

ABSTRACT

The development of prosthetic hands has not been done much, especially in Indonesia because the development costs are not cheap, therefore this research is aimed at making cheap prosthetic hands but does not override the function rules of the hand itself such as joint movement and user comfort. The sensor used is an IR sensor with the QRD1114 type, the reason for using this sensor is that in addition to reducing prices, it is easy to find at component stores and also easy to develop. Microcontrollers are also used in prosthetic hands as the brain that regulates sensors, motors and drivers. The mold that will be used on this prosthetic hand uses a 3D printer and the mold design uses the 3D Blender software to make it easier if the user wants to change the shape to get comfortable when used. The purpose of the development of prosthetic hands is so that the middle and lower class people can use them, unlike commercial prosthetic hands which are very expensive, especially for the middle to lower class, with the presence of prosthetic hands, it is hoped that they can be funded by BPJS so that people do not have to spend a lot of money to get prosthetic hands.

Keywords : prosthetic hand, bionic arm, myoelectric, amputate