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A Green Corridor for Ambulance using Arduino Mega 2560

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Abstract - Business traffic is a major problem in all major metropolises each over the world. Conventional systems have important limitation. in our design we worked with three major pretensions that is

a) Provide variable time slots as per traffic density.

b) Provide green corridor for emergency vehicles.

c) Provide zero waiting time to a car at a junction if all other roads are empty.

We propose to design and develop a green corridor for ambulance is the signal changes automatically on sensing the ambulance. The prototype model was develop using IR sense and Arduino. We use arduino to write programming according to our demand.

***Keywords*:-** Arduino , IR sensor , Traffic light

1.INTRODUCTION

A GREEN CORRIDOR is a special route where all the street signals are manually operated and the traffic is controlled to avoid any obstacle to ensure quick medical aid to the patient at theearliest. It takes great deal of coordinationbetween traffic police and the situation is more difficult in peak hours. The concept was introduced in 2007 but came into action for the first time in Tamil Nadu in 2008. Our project also aims to send message to the traffic officers on the path regarding the coordinates of the ambulance for better coordinates in case the traffic signals stops working due to some technical defects.

2. literature servey

Sr.no	Author name	Paper Title	Paper content to be observed
1	Bhandari Prachi, Dalvi Kasturi, Chopade Priyanka	Intelligent Accident-Detection And Ambulance-Rescue System [2014]	Provide variable time slots as per traffic density.
2	Pooja Kadam, Nivedita Patil, Pooja Patil, Snehal Shitole	Survey on Smart Ambulance with Traffic Management [2021]	In this paper we are studying about how to manage the ambulance meanwhile in traffic area and crud area
3	Sudhakara H M, Girish H. R, Kumara Swamy N. R J. Vinay Kumar	A Review: Smart Ambulance and Traffic Controlling System [2020]	Wireless communication between server and traffic signals, also between server and ambulance
4	Prof. .Manjiri M. Kokate , Madhuri S. Dabade, Shivani S. Shete, Jeevan G. Shitre, Gunjankumar H. Singh	Intelligent Traffic Signal Control System For Ambulance [2018]	Once the ambulance is spotted then it will verify and provide a green corridor.

3. COMPONENTS

ARDUINO MEGA 2560 :-

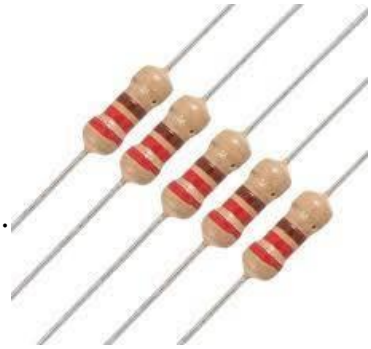
The **Arduino Mega 2560** is a microcontroller board based on the ATmega2560. It has 54 digital input/output pins (of which 15 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection and a power jack, an ICSP header and a reset button.

IR SENSOR :-

An infrared sensor is an electronic instrument that is used to sense certain characteristics of its surroundings. It does this by either emitting or detecting infrared radiation. Infrared sensors are

also capable of measuring the heat being emitted by an object and detecting motion.

220 OHM RESISTOR INFORMATION



A resistor is a passive two-terminal electrical component that implements electrical resistance as a circuit element. Resistors actto reduce current flow, and, at the same time, act to lower voltage levels within circuits.

COPPER WIRE:-

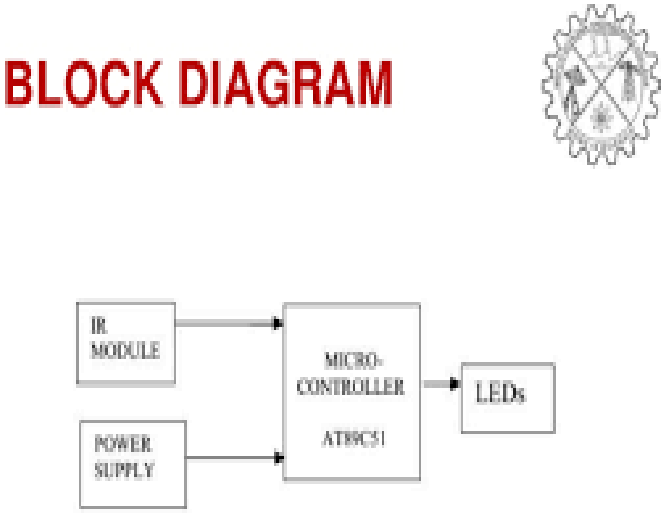
copper wire is a single electrical conductormade of copper. It can be insulated or uninsulated. Copper wire and cable is used

in power generation, power transmission, power distribution, telecommunications,electronics circuitry, and countless types of electrical equipment

LIGHT-EMITTING DIODE (LED

x A light-emitting diode (LED) is a semiconductor light source that emits lightwhen current flows through it. Electrons in the semiconductor recombine with electron holes, releasing energy in the form of photons. ... Modern LEDs are availableacross the visible, ultraviolet, and infrared wavelengths, with high light output

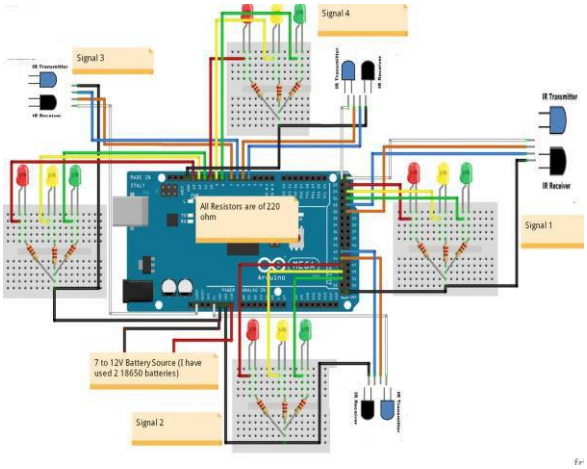
4. BLOCK DIAGRAM



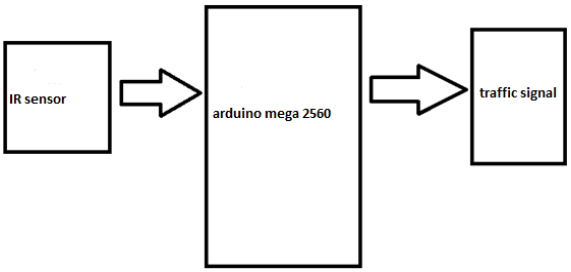
5. WORKING

1. when the ambulance is sense by IR sensorthen the current way of ambulance is green.
2. when ambulance clear the traffic then the singnal is working normally.

6. CIRCUIT DIAGRAM



7. FLOWCHART



8. ADVANTAGES

1 it save the time and efforts of trafficpolice .
2 it is also used for control the traffic.

9. PROBLEM STATEMENT

When IR sensor is sence the ambulance it will provide green corridor at the traffic junction

10. OUTPUT

11. CONCLUSION

The proposed framework is capable of providing its customizable best route identification based on multiple possible optimization factors such as travel time and distance. The dynamic time management scheme operates in real time and emulates the judgment made by a traffic policeman on duty. This system aims at saving a big amount of man-hours caused it by many traffic problems and accidents, where prevention can save human life.

12. ACKNOWLEDGEMENT

This Paper is completed by referring different research papers on steganography techniques and their overview and I really appreciate the hard work and dedication done by the authors of the papers

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