

# **Controlled Access Device**

# **PROJECT PRESENTATION**

## **TEAM 5**

**BHAVIK PATEL**  
**DARRELL NAILL**  
**FADI ASHOUR**  
**JAPHETH MUTOTE**

**Project Advisor: Dr. F. ATTARZADEH**  
**Project Sponsor: University of Houston**  
**College of Technology**

# Controlled Access Device Introduction

## Project Objective

- Development of Timer Circuit
  - A cost effective
  - Can be integrated into an existing garage door unit to automatically close the door.
  - Easy to Install
  - User Friendly

# Controlled Access Device

## Background

Initial Plan To Design a timer to control door lock , but one of our team Member left his garage door open that led to a new idea of better implement Of the garage door controller. It provide more feasible application for timer Circuit.

In researching the authenticity of the new proposed garage door closer, it was found that similar but limited products are available in the market. The Least cost for an Automatic garage door closer device was around \$90.

Further research revealed that 33% of all home burglaries take place because someone forgot to close the garage door

# Controlled Access Device Design Requirements

- 30 seconds alarm activation before door closes to allow for override
- Garage door closes 30 seconds after motor light goes off
- Use commercial 12V power converter.
- Provide an override switch to disable closing automation.

# Controlled Access Device

## Design Alternatives

- Alternative design is to give the user flexibility in choosing the time frame for closing the garage door.
- Team chose to eliminate the complex user interface and implement an embedded time element using hardware techniques to begin the closing action of the garage door.

# Controlled Access Device Design Description

- Insert block diagram.

# Controlled Access Device Schematics

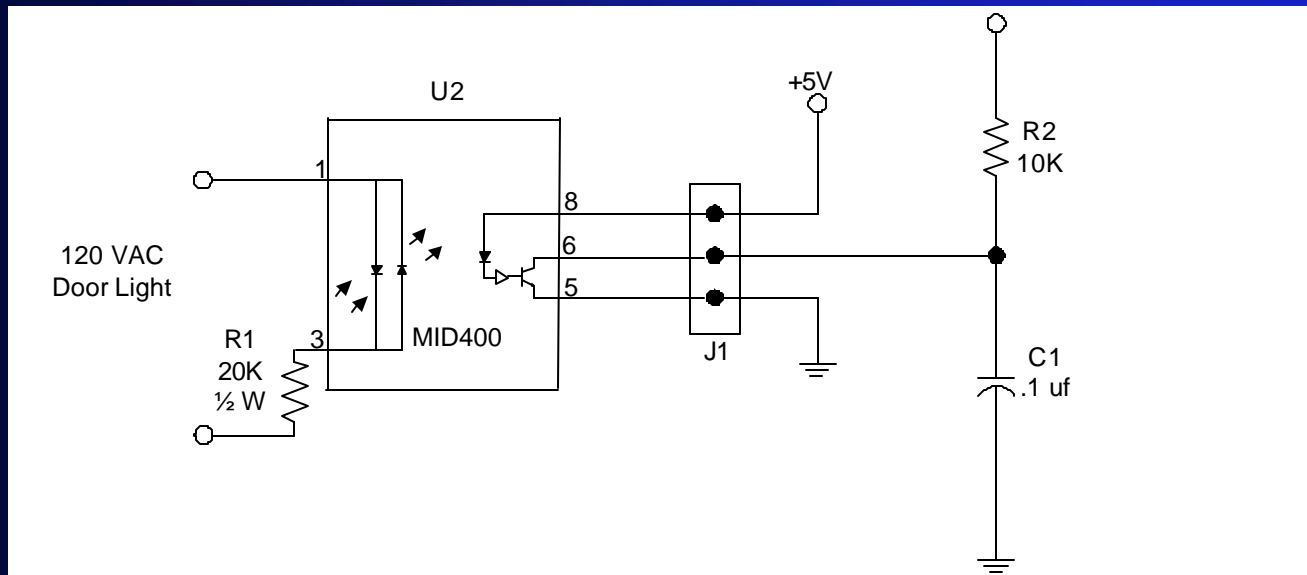
# Controlled Access Device Design Description Cont.

- Motor Light Sensor
- Door position sensor
- Microcontroller
- alarm
- Motor drive



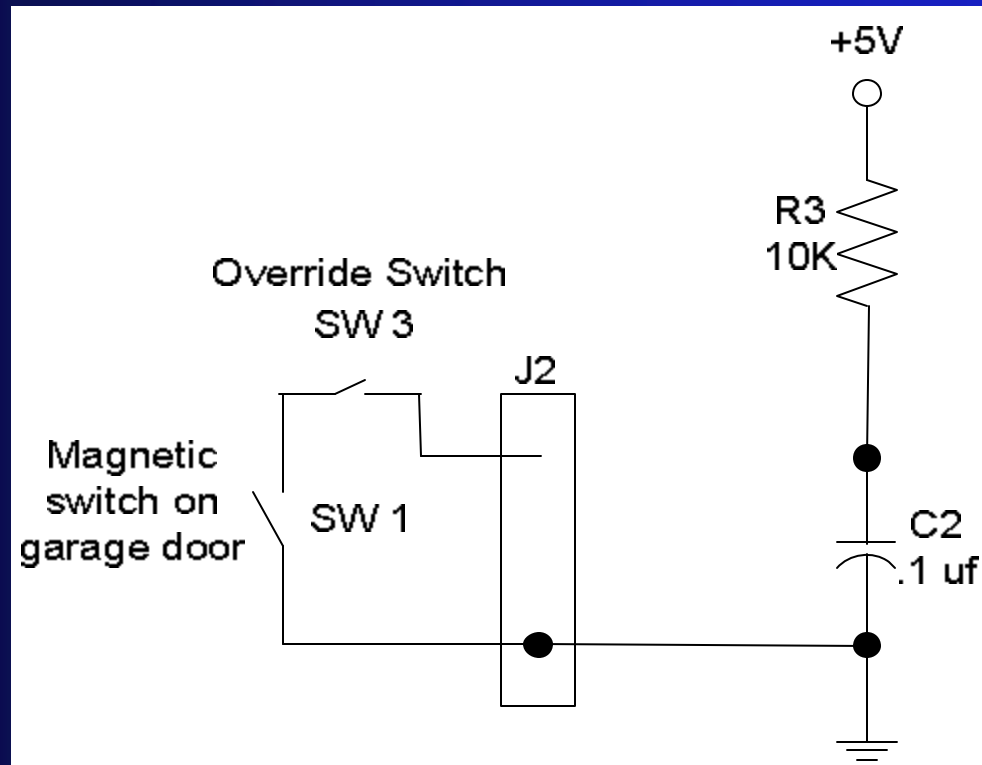
# Controlled Access Device Design Description Cont.

## Motor Light Sensor



# Controlled Access Device Design Description Cont.

- Door position sensor



# Controlled Access Device Design Description Cont.

Microcontroller

# Controlled Access Device Design Description Cont.

Alarm

# Controlled Access Device Design Description Cont.

Motor drive

# Controlled Access Device Conclusion

# Controlled Access Device

QUESTION TAKEN AT THIS TIME

Q  
U  
E  
S  
T  
I  
O  
N  
  
T  
A  
K  
E  
N  
  
A  
T  
  
T  
H  
I  
S  
T  
I  
M  
E



3/30/2006

# Controlled Access Device References



# Controlled Access Device

Thank You

Our sponsor: University of Houston  
College of Technology

Our Advisor: **Dr. F. ATTARZADEH**

**From: Team # 5**