

SONIC LOCK

ABSTRACT:

The aim of the project is to build a locking systems for safe. It is done by using ultrasonic sensors, IR sensors, LED and LCD interfaced to MSP 430. The safe is opened only when the pre-defined pattern set to IR sensors is recognized by microcontroller. The 7 segment LCD display continuously displays the status of the lock system. There are four LEDs with the IR sensors which displays the pattern is correct or not. Initially the IR sensors and LEDs are in sleep mode. When the ultrasonic sensor senses an obstacle the LEDs and IRs are activated and the LCD displays ATTEMPT 1. If the correct pattern is sensed by the IR sensors then the lock is opened. If the pattern is wrong then the LCD displays to make a second attempt. If three attempts go wrong an alarm is activated.

TEAM:

Alem Abreha, aabreha@gmu.edu.

Chidi Okafor, cokafor5@gmu.edu.

Rajiv Gautham Champati, rchampat@gmu.edu.

Ashritha Rasa, arasa@gmu.edu.

Akshay Reddy Veerayyagari, aveerayy@gmu.edu.