CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

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Project Number
S0907

Project Title
Sound and Light

Abstract

Objectives/Goals
The goal of our experiment was to prove that light can transmit sound over long distances and to verify what solar panel and what laser is the best for this experiment.

Methods/Materials
Followed materials are needed: one or more lasers, one or more solar panels, an oscilloscope, a funtion generator, a sound source, an amplified speaker, an induction coil, a power supply, a microphone and alligator clips. A transmitter consisting of a laser and a sound source and a receiver consisting of an amplifier and a solar panel have to be built.

Results
The results were that the sound that came out from the amplified speaker was alway the same as we put in to the transmitter.

Conclusions/Discussion
When the laser beam is turned on, current flows through the coil and the laser is lit.The "sound vibrations" recorded on the tape are transformed into electrical vibrations. These fluctuations of the brightness of the laser beam are picked up by the solar cell and are turned into electrical pulses, which are amplified by the speaker or tape recorder and turned back into sound.

Summary Statement
The purpose of this project is to prove that light can transmit sound through long distances and to measure what solar panel and what laser are the best for this experiment.

Help Received