ATLANTA
Innovative IOT Solutions

L-400

VEHICLE TRACKING DEVICE

TECHNICAL MANUAL

ATLANTA SYSTEMS PVT. LTD.

+91 9990333888 / +91-11-49039700(100 Lines) enquiry@atlantasys.com www.atlantasys.com

M-135, 2nd Floor, Connaught Place, New Delhi - 110001

Telematics | IOT and Industrial IOT | Electric Vehicle Solutions | Smart Parking Solutions | Smart City Solutions

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Packaging Contents:

Unpack the **L-400** Box carefully, in the package you may find:

1. L-400 Tracking Device
2. Wiring harness
3. Fuse
4. Relay with socket *
5. Usermanual

Note- Some of the accessories shown above are optional and need to purchase separately

Features:

1. High sensitive GNSS chipset.
2. Combination of GNSS, GSM/GPRS wireless network.
3. Durable and highly reliable GPS tracker.
4. Easy to install or hide in the vehicle to perform tracking.
5. Ideal application for vehicle tracking and equipment/assets monitoring.
6. External DC power supply.
7. Configuration can be done via SMS and GPRS commands.
8. Vehicle control with Immobilization.
9. Vehicle control function (Ignition off/on) can be started /stopped by the user.
10. Easy installation and easy SMS commands.
11. If wrong SMS command sent by the user then, L-400 will delete SMS and send “SMS NOT ACCEPTED” to user mobile number.
12. User would get a Google map link on mobile with Latitude /longitude.
13. Over The Air (OTA) software updation.
14. GUI for configuration through PC

Precautions:

While washing the engine, protect the L-400 by all suitable means from being struck directly by water jet or flow.

The GSM operations are dependents on the Network availability.

Postpaid/Prepaid SIM card can be used.

Pay special attention to the amount of remaining credit & expiry date of mobile connection in case of prepaid SIM card.

"ARM MODE" commands will immediately bring the vehicle to a sudden halt. Hence, we strongly recommend that these commands should not be used when vehicle is moving, as sudden stop may result in some mishappenings.

Hardware Discription:

a. Power Requirement: 8V to 39V

b. Normal operation temperature: 30°C to +80 °C

c. Restricted operation temperature: Above 40°C and below +85 °C

d. Storage temperature: 45°C to +90°C

e. Humidity: 5% to 95%

Installation Procedure:

Steps:-

- Set up the required wiring as per the wiring diagram using the Harness and Fuse provided in the package.

- Insert SIM card in to the SIM Slot, make sure that the mobile number is recorded
- Turn ON the Switch to start the device.
- Connect the device to the wired harness and wait for Indicators.
- Within 10 to 40 seconds the unit will begin to work and acquire the GSM signal as well as the GPS signals. The GSM indicator (**GREEN LED**) will flash when the unit has received the GSM signal.
- Once the GPS signal has received. The GSP indicator (**BLUE LED**) starts blinking.
- Both the indicators would be ON if no signal available.
- **RED LED**- Indicates the Power status. if LED is ON means External power connected. Turns **GREEN** means internal battery is charging. If only RED is ON means battery is full.
- Use SMS commands to configure and start tracking.

LED Indication

- RED: Battery charging indication, RED ON→ Battery fully charged, Turn GREEN→ Battery charging.
- GREEN: GSM indication, ON→ out of network, Blinking at every sec.→ GSM signal available.
- BLUE : GPS indication, ON→ GPS NOT FIX, Blinking at every sec.→GPS FIX

SMS commands and Web Tracking

- The Device can be controlled through SMS and GPRS commands
- L-400 would accept SMS commands from any mobile number if the password is correct.
- L-400 can accept command on GPRS from the connected server
- L-400 can send data at set inetrvals
- L-400 can send data on any alert(I/O change)
- L-400 can send data on set distance and 30 degree angles, if enabled

Installation Procedure:

L-400 would accept commands from any number if the password provided is correct. The password is a four digit number. The users can change the password of their device. L-400 would reply to all commands send by user.

Example:- The command format would be

Command<password>

The password would be a 4 digit number and ***default password is 6906,***

So the command to get FIRMWARE VERSION would be

VERSION<6906>

Note:- the brackets (< , >) are must in the command

SMS Command Description

- **PW::1234;<*password*>** - This command is used to change the password. After this command the password will be **1234**

  Eg: PW::12345;<6906>

Immobilizer

- **ARM<*password*>** -L-400 will start monitoring the vehicle. It will start sensing the ignition; cut the ignition of the vehicle and confirmation massage "ARM MODE HAS BEEN ACTIVATED" will be received.

- **DISARM<*password*>** -L-400 will stop monitoring the vehicle. It will stop sensing the input, Start the ignition and fuel of the vehicle a conformation massage "ARM MODE HAS BEEN DEACTIVATED" will be received.

APN Configuration

- **#CONFIG::APN::username::password;<*password*>** – This command is used to configure your GPRS account.
  APN (access point name) which is used to get to the GPRS gateway provided by network operator.
  Username: for your GPRS account, username is provided by your by network operator or else leave it blank.
  Password: for your GPRS account, password is provided by your by network operator or else leave it blank.
  Eg . For idea command would be **#CONFIG::internet::::;<6906>**

- **#CONFIG?<*password*>** - This command replies with GPRS APN, User Name and Password already saved.
  Response:
  i) APN: XXX,(GPRS USERNAME:)XXX,(GPRS PASSWORD)XXX

Installation Procedure:

- To start live tracking on internet :

WEBSTART<xxx/H/M/S>,<yyy/H/M/S><*password*>" to L-400, L-400 will send confirmation SMS and then start sending data to our web server at different intervals depending on IGNITION status. Where **xxx** is the interval during IGNITION ON and **yyy** is the interval during IGNITION OFF

- xxx means digits from 001-999
- H means HOURS,M means MINUTES,S means Seconds

Example – when we send the command WEBSTART030S,002M<6906>, L-400 will start sending the data to web server at 30 seconds interval during IGNITION ON and 2 minutes interval during IGNITION OFF.

Enable Distance Based Tracking:

- **DBT<xxxM/K><*password*>**" to L-400, device will send confirmation SMS and then start sending data to web server after as soon as covering the set distance and on deviation of 530 degree from the normal course.

  - xxx means digits from 001-999
  - M means METERS, K means KILOMETERS

Example – when we send the command DBT5OOM<6906>, L-400 will start sending the data to web server at every 500 meters and on deviation of 30 degree from the normal course..

- **SDBT<*password*> :-**this command will stop the distance and angle based tracking

TCP Server Settings:

To port the device to a SERVER

Command to port the L-400 to the first server (with IP and PORT)

#SERVERCHANGE::IP::PORT;<password>

Example:-
#SERVERCHANGE::196.168.175.12::20000;<6906>, this command would point L 400 to the server with IP=196.168.175.12 and Port= 20000.

Location on SMS :

Send "**GETGPS<*password*>**" to L-400

Response:
L-400 will send:

- If the GPS satellites are unreachable, you will receive "GPS NOT FOUND"
- If the GPS satellites are reachable, you will receive

Web link to view location (It will show you the location on map)*

Speed: XXX (It will tell you the speed of the vehicle in KPH)
Date: XXX (It will tell you the date of this particular data)
Time: XXX (It will tell you the time of this particular data in IST)

To observe the exact location on Google map for a corresponding LAT – LONG, open www.maps.google.com, in the search bar enters the latitude and longitude coordinates separated with a comma (,). It will show you the location.

- **FE<*password*>**
  Command to clear the unsent memory data from flash

- **FR<*password*>**
  Command to set factory default values.

Command To Configure Odometer

- **SETODO?<*password*>** --- This command is used to get/read the present accelerometer reading of vehicle.
  Response: Odometer reading:: 12345.00

- **SETODO::12345;<*password*>** -- This command is used to calibrate the odometer where 12345 is the present odometer reading.
  Response:

Diagnosis Commands :

- **SYSSTATUS<*password*>**
  Response:

Main power status MPON MPOFF

Ignition status IGNON IGNOFF

Immobilizer status ARM DISARM

Reserved Field DIPOFF

Odometer (KM) 0.00

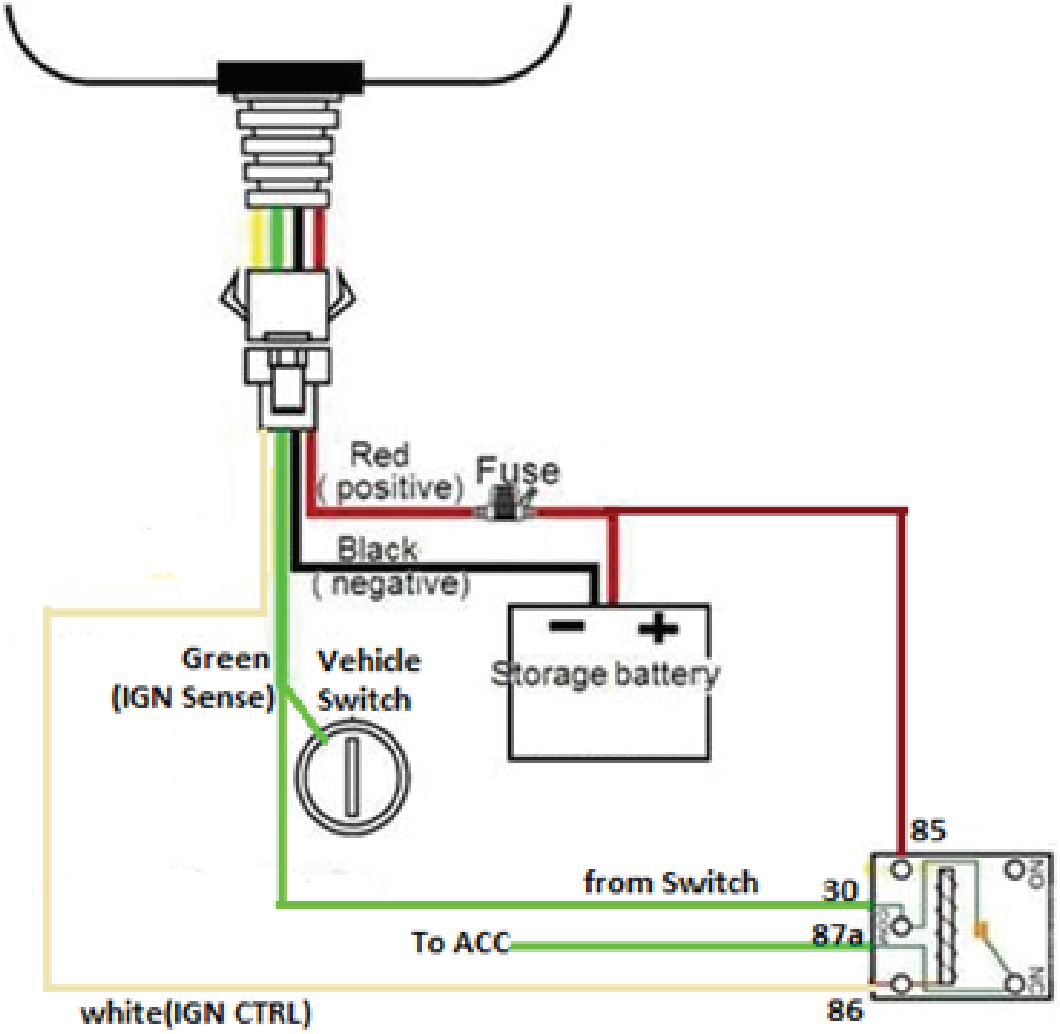
On board temp. 25.6

Battery Voltage (internal) 4.0

- **GPRSSTATUS<*password*>**
  This command is used to get the complete status of the device, and the command format is **GPRSSTATUS<6906>.**
  Description of the reply

Entries	Description	Remark
CN:	Current network	
DBTON/ OFF	Distance based tracking	Set distance would e shown here with DBTON
SOFF	Sleep status	SOFF for SLEEPOFF and SON for SLEEPON
SS	GSM Signal strength	Should be >10 for proper GPRS comm..
CC	Current configuration	Currently using APN,UN,PWD
IP	Server address	Currently using Server details(IP,PORT)
WTI	Webtracking interval	Web tracking interval
ID	Device ID	15 Char Device ID(shows only if enabled)
GPS	GPS availability	A= available, V= void
SF	Data sending fail	Shows two fields if duel IP enabled
CF	Connection fail with server	Shows two fields if duel IP enabled
MU	Internal memory unsent data count	Shows two fields if duel IP enabled
PD	PDP Deact error	Network error occurs normally if APN is wrong
GMS	GMT shift	330 for india
LHC	Location hit count per day	Customized, client specific
P:X	Protocol	0=DIMTS, 1=ATL(Shows two fields if duel IP enabled)

Wiring Diagram :



Trouble Shooting:

S.NO	SCENARIO IN GENERAL	TROUBLE SHOOTING
1.	No LED indication	• Check SIM card position • Check the Harness wiring
2.	GREEN LED not blinking at 1 sec. interval	• Check SIM card validity • Check SIM security settings(No PIN reccomended)
3.	BLUE LED not blinking	• Check the side marked as “THIS SIDE UP” is facing sky. • Keep the device in open space for 2-3 minutes for GPS fix.
4.	SMS not accepted : “WRONG COMMAND”	There may be some spelling mistake in the command or the command may be invalid. Please recheck the command phrase and resend.
5.	No response from L-400:	• Check your balance in case of Pre Paid connection. • Check the network status. (No or weak network connection could be the reason) • Resend the desired commands again. • Reset the L-400. • Check the password
6.	SMS is not Delivered:	Please check the network status.
7.	“NO DATA” from device	• Check GPRS availability of SIM card • Check server settings • Check “GPRSSTATUS” for various settings
8.	I/O status not Proper/ not getting Alerts	• Check harness wiring • Register the controlling number.