Vehicle tracking by GPS - GSM

ABSTRACT

The project is designed to find out the exact location of any vehicle and intimate the position to the concerned authority about through an SMS.

This system includes a GPS modem which retrieves the location of a vehicle in terms of its longitude and latitude. This data is fed to the microcontroller which is interfaced with a GSM modem. Microcontroller retrieves the location details from the GPS and sends it to the concerned authority in the form of an SMS over GSM modem on periodical intervals so set by the user. An LCD display is interfaced to the microcontroller for crossing the data received before being sent over GSM

Adopting this technology will be highly useful to transport companies to keep tracking their vehicles . This project can be further enhanced by making an arrangement to stop the vehicle ignition by the owner remotely by sending an SMS in theft situations.
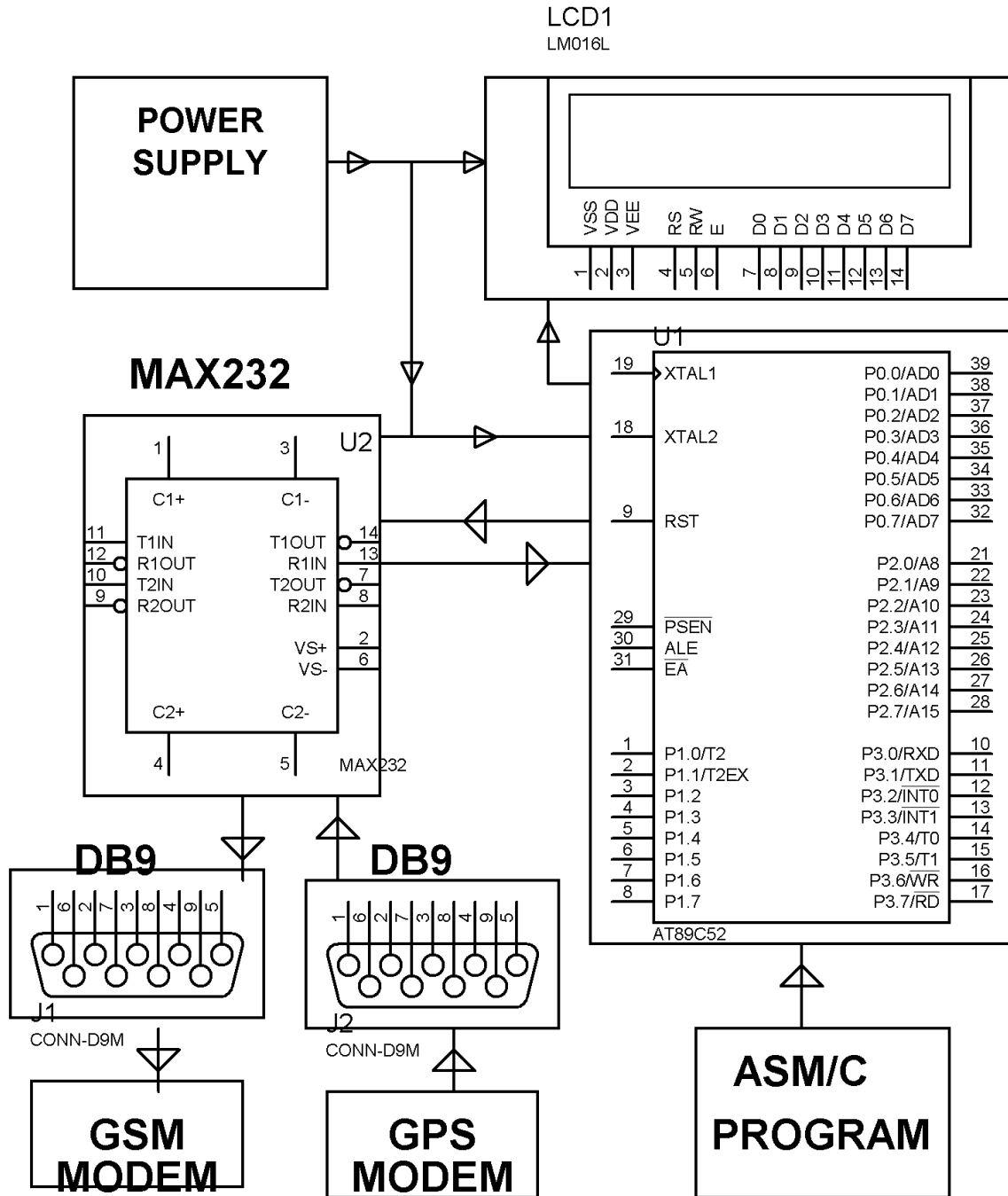
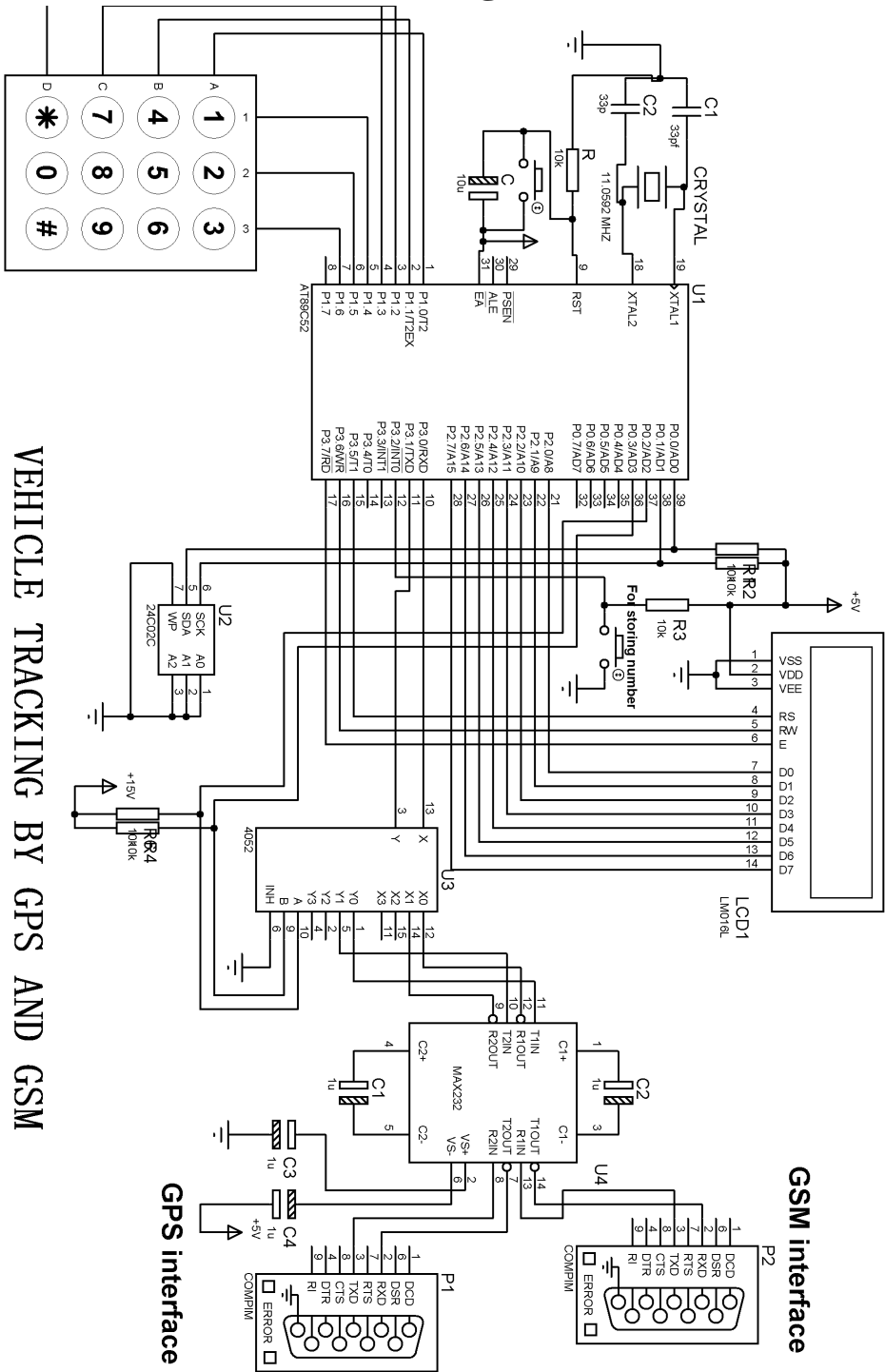| HARDWARE REQUIREMENTS:	SOFTWARE REQUIREMENTS:
Micro controller unit (AT89C52), Max232, GSM module, Resistors, Capacitors, voltage Regulator, DB9 connector, GPS,LCD display	Keil compiler, Language: Embedded C

block diagram

POWER SUPPLY

LCD1
LM016L

VSS	VDD	VEE	RS	RW	E	D0	D1	D2	D3	D4	D5	D6	D7
1	2	3	4	5	6	7	8	9	10	11	12	13	14

MAX232

U2

1		3
C1+		C1-

- 11 T1IN
- 12 R1OUT
- 10 T2IN
- 9 R2OUT
- 14 T1OUT
- 13 R1IN
- 7 T2OUT
- 8 R2IN
- VS+ 2
- VS- 6

| 4 | C2+ | | C2- | 5 |

MAX232

U1

- 19 XTAL1
- 18 XTAL2
- 9 RST
- 29 PSEN
- 30 ALE
- 31 EA
- 1 P1.0/T2
- 2 P1.1/T2EX
- 3 P1.2
- 4 P1.3
- 5 P1.4
- 6 P1.5
- 7 P1.6
- 8 P1.7

- P0.0/AD0 39
- P0.1/AD1 38
- P0.2/AD2 37
- P0.3/AD3 36
- P0.4/AD4 35
- P0.5/AD5 34
- P0.6/AD6 33
- P0.7/AD7 32
- P2.0/A8 21
- P2.1/A9 22
- P2.2/A10 23
- P2.3/A11 24
- P2.4/A12 25
- P2.5/A13 26
- P2.6/A14 27
- P2.7/A15 28
- P3.0/RXD 10
- P3.1/TXD 11
- P3.2/INT0 12
- P3.3/INT1 13
- P3.4/T0 14
- P3.5/T1 15
- P3.6/WR 16
- P3.7/RD 17

AT89C52

DB9

| 1 | 6 | 2 | 7 | 3 | 8 | 4 | 9 | 5 |

J1
CONN-D9M

DB9

| 1 | 6 | 2 | 7 | 3 | 8 | 4 | 9 | 5 |

J2
CONN-D9M

GSM MODEM

GPS MODEM

ASM/C PROGRAM

Circuit diagram

VEHICLE TRACKING BY GPS AND GSM

PCB artwork

GSM MODEM

DB9 FEMALE

GPS MODULE

DB9 FEMALE

10M ANTENNA

KEEP OUTDOOR

+9V DC

230V AC

MAX232

GPS INTERFACE DB9 MALE

GSM INTERFACE DB9 MALE

1uF 1uF 1uF

JUMPER

TRANSFORMER

+9V +9V

7809 9V

7805 JUMPER

1N4007 1N4007 1N4007 1N4007

VOLTAGES AT IC PINS WITHOUT IC

JUMPER

JUMPER

4052

10K

LED

RESET

7805

4.7uF/330R

330R

11.0592MHz

33PF 33PF

33PF CRYSTAL

JUMPER

10K PRESET

JUMPER

JUMPER

8051 SERIES MC

KEYPAD

1 2 3
4 5 6
7 8 9
* 0 #

10K

JUMPER

10K

24C02

16X2 LCD DISPLAY

MALE RELIMET FLAT TOWARDS THE REGULATOR

COMPONENT NAME		QUANTITY
Resistors		
330R		1
10K		6
10K PRESET		1
Capacitors		
470uF/35V		1
10uF/63V		4
1uF/63V		4
33pF CERAMICE		2
Integrated Circuits		
7805		1
7809		2
AT89S52		1
24C02		1
MAX232		1
CD4052		1
IC BASES		
40PIN BASE		1
16PIN BASE		2
08PIN BASE		1
Diodes		
1N4007		4
Miscellaneous		
GSM MODEM		1
GPS		1
DB9 STRAIGHT CORD		1
DB9 MALE CONNECTOR PCB-MOUNT		2
RED-LED		1
LCD	16X2	1
2-PIN PUSH BUTTON		2
POWER CORD		1
TRANSFORMER	0-12V	1
CRYSTAL	11.0592MHz	1
MALE BURGE	2PIN	1
MALE RELIMENT	2-PIN	2
7-PIN MALE RELEMENT		1
7-PIN 1-SIDE FEMALE RELEMENT		1
KEYPAD (4X3)		1
DC PIN SOCKET		2
2-PIN 1-SIDE FEMALE RELEMENT		2
FEMALE BURGE	16PIN	1
MALE BURGE	16 PIN	1(INCLUDED WITH LCD)
HEAT SINK		1
SCREW NUT FOR HEAT-SINK		1

For complete synopsis, weekly reports, source code, black books

Please mail your complete details on <u>support@makeitortakeit.in</u>

We will mail you within 24hours from the time you mail us.

Name of the student

 PROJECT NAME

Group member1   Group member 3

Group member 2   Group member 4

                                    Group member 5

College name   Branch

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Note to make your kit /project

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You need basic knowledge & logic of components /soldering /disordering /breadboard circuiting/PCB designing/etching.

1. You can download the projects from our website <u>makeitortakeit.in</u> and get started to build one, we help you with the basics of know & how.
2. You can purchase the complete do it yourself kit & assemble it.
3. At the last moment, If you are short on time /if your project is not giving output!!!!!! Readymade project kit is available.
4. **Training (optional)** available if you want us to help u in your projects, it includes.
   - 7 sessions, (timing mutually decided).
   - hands on training on breadboard circuiting ,soldering,desoldering,pcb making ,how to use instruments
   - Stepwise guidance you build your project right from the scratch **.
   - complete documentation/references(hard & soft copy)
   - Plotting and Implementing Scale Model.
   - Troubleshooting.
   - Programming of Controllers
   - PCB Software tool, Hardware Cutting, Drilling and Etching