

**THE DESIGN AND DEVELOPMENT OF AN ALARM  
FOR DEAF STUDENTS**

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## ABSTRACT

Deafness or being hard of hearing is one of the major hindrance of effective communication between the hearing and the deaf. A deaf person can neither hear his voice nor that of other people and therefore cannot develop meaningful speech or language. Being deaf or hard of hearing limits one from getting or giving information [13]. In Kenya there are over thirty primary schools for the deaf with an average of a hundred and eighty students or less and a few smaller units of between thirty and forty students. It was the purpose of this project to help design and simulate an alarm system that can help deaf and hard of hearing students improve communication with their teachers and the rest of the people. This is because deaf students can learn to speak and make themselves understood if properly taught by skilled parents and teachers through the senses of vibration, touch, visual aids, kinesthetic(combined sensations by which position, weight and muscular position are perceived) and proprioceptive cues(sensory end organs that provide information about movements and position of the body).[2].

The system was based on two-way FM communication and employs the use Matlab (simulink) software which enables the modeling, simulation and analysis of systems whose output change overtime (dynamic systems) and is used to explore the behaviour of real-world dynamic systems such as electrical circuits, shock absorbers, braking systems, mechanical as well as thermodynamic systems.

A feasible design with core information concerning architecture issues was developed and theoretical work tested through simulation and results analyzed using the simulink software .

The results showed the need for building and testing of full product development.