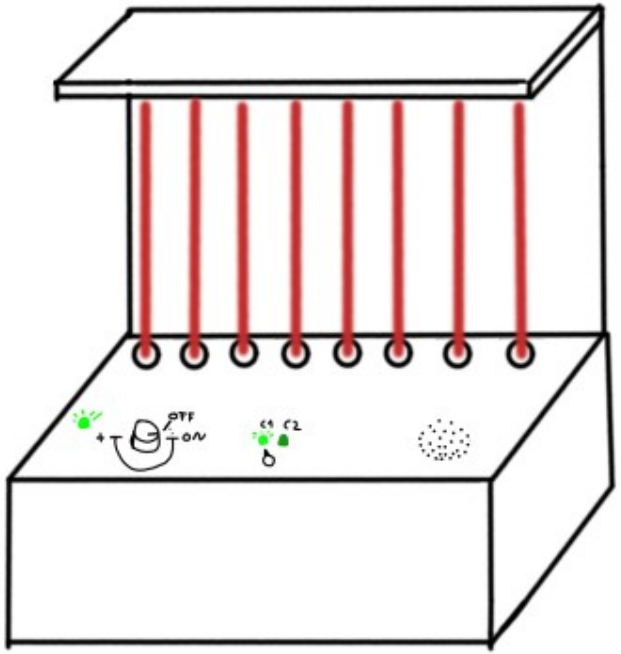
Physical Computing 2022 Group 1

Jakob Wietstock
Master 2nd Semester

Cedric Krug
Bachelor 5th Semester

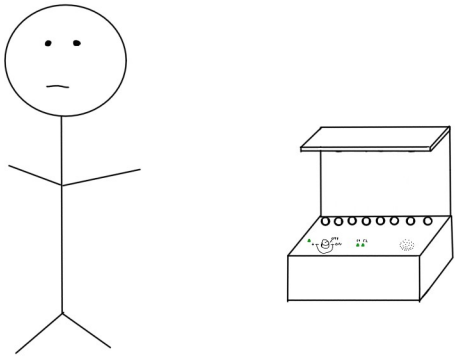
Donatien Leray
Bachelor 5th Semester

Topic: Laser Harp

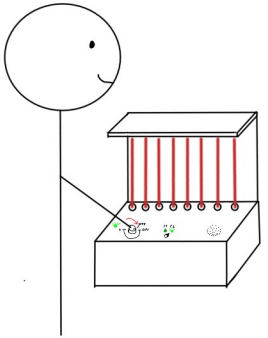


- Disruption of laserrays causes sound
- Selection between two octaves
- On/off dial
- Volume selection
- Build in speaker

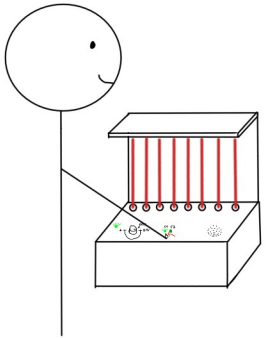
Storyboard



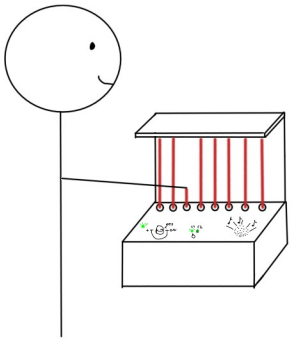
Bob wants to play a Melody. As his Instrument he chooses the Laser Harp.



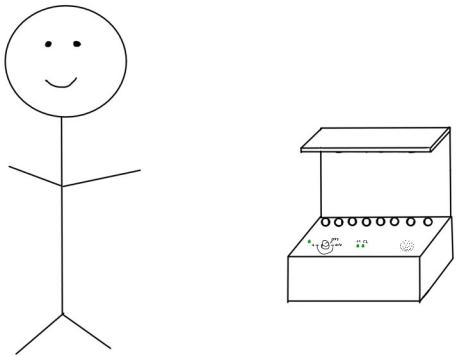
He Turms on the Harp by switching the volume Knob on the left side above the ON position. The knob also allows him to select his desired volume. Turning the Harp on activates the lasers and the LEDs indicating that the harp is turned on and which octave is selected.



He selects the octave he wants to play in using the switch in the bottom center. The LEDs above the switch indicate the selected octave.



He can now play the instrument by breaking the laserbeams with his hands. The harp will then play the according pitch from the speaker at the bottom right.



Satisfied Bob turns off the instrument and continues with his day.

Users

- Casual users who want to play simple melodies
- Children/People without much experience playing instruments
- People who like eye-catching gimmicks/instruments

Components

- Frame (3d-printed or wooden)
- 8x Light dependent Resisstors
- 8x potentiometers
- 8x Laser Diodes
- 1x relay
- Buttons and dials
- Resistors
- Maybe additional power supply for lasers