ABSTRACT

With developing of technology and human activity was more increasing, makes people think to work more effectively and efficiently. Because of that, almost all of the mechanic tools was changed to be automatic tools. A lot of automatic tools needed an IC microcontroller. Microcontroller is a microprocessor system which already exist inside the CPU, ROM, RAM, I/O, clock, and other internal tools that are mutually connected and organized each other by the manufacturer and packaged in a single chip that is already to use. So we just programming the ROM content based on the regulation of the manufacturer.

When the user would use or buy an IC microcontroller, the user didn't know how the condition of that, is it in a good condition or bad codition. Ussualy demaged of IC microcontroller is known while it has been used. Because of that, in this final project, writer will design and realize a tool that can be used to check a condition of IC microcontroller ATMega 8 is in a good condition or bad condition. This tool is integrating two pieces of microcotroller. Tester IC microcontroller (*master*) and IC microcontroller to be tested (*slave*). Tester microcontroller (*master*) contents the program that will be loaded to the IC microcontroller to be tested (*slave).*

From both of communication microcontroller could be known how the condition of IC microcontroller to be tested is in a good condition or bad condition. In this test of Final Project is shown that the voltage of the power supply is 4.9 Volt, then the communication between two microcontroller and the test of slave have already good signed by there is feedback displayed on LCD, LCD shows O (OK) to a good condition of PIN and shows X (demaged) to the demaged PIN. In this test there is one PIN gives the feedback X (demaged), the demaged is in PINC.6 because in this test is used ATMega to be tested (ATMega8) which have the demaged in it's PINC.6.

Key words: Microcontroller ATMega 8, Tester IC microcontroller (master), Microcontroller to be tested (slave), LCD.