Group Project

B.Sc. Eng., Semester 2   2019 Batch

1. Design and implement a voice/sound recorder capable of simple voice modulation .

Description

Given a sound source your must be able to sample,encode and store the bit stream in an SD card. During playback you must be able to do minor adjustments such as changing its pitch. Your solution must be able to do the following tasks given below

   (a) Record and save multiple voice recordings

   (b) Selectively play back the recordings.

   (c) Do minor adjustments to its spectrum during playback.

Your design must include a ADC and DAC with 8 bit PCM. You are to decide all aspects such as sampling rate , quantization and the compression needed for PCM. You are encouraged to add more features to the voice recorder if possible. Your end product should be presented with a well designed PCB along with a proper enclosure . A LCD should be used to provide a simple UI for making playback selections

For storing data you can use a SD card module and for the microcontroller you are encouraged to use Atmega . You will be evaluated based on the functionality, PCB design and enclosure design at the final evaluation