

Playing audio on BASYS 3 board

Wave format is perhaps the simplest format to use for audio. The files using this format have a “.wav” extension. Refer to the link below for a description of this format.

<http://soundfile.sapp.org/doc/WaveFormat/>

Once you understand this format, write a small program to go to the *data sub-chunk* in a wave file and extract the raw sound data from it.

Record a few sound samples (one or two seconds) on your phone. If the files created are of .wav type, it is fine. Otherwise, use a suitable file converter to get .wav files. Extract the sound data from these files.

Using Vivado, create a read-only memory component of suitable size and specify the file containing extracted sound data as the initialization file.

Design a circuit that reads out sound samples from this read only memory and outputs these in PWM form to audio amplifier Pmod.