

UNIVERSITI TEKNOLOGI MARA

PROJECT TITLE:

SMART MICE CONTROL

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DIPLOMA OF ELECTRICAL ENGINEERING

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DECLARATION

“I declare that this report entitled “SMART MICE CONTROL” is the result of my own group research except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in candidature for any other degree.”

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Praise to God with His will that give us idea and we could finished our project smoothly. Smart Mice Control finally finished with the prototype and its requirement for this project. Here, we want to take an advantage to highly thanks to all lecturers of Faculty of Electrical Engineering especially to our supervisor, Madam Rafiza binti Abdul Rahman that give us advice to finish this project and help us to generate ideas to solve problems that we were facing in making this project. Thanks to presentation panel that give us support until we could produce this Smart Mice Control. Next, thanks to laboratory technicians that helping us in making PCB breadboard and managed the machines for us. Thanks to our friends that have been helping with software conduction and circuits analysis of breadboard. May God bless all who involved directly or indirectly.

ABSTRACT

The Smart Mice Control is to presents an analysis follows of research and development attempts of a device that is capable of emitting ultrasonic varied frequencies to reduce habituation effects, to improve efficacy, to incorporate and integrate ultrasonic devices into traditional rodent control methods. These frequencies do affect the auditory senses of pests but not the hearing ability of man. This device used Astable Multi-vibrator (AMV) to generate the required varied ultrasonic frequency by a pulse generating IC and a counter. To control the different frequencies selection, variable resistors are used before a D-type flip-flop IC used to obtain a symmetrical output signal. Transducer was employed to produce an efficient sound generated. The unit was tested with white foot mice (*Peromyscus leucopus*) and a female house mouse *Mus musculus* which all responded positively from the source.

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