World Academy of Science, Engineering and Technology
International Journal of Electronics and Communication Engineering
Vol:11, No:10, 2017

Non-Contact Digital Music Instrument Using Light Sensing Technology

Authors : Aishwarya Ravichandra, Kirtana Kirtivasan, Adithi Mahesh, Ashwini S.Savanth

Abstract : A Non-Contact Digital Music System has been conceptualized and implemented to create a new era of digital music. This system replaces the strings of a traditional stringed instrument with laser beams to avoid bruising of the user’s hand. The system consists of seven laser modules, detector modules and distance sensors that form the basic hardware blocks of this instrument. Arduino ATmega2560 microcontroller is used as the primary interface between the hardware and the software. MIDI (Musical Instrument Digital Interface) is used as the protocol to establish communication between the instrument and the virtual synthesizer software.

Keywords : Arduino, detector, laser, MIDI, note on, note off, pitch bend, Sharp IR distance sensor
Conference Title : ICSSEE 2017 : International Conference on Sensor Science and Electronic Engineering
Conference Location : New York, United States
Conference Dates : October 05-06, 2017