ABSTRACT

This final project contains the implementation of learning kits along with the analysis of the effect of changes in resistance, capacitance, and the use of negative feedback on the frequency response of the amplifier. At this time the available electronics learning kits have several shortcomings, such as: not being able to experiment, not being able to know the real specifications of the components used, to the legs of the components that are often damaged after use. In terms of material, the frequency response of the amplifier is not discussed in detail, making it difficult for students to understand. Based on the problems that arise, it is necessary to update the learning kit which aims to facilitate students in experimenting and overcoming the problem of fast damage to component legs. As for this Final Project, it emphasizes the analysis of the effect of using resistance, capacitance, and negative feedback to then observe the results of the percentage of linearity and frequency response using the tools that have been designed. This Final Project uses experimental methods to prove the relationship between theory and practice. The result of this Final Project is the creation of an electronic learning assistant that is equipped with guidelines, rules of use, and worksheets. As well as, getting the percentage of linearity and the working area results from the effect of changing the value of resistance, capacitance, and negative feedback on the amplifier circuit used.

Keywords: learning tool, negative feedback, frequency response