

Massachusetts Institute of Technology
Department of Electrical Engineering and Computer Science
6.111 - Introductory Digital Systems Laboratory

Final Project Check Off Sheet

Project Title: Hypersonic Security System

Student Name: Christian Deonier, Rich Lean

TA Name: Jenny Lee

TA Signature/Date:

Design

State transition diagrams, Block Diagrams, Code for keypad and motion sensor (Christian)

State transition diagrams, Block Diagrams, Code for laser net and pressure switch (Rich)

Functionality

Demonstrate keypad can change component status: system (all), lasers, pressure switch, motion detector, and sound. (Christian)

Demonstrate motion detector raises alarm when there is movement in front of camera (Christian)

Demonstrate pressure switch raises alarm when object is removed (Rich)

Demonstrate laser net raises alarm when beam disrupted on any of five sides (Rich)

Demonstrate when all components enabled, any imminent threat activates alarm. When System is “off” no alarm goes off. When only lasers are on, only the disrupting laser net raises alarm. When only pressure switch is on, only removing the object raises alarm. When only motion detector is on, only motion in front of the camera raises alarm.

Discussion

How does PS/2 keyboard interface work? How do you analyze each image? How do you sample data from the scale? Are there any timing issues with the laser system?