



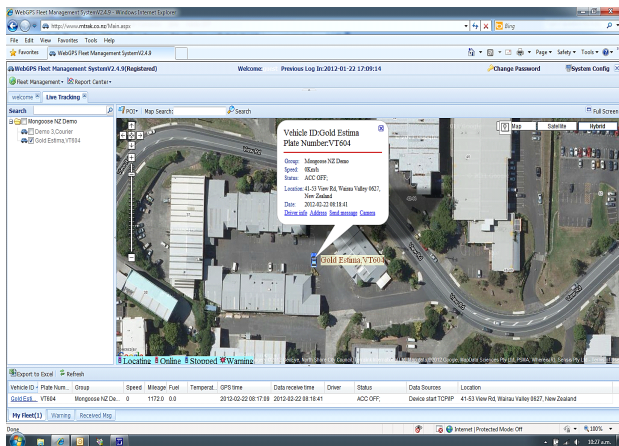
**MONGOOSE VT604**  
**GPS-GPRS TRACKER**

**OWNERS MANUAL**

**Installation  
and  
M-TRAK Configuration**

# M-TRAK

## GPS TRACKING



M-TRAK is the Mongoose internet web-server which is hosted in New Zealand for fast 24/7 access. M-TRAK requires no software to install on your computer.

M-TRAK can be accessed through any internet ready PC, tablet or smart-phone. You control your vehicles reported locations, therefore the cost. M-TRAK records and preserves the travel history for you to download and produce electronic or printed reports.

[www.mtrak.com.au](http://www.mtrak.com.au)  
[www.mtrak.co.nz](http://www.mtrak.co.nz)

## How it works

The Mongoose VT604 is a GPS tracker which uses the GPRS (General Packet Radio System) mobile network to transmit its location 'data' to our M-TRAK web-server located in Auckland, New Zealand. GPRS uses data, not SMS text messages, to send location information from the tracker to the M-TRAK web-server. It also uses GPRS to send commands from the web-server to the tracker.

A SIM card with data allowance is required. Most contract cards have a certain amount of data usage. Always use a SIM with adequate data for up to 10mb per month per vehicle. 'Data/text' contracts are only available from the card providers directly.

M-TRAK records the vehicle movement from its last reported 'live' location as well as maintaining a full record of current and previous travel history. This travel history can be searched by date and time, viewed on-screen or printed as a report. There is also the option of saving the location data on your own computer.

The VT604 is controlled by GPRS commands from the M-TRAK website.

SMS text messaging is used for;

- a) initial setup to instruct the tracker where to send the tracking data.
- b) to ask its actual current location.

An M-TRAK account will be created for you with your own unique username and password. These give you 24/7 access to the M-TRAK web-server where you can have full control of your vehicle(s) frequency of reporting. You can also view, save and print reports.

The M-TRAK programme is self explanatory as it is very similar to other Windows based programmes.

The VT604 can report locations by either time or distance travelled – or both. To keep costs really low, the VT604 was designed to be installed to only report when the engine is running and the vehicle driven. This can be changed if constant 24/7 reporting is required.

When the engine is started, a GPRS session is opened with the mobile provider and when the engine is stopped, the session ends. Most mobile data SIM providers usually only charge per session.

The tracker doesn't transmit its location when the engine is off, so just use the SMS text command if you need to know where it is at any time.

## Basic functions

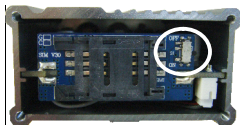
Function	Details
Live Tracking	Monitor online vehicles' last LIVE reported location with our M-TRAK web based fleet management server. Or send an SMS to find out where it is right now.
Track according to time interval	The tracker sends its location to M-TRAK at your selected time intervals from 5 seconds and above. From within M-TRAK you control and select the time intervals. (30 seconds is typical as this gives an accurate map trace)
Track according to distance	The tracker can send its location to M-TRAK at pre-set distance intervals. From within M-TRAK you control and select the distance intervals. (250~500 metres is typical for an accurate map trace)
Geo-fence	Detect when a vehicle is driven out or into a pre-defined 'geo-fenced' area.
Speeding alert	Monitor vehicle's speed. Send speeding alarm to the M-TRAK server.
Mileage	Calculate mileage and report by using of GPS speed.
SMS tracking	Simply send a text to tracker to request current location. Tracker will check the location in Google maps and reply with location address.
ALERTS	
SOS	If the driver presses and holds the 'SOS' button in emergency, the GPS tracker will report the emergency to the M-TRAK server and send an SMS to the controller mobile phone.
External power cut off report	When the GPS tracker's power supply is cut off, it will report to the M-TRAK server.
Immobilise the vehicle	If the vehicle is stolen or used without permission, you can immobilise the engine. This is usually the starter motor which prevents the engine being started next time – far safer than simply cutting the engine at any time.

COMMUNICATION	
Double reporting	The VT604 has the ability to send its data to two servers.
UDP/TCP Connection	Tracker supports both SMS and GPRS (TCP / UDP) communication.
Tracker control	The VT604 is controlled by you from the M-TRAK web-server.
Set M-TRAK address via mobile phone	Your mobile phone is used to setup the basic parameters such as:- APN, server's IP address, server port number, controller number and trackers SIM number.
POWER MANAGEMENT	
Tracker self test	Tracker will test itself to ensure correct operation. If it detects a fault, it will report to the M-TRAK server with a fault description.
Power Saving Mode	While engine off, device automatically switch off GPS and GPRS connection, extend more battery life
Low Voltage Protection	When vehicle battery voltage is lower than normal, the VT604 will switch off so as to avoid further discharge.

### **Installation**

*Note: This product is for professional installation. Any fault to this product or the vehicle caused by incorrect installation by unauthorised persons voids any warranties.*

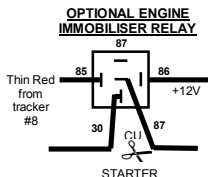
#### **Insert the SIM card and turn on the battery back-up**



- Remove back cover and slide open the SIM card holder.
- Insert SIM card into holder, fold down and slide clip into place.
- Turn circled micro switch to 'on'. (This turns on the battery back-up)
- Re-fit rear cover

## Wiring connections

RED	- Constant (+)12v fused
BLACK	- Ground (-neg)
YELLOW	- Ignition detect (+12v) – sometimes marked 'ACC'
THIN RED	- Immobiliser ground out (-), use a relay (not supplied)
SOS switch	- Pre-wired, mount in a handy but hidden location.

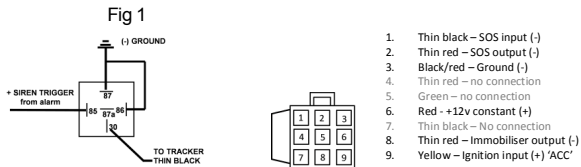


### **Connection to a vehicles car alarm siren (if vehicle equipped)**

Mongoose alarms have a (+) positive siren output. Use a suitable low impedance miniature relay, not supplied, to convert this positive siren output to negative – fig 1. Connect to pin 1 (black) as shown in the diagram below.

For (-) negative siren connection;

No relay required, connect siren trigger wire to thin black pin 1 with a diode in-line to prevent pressing SOS button sounding the siren.



**Note:** SOS alarm feature inoperative from a pulsed horn honk - input must be constant ground for 5 seconds or more.

**GSM antenna** – mount above interior mirror for best reception. Dress cable around windscreen and down 'A' pillar.

**GPS antenna** – mount where it can 'see' the sky to receive satellite reception. Hide antenna from view and tampering. Under dash above glove box is ideal providing dash is plastic. Antenna cannot 'see' through metal.

## Quick Start Guide

### Device Start-up:

1. Insert the SIM card.
2. Connect the trackers wiring to the vehicle.
3. Install and connect the GSM and GPS antennas.
4. Turn on the trackers battery back-up battery. (see photos)
5. Mount and secure the GPS module from tampering.
6. Turn the ignition 'on' and start the engine to activate the unit.
7. Move vehicle outdoors for good GPS reception.
8. Check status LED's for correct operation. See chart below.
9. Install and hide the GPS module from access and tampering.

<b>GREEN GSM LED</b>	<b>Description</b>
Flashes once every 3 seconds	GSM connected and working
LED off	No power in or IGN not connected.
Flashes once every 0.2 seconds	Data transmission
LED constant on – not flashing	No GSM signal or connection. Check GSM antenna connection.
<b>RED GPS LED</b>	
Flashes once every 1 second	GPS satellites acquired and working
LED off	No power in or IGN not connected.
LED constant on – not flashing	No GPS satellites acquired. Check GPS antenna connection – outdoors.

## **Configure the tracker for M-TRAK**

Just one SMS text message is all that is required to set-up the VT604.

**(4U,Controller mobile number,IPAddress,port,APN,,SIM number of tracker)**

Description:

Controller Mobile Number = The phone number of the controlling mobile phone

IP address = IP address of the M-TRAK server

port = port number of the M-TRAK server

APN = 'Access Point Name" - mobile service providers address

SIM = The SIM card mobile number in tracker

Example:

**(4U,0211239876,220048083028,12342332,vodafone.net.nz,,0211234567)**

Include brackets and commas. Tracker will reply "**Done!**" when completed.

**SMS commands** Default Password as 111111.

### **Request Location (where is it right now?)**

**When ignition is on:** Command: (AI\*RPASSWORD)

Sample: **(AI\*R111111)**

1<sup>st</sup> 3 letters are upper case - include brackets in SMS. The tracker will reply with latitude and longitude with a link to Google maps for Smartphones.

**When ignition is on or off:** Command: (AI\*PPASSWORD)

Sample: **(AI\*P111111)**

1<sup>st</sup> 3 letters are upper case - include brackets in SMS. The tracker will reply with location address text message.

### **Change Password**

Command: (AI\*WOld Password\*New Password)

Sample: (AI\*W111111\*123456)



## **Controlling the VT604**

The M-Trak web server is used to control the GPS tracker.

This control can be found under 'device parameters'.

Select 'add' and a vehicle list will appear. A drop down box shows the various options of control.

Please note, some options do not apply to the model VT604.

**The most common options are highlighted in bold.**

1. Driver access	n/a
2. Call restriction	n/a
3. Speed limit warning	set limit for warning
4. Time for power saving mode	Save power after ignition off Default 30 minutes
5. Sleep parameters	Time to sleep mode with ignition on if speed is zero
6. Overtime parking	Set time limit for parking with ignition on before reporting
7. Function switch	a) Turn off GSM or not under power save mode b) When speed is zero still upload GPS data or not When to upload data
8. Mileage	
9. <b>Interval to upload time data</b>	<b>Set how often to locate vehicle and upload data to server. Default is 30 seconds</b>
10. <b>Link to maintain GPRS</b>	<b>How long to keep GPRS connection open when tracker is in sleep mode. Default 3 minutes.</b>
11. Fuel alarm	n/a
12. Snapshot of parameters	n/a
13. Wake-up after power save	Restart the tracker
14. Cancel alarm warning	Resets alarm parameters
15. Engine lock	Immobilise the vehicle, on or off
16. Device software version	Checks software version
17. Check fuel level setting	n/a
18. RFID	n/a
19. Temperature threshold	n/a
20. <b>Interval to upload distance</b>	<b>Set how often to locate vehicle by distance travelled. Default is 250 metres.</b>

Set parameters 9 or 20 – both can be used but will double the data usage.

## **Technical Specification**

GSM module	Huawei GTM900, GSM 850/900/1800/1900, Support dual-band or quad-band
GPS Chipset	SIRF-Star III chipset
GPS Sensitivity	-159dBm
GPS Frequency	L1,1575.42MHz
C/A Code	1.023MHz chip rate
Channels	20 channel all-in-view tracking
Position Accuracy	10 meters, 2D RMS
Velocity Accuracy	0.1 m/s
Time Accuracy	1 us synchronized to GPS time
Datum	WGS-84
Reacquisition	0.1 sec.,average
Hot start	1 sec.,average
Warm start	38sec.,average
Cold start	42sec.,average
Altitude Limit	18,000 meters (60,000feet) max.
Velocity Limit	515 meters/second (1000knots) max.
Acceleration Limit	Less than 4g
Jerk Limit	20m/sec
Operating temperature	-25℃ to 70℃
Humidity	5% to 95% Non-condensing
Battery Back-up Voltage	Rechargeable 1300 mAh battery(3.7V)
Operating Voltage	DC 12~24V



## **Mongoose Australia**

Web site: [www.mongoose.com.au](http://www.mongoose.com.au)

### **NEW SOUTH WALES**

Head Office: 6 Hornsby Street, Hornsby  
NSW 2147

Ph: (02) 9482 4444

Fax: (02) 9482 4500

Email: [sales@mongoose.com.au](mailto:sales@mongoose.com.au)

### **QUEENSLAND**

Unit8, 871 Boundary Road,  
Coopers Plain, Brisbane,  
Queensland 4108

Ph: (07) 3344 7611

Fax: (07) 3344 7911

Email: [sales@mongoose.com.au](mailto:sales@mongoose.com.au)

## **Mongoose New Zealand**

Web site: [www.mongoose.co.nz](http://www.mongoose.co.nz)

41A View Road, Glenfield, Auckland  
PO Box 101-599 NSMC

Ph: (09) 443 3128

Fax: (09) 443 3129

Email: [sales@mongoose.co.nz](mailto:sales@mongoose.co.nz)