

ABSTRACT

Electrooculography (EOG) is a technique of recording the movement of the eye. EOG can help the recording of eye muscle activity as a reference research of eye movement patterns, eye muscle abnormalities. EOG can be processed into inputs on the kontrol system to assist human activities, especially for people with disabilities. In the context of the EOG signal kontrol system needs to be classified in order to become the input kontrol system.

The working principle of this system is by acquisition of EOG signal using electrode and EOG sensor. Then the signal is processed by mikrokontroler to be classified and processed deraunya with exponential filter. Where the output is a flame off lamp corresponds to the EOG signal pattern.

The data obtained by using sample as many as ten people as much as 60% of samples can kontrol the lamp well, while the remaining 40% have errors. ADC values for right eye movements above 500, while ADC values of movement to the left below 470. Differences in ADC value conditions are affected by differences in skin conditions as EOG intermediaries with the body, as well as sensitivity level of device sensors. The derau of the device can be greatly influenced by the environment, the presence of an AC voltage around the derau level of the device. From the successful sample test data the device has a 60.12% success rate.

Keywords: electrooculography, lamp, exponential filters.