INSTABOOM LITE
Mobile Barrier Gate

PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE PROCEEDING WITH OPERATION

Version 2.1

21 August 2023

Contents

Product Introduction:

The Instaboom Lite Portable Barrier Gate is a lightweight, solar powered barrier arm, suited to short duration traffic management of major projects and construction sites. Having a physical barrier arm provides instant demarcation for your worksite. The Lite Barrier is only 48kgs so can be manually offloaded by two people and set up in minutes.

Included in this manual are two TMP diagrams showing two possible uses of the INSTABOOM in the road environment that allow for the control of traffic with the arm.

Always check www.rtl.co.nz for new versions of this installation manual – Search Instaboom Barrier

Also included is a printable maintenance checklist used for monthly inspections.

Component List:

Component list

- 1x mobile barrier
- 1x red wheel-barrow handle
- 3x boom sections
- 1x 4 button remote fob (red)
- 1x mains charger
- 1x NZ 3m power cord
- 1x Stop Sign (with 2x M6 x 60mm stainless steel bolts)

Normal Operation

Position

Move the INSTABOOM into position on firm level ground using the yellow handle on the rear of the unit or the red handle fitting supplied separately.

Remove the red handle if you have used this.

For best performance, locate the INSTABOOM product in natural daylight, ideally in direct sun.

Assemble the boom

Remove the three boom sections from the rear storage area and assemble them to form the boom arm. The pieces slot together and click into place with spring clips.

New Zealand specifications require a Stop Sign to be mounted to the barrier arm boom. This is supplied with your purchase.

The sign is fixed to the mid boom section by 2x M6 * 60mm stainless steel bolts and nuts.

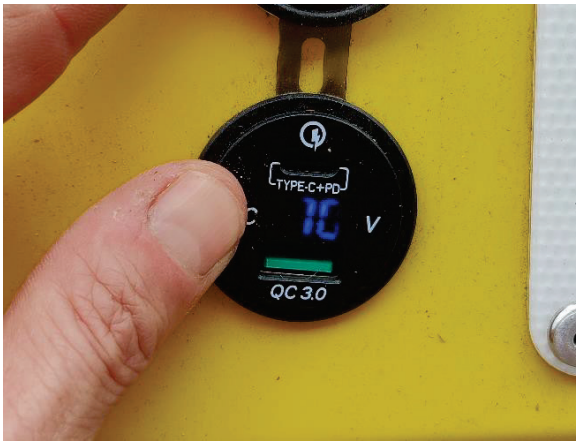
The Stop sign can be utilized on either side of the boom arm, dependent on the barrier arm orientation. Please check the nuts are sufficiently tight before operation.

Fit the boom to the INSTABOOM

Using two hands, position the boom onto the mount on the INSTABOOM. Support the boom with one hand while compressing the spring clip with the other and the boom assembly will slot into place

Switch the INSTABOOM on

Turn the INSTABOOM on using the two position switch.



Check the charge level

The USB charge port can be used to charge USB devices such as your mobile phone. You can press the button to view the current charge state of the INSTABOOM. ***Once the charge reaches 11.9v*** *please follow the procedure below to charge your barrier from a local mains supply.*

Move the barrier

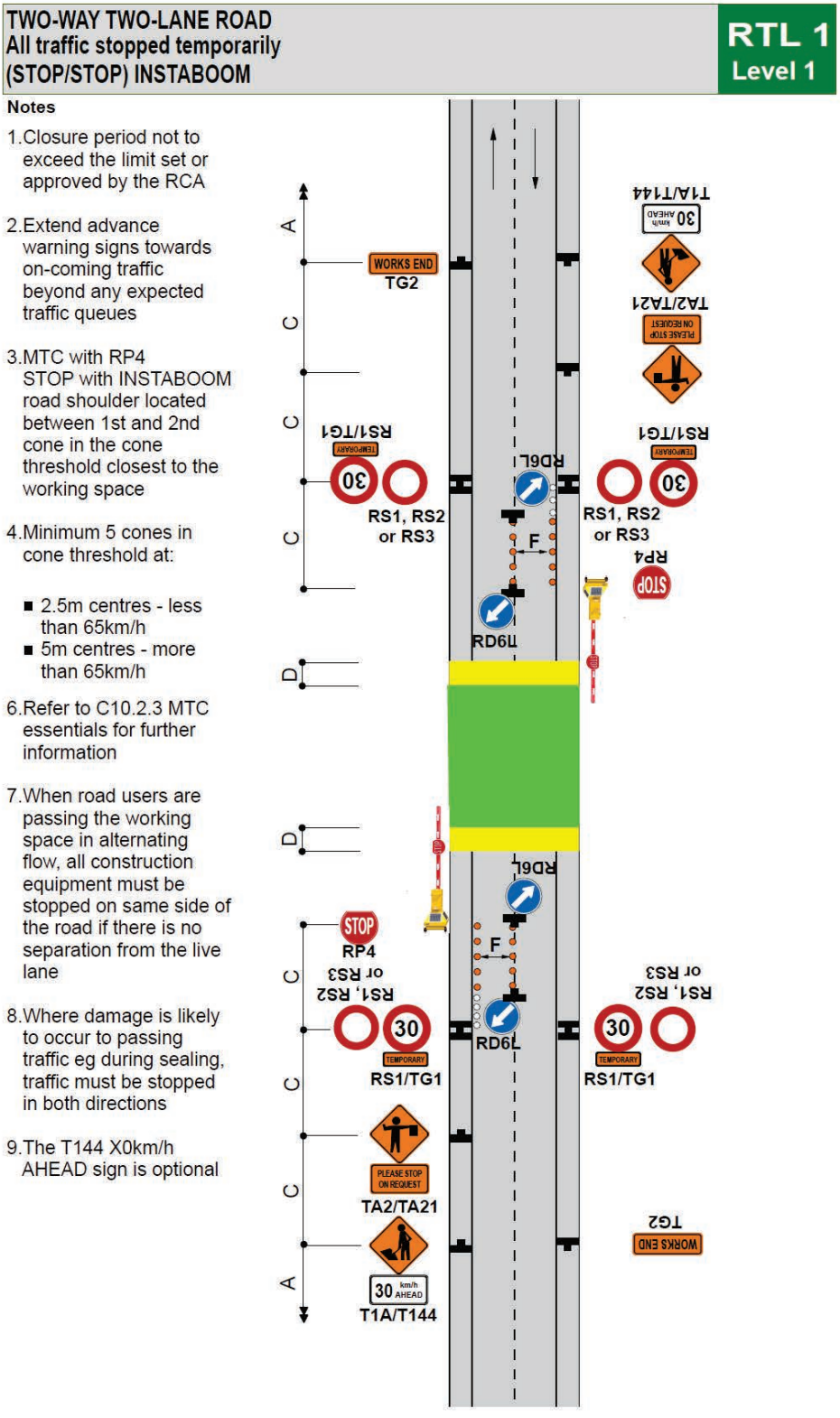
Press the button on the fob which corresponds to the INSTABOOM you have selected. The barrier will come down. Click the same button again to send it up to the vertical position. The barrier works on a "push to open, push to close" basis.

It is possible to programme a barrier to each of the buttons on the remote fob. Please see guide below for a guide on this process.

Operation

Mobile Barriers should be operated within a clear line of sight by the operator to verify if the boom arm is in the raised or lowered position. This is a manually controlled, remote operated barrier arm; responsibility for safe operation lies entirely with the operator of the plant.

See Traffic Management Diagram suggestion at the end of this document for recommended site layout to use the boom safely and in accordance with CoPTTM layout requirements when working in the public road environment.

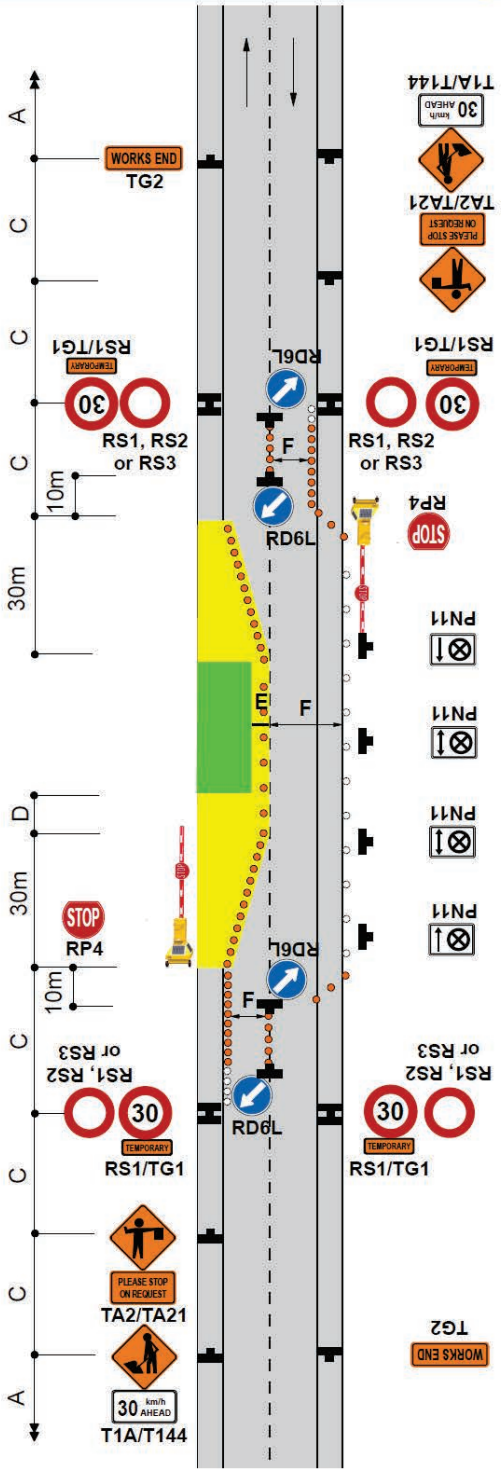


TWO-WAY TWO-LANE ROAD
Single-lane alternating flow
Manual traffic control (STOP/GO) INSTABOOM

RTL 2
Level 1

Notes

1. Extend or place extra advance warning signs towards on-coming traffic beyond any expected traffic queues
2. A 30m return taper at the end of the closure is mandatory
3. Cones are required on edge of the temporary lane opposite closure if road is not well defined
4. To allow heavy vehicles to manoeuvre, cones in the channel must be offset by at least 10m where the direction changes. Refer C8.2.12
5. Use PN11 no stopping signs, if necessary
6. MTC with RP4 STOP paddle with INSTABOOM on road shoulder located between 1st and 2nd cone in the cone threshold closest to the working space
7. Minimum 5 cones in cone threshold at:
   - 2.5m centres - less than 65km/h
   - 5m centres - more than 65km/h
8. Refer to C10.2.3 MTC essentials for further information
9. Delays cannot exceed the time approved by the RCA (normally 5 to 10 minutes)
10. The T144 30km/h AHEAD sign is optional



Monthly Maintenance Checklist:

On top of daily operator checks, it is recommended that a more in-depth mechanical inspection is carried out on a monthly basis. This is to ensure optimal operation. For high use sites, this may need to be done on a more frequent basis. The main top cover needs to be removed to carry out mechanical checks.

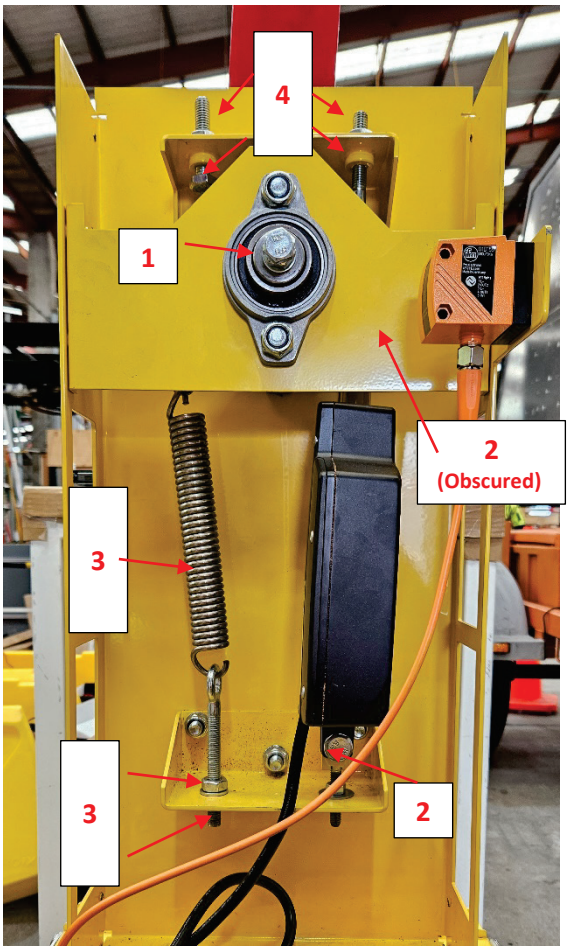
Print off the Monthly Maintenance Section and check off each item as it's completed. Do this Monthly.

Checklist:

- Comprehensive Visual inspection of LITE Barrier Arm and components noting any wear and tear and or user damage.
- Check for smooth BOOM operation and boom arm is sitting level in the down position
- Check Battery levels and for any loose wiring
- Check Safety Beam & Contact Feature operate correctly on opening cycle
- Check Safety Beam & Contact Feature operate correctly on closing cycle
- Clean Safety Photocells (sensor)
- Lubricate hinges and other moving parts
- Check & Tighten internal nuts and bolts on the levelling bolts, main shaft and the levelling bolts
- Check & Tighten 4x scrub screws on the main shaft.

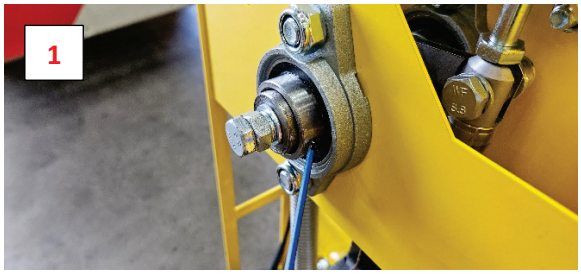
(Using a 17mm Spanner):

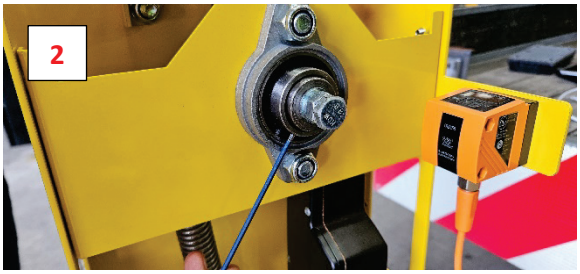
- Check & tighten (if required) shaft bolt and nut (1)
- Check LINAK top nut & bolt and bottom nut & bolt (2)
- Check & adjust spring tension if required AND check and tighten eyebolt bottom securing nut (3)
- Check Boom is sitting level and levelling tighten nuts and bolts as required. (4)

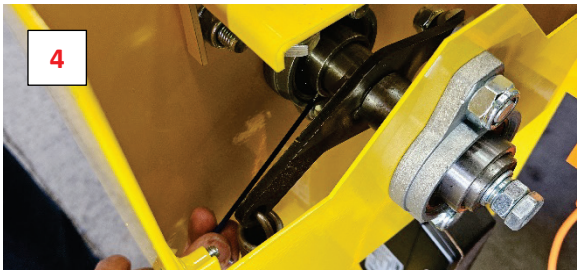


(Using a 2.5mm Allen Key):
Check tightness of 4x grubscrews on Shaft. Tighten as required. Each location is indicated by the photos below.

- Front Section – Check and Tighten two grubscrews (1 & 2)
- Back Section – Check and Tighten two grubscrews (3 & 4)







Safety Features:

Non-contact safety

The INSTABOOM Lite is equipped with a Class 1 laser sensor to scan the area under the boom to prevent the barrier coming down and striking objects or people. If an object interrupts the laser beam in an area between 300mm and 3000mm in a direct line out from the laser window, the barrier will not come down. If an object is detected while the barrier is moving to come down, it will reverse direction and return to the vertical.

Contact safety

If the boom does come into contact with an otherwise undetected object while moving to the horizontal position, it will detect this and reverse direction, returning to the vertical and then will attempt to cycle again.

Charging:

Operational voltage

Your INSTABOOM Lite is a 12v system designed to be solar/hybrid. This means that, while it is equipped with 40w of solar, it will require periodic charging dependent on use.

You can use the USB charger output to check the voltage of your INSTABOOM. Once below

11.9v it will require charging.

Connect the charger

Your INSTABOOM Lite was shipped with a separate mains charger. Connect the charger output cable to the Anderson socket on the side of the barrier. Then connect the mains cable to your local mains outlet (110-240v AC).

Charge the INSTABOOM

If the voltage is seen to drop below 12V, it will be necessary to charge the unit from another power supply. This is via the 'ANDERSON' socket and either supplied mains step down charger or car charger**.**

Switch the charger on and allow the INSTABOOM to charge for at least 12 hours. The charger is a trickle charger and a 24 hour charge is the best way to condition your batteries.

Cleaning the Solar Panels

For optimal charging, solar panels should be periodically wiped clean with a soft cloth.

Recovery from Low Voltage:

Recovery from low voltage 1

If the INSTABOOM is allowed to drop below operational voltage, the solar charge regulator will cut off power to the control board to allow the device to recharge from solar. In this eventuality you will need to switch on the device manually. To do this, remove the cover from the top turret by unscrewing the 6 retaining screws

Recovery from low voltage 2

Withdraw the cover. If the LOAD light is not illuminated, click the black button once to re- enable the INSTABOOM.

Frequently Asked Questions:

Is the Instaboom LITE approved for use in New Zealand?
Yes – the Instaboom LITE is featured in Waka Kotahi (NZTA) NZ Transport Agency M23 Appendix F.

What is included when I purchase a Instaboom LITE?
The package Includes: mobile LITE barrier, wheel-barrow handle, 3x boom sections with a fitted NZ Stop Sign, 4 button remote fob, mains charger and a NZ 3m power cord.

Can one remote be used to control multiple barrier arms?
Yes – up to four separate barriers can be programmed to one remote, or multiple barriers can be programmed to a single button to go up and down together (simultaneously). Note, it is good practice to erase all pairings from the fob, to prevent unwanted operation. This needs to be done at each unit, one at a time.

What Batteries does the Instaboom LITE have and what about the Remote Batteries?
Battery is as 12v 26ah battery. The remote takes standard AAA batteries.

Is the Boom Arm Collapsible?
Yes – The boom arm is designed to be modular, so it's easy to transport and takes up minimum space during storage. The Arm is made up of 3x sections that are easily clicked together. The LITE Boom is designed for the full 2.6m boom only. If a barrier arm is required that can go from 1m to 4m, please contact RTL about the larger INSTABOOM Barrier.

Are the Remote and Boom Sections the same for the Instaboom LITE and the Larger Instaboom?
Yes – both models use the same remote and boom sections, making them interchangeable.

What Safety Features does the Instaboom LITE have?
The Instaboom LITE has both an Anti-contact IR safety beam and a rubber buffer on each boom section.

Pairing Remote Fobs:

Erase/Unpair:

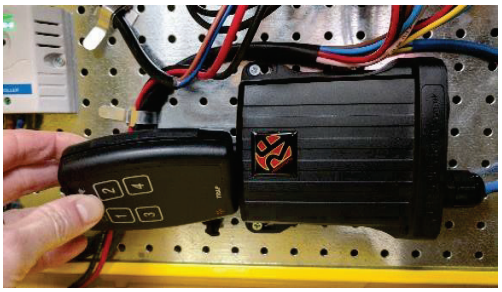
It is good practice to erase <u>all pairings</u> from the fob, to prevent unwanted operation.

This needs to be done at each unit, one at a time.

Unscrew the whip antenna and remove the device from the red boot

The arrows show the activation point of each device. This is required for the next step.

Remove the cover from the top turret by unscrewing the 6 retaining screws



Touch the bottom left of the transmitter against the top left of the receiver for 1 second, as shown. The receiver will beep once. Press the chosen number switch on the transmitter you wish to pair. The receiver will beep twice to confirm pairing.

Additional

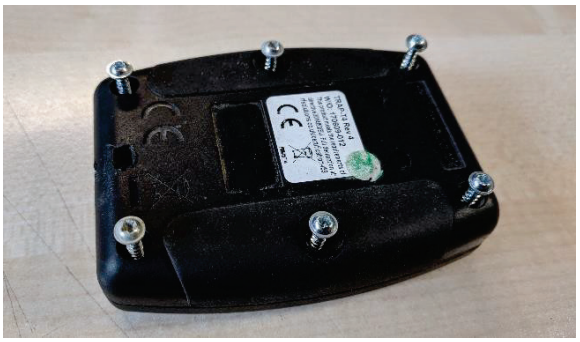
The receiver can store up to 30 transmitter pairings so when a barrier returns to base it is good practice to erase all fob pairings from its memory to prevent unwanted operation. To achieve this, touch the bottom left of the transmitter against the top left of the receiver, as described above, but **hold it in position for over 5 seconds**. The receiver will emit a long beep to confirm all pairings have been erased. You will then need to follow the steps above to pair a new remote

fob.

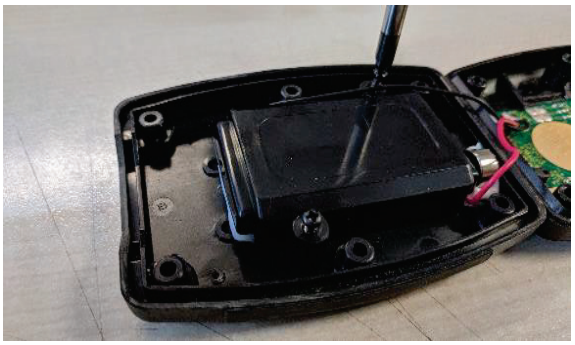
Replacing Remote Fob Batteries:

The remote takes 3x AAA batteries.

Unscrew the whip antenna and remove the device from the green boot



Remove the six case screws with a small Philips screwdriver



Open the case and remove the two black Philips screws from the battery case

Exchange the three AAA batteries and reassemble the handset by reversing this process

Re-Assembly Instructions (If required):

After unpacking your INSTABOOM Lite from the packing case, the boom mount may need to be re-orientated before it can be used.

Unpacking state

For safe transportation the boom is oriented downwards

Remove Boom and cup assembly

Note the position of the boom on the square plate. Once removed, the boom should be re- fitted into the same holes.

Undo the four bolts holding the boom cup to the plate. You will need a 13mm spanner and 13mm socket.

Re-affix the boom mount

Re-fix the boom mount onto the square plate with the boom oriented upwards. Securely tighten the bolts through the same holes used previously.

Fit the finger guard

Remove the two screws from the square plate.

Slide the finger guard over the top of the now vertical boom. Position it over the square plate, lining it up with screw holes.

Fit securing screws

Locate one of the securing screws into its hole. Squeeze the finger guard so you can see the other screw hole and locate the second screw into position. Tighten both screws.

Stop Sign

The boom mounted stop sign is secured in place, using 2x M6 x 60mm stainless steel bolts and nuts.

Align the pre-drilled holes, and secure using the two bolts.

Please ensure the nut is sufficiently tightened before operation.

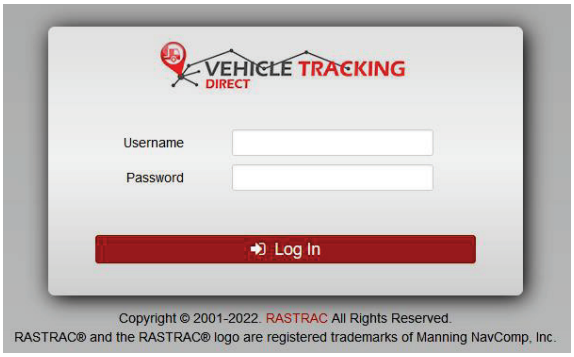
Parts List:

Image Preview	Description:	Part Code:
	INSTABOOM: CM66 Control Board	ET PMBIP160
	INSTABOOM: 433 Receiver Only	ET PMBITRAPR4
	INSTABOOM: 433 4 Button Remote Only c/w Rubber Cover & Lanyard	ET PMBITRAPT4
	INSTABOOM LITE: Full Boom - 2.6m Boom Arm Drilled c/w Red / White Conspicuity Tape + Stop Sign	ET PMBIP260
	INSTABOOM LITE: 750mm Mid-Section Only c/w Red / White Conspicuity Tape	ET PMBIP250
	INSTABOOM LITE: 750mm Mid Section + Stop Sign c/w Red / White Conspicuity Tape	ET PMBIP255
	INSTABOOM: 3pin 3m NZ Power Cord	ET PMBIP103
	INSTABOOM LITE: Replacement 12V 26AH Deep Cycle Battery	ES BAT12VA26

Telematics Portal:

Navigate to www.solargates.co.uk/instaboom/login

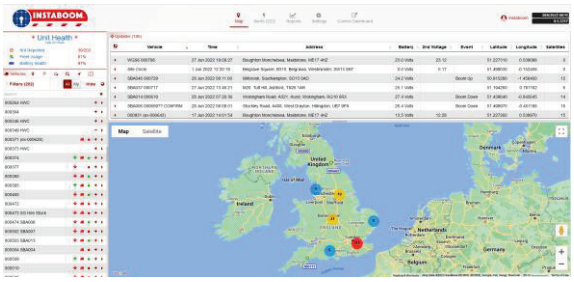
And click on the “Tracker log in” link



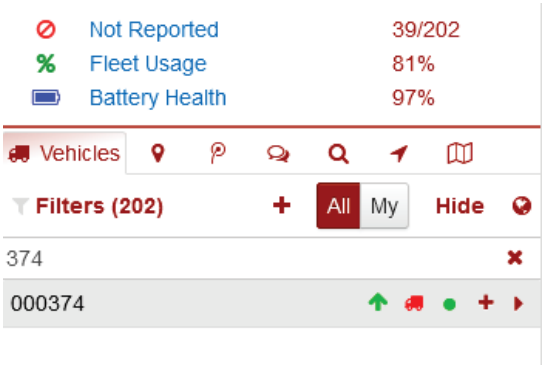
Log in with your User name and Password credentials

User name: **CONTACT RTL**

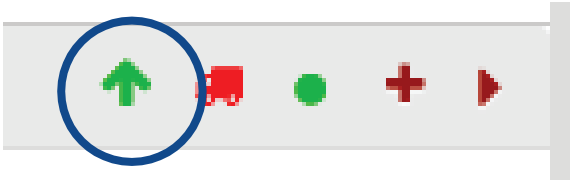
Password: **CONTACT RTL**



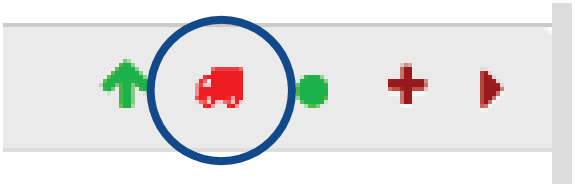
Items of plant are shown on the left hand side. GPS positions are shown on the map panel. The top panel shows the feed of status updates, in order of occurrence.



User the side panel to search for a specific item of plant.



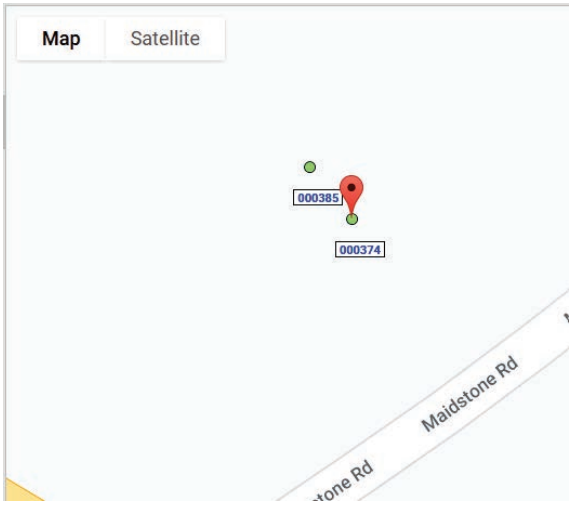
This icon depicts the state of the boom – either up or down.



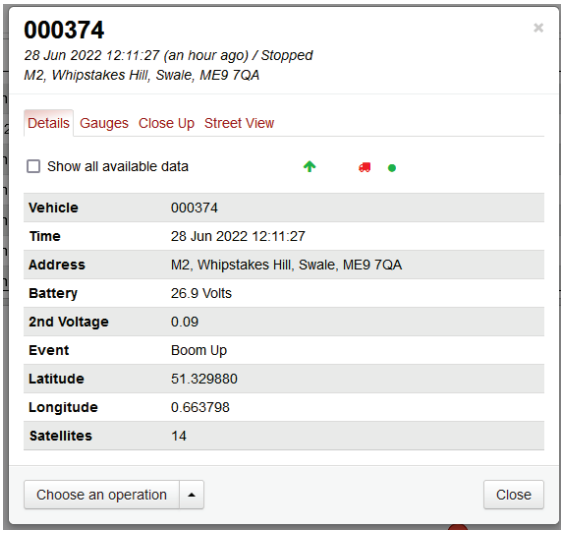
This icon depicts whether the item of plant is being transported.

This icon depicts the power state of the barrier. Green is ON and red is OFF.

Click the triangle to focus the map on the GPS position of this item of plant.



The barriers are shown as green dots on the map. Click on them to bring up the dashboard of telemetry recorded on the that barrier, shown in the next step.



This is the unit dashboard, allowing you to see all the current readouts from an individual device.

It is possible to set up notifications based on triggers such as battery voltage or movements into or out of custom geofences. Please contact us at Solar Gates for assistance with this.