ATTENTION: Activation Required

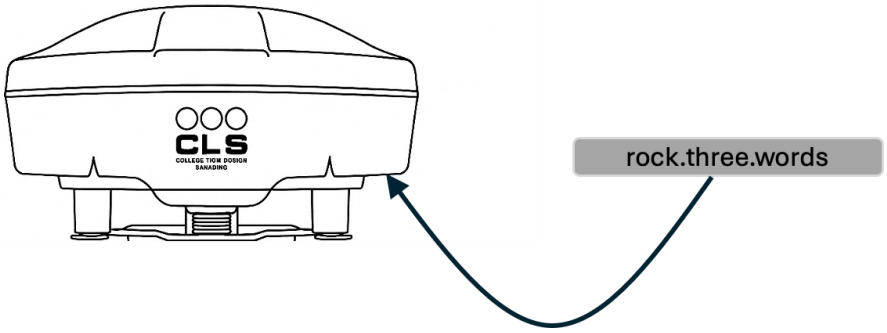
All units require activation prior to installation; this unlocks your over-the-air reporting, remote configuration, and enables your APNT licence.

It is therefore **critical to complete our online activation form** so that our team can finalise the setup of your device for smooth operation during your subscription term.

https://docs.groundcontrol.com/activation-helper

or

contact our helpdesk help@groundcontrol.com



For activation **you will need your 'rock.three.words' serial number**, which is printed on a label located on the underside of the above deck unit and can also be found in your paperwork.

Ground Control
A CLS Group Company

RockFLEET Assured

Quick Start Guide

v5.0 - 12th November 2026



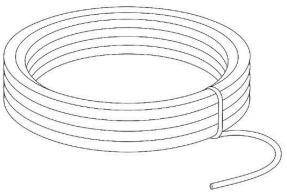
CAUTION: Contains LiFePO4 batteries (Class 2 power source). NOT user replaceable. Protect from extreme heat.
CAUTION: While in operation this device should not be subjected to the low pressures that occur at high altitude. The maximum operation altitude is 4000m.

What's in the box

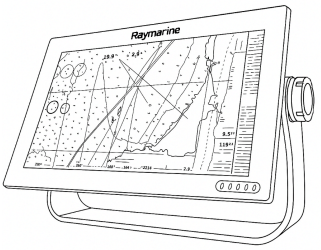
RockFLEET Assured - Full bundle



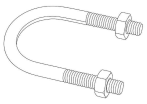
RockFLEET Assured - above deck unit



Communication/power cable; up to 100 metres



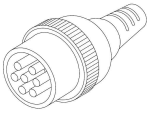
Raymarine Axiom+ 9 Chart Plotter - below deck unit



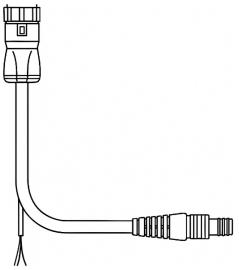
Pole mounting kit; diameter 38-44mm



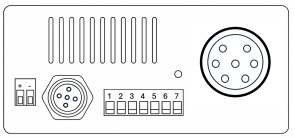
Female connector; attach to above deck unit



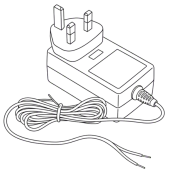
Male connector; attach to power hub



Raymarine 'Y' NMEA cable



Power Hub

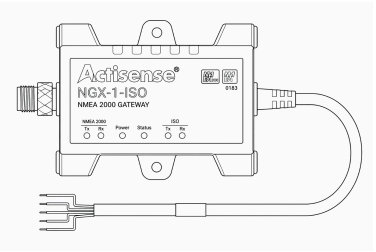


24V DC power supply with universal plug adapters; connect to Power Hub

Optional Actisense accessory bundle



NMEA 2000 T-Piece



Actisense NGX-1-ISO

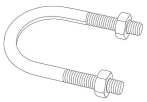


25cm drop cable

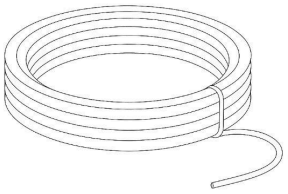
RockFLEET Assured - NMEA 0183 and NMEA 2000 stand-alone bundles:



RockFLEET Assured - above deck unit



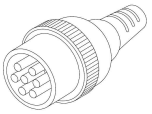
Pole mounting kit; diameter 38-44mm



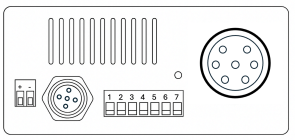
Communication/power cable; up to 100 metres



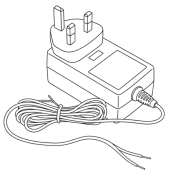
Female connector; attach to above deck unit



Male connector; attach to power hub



Power Hub

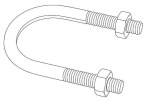


24V DC power supply with universal plug adapters; connect to Power Hub

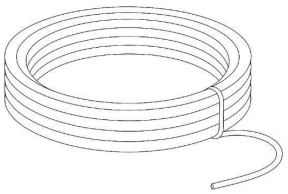
RockFLEET Assured - Rapid Deploy bundle



RockFLEET Assured - above deck unit



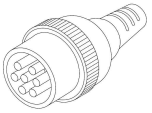
Pole mounting kit; diameter 38-44mm



Communication/power cable; up to 100 metres



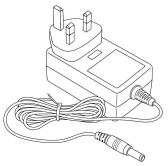
Female connector; attach to above deck unit



Male connector; attach to below deck unit



Ray Marine Axiom+ 9 Chart Plotter in rugged case - below deck unit



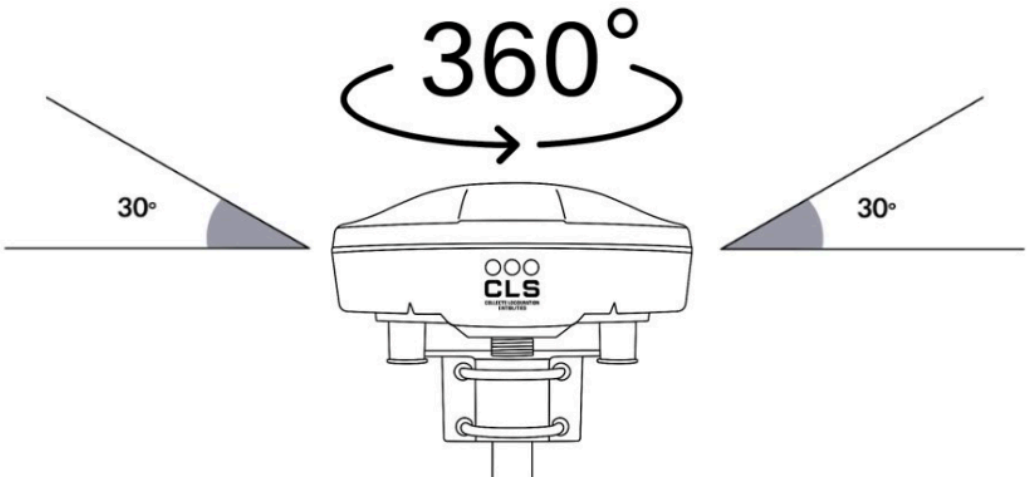
24V DC power supply with universal plug adapters; connect to Rugged Case

1. Installation - Above Deck Unit

The above deck unit is supplied with a pole mount kit for vertical installation on a pole ~38-44mm in diameter. Placement will differ from vessel to vessel and is determined by these key considerations:

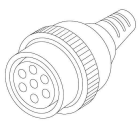
- The above deck unit has a clear view of the sky
- Located within the 100m cable length constraints of the unit
- Is not located within 1 metre of any L-band devices
- Ensure the above deck unit is installed outside of any radar's **primary radiation pattern** to prevent signal degradation and potential damage

The RockFLEET Assured utilises the Iridium LEO satellite constellation and requires a clear view of the sky for optimum performance; in practice this means an unobstructed view for a 30 degree elevation from the top of the unit, spanning 360 degrees across the horizon.



More advice on positioning the unit can be found in an FAQ on our website: https://docs.groundcontrol.com/iot/signal_strength

Cable connection

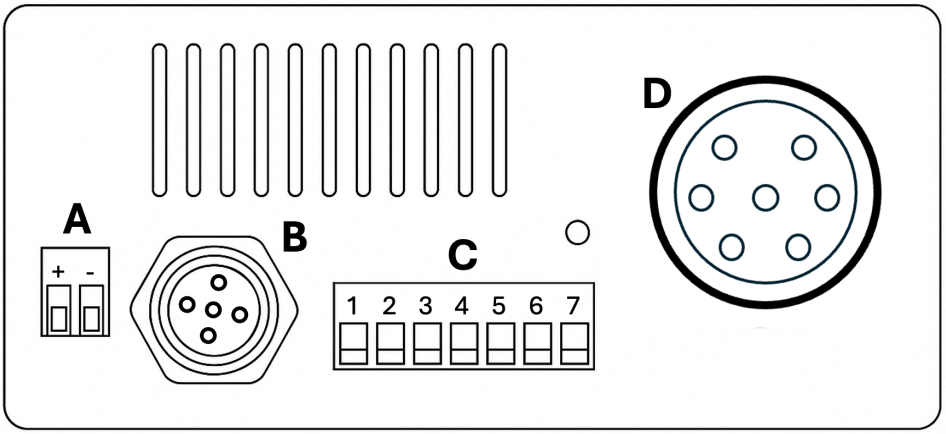


Attach the 7-pin female connector to the RockFLEET Assured above deck unit; please ensure that this is **seated correctly and securely screwed on to the port** on the underside of the case to maintain the IP67 rating.

2. Installation - Below Deck Unit

Power Hub (where supplied)

The RockFLEET Assured Power Hub provides a below deck junction box that offers simplified installation and power management for the RockFLEET Assured. The Power Hub will be configured to match your chosen RockFLEET Assured build option (NMEA 2000 or NMEA 0183 - note: factory build only, cannot be reconfigured once shipped).

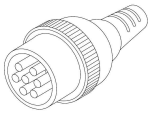


https://docs.groundcontrol.com/Tracking-and-Messaging/RockFLEET-Assured/power-hub

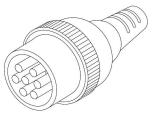
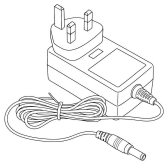
Connector A	DC power input connector with screw terminals. Supply voltage is 10-30V, positive wire left and negative wire right.
Connector B	Standard NMEA 2000 female connector for attaching the Ground Control supplied Chart Plotter or any 3rd party equipment that supports our position and AIS NMEA 2000 sentences. The Power Hub includes a NMEA 2000 terminator, completing a backbone connection to the RockFLEET Assured above deck unit, and connector B offers a drop/spur connection to the attached device; therefore cable lengths to the device should be no more than 6 metres.
Connector C	1: Power out + *Power output for Chart Plotter (15V DC)* 2: Power out - 3: Screen *Cable screen connector for Chart Plotter (where required). Also provides a reference ground for RS-422.* 4: RS-422 TX+ 5: RS-422 TX- 6: RS-422 RX+ 7: RS-422 RX-

Connector D	7 pin Amphenol connector to connect the Power Hub to the RockFLEET Assured above deck unit.

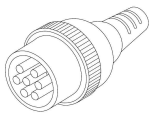
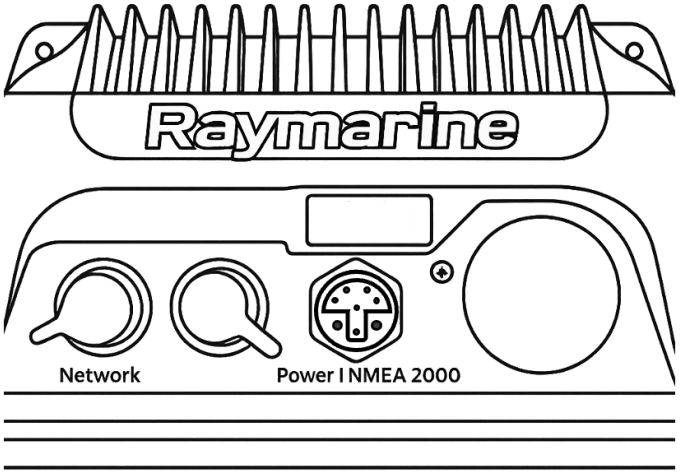
Cable connections for ‘Stand Alone’ bundle

Step 1	 Connect the 7-pin male connector from the above deck unit to the Power Hub **Connector D**
Step 2	For NMEA 0183 versions you can output the NMEA to your equipment via an RS422 connection wired to pins 4,5,6 and 7 on **Connector C** of the Power Hub. Terminal 4: RS422 TX + (TX from RF Assured) Terminal 5: RS422 TX - Terminal 6: RS422 RX + Terminal 7: RS422 RX - For NMEA 2000 versions, connect an NMEA drop/spur cable to **Connector B** of the Power Hub; cable length should be no more than 6 metres.
Step 3	Connect a power supply of 10-30V DC to **Connector A** + and - terminals

Cable connections for ‘Rapid Deploy’ bundle

Step 1	 Connect the 7-pin male connector from the above deck unit to the back of the Rapid Deploy Chart Plotter case.
Step 2	 Use the supplied 24V DC Power Supply and connect to the back of the Rapid Deploy Chart Plotter case; a set of international plug adapters are included for connection to the 220V AC on-board power supply.

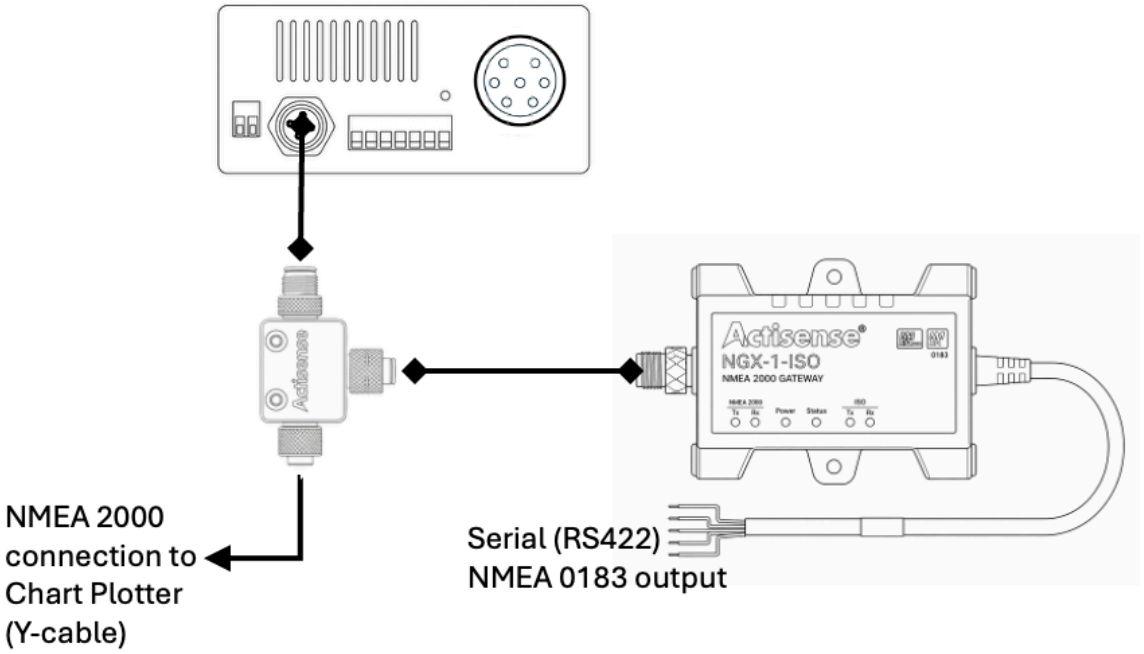
Cable connections for ‘Full’ bundle

Step 1	 Connect the 7-pin male connector from the above deck unit to the Power Hub **Connector D**
Step 2	 Attach the largest NMEA 2000 connector of the Raymarine ‘Y’ cable to the back of the Axiom 9+ Chart Plotter.
Step 3	Attach the smaller NMEA 2000 connector of the Raymarine ‘Y’ cable to **Connector B** of the Power Hub.
Step 4	The remaining 3 wires of the Raymarine ‘Y’ cable can now be attached to **Connector C** of the Power Hub: Terminal 1: Red (power +) Terminal 2: Black (power -) Terminal 3: Grey (screen)
Step 5	Connect a power supply of 10-30V DC to **Connector A** + and - terminals

Actisense NMEA Converter Installation (Optional)

For installations where you want to integrate an NMEA 0183 stream in combination with the NMEA 2000 Chart Plotter, we can supply the optional Actisense NGX-1-ISO converter.

To install, the Actisense is installed inline, using a T-piece connector, to the NMEA 2000 feed from the Power Hub:



The RS422 pinout for the Actisense cable is as follows (other configurations are possible, see: Actisense User Manual):

WHITE	Talker (A/+)	YELLOW	Listener (A/+)
BROWN	Talker (B/-)	GREEN	Listener (B/-)

4. Operation Guide

Power On Checks

For simple validation that your unit is working following the installation view the positions being shown on the chart plotter as per the section below. Alternatively, you can download our 'RockCONNECT IoT' app:
iOS: https://apps.apple.com/gb/app/rockconnect-iot/id6749900371
Android: https://play.google.com/store/apps/details?id=com.gc.iot

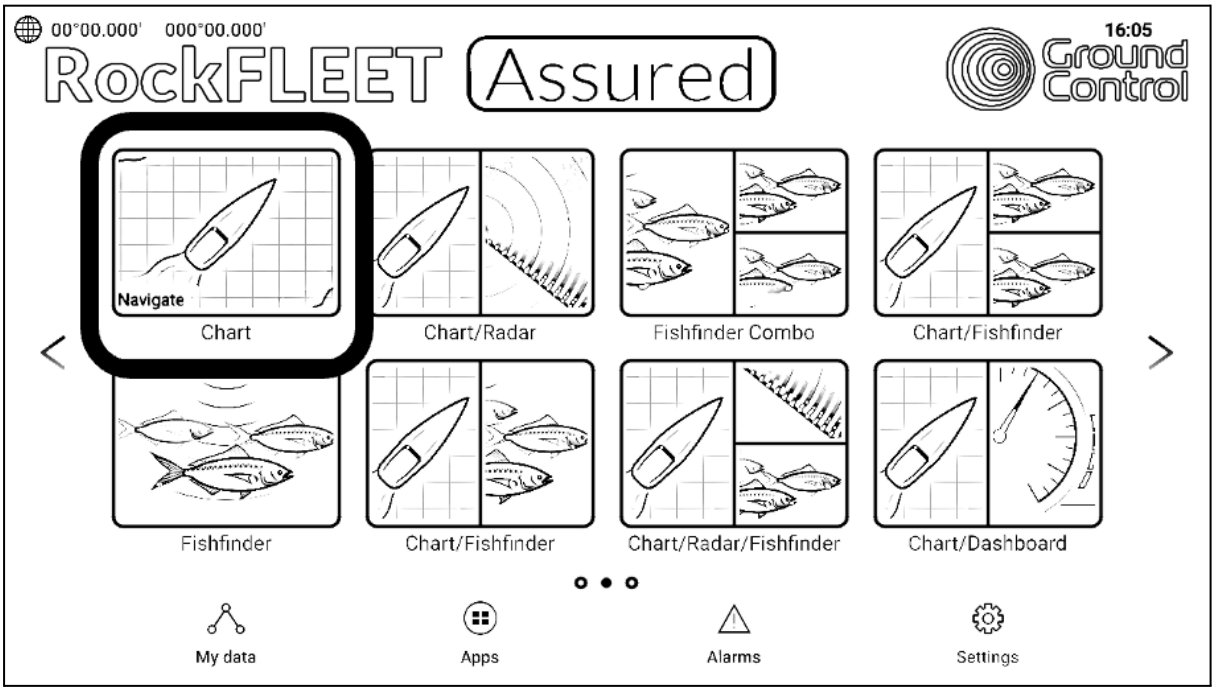
Connect to the unit using the 'rock three words' in the App and you should receive GNSS and APNT positions within 1-2 minutes of start up. These are visible in the 'Location' section of the app.

Using the Chart Plotter

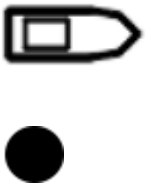
Once the installation and activation has been completed, your Chart Plotter (where included) will display both the APNT and GNSS position and alert when any GNSS jamming or spoofing events are detected.

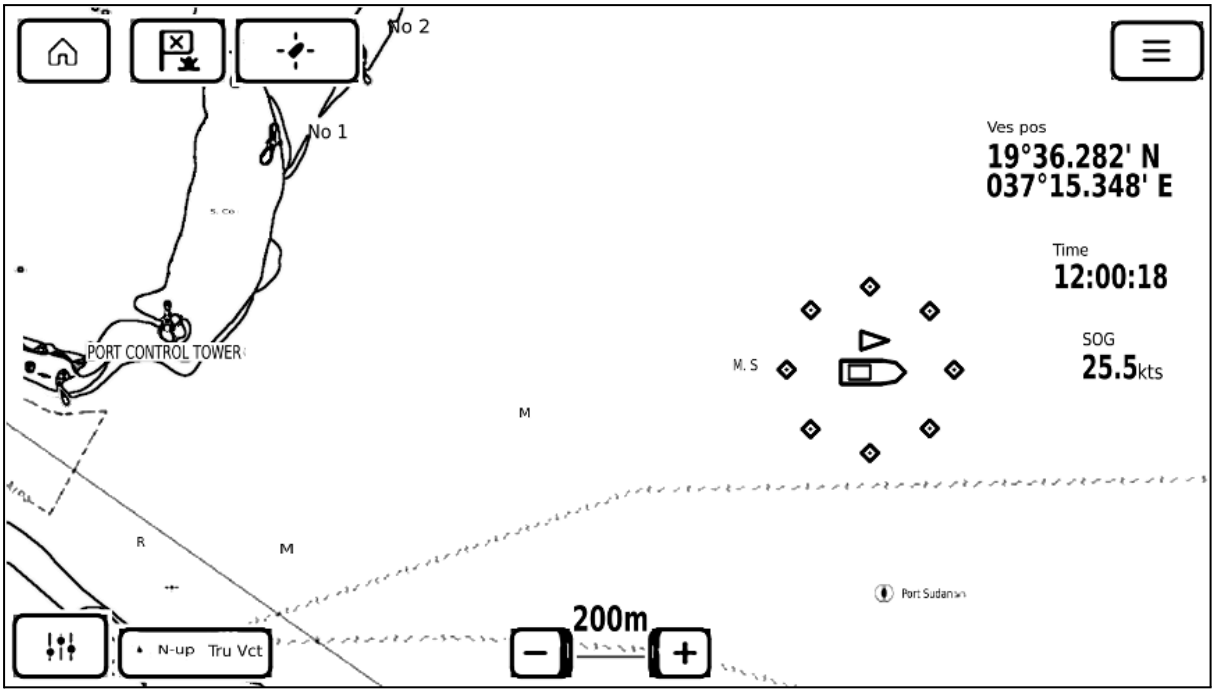
***** The Chart Plotter is pre-configured to use the RockFLEET Assured and the internal GPS should remain disabled.***

Choose the 'Chart' option from the home menu:



Once in the ‘Chart’ view you should see a map of your current location with the APNT and GNSS positions being displayed via the following icons:

The APNT position is displayed as the Vessel’s position. When moving this is shown as a Boat icon (configurable), and when stationary as a black dot. Any position data, speed and course shown on the screen relates to this source.	
The GNSS position is shown as a green triangle.	
The circle of diamond shapes represents the ‘Estimate Position Error’ of the reported APNT position, as an indication of the confidence of the position accuracy.	



Configuration Options

***** Your unit will be supplied with the recommended configuration settings already enabled, and our team will perform a check during the online activation.***

To apply local updates to your settings you can utilise our 'RockCONNECT IoT' bluetooth app available for both iOS and Android:
https://apps.apple.com/gb/app/rockconnect-iot/id6749900371
https://play.google.com/store/apps/details?id=com.gc.iot

You can also perform remote over-the-air configuration changes via our Cloudloop platform using the login details provided by your Account Manager:
http://devicemanager.cloudloop.com/

Changing your over-the-air reporting frequency

Your RockFLEET Assured is configured to not send positions over-the-air to avoid any unnecessary costs being incurred during transit and installation. If you have purchased airtime tracking, then you will need to configure the 'reportInterval' (in seconds) on your device:

- 300: 5 minute tracking
- 900: 15 minute tracking

Changing the Chart Plotter alerts

The supplied Axiom 9+ Chart Plotter is able to display GNSS spoofing, jamming and time difference alarms (via AIS safety messages). These are controlled using the following settings:

- **GNSS Jamming**
    - "Position Validity Timer": Time (in seconds) that GNSS fixes are continuously detected as INVALID or JAMMED before an alarm is triggered. *Default is 30 seconds, use '0' to disable.*
- **GNSS Spoofing**
    - "Position Compare Timer": Time (in seconds) the GNSS position needs to continuously be outside of the APNT boundary* before the SPOOF detection alarm is triggered. *Default is 30 seconds, use '0' to disable.*
- **Time Inteference**
    - "UTC Difference Limit": How many seconds the GNSS time needs to differ from APNT time before time interference is suspected.
    - "UTC Difference Timer": Time (in seconds) that the UTC Difference is continuously detected before an alarm is triggered. *Default is 5 seconds, use '0' to disable.*

- **Alarm Limit**: After an initial alarm has sounded, this option allows you to suppress subsequent alarms for a defined period (in seconds), e.g. a snooze function. *Default is set to 30 minutes (1800 seconds).*

* APNT boundary is calculated as the radius of the Estimated Position Error multiplied by the EPEscale setting (default = 1x)

Troubleshooting & Support

The latest information and advice on the RockFLEET Assured features and configuration can be found on our documentation website:
https://docs.groundcontrol.com/tracking/rockfleet-assured

For specific support and questions, please feel free to contact our support team via email:
help@groundcontrol.com

You can also view our support pages for regional telephone numbers:
https://www.groundcontrol.com/support/

FAQs

Why am I not seeing a position?	Ensure that the RockFLEET Assured is powered on. Check that positions are displayed via the Bluetooth app; if so, then investigate the connection / configuration of the below deck unit. Ensure you are providing a clear and unobstructed view of the sky to the above deck unit. Check that the APNT licence key is valid.
My device is not able to read the NMEA 0183 output	Check the baud rate of the RockFLEET Assured is correctly configured to match your equipment, and the wiring is correctly connected. Check that the correct NMEA sentences have been configured to be sent from the RockFLEET Assured, and that 'NMEA forwarding' is enabled.

	Check the configuration of your NMEA equipment to ensure it is expecting one/both of the GPxxx and GNxxx ‘talkers’.
I am only receiving GNSS (GNGGA) positions and not APNT (GPGGA)	Check that your APNT licence is valid; this is visible within the Bluetooth app or via Cloudloop Device Manager. Ensure that the device has been rebooted after applying a new licence key. Check that the GPGGA sentences are enabled via the Bluetooth App or Cloudloop Device Manager.
I am not seeing any positions being reported in Cloudloop Tracking	Check that the ‘reportInterval’ setting on your device is not set to 0. Ensure that your device has an Active IMT data plan.
Why do I only see basic maps on my Chart Plotter?	The Raymarine Axiom chart plotter requires a ‘Lighthouse’ map for detailed navigation views and these are installed via an SD card for a specific region; each SD card is an optional extra and can be purchased from Ground Control - please contact your Account Manager or sales@groundcontrol.com
My vessel position on the Chart Plotter is jumping or I suspect it is incorrect.	The chart plotter may be misconfigured to use its internal GPS and is therefore not receiving the RockFLEET Assured APNT position. Check the ‘Settings → Internal GPS’ option on the chart plotter and ensure it is disabled.
The Raymarine chart plotter is reporting no satellite information in Settings.	This information relates to the internal GNS of the chart plotter which is disabled by default (correctly), as it is replaced by the positions from the RockFLEET Assured.