

ABSTRACT

In general, measurement of color variables is done using LDR or phototransistor. The colors are arranged from the base color, one of them for light with the basic color of the constituent is red, green and blue (RGB), while the color parameters have different light waves. With the development of electronic technology, it is now possible to detect or measure colors based on the basic color of the compiler, one of which uses the TCS230 sensor. This research is to design a tool to detect color and nominal money based on arduino mega and TCS230 sensors that utilize current changes whose magnitude is proportional to the basic color parameters of the light that befalls it and then the current is converted into a square signal with a frequency proportional to the magnitude of the current. The test results show that the accuracy of the device works well, this is based on the sensitivity of the color sensor TCS230 to the conversion of the color of the light to the frequency for both white, black, and the colors contained in the object. Furthermore, after comparing the results of the calibration reading with the reading of the value, the output will be displayed by the speaker as the output in the form of sound. Speakers utilize MP3 modules.

Keywords: Arduino Mega, TCS 230, Speaker and MP3 Module.