

WIRELESS BLACK BOX FOR VEHICLES USING GSM GPS

AIM:

Design and Development of Wireless Black Box for vehicles using GSM GPS.

PURPOSE:

So many Vehicle accidents happen around world every day. There are so many systems to preventing accidents. Even though number of accidents remains same. Analyzing after accident is very important to take further preventions. Means one system has read vehicle parameters like Temperature, Engine RPM, Vehicle speed, Location and vehicle position. Here we propose system like wireless black box for vehicles using GSM GPS.

DESCRIPTION:

This project includes GSM (Sim800C) module, which is connected to Arduino through UART. GPS module connected to Arduino through UART interface. LM35 connected to Arduino analog Pin. Engine RPM and Vehicle Speed indicated by 10K potentiometers. MEMS sensor connected to Arduino analog pins to know vehicle position. Buzzer connected to Arduino digital pin.

WORKING:

Arduino continuously reads all sensors status. If any sensor gets activated or exceed range then buzzer sound will come. Here Temperature sensor (LM35) reads engine temperature, MEMS sensor monitors vehicle stability, two 10k pots for vehicle speed and engine rpm respectively. If any sensor gets activated or exceed range then SMS will be sending to registered mobile number along with tracking location with Google maps assistance. User can get location and all sensors data when he wants, by sending request SMS to Arduino. All the sensors data displaying on LCD.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
GPS	:	NEO-6M
Button	:	2 pin leaded
Temperature Sensor	:	LM35
Engine RPM and Speed	:	10K Pots
Vehicle Position Sensor	:	MEMS
Buzzer	:	5vDC
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

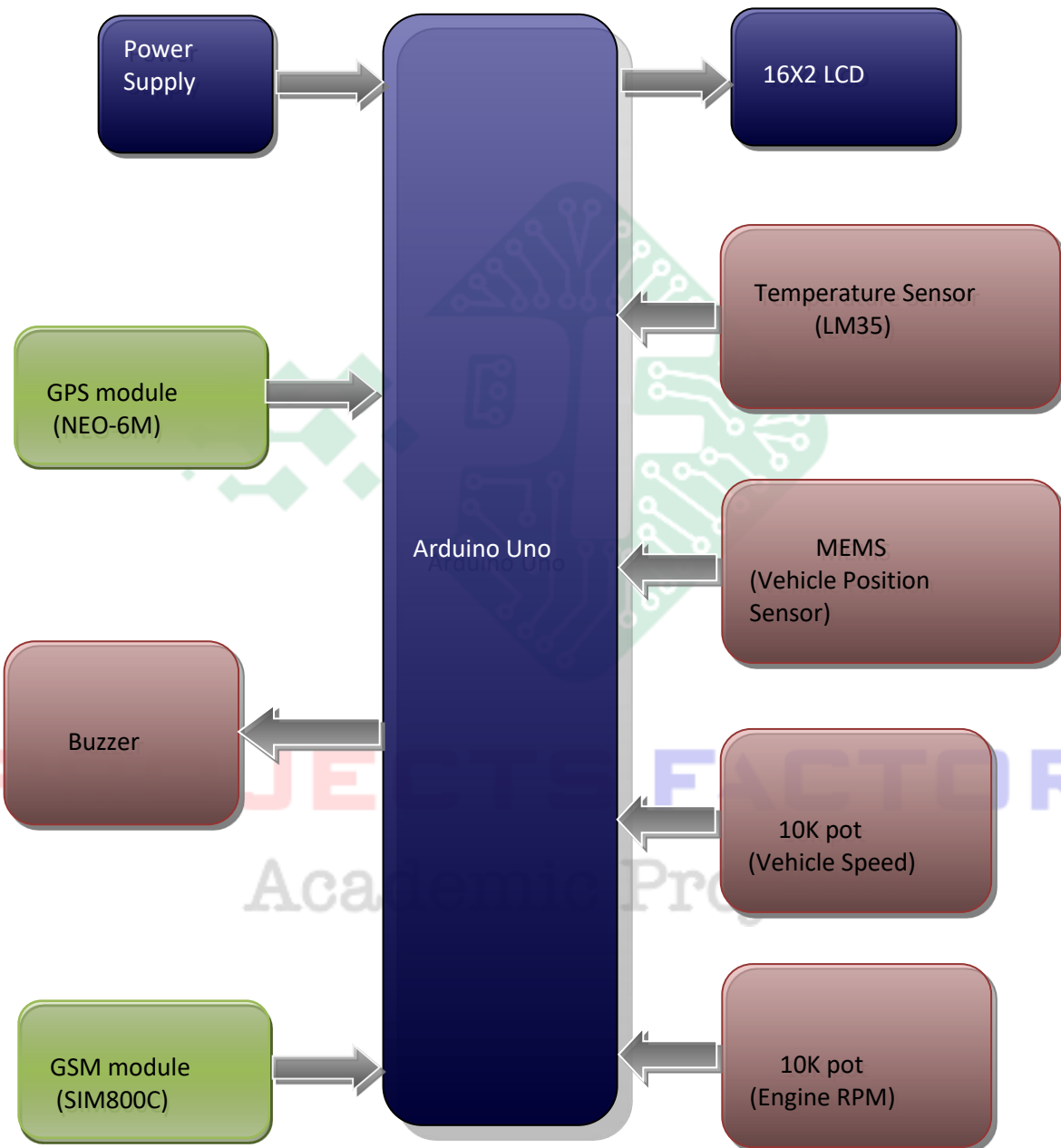
Arduino IDE

Proteus based circuit diagram

APPLICATIONS:

- Military Application
- Navy Application
- Tracking Application

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- GPS (NEO-6M) module interfacing
- Sensors like LM35, MEMS

PROJECTS FACTORY
Academic Projects