

ABSTRACT

Money is a tool used to make buying and selling transactions and has been used by people all over the world. This certainly makes money a staple item for every human being, even for people with disabilities such as the blind. The limitations of the blind in terms of seeing problems in communication so that they only rely on their senses of touch and listeners. The weakness of blind people in seeing and identifying money that can cause money to be exchanged, misplaced, or not knowing that the money they are using is genuine or even friends are deceived when making buying and selling transactions.

The detector for the nominal value of Indonesian banknotes and their authenticity is a tool designed to help blind people. The nominal detector for Indonesian paper currency and its authenticity is able to detect real or counterfeit money based on the color temperature of the money by means of the object will first be exposed to the uv led which will then be detected based on the color temperature of the money, if the money is counterfeit then the uv color temperature value range the money is above 13,000 and below 10,000, whereas if the real money is the value range for the UV color temperature is above 10,000 and below 13,000. Furthermore, to detect money based on its nominal value, a nominal detector for Indonesian paper currency and its authenticity will detect the nominal currency based on the color temperature range, lux and RGB color range obtained from testing on each nominal money. Then the instrument for detecting the nominal value of Indonesian banknotes and their authenticity is also able to add up the total nominal value of money that has been detected by adding the detected nominal currency with the total detected currency.

The test was carried out by detecting the nominal value of the Indonesian paper currency and its authenticity and testing by adding up the total detected currency. From the results of testing the nominal value of Indonesian paper currency and its authenticity 10 times on each real and fake money and also the conditions found that 100,000 instruments were able to detect that the money was genuine and fake and the nominal with 100% success, then for 50,000 instruments able to detect that the money is genuine and fake and the nominal with 100% success, then for the 20,000 money the instrument is able to detect that the money is genuine and fake and the nominal with 100% success, then for the 10,000 money the instrument is able to detect that the money is genuine and fake and the nominal with 100% success, and for 5,000 and 2,000 the instruments were able to detect that the money was genuine and fake and its nominal with 100% success. Then for tests carried out by adding up the detected money, the nominal detector for the Indonesian paper currency and its authenticity was able to detect with a 100% success rate for each nominal money, condition of money, and total money detected. It is hoped that with maximum results this tool can help the blind in knowing the nominal money and its authenticity and can help add up real money that has been detected.

Keywords: *color sensor, blind, paper money.*