

A Study on the Interactive Design of Operational Amplifier Calculator Utilizing TFT LCD and Arduino Mega

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Abstract

An operational amplifier calculator circuit is designed and built in this paper. This device is intended to be used as a teaching tool in electronics teaching rooms and practical electronics laboratories. The built-in device is capable of calculating the value of output voltage and gain value of the inverting amplifier circuit or non-inverting amplifier circuit. First of all, the values of components can be selected by user input switches. At that time, inverting amplifier circuit or non-inverting amplifier circuit gave the calculated values of output voltage and gain value. The circuit diagram and the calculated results are illustrated with a 3.5-inch color LCD (liquid crystal display) display. The output results were found that it was more error-free than the manual process.

Key words: Arduino Mega, TFT LCD, power bank or 9 V adaptor.

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