is composed with posts, they are channels which are connected to the impress circuit, they also function to send and receive the testing data. They hold up the circuit which is testing on according way and with less errors. The prototype is handing of two ways: Automatic or manually.

Automatic: in this way specific routines are programmed for each type of circuits, indicating the program how many and which one are the electronic components to test. In this modality the program will repeat automatically each time a new circuit inserted.

Manually: this other modality will offer the user an option to work step for step without help of the routines in the program.

Data

One of the most important goal was apply the project in a small company which necessity is only economy. I applied the project having in mind that the problem of the company is the high price of the actual circuit testers being inaccessible for the small companies, also the project was made with low budget to be reach of all small companies or consumer. The handling of the project is more exact and quick.

Conclusions

When I developed this project I conclude that it will be of great utility for the small companies thanks to the low price and facility of operation, it will help the percentage of production and it will increase the savings of time in the testing. It will reduce the help of the employee and this can be used in other areas, the circuit tester works in automatically way, and only needs one person to operate. The way of operation of the project is very easy even for an old person, there are only a few buttons in the program, they are very easy to see because there are pictures in the buttons, showing which component is causing an error.