



LAPORAN PROJEK TAHUN AKHIR  
KURSUS DIPLOMA KEJURUTERAAN PERALATAN  
KAJIAN KEJURUTERAAN ITM SHAH ALAM

“PULSE GENERATOR”

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ABSTRACT

This report is written primarily on the construction of the PULSE GENERATOR as part of the course requirement for the award of the Diploma in Electrical Engineering from the Mara Institute of Technology, Shah Alam, Selangor.

The report has been made as short as possible without omitting what we **thought** is necessary to make it incomprehensible. We hope that the numerous illustration and the few examples accompanied will greatly help to reinforce the report.

We opened up the report on the chapter of the theory of the PULSE giving the terms defining it, how the pulse is developed and the various factors involved in perfecting it. We proceed to give the theory of some important circuit operation involved in the pulse generation, example the multivibrator and the operation amplifier. The description of the various IC components used are immediately laid out for easy reference to theory. Also included in a chapter by itself is the power supply system used for the pulse generator.

Other chapters include the construction of the pulse generator using the necessary components (list provided), the result of tests that was carried out and a discussion on it. The pulse generator application is mention and its specification provided.

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Also we like to convey our most sincere and heartfelt gratitude to all Laboratories Technicians and the workshop Technicians who together gave us valuable informations and co-coperation to the improvement and completion of the project.

Last but not least, we like to dedicate this piece of work to our parents, colleagues, lecturers and some others who all given us the motivation in this piece of work.

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INTRODUCTION

Instrumentation is a subject which is concerned about the instrument that can be used in the form of measuring, testing, consulting, processing, controlling normally widely used in industries.

Here we are interested to make one of the measuring instrument which is concerned in form of electronic device. This instrument is called PULSE GENERATOR.

In this issue we have described our pulse generator project and dealt with all the constructional details, look the possible uses for and various function of a pulse generator as one of the electronic device. This instrument also features independent control over both pulse width and pulse frequency.

Electronic devices are of value to mankind in their ability to produce, modify, amplify and detect changes in voltages and currents. In order to describe the way in which a voltage or current changes with respect to time, the instantaneous values are plotted on a rectangular coordinate graph, where the vertical axis represents time. A graph is called the pulse of the voltage or current.

Pulse generator has a variety of application in the modern electronic workshop or laboratory. In its simplest form a pulse generator can be used for testing the performance characteristic of a common or garden digital circuit.