Donkey Kong Music Box

FAQ and Contact Sheet

FAQ

❖ Why was Donkey Kong the theme for your project?

The team wanted a whimsical and fun design that would make the music box aesthetically pleasing and enjoyable to use. Donkey Kong was an excellent choice and fit well with the retro idea of a music box.

❖ How long can the box run on battery power?

Runtime is heavily dependent on how the box is used. Assuming the lights are set at maximum intensity and a song is constantly playing, the box should run for at least one hour. During our testing phase, we periodically played songs and changed the brightness of the lights and found that the box would typically last for three hours before a noticeable change in sound quality and intensity was observed.

❖ Why does the box need a microSD card to play music?

The team wanted the box to be able to play songs for more than 20 seconds. Additionally, the team also wanted the box to play high quality songs. This required the use of .wav files, which could be compressed to fit on the microSD card and produced good quality sound. This implementation also reduced the memory demand on the Arduino UNO and allowed us to use the free dynamic memory for use in other parts of our code.

❖ Can I replace the pre-programmed songs with songs that I want to play?

Yes, the microSD card implementation choice allows for the user to swap out the pre-programmed songs. The exact methodology of how to do this is outlined in the Developer Guide under the User Guide section.

Contact

If you have any additional questions, please feel free to reach out to one of the team members listed below.

- Aaron Bicks (Audio Circuitry, UI, PCB): bicksa@oregonstate.edu
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