

## **ABSTRACT**

*Blood pressure is the pressure given by blood to the walls of the arteries. The pressure is measured in millimeters of mercury (mmHg) by using a sphygmomanometer. Appropriate measurements and accurate results can improve the accuracy of the resulting data. Long-term use causes changes in accuracy, therefore a calibration process is required. Calibration is a comparative activity between measuring devices (UUT) with standard tools that have high accuracy for detecting, adjusting and documenting the accuracy of comparable instruments. Sphygmomanometer calibration can be done by using Digital Pressure Meter.*

*Digital Pressure Meter (DPM) compares the value of sphygmomanometer pressure with DPM measuring scales comparison. The author uses MPX 5100 GP sensor as a pressure sensor, LCD to display the set point, pressure and amount of data stored. In this module comes with data storage using SD Card and processing raw data into worksheets by using QT GUI. This module has a precision of 0.1 mmHg.*

*Based on the measurement and comparison of data with comparative Unomatic MCX that has a precision of 0.01 mmHg, obtained the average result of error of 0.08% on the measurement rises, and 0.03% in the measurement down. It can be concluded that the tool is worthy of use.*

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**Keywords: Blood pressure, Calibration, Digital Pressure Meter, MPX 5100 GP**