



GTKPRO2

User Guide

GPS TRACKING

ADVANCED VEHICLE TELEMATICS

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IMPORTANT INFORMATION:

- This user guide is considered correct at the time of printing but is subject to change. The guide is under constant review and revision, as is the server software constantly being improved and updated. We recommend you download the latest version of the guide, as well as check for more information and instructional videos, from our website: gatortracking.com.au.
- The following instructions are based upon this unit being connected to the Gator Tracking Server which **requires an active paid subscription** to be entered into within 30 days of activation of the SIM card in this device. The GTKPRO2 is a subscription based model and requires ongoing payment, details can be found at: gatortracking.com.au/subscriptions.
- All users of the Gator Tracking Service must agree to our terms of service at the time of registering their account on the Gator Tracking Server. Users found breaching the terms of service may have their accounts deleted by the server administrator. Terms of service can be viewed on our website: gatortracking.com.au/tracker/terms.
- When adding a device to an account on the Gator Tracking Server, you must first have a SIM card installed in your device (for reasons of easy access, do this before you have it installed) and the unit operational at the time of adding it to your account. Set up an account and add objects using a standard desktop computer or the App.
- The SIM card activates automatically when it first connects to a cellular signal once the tracker is fitted. Please ensure you read and understand this entire manual, along with the subscription details and terms of service, before fitting the device and activating the SIM card.

INTRODUCTION:

Thank you for purchasing the Gator GTKPRO2 GPS Tracking Advanced Telematics Device.

The GTKPRO2 is designed to work in conjunction with the Gator Tracking Server (web portal and app).

The GTKPRO2 comes supplied with a M2M SIM Card operating on the Telstra M2M CatM1 Network, it includes 30 days of included tracking. After 30 days, subscription is required to continue using the GTKPRO2 Tracking Device and to access the Gator Tracking Server. Subscription costs, terms and conditions can be found at our website: gatortracking.com.au

INCLUSIONS:

The GTKPRO2 is supplied with all the equipment that is necessary for basic tracking operation.

The package contains:

- GTKPRO2 tracking device
- M2M SIM Card
- Wiring harness
- User Guide

DETAILED PRODUCT OVERVIEW:

The GTKPRO2 is a professional real-time tracking device with GNSS and LTE CAT-M1 connectivity and backup battery. This device is pre-configured to simultaneously use the US based GPS and the Russian based GLONASS global satellite navigation systems. This device also includes a 4G network LTE CAT-M1 transceiver for data communications to the tracking server. This device is pre-configured with ignition sensing, door sensing and SOS button inputs and has 3 digital control outputs that can operate external relays for various / custom functions, one of which is reserved for remote ignition disable functionality. It is perfectly suitable for fleet management, car rental companies, taxi companies, public transport, logistics companies and personal vehicles.

FEATURES:

Nationwide Coverage

4G LTE CAT-M1 device operating on the Telstra Network

Unlimited Vehicle Tracking

track unlimited vehicles/trackers from a single log in

14 Months Tracking History

view tracking history and download detailed reports

Offline Memory

continues tracking even when data connection is lost

Fleet Management Tools

create sub accounts, group fleets and generate advanced reports

Vehicle Location Alerts

geo-fences, routes and places can be set to create alerts

12-24V Compatible

suitable for installation in virtually any vehicle

Battery Back Up

continues tracking when power is disconnected

Vehicle Monitoring

driver behaviour and crash impact alerts can be enabled

Tow Away Detection

will send an alert if the vehicle is being towed

Ignition Disable

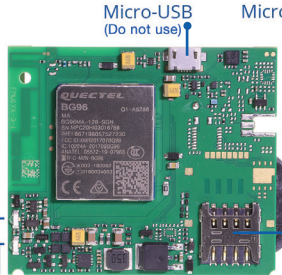
cut off the vehicle ignition remotely via the tracking portal

KNOWING YOUR DEVICE:

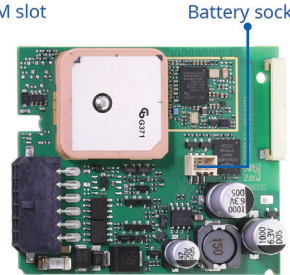
Top view



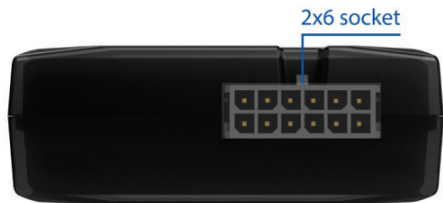
Bottom view
(without cover)



Top view
(without cover)



LED INDICATIONS :



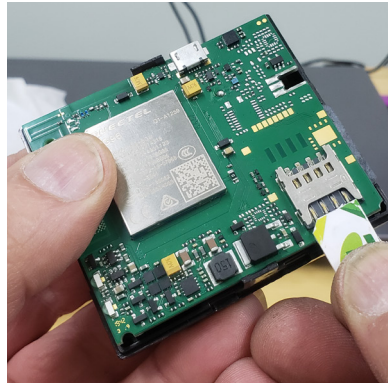
NAVIGATION LED INDICATIONS	BEHAVIOUR MEANING
Permanently on	GPS signal is not received
Blinking every second	Normal operation, GPS is connected
Off	Device is not working or Device is in sleep mode
Blinking fast constantly	Device firmware is being flashed
STATUS LED INDICATIONS	BEHAVIOUR MEANING
Blinking every second	Normal mode
Blinking every two seconds	Sleep mode
Blinking fast for a short time	Modem activity
Off	Device is not working or Device is in boot stage

SETTING UP YOUR DEVICE:

1. Gently remove the bottom cover using a plastic pry tool from both sides. Then remove the top cover.
2. Insert the supplied M2M Micro-SIM card. Make sure that Micro-SIM card cut-off corner is pointing forward to the left looking from above. Do not insert a 3rd party SIM card in this device.



1 Figure 1 Cover removal



2 Figure 2 SIM card insertion

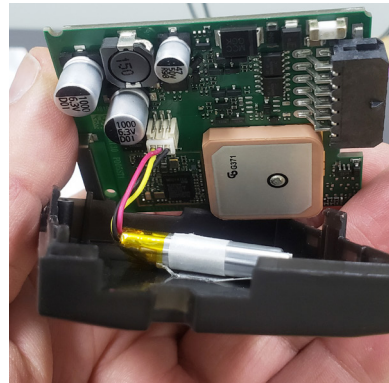
IMPORTANT: DO NOT INSERT THE INCLUDED SIM CARD IN ANY OTHER DEVICE OTHER THAN THIS TRACKER. DOING SO WILL PERMANENTLY DISABLE THE SIM.

SETTING UP YOUR DEVICE:

3. Connect the battery as shown. Position the battery in place where it does not obstruct other components.
4. Once battery is connected then re-attach the cover.



3 Figure 3 Battery connection



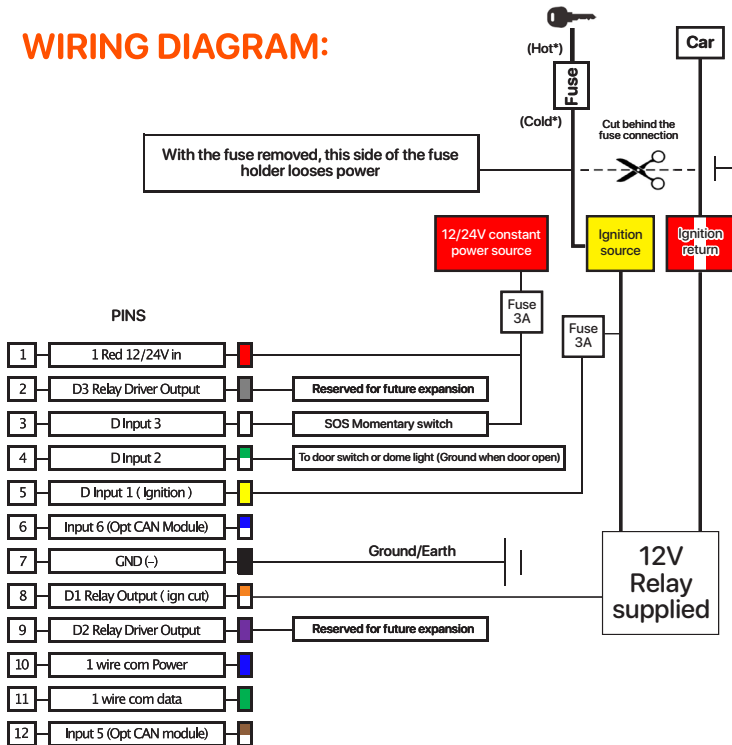
4 Figure 4 Battery connected

Right now is a good time to take a photo of the top of your unit with your smart phone or to notate the IMEI number of your device. You will need this in order to register the device on the server.

PINOUT TABLE:

PIN NUMBER	PIN NAME	DESCRIPTION	COLOUR
1	Constant power	Constant power supply 10-30V DC (+)	RED
2	AUX output 1	Optional auxiliary relay output 1. Maximum 0.5A DC. Negative output (-)	GREY
3	SOS button input	SOS button input. Maximum input 10-30V DC. Positive input (+)	WHITE
4	Door switch input	Optional door switch input. Maximum 0.5A DC. Negative input (-)	WHITE Green trace
5	Ignition switch input	Ignition switch input. Maximum input 10-30V DC. Positive input (+)	YELLOW
6	CAN module input	Optional CAN module input 1*	WHITE Blue trace
7	Ground	Ground pin. 10-30V DC (-)	BLACK
8	IGN cut output	Optional ignition cut relay output. Maximum 0.5A DC. Negative output (-)	WHITE Orange trace
9	AUX output 2	Optional auxiliary relay output 2. Maximum 0.5A DC. Negative output (-)	PURPLE
10	1 wire com power	Currently unused	BLUE
11	1 wire com data	Currently unused	GREEN
12	CAN module input	Optional CAN module input 2*	WHITE Brown trace

WIRING DIAGRAM:



Suggested method for ignition cut off function:

Locate a fuse that is energised when the Key is in the on Position and has no power when the Key is off or in the accessory position. The fuel pump circuit is Ideal for this function. When the fuse is removed it stops the vehicle from running, if already running.

With the fuse removed, note which side is the source (Hot*), the one that still has power with the fuse removed.

Make the cut behind the return (Cold*) side wire (with the fuse still removed) and replace the fuse after your wiring of the relay is complete.

Please note it is recommended that a technician be used for Installation.

INSTALLATION TIPS:

(Here are some additional points to be aware of)

Wiring colours

- When wiring up your device, please pay careful attention to the dual colours of some wires.

Connecting the constant power wire

- Some vehicles have a function where after some time certain circuits will be completely switched off, we recommend connecting the constant power wire either directly to the battery or to a circuit that never switches off.
- Ensure the supplied external fuse is installed at the source.

Connecting the ignition power wire

- Ensure the device is connected to ignition power, not accessory power.
- Be sure to select an ignition source that does not switch off when the starter is cranked.
- Ensure the supplied external fuse is installed at the source.

Connecting the ground wire

- Ensure the ground wire is connected to the vehicle chassis or a metal part that is connected to the chassis.
- We recommend terminating the cable with a ring terminal that is a suitable size for where you are fixing the cable (not included).

After wiring is complete

- This device comes pre-configured and does not require any post installation configuration/setup.
- If operating correctly the unit will make immediate contact with the cellular network.
- The SIM card will authenticate that it is in the correct device and activate.
- The device will then make contact with the tracking server and will be ready to add to your account when you go online.

LOCATION AND ORIENTATION CONSIDERATIONS:

IMPORTANT NOTE:

The Unit must be installed with the writing side of the module facing up. Failure to do so will result in poor GPS positioning. (It is advised to secure the module in place AFTER your wiring is complete and you have turned the device on to test that it's working. To do this you need to see the indication LEDs on the device)

After wiring is complete, a suitable location should be sought that has an unobstructed view of the sky from a metal perspective. ie. The unit should be placed out of sight but not behind any metal objects that could shade the GPS and cellular transceivers view of the sky above it. Large wiring looms are metal objects so if you are securing the unit to a harness, you must secure it on top of the harness, not underneath.

A location behind the dash well out of reach as close to the side skin of the top of the dashboard is ideal.

This unit has a 3D gyroscope/accelerometer system that needs to be calibrated after installation (The unit can take between 20 min to 2Hrs of driving to calibrate fully depending on your driving habits and where you are driving. Essentially the unit needs to experience acceleration, deceleration and change in direction at differing speeds.) Please note that gyro-based feature accuracy depends on this calibration being complete such as accident detection, tow detection and driver behaviour). The unit's orientation does not need to be perfectly flat, however the flatter the unit's orientation the better it will work.

SERVER CONNECTION AND NEW ACCOUNT SETUP:

Notes about our service:

The Gator Tracking server is for the exclusive use of Gator branded tracking devices.


Gator customers are eligible to register an account at anytime for free. However the devices added to the account require a subscription in order to work beyond 30 days from activation.

All users of the service must agree to our terms of service at the time of registering their account. Users found breaching the terms of service may have their accounts deleted by the server administrator.

When adding a device to an account, you must have a SIM card installed in your device (for reasons of easy access, do this before you have it installed) and the unit operational at the time of adding it to your account. The easiest way to set up an account and add objects is to use a desktop computer.

A Video of how to register an account and add your device can be found here.

<https://www.youtube.com/watch?v=pPVdCOul8wA>



INTRODUCTION TO THE GATOR GPS TRACKING SERVER (WEB PORTAL)

An introduction to the Gator GPS tracking server. Covers setting up an account. Adding objects. General tracking usage, Basic troubleshooting and subscription services. For more information about...

Please note that the references to the LED behaviour on this video does not apply to this model.

Please refer to Page 7 of this manual for LED indicator light details.

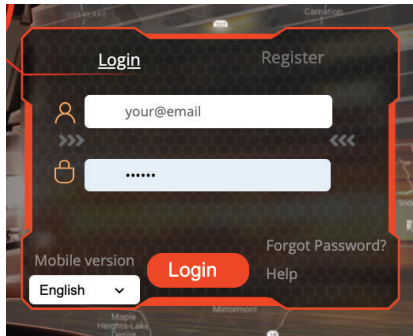
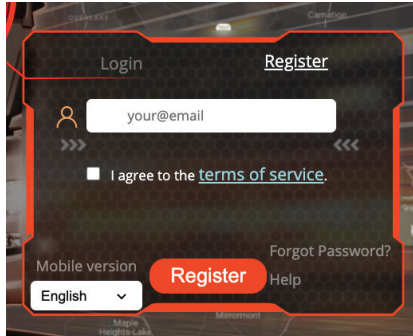
Alternatively, a basic guide on how to create your account and add an object visit www.gator.net.au

PORTAL LOGIN SCREEN:

Select "**Register**" at the top, and enter the email address you would like to use, make sure you get this correct as a password will be sent directly to it (one-time). Click "I agree to the terms of service" Press "**Register**" at the bottom, then wait a second for the success notice, which will ask you to check your email for the password.

Read the help that comes with your email, and login to the server with your server assigned password. We encourage you to change this password in your account settings.

Go back to the login screen, this time type in your **username** and the **password** that was sent to you via Email.



MAIN SCREEN:

The screenshot displays the Gator.net.au web interface. At the top, there is a browser address bar with the URL `https://gator.net.au/tr`. Below the address bar, a navigation menu includes "Help", "Settings", "Point", and "Address". A secondary menu contains "Objects", "Events", "Places", and "History". In the main content area, there are two buttons: "Refresh" and "Add Object". The "Add Object" button is highlighted with a red arrow in a circular callout. The background is a satellite map of an urban area with green and red lines representing vehicle paths. A table at the bottom left has columns for "Data" and "Value".

Help Settings Point Address

Objects Events Places History

Refresh Add Object

Objects

Refresh Add Object

Data Value

Google

Map data © 2018 Google Imagery ©2018 CNES / Airbus, GeoSatellite, Terms of Use | Street View

You can now add your Gator tracking device to your account by pushing the "Add Object" button in the main view.

ADD OBJECT:

When you select add object this will bring up a box that lets you enter details about the device, confirm that you've configured it, and saved it. You will also have the option of adding a subscription for your tracker. You have up to 30 days to complete this task but we recommend you do it at the time of adding the device to your account. There is no financial advantage to waiting for the 30 days to expire as a credit is given on your first subscription based on the remaining complimentary period left on your device. The option to add up to 3 devices without subscriptions is available by pressing the link "add without subscription" instead of "Subscribe now" in the Add Object box.

The name of the object is for you to decide, and will show up on the left hand side of the tracking interface as the objects name, (you can change this at any time.)

The IMEI number uniquely identifies your tracker, don't share this with anyone. It is important to get this number right. If incorrect the add object function will be rejected.

Add object ✕

Object Name

IMEI

Please read the device [setup guide](#) before adding a new device

Would you like to subscribe this device?

Subscriptions are optional, you may add 3 unsubscribed Gator objects to your account, additional objects require subscriptions. [More Info](#)

DEVICES:

Now your device has been added to your account, the GTKPRO2 is ready to track. Ensure the device is powered on (i.e. turn on the vehicle ignition), click on the device icon in the tracking portal and the map will automatically move to the tracker location. In its first cold start, a positional fix may take a few minutes, after that the unit generally finds its location in under a minute depending on its sleep state and it will start sending data to the server under your account. The system allows users a 30 day grace period to subscribe devices. However, the system also limits non subscribed devices to a maximum of 3 units at any one time.

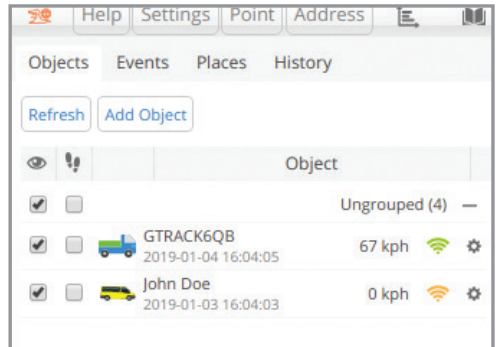
Devices appear in the left hand top section of the screen, like this:

Once you have been able to register your account and add objects you're up and away.

Please check in on our Gator You tube channel for information about using some of the more advanced features of the server system.

<https://www.youtube.com/channel/UCwSTevtQvmDljbsDCB9bNFA>

or search "Gator tracking" and look for videos with this logo.



You can also visit the app store and download the Mobile app. Under "Gator Tracking"

GATOR TRACKING SMARTPHONE APP

FOR SMARTPHONES & TABLETS



The Gator Tracking Smartphone App allows you to monitor your vehicle, track its location, create geofences and receive alerts when events are triggered. This App is for both iOS and Android devices. Search **gator tracking** or scan the QR code below

Download This App



TECHNICAL SPECIFICATIONS:

GNSS	GPS, GLONASS, GALILEO, BEIDOU, QZSS, AGPS (Configured for GPS and GLONASS only)
Receiver	Tracking: up to 33 satellites
Tracking sensitivity	-165 dBm
Accuracy	< 3 M (Accuracy depends on PDOP metrics (satellite qty and spread))
Hot start	< 1 s
Warm start	< 25 s
Cold start	< 35 s

CELLULAR

Technology	LTE CAT M1/NB-IoT/GSM (Configured for 4G CATM1, Telstra Network only)
4G bands	LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B28 LTE TDD: B39 (Configured to focus only on Telstra 4G CATM1 bands only)
Data transfer	LTE: Max. 375Kbps (DL)/Max.375Kbps (UL)
GPRS	Max. 85.6Kbps (DL)/Max. 85.6Kbps (UL)
Data support	SMS (text/data) SMS limited to administration only
SIM Supplied	M2M SIM card. Requires subscription to work beyond 30 days from activation.
Input voltage range	10V to 35V 10 - 30 V DC with over voltage protection
Back-up battery	170 mAh Li-Ion battery 3.7 V (0.63 Wh)

TECHNICAL SPECIFICATIONS:

BLUETOOTH/ CAN	4.0 + LE
Supported BT peripherals	Temperature and Humidity sensors, Universal BLE sensors support (Requires extra configuration and server admin approval)
Supported CAN peripheral	Peripheral data to server is not supported under all subscription plans. CAN data plans on request. (Requires extra configuration and server admin approval)

INTERFACE

3 Sensor Inputs	(Digital High/Lo) D1 - Ignition detection (High), D2 door open sensing (Gnd), D3 SOS Help button (High)
Digital Outputs	3 (D1 reserved for ignition disable)
CAN Adapter Inputs	1
1-Wire data expansion ports	1
GNSS antenna	Internal High Gain
Cellular antenna	Internal High Gain
USB	2.0 Micro-USB (Used for config/ debug only)
LED indication	2 Status LED lights
SIM	Micro-SIM
Memory	128MB internal flash memory (capable of storing tracking data when data link is severed temporarily from the server)

TECHNICAL SPECIFICATIONS:

PHYSICAL SPECIFICATION	
Dimensions	65 x 56.6 x 20.6 mm (L x W x H)
Weight	55 g

OPERATING ENVIRONMENT

Operating temperature	(without battery) -40 °C to +85 °C
Storage temperature	(without battery) -40 °C to +85 °C
Operating humidity	5% to 95% non-condensing
Ingress Protection Rating	IP41
Battery charge temperature	0 °C to +45 °C
Battery discharge temperature	-20 °C to +60 °C
Battery storage temperature	-20 °C to +45 °C for 1 month / -20 °C to +35 °C for 6 months.

TECHNICAL ASSISTANCE:

If you need assistance setting up or using your Gator product now or in the future, call Gator Support.
Australia

TEL: 03 – 8587 8898
FAX: 03 – 8587 8866
Mon-Fri 9am – 5pm AEST

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