# DEPARTMENT OF ELECTRICAL ENGINEERING UNIVERSITI TEKNOLOGY MARA CAWANGAN PULAU PINANG

# FINAL REPORT OF DIPLOMA PROJECT

# **REMOTE CONTROL USING TELEPHONE**

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### ABSTRACT

Remote Control Using Telephone

Here is a teleremote circuit which enables switching 'on' and 'off' of appliances through telephone lines. It can be used to switch appliances from any distance, overcoming the limited range of infrared and radio remote control. The circuit described here can be used to switch up to nine appliances (corresponding to the digits 1 through 9 of the telephone key-pad). The DTMF signal on telephone instruments are used as control signals. The digit '0' in DTMF mode is used to toggle between the appliances mode and normal telephone operation mode. Thus the telephone can be used to switch on or switch off the appliances also while being used for normal conversation.

For our project we are advised by our supervisor to make the circuit to switch 2 appliances. The DTMF signals on telephone instruments are used as control signals.

## **CHAPTER 1**

## **INTRODUCTION**

#### 1.1 Background

In this new area, all the electronic materials such as TV, HIFI, VCR, microwaves have its own remote control. As we all know, remote control is very useful and becomes apart of our life today. Besides that, it is widely used in all over the world. For this project we are interested making remote control using telephone. The remote control can use in any distance.

### 1.2 Objective

The main objectives of this project are to;

- understand the operation on of remote control
- to design remote control using telephone circuit
- to simulate remote control using telephone circuit using TINA simulator
- to investigate circuit simulation result
- to know how to draw PCB design
- Planned a good and complete project
- to broaden the use of remote control
- to make life simple task more easier and comfortable