ABSTRACT

Signal processing is currently often used for research. One of them is signal processing in the form of audio / sound. Voice recognition can be applied to find out some problems, including the voice recognition of motorcycle engines. There are various kinds of motorcycle engine sound patterns that can show the type of damage from the motorcycle engine. There are still many motorcycle users who do not understand about the damage done to motorcycle engines. In checking the motorcycle engine, workshop technicians can find out the damage to the motorcycle just by hearing the sound of the motorcycle engine. Therefore, in this study will be able to detect the health of the motorcycle through the sound of its engine. The study used the Artificial Neural Network (ANN) BACKPROPAGATION method for the sound classification process. Piston handlebars became the type of sound classification used in this study. In this study, 50 different sound patterns were needed. The Backpropagation ANN architecture used in this study consists of 1 hidden layer and 2 hidden layers in order to obtain optimal results. The test shows that the highest accuracy of the MSE value in the testing process is on order 8 with 2 hidden layers of 0.00010034.

***Keyword**: Classification, motorcycle, piston, ANN, Backpropagation.*