FleetComplete

CERTIFIED INSTALLER GUIDE

GO9 INSTALL

Fleet Complete | 25 Wright Street | Adelaide, SA | 5000

1300 653 395
fleetcomplete.com.au

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Geotab GO9 — Expandable Telematics Device

GO9 Device

Geotab's GO9 telematics device is the most powerful yet. The GO9 offers a 32-bit processor, 4x more memory and 5x more RAM than the GO8. Similar to the GO8®, the GO9 offers state-of-the-art GPS technology, g-force monitoring, GEOTAB IOX® expandability, engine and battery health assessments, and communication on the LTE network*.

Vehicle Tracking

Using Geotab's patented tracking algorithm, the GO9 accurately recreates vehicle trips and analyzes incidents. The GO9 also offers in-vehicle alerts to instantly notify drivers of infractions and — with hardware Add-Ons — provides live coaching for driver's on-road performance. The GO9 does not require a dash-mounted antenna or any wire splicing.

Security

Geotab platform security is designed for end-to-end protection of your data.

Key implementations include:

- GO device and network interfaces use authentication, encryption, and message integrity verification.
- GO devices are individualized. Each device uses a unique ID and non-static security key — making it difficult to fake a device's identity.
- Over-the-air updates use digitally-signed firmware to verify that updates come from a trusted source.
- Geotab uses independent third-party experts to validate the platform from end to end.
- FIPS 140-2 validated by NIST (certificate #3371)

Top Features

- Easy installation
- LTE Connectivity (select regions)*
- Small form factor device
- Intelligent in-vehicle driver coaching
- Breakthrough collision detection and notification
- External device expandability via IOX Technology
- Built-in auto-calibrating accelerometer and gyroscope
- Near-real-time vehicle data
- Fast GPS acquisition time using Almanac OTA support
- Support for GPS+GLONASS connectivity
- Additional native support for more vehicle protocols
- End-to-end cybersecurity

Technical Specifications and Features

Engine Management

Legacy Interfaces:
Physical Interfaces: J1850 PWM, J1850 VPW, J1708, 9141-2 and ISO 14230 (KWP2000) at Pins 2 and 10.
Speed: 10.4/41.6 kbaud for J1850, 9141-2 and ISO 14230 and 9600/62500 bps for J1708
Data packet protocols: J1850 PWM, J1850 VPW, J1708, J1708 CAT, ISO Toyota, ISO Vario, ISO Ford, ISO Isuzu
Diagnostic/application protocols: OBD2

Single Wire CAN:
Physical Interfaces: Single Wire CAN at Pin 1 Speed: 33/50/83.3 kbps
Data packet protocols: GMLAN, OEM Specific

Standard CAN:
Physical Interfaces: CAN at Pins 6 and 14, Pins 3 and 11, Pins 2 and 10. Speed: 125/250/500 kbps
Data packet protocols: ISO 15765 CAN, GMLAN, VW TP 2.0, SAE J1939-21, SAE J1939-FMS
Diagnostic/application protocols: Std OBD2, WWH-OBD, UDS (ISO 14229)

Medium/Low Speed CAN:
Physical Interfaces: J1939-13 Type 2, TTL CAN at Pins 3 and 11, Pins 2 and 10 Speed: 50/125/250 kbps
Data packet protocols: GMLAN, OEM Specific, ISO 15765 CAN, SAE J1939-21, SAE J1939-FMS Diagnostic/application protocols: Std OBD2, WWH-OBD, UDS (ISO 14229)

* 2- or 3-wire install support (for older vehicles/asset tracking)

Input/Output

Buzzer
LEDs — Ignition, GPS, Cellular
IOX (more details below)
Internal GPS/Cellular antennas

Cellular

GO9 LTE - Oceania (New Zealand, Australia)
LTE (CAT-M1): Bands 3/28

GPS Receiver

72-channel engine (GPS/GLONASS)
Under 1 second Time-To-First Fix for hot and aided starts
Cold start: 26s
Concurrent GPS & GLONASS system
A-GNSS
Accuracy: ~2.0 m CEP
OTA FW updates supported

I/O Expandability Support (IOX)

Currently supports a combination of up to 5 of the following:
Driver ID
Charging or data transfer over USB
Garmin
Iridium Satellite
AUX — 4 per IOX (Digital or Analog)
Serial Port and Additional CAN for third-party device integration
Driver Feedback via external Buzzer and GOTALK
Substance Spreader
Relay control
Alert
Bluetooth

Environmental and EMC

Operating Temperature
−40 to +85 °C

SAE J1455
Thermal Shock (Section 4.1.3.2)
Humidity cycle (Section 4.1)
Temperature Cycle (Section 4.2)
Mechanical Vibration (Section 4.10)
Operational Shock, Transit drop, Handling Drop (Section 4.11.x.x)
inductive Switching, Burst Transients, Starter Motor Engagement (Section 4.13.2.2.1)
Coupled Transients (Section 4.13.2.2.2)
Electrostatic Discharge Handling, operational and non-operational (Section 4.13.2.2.3) Radiated Immunity
Radiated and Conducted Emissions

Compliance

Standards: FCC, IC, PTCRB, NOM, HERO (select SKUs), HERF, HERP, CE, Emark, RED, REACH, RoHS, WEEE, RCM
Carriers: T-Mobile, AT&T, Verizon, Telefónica, Rogers, Bell, TELUS, Telenor

Over-the-Air (OTA) Support

Firmware Updates: For maintenance, new features, and custom applications
Parameters: For turning additional features on/off
Almanac/Ephemeris Data: For quicker GPS latch

In-cab Buzzer

Decibel Output: >85 dBA at 10 cm
Driver Feedback: Harsh braking, harsh acceleration, harsh corners, over-revving, excessive idling and speeding, engine-based seatbelt violations (when available), and custom
Test Mode: Diagnostic beeps for validating GPS and wireless connection

64-Mb Non-volatile Flash Memory

Main Data Memory: Up to 80,000 logs in offline mode (out of coverage)
Collision Data Memory: Buffer records over 100 minutes of second-by-second data (6,000 logs). Last 72 records (1.2 minutes) are sent instantly on accelerometer-triggered collision-level events.

Accelerometer & Gyroscope

3D accelerometer and 3D gyroscope. Full-scale acceleration range of ±8g and an angular rate range of ±250 dps
Acceleration and angular rate output data rate of 1.66 kHz

Mechanical

Weight: 70 g (0.15 lb)
Dimensions: 75 mm L × 50 mm W × 23 mm H
Housing: Flame retardant black ABS

Electrical

Voltage
12 V and 24 V systems supported

Current
At 12 V
Operating Mode: 60–300 mA
Operating mode + IOX: Up to 2 A
Sleep mode: 4.5 mA

At 24 V
Operating Mode: 35-180 mA
Operating mode + IOX: Up to 2 A
Sleep mode: 3.0 mA

Resettable overcurrent protection to IOX

Voltage Recording

Curve-based voltage logging to detect weak batteries, failing alternators, and failing starters.

Recording Parameters

Patented curve-based GPS/voltage/accelerometer/engine data logging algorithm for fewer, more accurate data points.

Intelligent Ignition

Non-engine-based ignition detect on voltage and movement, allowing for 3-wire installation. Ideal for older vehicles with no engine information and covert installation for asset recovery.

GO9 Basic Installation

First, please record the serial number of your GO device so that it can be quoted to our support team. You will find spare serial number stickers inside the box that you may wish to use.

Locate the OBD Port in your vehicle

The OBD Port (On Board Diagnostics Port) of your vehicle is normally located under the dash, on the driver's side of your vehicle (see above). For more information on locating your OBD Port please refer to the vehicle manufacturer's manual or your mechanic.

Plug the Device in

Once you have plugged your device in (see above). The 3 lights on the device will then show when the device has power, is connected and knows its position.

Make sure that your vehicle is parked out in the open, where it can get a clear GPS signal, then start your vehicle. Let it run for a minute or two then turn the ignition off. Start your vehicle again, if there is no further beeping from your device, it should be active on your database.

WARNING – Please ensure that your device is plugged in and secured tightly to ensure a good connection as loose devices may cause electrical issues with your vehicle.

Once you have completed all aspects of the installation, please ensure you call our Customer Service Team on **1300 653 395**, Option 1 and quote the relevant Company Name, Device Serial Number and Vehicle Details (e.g. Make & Model, Rego, Odometer & VIN Number) to confirm that the device is installed and tracking correctly. They can also update the vehicle's details in the client's database.

Harness Identification and Application

Universal OBDII T-Harness Kit

Installation instruction on the next page.

HRN-GS09K2

Universal Heavy Duty Harness Kit with four mounting brackets, connects a Geotab GO device to most heavy-duty vehicles internationally. The HRN-GS09K2 contains four mounting adapters, engraved with numbers for easy reference.

HRN-3WCP

Used to provide a fused two wire connection. For installations where no engine data is available

Universal OBDII T-Harness Kit

(This harness is for custom applications) contact Fleet Complete support for more information

IOX

Expandability

Geotab's IOX is the state of the art expandability for your GO9, with the Geotab IOX you can instantly expand the capabilities of the GO9 to include options like RS232, Garmin fleet, Iridium satellite, RFID, and of course, the flexibility of the Geotab auxiliary inputs that you have come to rely on will be possible on the GO9.

IOX expansion for most products is as simple as plugging in; your GO9 will auto learn and configure itself for IOX functionality. No need to set up anything, and if that were not enough, you can plug in up to 4 IOX expanders in a daisy chain fashion on a single GO9.

This amazing technology will give you the ability to add combinations such as RFID, Garmin, and Iridium, that will function simultaneously.

Here is how simple it is.

When you are ready to add an IOX start with the GO9 uninstalled or unplugged if previously installed. Remove the blue expansion port cover on your GO9 and plug in the first IOX followed by any additional IOXs. The IOX installation order is not important. Plug in you GO9 and start the vehicle; once the vehicle is running plug in the accessory to the device to the other end of IOX. It's that easy!

In addition you will notice each IOX comes with a termination shunt installed in it expansion port. If you are installing more than one IOX in a daisy chain you will need to remove the shunt from each device in line with the exception of the "LAST" IOX connected. That shunt must remain in the IOX.

IOX Shunt

The use of the shunt in the LAST IOX is necessary for the GO9 to learn and configure the

IOXs as effectively as possible.

NOTE: Failing to install the shunt in the last IOX could effect IOX configuration.

Each IOX comes with additional set up and installation information for its specific application.

For the most up to date harness listing please contact Fleet Complete Support on 1300 653 395

GO9 Under Dash Installation

Installation using T-PIECE HARNESS

Locate the ALDL (OBD II) connector under the driver's side of the dashboard; it is a Trapezoid shape 16 cavity connector

There are typically three mounting styles used in light duty vehicles

1. Screw in 
2. Snap in 
3. Slide in 

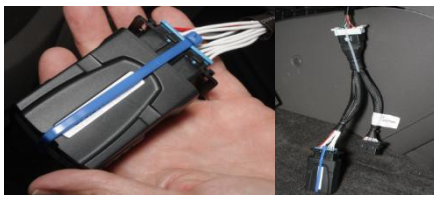
Remove the factory connector carefully so as not to damage the wiring. For the snap in style shown below this is done by squeezing the two outside tabs one at a time using a small flat screwdriver or other suitable tool and releasing it backwards from its mount.

There are two replacement connector ends to choose from on the HRN-EUNI
The snap in style end having two possible variations, snap in and screw in using the provided screw mount adaptor.

Identify the correct one to use for the vehicle.

The receiver end of the HRN-EUNI will plug into the original vehicle connector

Attach the GO device to the HRN-EUNI securing the connection using a Geotab serialised zip tie. (Supplied with GO9)



Geotab zip seal

Replace the OEM connector with the appropriate HRN-EUNI replacement.

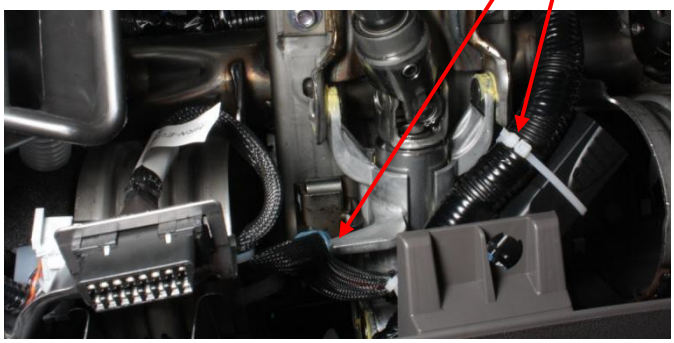
All Geotab devices have a sensitive accelerometer built in, for this to calibrate and work correctly the device MUST be secure in vehicle and not be able to move freely

Secure the device someplace under the dash where it will not interfere with safe operation of the vehicle.

The device must be secured using at least two zip ties in addition to Velcro or two sided tape for proper operation of the built in G force monitor.

Mount the device serial number facing up this will ensure best possible operation of the GPS.

Two zip ties



Verification

Start the vehicle and allow it to run for approximately 3 minutes. During this time period, you will notice the Red LED will power on and illuminate on the face of the device. Shortly afterwards the Green and Blue LEDs will illuminate as the device links up with the cellular and GPS networks. This initial start-up may take several minutes to complete, and assumes the vehicle is parked outdoors.

Important!

Once you have completed all aspects of the installation, please ensure you call our Customer Service Team on **1300 653 395**, Option 1 and quote the relevant Company Name, Device Serial Number and Vehicle Details (e.g. Make & Model, Rego, Odometer & VIN Number) to confirm that the device is installed and tracking correctly. They can also update the vehicle's details in the client's database.

WARNINGS AND CAUTIONS

WARNING: Mapping, navigation and tracking features available through Geotab software is dependent on third party mapping data and services and the availability and accuracy of the Global Positioning System ("GPS") operated by the United States government. Both third party data and services as well as GPS is subject to changes which may affect the accuracy or performance of mapping, navigation and tracking information or graphics presented through the use of Geotab software. Geotab products, software and services are not intended for use for primary navigation, route planning or similar purposes, as information presented may be inaccurate, delayed or misinterpreted. Relying on Geotab software for such purposes may result in incorrect navigation leading to unsafe driving situations.

WARNING: Geotab's products and related software and services are not designed or intended for use in emergency or failsafe situations including, without limitation, situations:
(A) where failure of same may result in a risk of property damage, death or personal injury; (B) where Geotab's products, software or services are used to alert others upon the occurrence of certain vehicular events recorded by Geotab in-vehicle devices; or (C) requiring fail-safe controls or fail-proof delivery of information, including without limitation any operations involving radioactive or hazardous materials, life support systems or munitions or weapons. Communication features in Geotab in-vehicle devices may be interrupted or inoperable if a vehicle travels outside of a network coverage area or where there is a fault or service interruption with the carrier. Communication of data through Geotab in-vehicle devices also requires transmission of data through the internet. Failure in internet access will result in the interruption of communications.

WARNING: Do not attempt to install, reconfigure or remove any product from any vehicle while the vehicle is in motion or otherwise in operation. All installation, configuration or removal must be done only in stationary vehicles which are securely parked. Attempting to service units while being operated could result in malfunctions or accidents, leading to death or serious personal injury.

WARNING: Do not attempt to remove Geotab in-vehicle devices from the vehicle in which they are originally installed for installation in another vehicle. Not all vehicles are compatible with Geotab in-vehicle devices, and doing so may result in unexpected interactions with your vehicle, including sudden loss of power or shutdown of the vehicle's engine while in operation or cause your vehicle to operate poorly or erratically.

WARNING: All in-vehicle devices and related cabling must be securely fastened and kept clear of all vehicle controls, including gas, brake and clutch pedals. You must inspect devices and cabling on a regular basis to ensure all devices and cabling continue to be securely attached. Loose cabling or devices may impede the use of vehicle controls, resulting in unanticipated acceleration, braking or other loss of vehicle control, which could lead to death or serious personal injury. Improperly fastened in-vehicle devices may detach and impact operators upon sudden acceleration or deceleration, which may cause injury.

WARNINGS AND CAUTIONS CONT.

CAUTION: Geotab products do not contain any user-serviceable parts. Installation, configuration, servicing, repairs and removals must only be made by an authorized Geotab reseller or installer. Unauthorized installation or other servicing of products will void your product warranty. Improper installation may also lead to short circuits and the risk of fire, leading to personal injury or significant damage to your vehicle. Installation or servicing may also require modifications to your vehicle. Failure to comply with specified procedures or without adequate knowledge of the vehicle may result in damage to your vehicle, which may cause malfunctions of vehicle controls or vehicular environmental systems and result in personal injury.

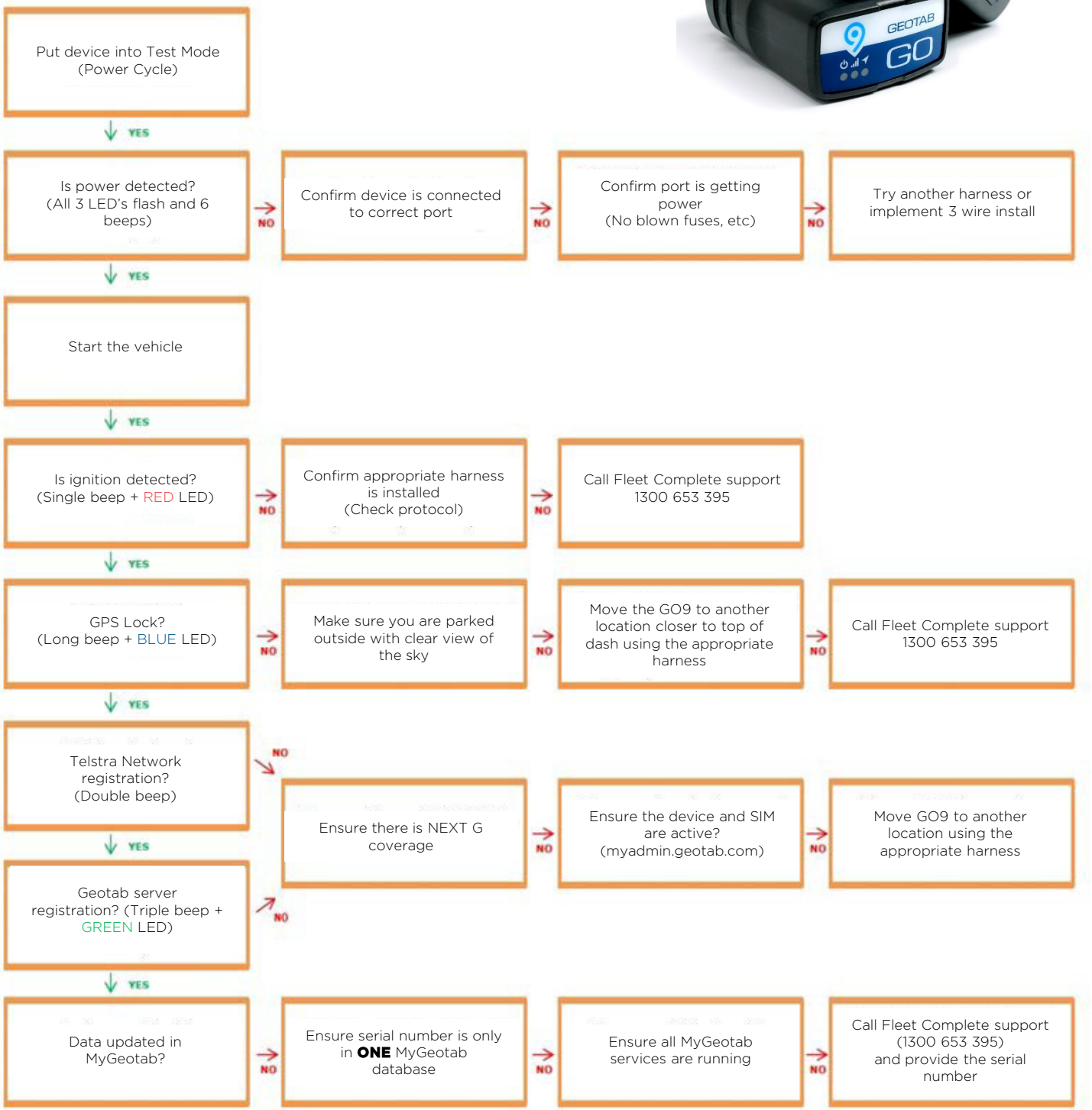
CAUTION: Geotab in-vehicle devices must be kept clear of debris, water and other environmental contaminants. Failure to do so may result in units malfunctioning or short- circuiting, causing a fire hazard.

Troubleshooting and Diagnostics

LEDs and Diagnostic Sounds

	In Normal Operating Mode	In Test Mode
Resetting power	6 "fast" Beeps	6 "fast" Beeps **RED GREEN BLUE** LEDs flash briefly and simultaneously
Ignition Detected	No Beep	1 Beep **RED** LED illuminates
GPS Lock	No Beep	1 Long Beep **BLUE** LED illuminates
Next G Sync Connection to a Telstra network established	No Beep	2 "short" beeps No change in LEDs
Geotab Sync Connection to GEOTAB server and hand shake returned	No Beep	3 "short" beeps **GREEN** LED illuminates
If part 3 "connection to the GEOTAB server" should fail you will hear a second set of 2 "short" beeps in place of the 3 "short" beeps indicating the device retrying the connection		
Over the air Firmware upgrade	No Beep	Long series of very short beeps

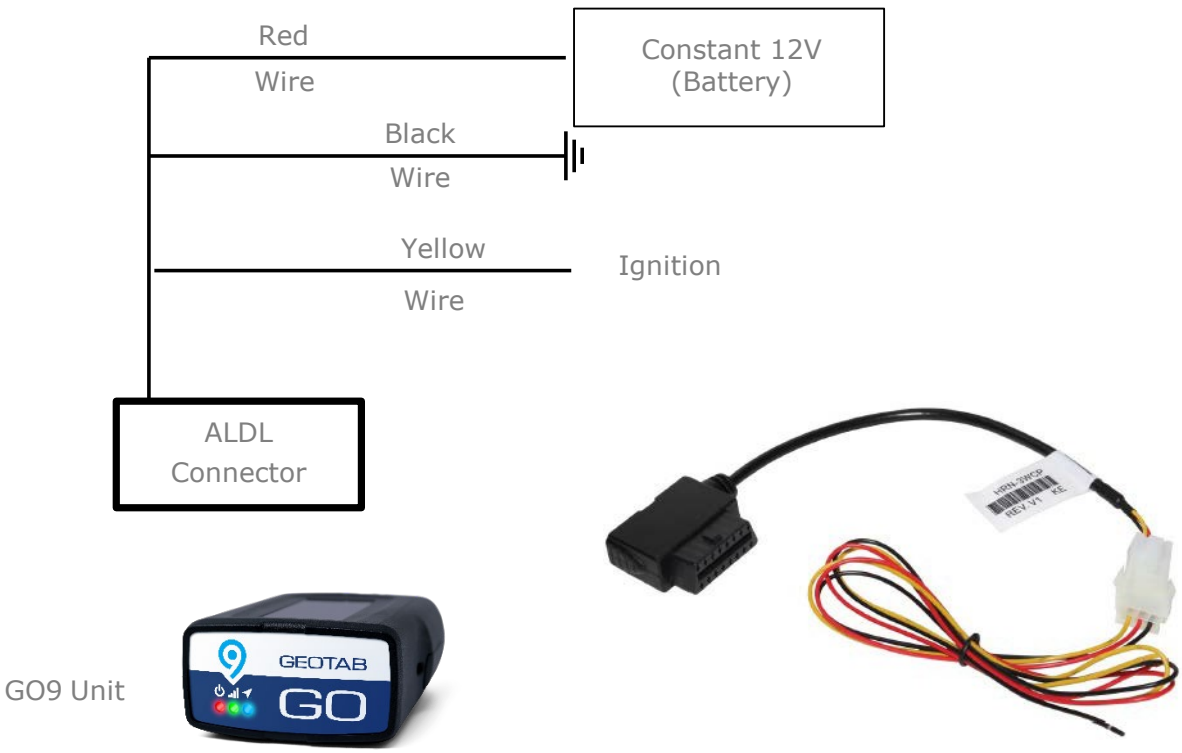
Diagnostic Flow Chart GO9



3-wire Installation Instructions

The HRN-3WCP connection is used to provide a fused two wire connection.

Please be aware that using a 3-wire connection, no engine data is available



This kind of installation only requires wire into the power lines, rather than ignition.

Red to a 12V constant power supply, black to earth/ground, yellow to ignition.

The device will be able to detect ignition based on voltage fluctuations, accelerometer readings, change in latitude and longitude and noise on the power line.

IOX Auxiliary Harness

IOX-AUX

The Geotab GO9device is the world's only expandable plug-&-play vehicle telematics platform that allows for unique IOX™ expandability. The IOX-AUX gives you the opportunity to monitor a variety of vehicle inputs allowing you to manage your fleet better.

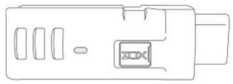
Top Features

- Plug & Play
- Monitor up to 8 inputs at any time with two IOX-AUX.
- Self-learning input triggers
- Operates at 0-32 volts

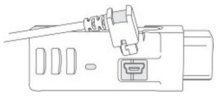
Installation Instructions

Identify and test the connection points for the auxiliaries you wish to monitor. Keep in mind the IOX™ wiring is limited to a reach of approximately 3 ½ feet from the GO9 mounting location. Extending the wiring to reach some connection points may be necessary. Make the auxiliary connections and secure them using an approved method such as "T" tapping. Ensure none of the components or wiring interferes with the safe operation of the vehicle.

1. Start with the Geotab GO9 device unplugged from the vehicle. Remove the blue IOX™ expansion port cover on your GO9.



2. Plug in the 90° USB connector of the IOX to the GO9. Secure the USB connector using a zip tie, being careful not to over tighten it, damaging the USB.



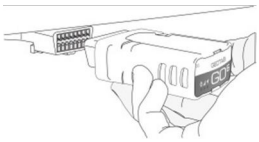
Note: The USB can only be inserted in one orientation (shown in image).

3. Your IOX-AUX has four inputs and comes configured as **Aux 1-4**. Connect the desired auxiliaries in the vehicle to the IOX-AUX wires as needed. If more than four auxiliaries are required please see **Expanding your IOX-AUX.**

   - Aux 1 = Blue (Spare)
   - Aux 2 = Orange (4WD)
   - Aux 3 = Green (Seatbelt)
   - Aux 4 = White (Duress)

   (* These are the standard Aux uses, depending on client requirement)

4. Once your connections to the IOX-AUX wiring have been made, connect the GO9 and immediately start the vehicle. The IOX is now in self-learn mode and your GO9is in debug mode.



5. Trigger auxiliaries as per **next page.** It is of paramount importance to follow these instructions carefully to successfully register the vehicle's auxiliaries.

6. Once you have completed all aspects of the installation, please ensure you call our Customer Service Team on **1300 653 395,** Option 1 and quote the relevant Company Name, Device Serial Number and Vehicle Details (e.g. Make & Model, Rego, Odometer & VIN Number) to confirm that the device is installed and tracking correctly. They can also update the vehicle's details in the client's database.

Important notice regarding Auxiliary testing:

Please be aware that after installing Auxiliary connections into the vehicles and connecting the IOX-AUX harness to the GO9, you then need to connect the GO9 unit to the vehicle and turn on the ignition.

The IOX is then in a *'self-learn'* mode. You then need to trigger each Auxiliary (4WD, Seatbelt, Duress Button) and have the IVMS unit learn the vehicle's function.

1. Connect IOX auxiliary harness
2. Connect the GO9 to the vehicle's OBD port, the unit will now enter the self learn mode
3. Trigger each auxiliary e.g 4WD, Seat beat, Duress (you will not hear any diagnostic beeps)
4. Trigger the auxiliaries again, you should now hear diagnostic beeps - this indicates that the GO9 will report the auxiliaries being triggered and Fleet Complete can verify they are working

   The GO9 will emit the appropriate number of beeping notifications to correspond to the auxiliary.

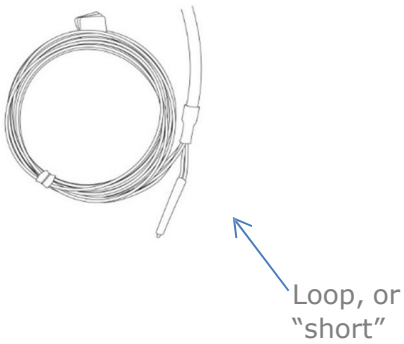
   For example, Aux 2 will emit 2 beeps when triggered on, then another 2 beeps when off

5. **Important!**

   Once you have completed all aspects of the installation, please ensure you call our Customer Service Team on 1300 653 395, Option 1 and quote the relevant Company Name, Device Serial Number and Vehicle Details (e.g. Make & Model, Rego, Odometer & VIN Number) to confirm that the device is installed and tracking correctly. They can also update the vehicle's details in the client's database.

Expanding your IOX-AUX

Expanding from four to eight auxiliaries is as simple as plugging in a second IOX-AUX to the expansion port of the first and following the steps below. Remember you will need to remove the zip-tie from the original IOX-AUX.



In order for the second IOX-AUX to report as 5-8 you will need to locate the red and black loop, or "short", on the IOX-AUX and cut the wires. This will configure the IOX™ to become Aux 5-8.

- Aux 5 = Blue
- Aux 6 = Orange
- Aux 7 = Green
- Aux 8 = White

To complete the installation, you will need to ensure that both IOX-AUX are zip-tied together.

Note: By cutting the loop, this IOX-AUX will always report as Aux 5-8, regardless of whether or not there is an Aux 1-4 installed previously.

Termination Shunt

You may notice your IOX comes with a termination shunt installed in the expansion port. If you are installing more than one IOX in a daisy chain you will need to remove the shunt from each device in line with the exception of the "LAST" IOX connected. That shunt must remain in the last IOX and should be secured with a zip tie.

The use of the shunt in the LAST IOX is necessary for the GO9 to learn and configure the IOX as effectively as possible.

Note: Failing to install the shunt in the last IOX could affect IOX configuration, it is recommended you secure the shunt using a zip tie if not already done.

Harness Technical Specifications

Weight	50 g
Size	■ Overall length: 1150 mm ■ Widest Point: 17 mm x 34 mm
Housing	■ Flame retardant black ABS
Interfaces	■ CAN: 500 Kbit/s; Daisy chain.
Inputs	■ Aux1/Aux5: 0V to 32V Aux2/Aux6: 0V to 32V ■ Aux3/Aux7: 0V to 32V ■ Aux4/Aux8: 0V to 32V
Power Output	■ Daisy Chaining: 12V/24V, 2000 mA
Power Consumption	■ Running Mode: 40 – 50 mA ■ Sleeping Mode: 1.1 mA
Connectors	■ 4 x Labelled wires
Installation	■ Keyed mini-USB plug connects to GO9 or another IOX harness. ■ Input wires connect to the intended circuit ■ Wires covered by heat shrink must be cut for harness to operate as aux 5 to 8.

Duress Button Instructions

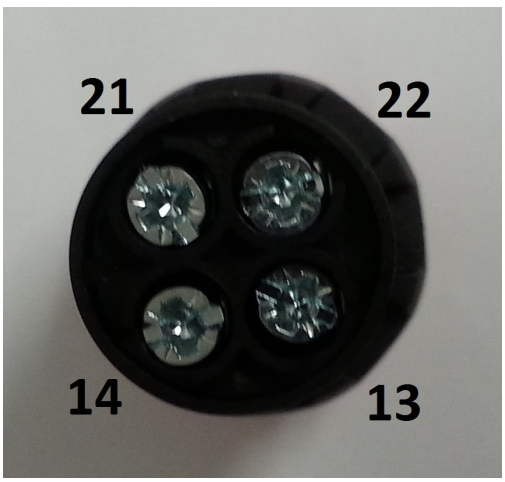
Your vehicle may be fitted with a push button Duress Alarm, please see the instructions below on how to operate your duress alarm.

The Duress Alarm will look similar to the one pictured here and be located on the dashboard of the vehicle within reach of the driver.

TO SEND A DURESS ALARM
Push the RED button all the way in until you hear a click. If your vehicle has been fitted with an Iridium Satellite Modem you will hear a series of beeps from inside the cabin of the vehicle (6 beeps, pause then repeat) until the duress notification has been sent by the vehicle. The vehicle will then attempt to send an alert back to base and to the nominated person/s within your company. The Duress Alarm will stay engaged until it is reset.

TO RESET THE DURESS ALARM
Simply twist your duress button until you hear it click and it will pop back out. The Duress Alarm has now been reset to the "off" position. You may hear a series of beeps from inside the cabin of the vehicle (6 beeps, pause then repeat) until the reset notification has been sent by the vehicle.

Wiring the Duress Button



Bottom side of Duress Button

GO9 Duress

Pin 13 - Aux 4

Pin 14 - Constant Power
(must be fused)

Iridium Satellite Modem

Iridium Satellite

Geotab offers Iridium satellite GPS fleet tracking solutions. The Iridium modem has been integrated with the GO9 platform as a backup means of communication. If the device can no longer communicate via cellular coverage it will send positional updates over the Iridium network, providing a reliable and cost effective fleet management solution.

Duress Add-on

The Iridium satellite modem can be wired into a duress button via an IOX Auxiliary harness. When triggered, it sends an "Emergency" message through the satellite network to the MyGeotab user. This feature will send a top priority message, regardless of the state of the vehicle. When triggered, the device will start a beeping sequence that continues until the message is received.

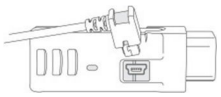
Harness Technical Specifications

Weight	■ 65 g
Size	■ Overall length: 850 mm
Housing	■ Widest Point: 17 mm x 34 mm Flame retardant black ABS
Interfaces	■ CAN: 500 Kbit/s
Inputs	■ Serial interface Emergency Switch Line: Open or shorted
Power Output	■ Iridium Interface: 12V/24V, up to 900 mA ■ Daisy Chaining: 12V/24V, up to 2500 mA
Power Consumption	■ Operating Mode: 40 – 550 mA ■ Sleeping Mode: 1.1 mA
Connectors	■ Keyed 5-pin mini-USB type-B plug: Daisy chain power and CAN in. ■ Keyed 5-pin mini-USB type-B socket: Daisy chain power and CAN out. ■ 12-pin Molex 4302-1200: Iridium
Installation	■ Single Wire: Emergency ■ Keyed mini-USB plug connects to GO9 or another IOX™ harness. ■ 12-pin plug connects to Iridium unit

Installation Instructions

1. Start with the Geotab GO9 device unplugged from the vehicle. Remove the blue IOX expansion port cover on your GO9.

2. Plug in the 90° USB connector of the IOX to the GO9. Secure the USB connector using a zip tie, being careful not to over tighten it, damaging the USB.



Note: The USB can only be inserted in one orientation (shown in image).

3. Choose an appropriate mounting location for the satellite modem. Keep in mind that the mounting location you have chosen for the GO9 and the length of wiring on the IOX-SATIRDv2 can influence the available locations to mount it. The modem location must not interfere with the safe operation of the vehicle.

4. The Iridium satellite antenna is a magnet mount antenna; however, a ring of two-sided tape has been added to the bottom of the antenna to cater for mounting on plastic. The antenna location cannot interfere with the safe operation of the vehicle or obstruct the driver's field of vision outside the vehicle in any way.

5. The antenna can be mounted below a dashboard provided there are no metallic objects or other obstructions directly above, that could interfere with satellite reception.
It is highly recommended to mount the antenna out of site and secured with at least one zip tie.

6. The antenna and IOX-SATIRDv2 cable are both connected to the satellite modem at the same end as the status LEDs. The LEDs indicate RED (power) and GREEN (connectivity).

7. Once your connections to the IOX-SATIRDv2 wiring have been made, connect the GO9 to the engine diagnostic port and immediately start the vehicle. Remember, your GO9 is now in debug mode.

8. **Important!**

Once you have completed all aspects of the installation, please ensure you call our Customer Service Team on **1300 653 395**, Option 1 and quote the relevant Company Name, Device Serial Number and Vehicle Details (e.g. Make & Model, Rego, Odometer & VIN Number) to confirm that the device is installed and tracking correctly. They can also update the vehicle's details in the client's database.

Termination Shunt

You may notice your IOX comes with a termination shunt installed in the expansion port. If you are installing more than one IOX in a daisy chain you will need to remove the shunt from each device in line with the exception of the "LAST" IOX connected. That shunt must remain in the last IOX and should be secured with a zip tie.

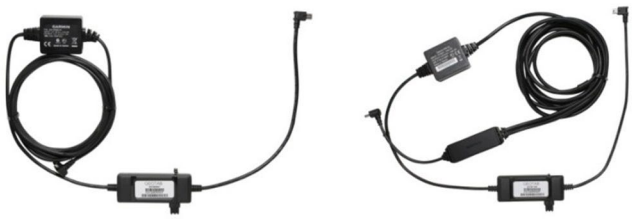
The use of the shunt in the LAST IOX is necessary for the GO9 to learn and configure the IOX as effectively as possible.

Note: Failing to install the shunt in the last IOX could affect IOX configuration, it is recommended you secure the shunt using a zip tie if not already done.

Device Technical Specifications and Features

Size	80 mm (L) x 54 mm (W) x 23 mm
Weight	(H) 158 g (0.35 lbs)
Inputs	RS-232 Interface
Housing	Aluminum casing
Environmental	Operating Temp. -40 ^{O}C to
Tests	80 ^{O}C
Operating Voltage	8 V to 36 V
Current Consumption	Operating Current: 100 - 125 mA
Antenna	Standard with magnet roof mount and sticky adhesive for optional dash mount.
Installation	Please refer to the installation manual available on the Geotab website.

IOX Garmin Harness



GO9 & Garmin

The Geotab GO9 device is the world's only expandable plug-&-play vehicle telematics platform that allows for unique IOX expandability. With Geotab being an Authorised Garmin partner, users are able to connect their Geotab fleet management solution to a Garmin device to allow for additional in-vehicle driver communication. With a few simple installation steps the system will be ready for use within minutes.

Top Features

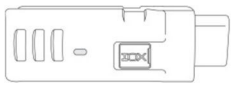
- Two-way communication between drivers and dispatchers.
- Send stops and routes directly to the vehicle.
- Drivers can change their status by touching the screen.
- Monitors for device disconnection, ensuring 100% up-time for communication.
- All messages are verified and time- stamped.
- All driver information is displayed on a map.

Harness Technical Specifications

Weight	▪ 190 g
Size	▪ Overall Length: 1900 mm + FMI 15/45 cable ▪ Widest Point: 43 mm x 22 mm
Housing	▪ Flame retardant black ABS
Interfaces	▪ CAN: 500 Kbit/s ▪ Serial interface
Power Output	▪ Garmin Interface: 5 V, up to 900 mA ▪ Daisy Chaining: 12 V/24 V, up to 2500 mA
Power Consumption	▪ Operating Mode: 40 - 1000 mA ▪ Sleeping Mode: 1.0 mA
Connectors	▪ Keyed 5-pin mini-USB type-B socket: Daisy chain power and CAN out. ▪ Keyed 5-pin mini-USB type-B plug: Daisy chain power and CAN in. ▪ 5-pin mini-USB type-B plug: Garmin
Installation	▪ Keyed mini-USB plug connects to GO9 or another IOX harness. ▪ Standard mini-USB plug connects to Garmin

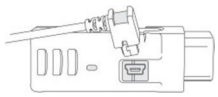
Geotab's IOX-GARMINWT (With Traffic) will allow you to plug a compatible Garmin into a GO9 via an IOX.

1. Start with the Geotab GO9 device unplugged from the vehicle. Remove the blue IOX expansion port cover on your GO9.

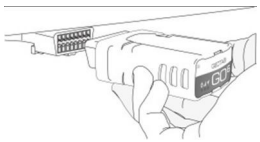


2. Plug in the 90° USB connector of the IOX to the GO9. Secure the USB connector using a zip tie, being careful not to over tighten it, damaging the USB.

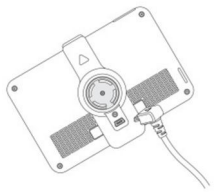
   Note: The USB can only be inserted in one orientation (shown in image).



3. Connect the GO9 to the engine diagnostic port and immediately start the vehicle. Remember, your GO9 is now in debug mode.



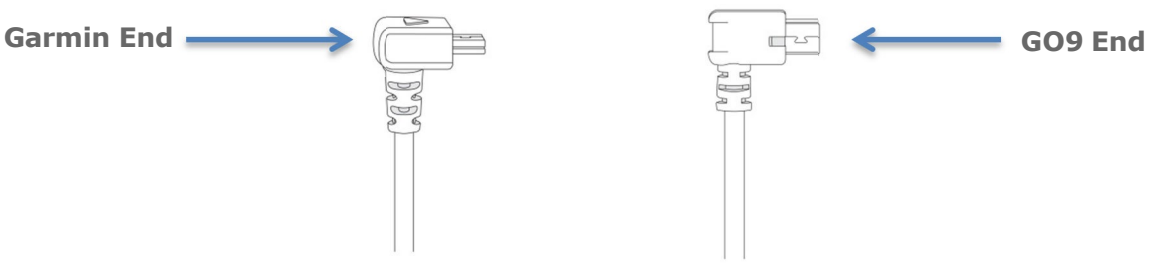
4. Plug in your Garmin.



5. **Important!**

   Once you have completed all aspects of the installation, please ensure you call our Customer Service Team on **1300 653 395**, Option 1 and quote the relevant Company Name, Device Serial Number and Vehicle Details (e.g. Make & Model, Rego, Odometer & VIN Number) to confirm that the device is installed and tracking correctly. They can also update the vehicle's details in the client's database.

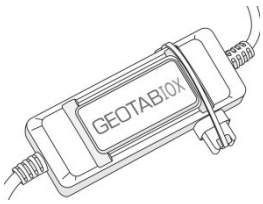
CAUTION: **The GO9 and Garmin Have Similar USB Connectors.**
IOX Garmin has two USB plugs. Since the Geotab GO9 device and Garmin have similar USB connectors; it is possible to plug in the wrong IOX USB plug into the wrong device. Remember that the end that goes into the GO9 will always have a notch. Make sure you insert the correct connector into its corresponding device.



Termination Shunt

You may notice your IOX comes with a termination shunt installed in the expansion port. If you are installing more than one IOX in a daisy chain you will need to remove the shunt from each device in line with the exception of the "LAST" IOX connected. That shunt must remain in the last IOX and should be secured with a zip tie.

The use of the shunt in the LAST IOX is necessary for the GO9 to learn and configure the IOX as effectively as possible.



Note: Failing to install the shunt in the last IOX could affect IOX configuration, it is recommended you secure the shunt using a zip tie if not already done.

IOX-NFC (Driver Identification)

The Geotab GO9 device is the world's only expandable plug-&-play vehicle telematics platform that allows for unique IOX expandability. Geotab has integrated Near Field Communications (NFC) to deliver simple Driver Identification where many drivers may operate pooled vehicles.

Top Features

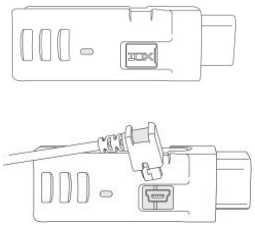
- Plug & Play
- Identifies drivers to vehicles
- Enables driver based reporting

Harness Technical Specifications

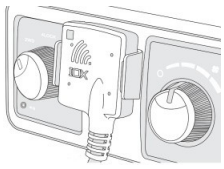
Weight	▪ 170 g
Size	▪ Antenna portion: 45mm x 50mm x 13mm ▪ Connector portion: and 30mm x 53mm x 15mm ▪ Cables: 1 m, 300mm
Housing	▪ Flame retardant black ABS
Interfaces	▪ CAN: 500 Kbit/s; Daisy chain; Ground
Frequency Range	switch 13.56MHz
Power Output	▪ 12V/24V
Power Consumption	▪ Running Mode: 100mA ▪ Sleeping Mode: 1.1 mA
Connectors	▪ Keyed 5-pin mini-USB type-B plug: Daisy chain power and CAN in. ▪ Keyed 5-pin mini-USB type-B socket: Daisy chain power and CAN out. ▪ 2-pin grounding socket (molex connector)
Installation	▪ Keyed mini-USB plug connects to GO9 or another IOX harness. ▪ Immobilizer module connects to 2-pin socket

Installation Instructions

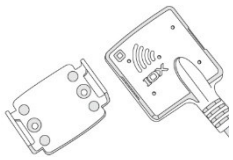
Start with the Geotab GO9 device unplugged from the vehicle. Remove the blue IOX expansion port cover from the GO9 and plug the 90° USB connector of the IOX into the port. Secure the USB connector using a zip tie, being careful not to over tighten it, damaging the USB.
Note: The USB can only be inserted in one orientation (shown in image).



Locate an appropriate spot to mount the NFC reader within safe reach of the driver and where it will not interfere with the safe operation of the vehicle. Keep the routing of the wiring harness in mind while choosing a location for the reader.



The NFC reader comes with a convenient mounting bracket that can either be screwed in place (screws provided) or taped in place (tape provided).
The reader itself is then snapped into the bracket.



Once your connections to the IOX-NFC have been made, connect the GO9 to the vehicles OBDII connector.

Tag verification:
To test the NFC installation touch a valid NFC tag to the reader - the Green LED on the reader will flash twice when the tag is read. For additional tags touch each tag one at a time to the reader - the LED will flash twice for each tag read.
Once an immobilization relay kit has been installed and the feature activated in MyGeotab you must touch a valid ID tag in order to start the vehicle. Failure to touch a valid tag prior to starting will cause the GO9 to beep continuously and the vehicle will not start until a valid tag is touched.
After a failed attempt the NFC resets (stops beeping) in about 30 seconds.

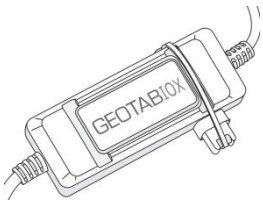
Important!

Once you have completed all aspects of the installation, please ensure you call our Customer Service Team on **1300 653 395,** Option 1 and quote the relevant Company Name, Device Serial Number and Vehicle Details (e.g. Make & Model, Rego, Odometer & VIN Number) to confirm that the device is installed and tracking correctly. They can also update the vehicle's details in the client's database.

Termination Shunt

You may notice your IOX comes with a termination shunt installed in the expansion port. If you are installing more than one IOX in a daisy chain you will need to remove the shunt from each device in line with the exception of the "LAST" IOX connected. That shunt must remain in the last IOX and should be secured with a zip tie.

The use of the shunt in the LAST IOX is necessary for the GO9 to learn and configure the IOX as effectively as possible.



Note: Failing to install the shunt in the last IOX could affect IOX configuration, it is recommended you secure the shunt using a zip tie if not already done.

Suspected Tampering

As an installer, if you suspect that a device has been subject to tampering, you should first take detailed photographs of the potential tampering before calling the Fleet Complete Helpdesk on **1300 653 395**.

Please then complete the following page with specific details regarding the tampering witnessed.

Please note that in no instance is it necessary, nor deemed appropriate, to discuss tampering suspicions with the driver of the vehicle.

Installation Incidents

The form is also used to identify any issues experienced with an installation, to notify Fleet Complete of any incidents that occur while you are installing a Fleet Complete IVMS unit. Please complete with all relevant data and forward to salesfulfilment@fleetcomplete.com.au

Please include photographic evidence.

Incidents could include any accidental vehicle damage, potential issues that could arrise after the installation that could affect the IVMS unit's performance, or any unusual installation situations that may occur. If you have any queries, please do not hesitate to contact your Installation Coordinator on **1300 653 395**.

Installation Incident Report

Installer: _____ Installer #: _____

Email: _____ Ph/Mob: _____

Installation/Troubleshoot Booking details

Client Name: _____

Location: _____ State: _____ Postcode: _____

Date: _____/_____/_____ Time: _____

Vehicle details

Vehicle Make: _____

Vehicle Model: _____

Registration: _____

VIN: _____

Incident type

☐ Suspected Tampering

☐ Installation Incident

IVMS Serial: _____

Iridium IMEI: _____

Incident details

_____

_____

_____

_____

_____

_____

_____

_____

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Post-Incident Install Status

☐ No action required ☐ Second site visit required ☐ Not repairable ☐ Escalation (Fleet Complete decision)

EXPANDABLE GPS VEHICLE TRACKING DEVICE

Lead your fleet into the future with Geotab GO9

FleetComplete®

fleetcomplete.com.au | 1300 653 395

Geotab GO9 — The evolution of fleet tracking

Automate. Integrate. Innovate. The Geotab GO9 is redesigned from the ground up and built to support the needs of your fleet now and into the future.

Near-real-time vehicle data

Get rich, accurate data on location, vehicle health, driving behavior and much more.

Compact, durable design

The small but mighty GO9 is housed in flame retardant black ABS.

Intelligent in-vehicle driver coaching

Improve driving habits with in-vehicle feedback. Set up rules to reduce unwanted driving behaviors like speeding, idling, or not wearing a seat belt. Advance driver safety further by adding a buzzer or Geotab GO TALK for in-vehicle verbal coaching.

Breakthrough collision detection and notification

Collision alerts keep you in the know and provide a detailed summary of events. Detection of a suspected accident will prompt the automatic upload of detailed data from the device to allow for forensic reconstruction of the event.

End-to-end cybersecurity

Geotab platform security provides end-to-end data protection. Security methods include authentication, encryption, message integrity verification, unique ID and non-static security keys, over-the-air updates that use digitally-signed firmware to verify that updates come from a trusted source. Device security features are implemented using a FIPS 140-2 validated cryptographic module. Certificate #3371.

Over-the-air updates

New updates and improvements are sent to your device seamlessly. The GO9 permits over-the-air initial provisioning and firmware updates for the device, GPS (GO9-only), and select cellular modems (LTE only).

LTE connectivity

Communication on the LTE network delivers speed where you need it and longevity for peace of mind. LTE connectivity is available on select products.

Device expandability via IOX Technology

The IOX port lets you get even more from your device. Integrate with third-party providers that suit your needs. Add on hardware for Driver ID, hours of service (HOS), temperature tracking, asset tracking, satellite communication and more.

Engine and battery health assessments

Extract valuable information on vehicle health and status. Record VIN, odometer, engine faults, seat belt and more.

Built-in auto-calibrating accelerometer and gyroscope

Measure precise vehicle movements such as harsh braking and acceleration with the high quality accelerometer and newly added gyroscope.

Geotab GO9 highlights

GO9 hardware innovations

- The device code space provides the capacity for further native vehicle support and more features — such as the improved fuel usage support that determines the engine size based on the VIN (vehicle identification number).
- The accelerometer — analyzing the X, Y, and Z axis — is enhanced with the addition of a gyroscope — which analyses the angular velocity (such as spinouts during accidents or harsh driving) — to provide enhanced data for accident detection and examination.
- Updated GPS module to a GNSS (Global Navigation Satellite System) module offering both GPS and GLONASS support. This new module provides improved latch times (time-tofirst-fix) and enhanced location data accuracy.

Updates made easy

- OTA (over-the-air) updates include device, GPS, and select cellular modems (LTE only).
- The latest firmware and configuration are applied at time of installation for enhanced privacy, security, and reliability.

The most powerful GO device ever

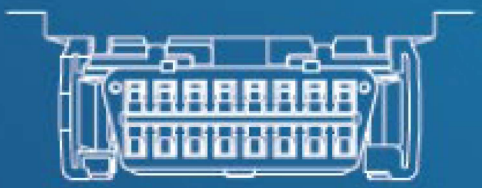
Upgrade to the next generation of GPS vehicle tracking devices. With a 32-bit processor, more memory and more RAM, the Geotab GO9 is the most powerful GO device ever.

Simple installation

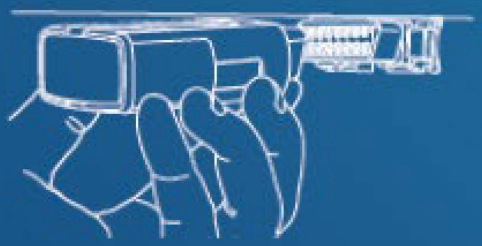
Simply plug the GO9 directly into your vehicle's OBD II port or with an adapter where needed. No antenna or wire-splicing required. The device auto-calibrates to accomodate for installation in any orientation. See installation sheet for full details.

It's as easy as 1-2-3

1



2



3

Contact us at sales@fleetcomplete.com.au

www.fleetcomplete.com.au | 1300 653 395

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