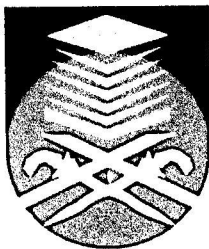


**THE DESIGN OF GAMELAN (SARON BARONG) PLAYING
MACHINE BY USING PERIPHERAL INTERFACE CONTROLLER
(PIC) 16F84A**

This thesis is presented in partial fulfillment for the award of the Bachelor of
Electrical Engineering (Hons)

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ABSTRACT

This project proposes the design of Gamelan Playing Machine via the usage of microcontroller namely PIC 16F84A in the circuitry system. The program builds by using MPLAB software and PIC StartPlus programmer. The main parts of the machine consist of motor stand, motors and microcontroller. The DC motor type use in this project is DC Power Door Lock Motor. This door lock supplied by 12V or 24V DC voltage source. The pull force of each motor is 7.0kg. The control circuit consists of PIC 16F84A, IC L293D motor driver, Voltage Regulator, Diode IN 4007, Capacitor, Resistor and switch. This project will use a wood as a holder of the power door lock motor. The motor is clamp to the wood. The motor that operate as the knocking system located above the Saron Barong. Saron Barong consists of six plate metal that has different thickness. Thus, when a knock force from DC Power Door Lock Motor applied to the metal plates it will produce a sound with different of tone. The continuous tone occurred will create Gamelan music.

Keywords: Peripheral Interface Controller (PIC), Power Door Lock Motor, MPLAB Software

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