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FINAL REPORT:
ELECTRONICALLY GUIDED BLIND STICK

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This report is submitted to the Faculty of Electrical Engineering,
Universiti Teknologi MARA (UiTM).
In partial fulfillment of the requirement for the award of Diploma in Electrical Engineering.

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Date: *5/10/2016*.....

ABSTRACT

The ordinary blind stick is not completely assist blind people to walk in securely and there is still several problem that blind people have to face. For an example, blind people may hard to detect a wet or muddy terrain using the ordinary blind stick. The guide dogs that navigating their human comes with many disadvantages such as high cost and only suitable for about five years.

To cover this disadvantages, this research has done to develop a blind stick with more safety features. Also the aim of this project is to show that this project technology can be used to provide safety for the blind people. Then, to design a combination of all circuit into one complex circuit connected to the PIC.

This project is actually consists of two parts, hardware and software. Hardware refer to the development of the device itself including the circuit constructing, printed circuit board (PCB) etching and soldering process. As for the software, it is focused on the program development specifically during the simulation, compilation and PIC burning process.

There are 3 sensor that produced a different input used in this project and each input will come with different output from another. The ultrasonic sensor will detect obstacles and the motor will vibrate as any obstacle detected. The LDR will detect the presence of darkness and the LED will be turn ON. The electrode will detect the wet or moisture and the buzzer will activated. This process is controlled and commanded by the PIC.

Lastly, at the end of the project development, a few experiences are gained conducting research and construct the hardware of this project. Hopefully, the development of electronically guided walking blind stick has given many benefits toward a blind people.

ACKNOWLEDGMENT

Praise to Allah for two semester we undergo our final year project, I finally successfully completed my Final Year Project Report. As for our supervisor from, Mdm. Belinda Chong, we thank you for all the guidance as it very helpful for me in completing my report. She had guide us from nothing until this project complete. Last but not least, we also felt lucky that we can to do my final year project at Universiti Teknologi MARA (UITM). Many thing we learned from this final year project from the beginning until we finished our project.

Also we offer our sincerest gratitude to our panels, Pn Sarah Addyani Syamsuddin and Pn. Nazirah for their comments and advises during the process of completing our project. I also would like to extend my thankfulness to my parents for all their moral support and financial support. We also would like to appreciate and thankful to our senior Mr. Syamim who is doing his Master at Lab Robotic for teaching us about PIC and the coding for the PIC. Lastly, we offer our regards and blessings to my colleagues and all of those who supported us in any aspect during the completion of the project.

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