

## ABSTRACT

### LEARNING MEDIA OF SIGNAL AUDIO FILTER FOR AUDIO ENGINEERING SUBJECT

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This research aims to determine the design, performance, and advisability level of “Learning Media of Signal Audio Filter for Audio Engineering Subject” as a learning medium of audio engineering subjects at Audio Video Engineering department at SMKN 3 Yogyakarta.

This research is a Research and Development. Object of this research is the “Learning Media of Signal Audio Filter for Audio Engineering Subject” be equipped learning module. Development steps consist of 1). Analysis, 2). Design, 3). Implementation, 4). Testing, 5). Validation, and 6). Trial usage. The method to collect the data consist of 1). Testing and observation of performance, 2). Questionnaire research. The media validation involving two experts learning media and two experts learning materials and usage trials conducted by 33 students.

The results show that the performance of “Learning Media of Signal Audio Filter for Audio Engineering Subject” is fit for purpose as a learning medium of audio filter. Test results of AFG circuit can produce output signal with three waveforms are sine, sawtooth and a square with a frequency between 10 Hz-30 KHz. Circuit frequency counter can count frequencies between 10 Hz-25 KHz and amplitude can be read with a range between 0.3 Vp-p-10 Vp-p. Each filter circuit board can work well in frequency range between 20 Hz-20 KHz. The results validate the content of the learning material experts get a level of validity with the percentage of 81.77% with a very decent category. The validation of the construct by expert learning media get the level of validity with the percentage of 87.5% to the category of very decent. While in used test by students in SMK N 3 Yogyakarta a validity of 78.5% to the category of very decent.

Keywords: media, learning, filters, audio signals