

# REDFOOT<sup>®</sup>

## LEVELLING

**REDFOOT**  
LEVELLING

**StabiVAN 12VDC Powered Jacks**

**Installation Manual**



**Updated: March 2024**

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**Before starting the installation, check the content of all boxes received against the picking slip which is attached to the outer of the main carton. Please call Redfoot® Levelling immediately if there is a discrepancy!**

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**WARNING!**

This is a 12VDC System **DO NOT** connect to your 24Volt House Battery

**Warning:**

REDFOOT Levelling does not permit use of our levelling system to be used as a ‘Tyre Jack’ solution. Do not use the levelling system as a vehicle jack when changing tyres. Use the proper vehicle jack supplied with the vehicle in accordance with the manufacturer’s instructions. Jack Stands shall be always in use as the primary support when wheels are off the ground for long durations.

**\*\*IMPORTANT\*\***

**Modification of any factory-supplied item may result in the denial of all warranty claims.**

Call Redfoot Levelling Technical Support prior to any modifications. Redfoot Levelling offers full installation support for authorised approved Installers only. End user installers must read and accept our Warranty and Terms and Conditions on the Invoice issued with this purchase.

**Danger:**

With any hydraulic application, holding position on a cylinder must be done with safety in mind. Failure in the system may cause the jack(s) to retract or extend suddenly. When working under or near the vehicle, always use jack stands of appropriate rating to support the weight of the vehicle.

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## Items Required for Installation

### StabiVAN kit



### Additional items required (not supplied in kit)

- 8mm 12V electrical wire
- 80-amp inline fuse/breaker
- Terminals 6mm eyelet for power and ground connections.
- Cable ties
- Spanner/socket set
- Electric Drill with drill bits
- Screws/adhesive for mounting keypad



## Installing the Leg Assemblies

The four leg assemblies should be mounted to the frame or structure sufficient to able to lift the frame. The mounting location should be selected so that there is no interference with the leg and foot as it is extended or retracted. The mounting location should be selected to minimize the amount of road spray onto the assembly. Generally, the closer to the edge (side) of the chassis the more stable it will be. Sufficient ground clearance should be considered to prevent damage to the jack assembly when the RV/Trailer is moving. Allowing too much ground clearance will “overextend” the jack assemblies resulting in an unstable situation. The best ground clearance is approx. 1/2 (200mm) of the maximum travel (400mm) of the leg assembly. There are mounting holes located in the mounting bracket for mounting to the vehicle. A minimum of three fasteners (bolts) should be used for mounting. The bolts should be minimum Grade 5 and should be of the proper size to fill the hole in the mounting bracket. The use of flat washers and locking type nuts are recommended.



## Installing the Control Panel

The control panel must be mounted in a location where it is protected from the elements as it is not a “sealed” or weatherproof unit. The location should be close to where the wiring harness can be easily connected to the panel. The location should allow easy access for operation. A sealed side compartment or an area near the door that will allow easy access for operation

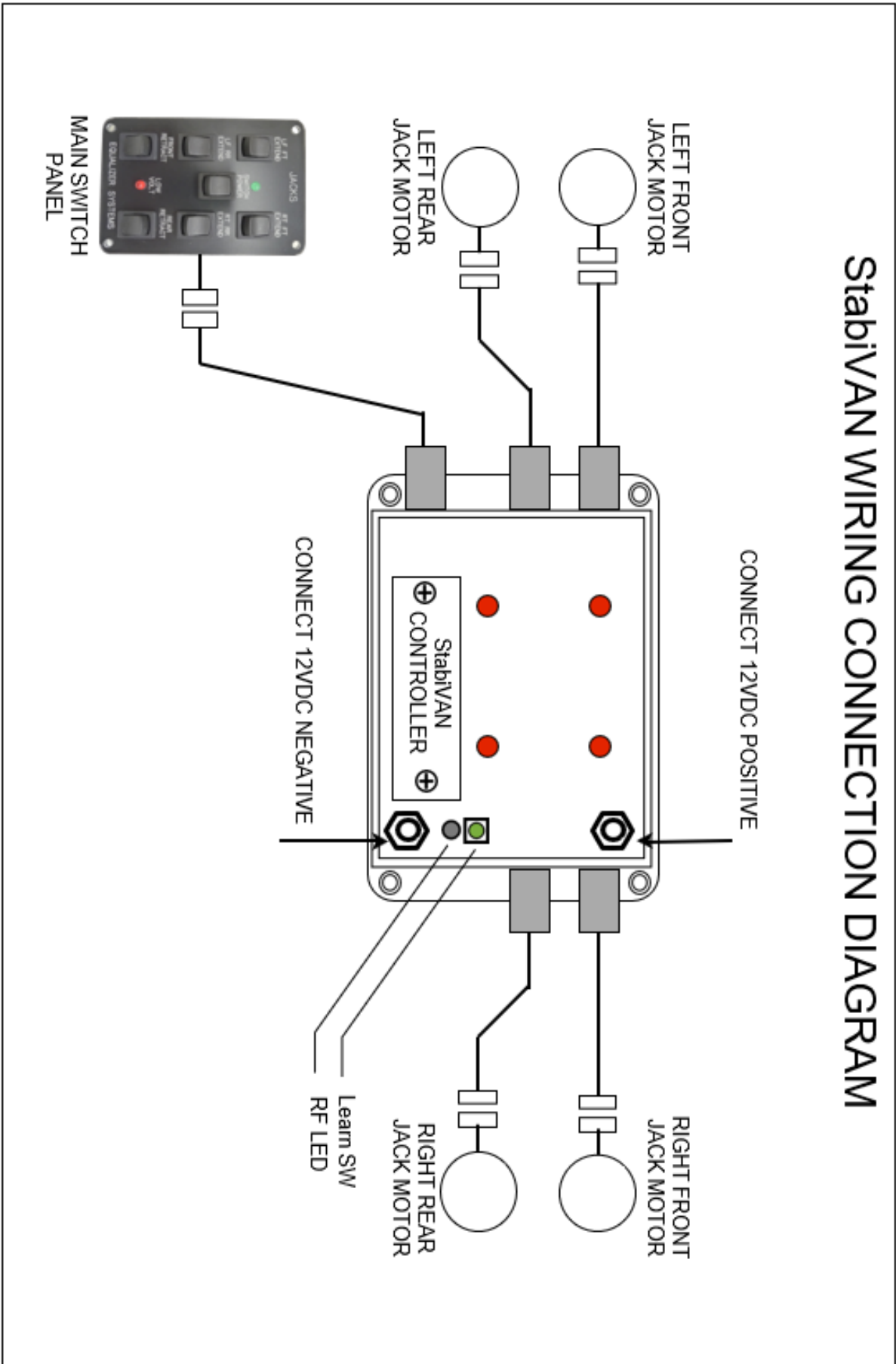
should be selected. Screw holes are provided for the mounting. Screws are not provided due to the varying surfaces to which the control panel could be mounted.



### **Installing the Controller**

The controller must be mounted in a location where it is protected from the elements as it is not a “sealed” or weatherproof unit. The location should be close to where the wiring harness can be easily connected to the controller. Screw holes are provided for the mounting. Screws are not provided due to the varying surfaces to which the control panel could be mounted.

## Stabivan WIRING CONNECTION DIAGRAM





## Electrical Connections

There are five harness assemblies (provided) and power and ground feeds (installer provided) to be connected. See drawings for wiring connections.



### *Control Panel to Controller*

There is a single harness assembly to connect the control panel to the controller. This connection is labelled **SW PNL INPUT**. Simply match up and connect the connectors. Ensure to press the locks so that the connectors may be mated. The harness should be routed and secured in such a manner to avoid strain on the connectors and to protect the harness from chaffing and heat sources.

### *Controller to leg assemblies*

Each leg assembly (4) will have a harness that is connected from the controller to the motor pigtails. Select the correct controller connector to the position of each leg assembly. The connectors are labelled for the jacks. The harness should be routed and secured in such a manner to avoid strain on the connectors and to protect the harness from chaffing and heat sources. The harness must be routed in a manner that keeps the harness away from the moving parts of the leg assembly. When plugging in the connectors verify that the locking latches are in place.



### *Power and Ground*

These two connectors are not provided in the kit. The two connections are made to the marked studs (6mm dia. lugs) located at the corners of the controller. The harness should be routed and secured in such a manner to avoid strain on the connectors and to protect the harness from chaffing and heat sources. Proper wiring and terminals should be selected for the application.

If required for the application (generally motorized units) a “safety interlock” relay may be wired into the power or ground feed to the controller to “disable” the operation when not desired - like when the vehicle is moving.

### *12VDC Battery Power*

On the corner of the controller there is a stud (lug) marked Battery+. This stud needs to be connected to a 12VDC 40Amp positive source. The wiring feed should be protected at the source by a 40Ampere circuit breaker. The wire gauge should be a minimum of 5mm (AWG10). Depending on the length of the run (over 4 meters) it may need to be larger.

Ground (-return to battery) On the corner of the controller there is a stud (lug) marked Ground. This stud needs to be connected to the chassis ground or directly to the negative side of the battery. The wire gauge should be a minimum of 5mm (AWG10). Depending on the length of the run (over 4 meters) it may need to be larger.



## Operation

### *Extension for levelling and stabilizing*

Push the power switch to the ON position, the power light should come on, if it doesn't then you have not connected it correctly. Use the individual buttons to extend the jacks to the ground to level and stabilize the RV/Trailer. The jacks may be extended individually or in pairs by pressing one or two of the extend buttons. Care should be taken to not over-extend individual jacks. The RV/Trailer will be at its most stable when the legs are most least extended after they contact the ground. The leg assemblies will lose stability the further they are extended. You may decide to use all four or just one pair of the jack assemblies depending on your needs. It is recommended that they be used as pairs (front or rear).

The use of pads or blocks to take up ground clearance or to prevent the foot from sinking into the soft ground should be done with care to avoid excessive stress on the leg assembly and the possibility of "falling off" the blocks.

### **Important!**

The StabiVAN dual vertical jacking and levelling system. It is not designed to lift vehicles to the point that all tyres lift off the ground. It is not to be used in a manner or circumstance that results in tyres being lifted off the ground. It is not to be used to change tyres or to do service work. Tyres should be blocked to prevent unwanted front to rear or side stress on the jack assemblies. The StabiVAN leg assemblies should not be relied upon to prevent side to side or front to rear (roll off) movement.

### *Retracting the Jacks*

Push the power switch to the ON position, the power light should come on. Use the Retract switches to retract the jacks in pairs front and rear. It is recommended that the rear jacks be retracted first. It may be necessary to alternate back and forth from rear to front for retraction to

avoid excessive stress on the leg assemblies. **Visually check that all jack assemblies are fully retracted prior to travel.**

### *Manual Over-ride*

Each of the leg assemblies is equipped with an override feature that will help to get the leg assemblies retracted in the event of power or electrical failure. This feature is to be used only to retract the leg assemblies and must be done by hand (no power tools). This feature cannot overcome a damaged leg assembly.

### *To retract the leg assembly/s*

Locate the override hex (5/8") 18mm on the gear box drive. Using a 5/8" socket wrench rotates the hex clockwise by hand to retract the leg assembly. If more than one leg needs to be retracted it is recommended that they be retracted alternatively to avoid excess stress on the leg assemblies.

### **Important!**

When using the override do not extend leg assemblies to lift the caravan/trailer. The controller has current overload protection built in to avoid damaging the leg assembly from exceeding the maximum capacity. The override is designed only to retract the leg assembly in the event of power or electrical failure.

**Caution!** Visually check all jack assemblies are fully retracted prior to travel.





## Trouble Shooting

### **Power light won't come on OR there is no operation on extend or retract.**

- Check the power and ground to the controller.
- Voltage must be at least 12VDC for operation.
- Check electrical connectors - are they plugged in?
- Is the battery weak or defective?
- Check for corroded power supply wiring.
- Does the low voltage light come on?

### **One or more of the legs work, other legs will not extend or retract.**

- Check to see if the harness for the leg won't run is plugged in at the controller and at the leg assembly.
- Check for power and ground to the jack/s that will not run when trying to operate.

### **Excessive noise from leg assemblies**

- Use a spray lubricant that dries, such as silicon or Teflon to lube the screw and nut of the leg assemblies. Contact Levelling Jacks for T9 Boeing spray lubricant.
- Do not use a grease or other lube that won't dry as it will attract dirt and road grime to the leg assembly.
- You will need to extend the leg assemblies to expose the screw and nut for lubricant spraying.

## Product Warranty Guide

Redfoot Levelling Pty Ltd

1. Only warranty claims with prior written or verbal authorisation from Redfoot Levelling will be recognised, all other claims will be denied.
2. Redfoot Levelling warrants levelling system components for a period of One year from the date of original sale of the vehicle. This warranty covers defects in material and workmanship only. Redfoot Levelling is not liable for any damage due to abuse, neglect, misuse, negligence, misapplication, error of operation, accidental or purposeful damage or damage due to an "Act of God" such as, wind or rain damage, flood, lightning, or other natural causes of the like. Redfoot Levelling limited warranty is applicable to the Redfoot Levelling components only and does not apply to the vehicle, apparatus, or property to which it is attached. Warranty parts will be shipped at no charge if the repair is authorised by Redfoot Levelling representative. Purchased components used in authorised warranty repairs will be reimbursed at the original purchase price. **ALL products prior to return must be authorised by a Redfoot Levelling representative. Connotes will be supplied for their return unless prior arrangements have been made. Installers must receive the appropriate Scope of Works from Redfoot Levelling prior to the commencement of any work.**
3. Labour and freight expenses due to warrantable parts defects or workmanship will be reimbursed for the period of One year from the date of the original sale of the vehicle. Freight expenses will either be prepaid by Redfoot Levelling or reimbursed at the Road Logistic rate only. Any additional shipping charges or requirements are the obligation of the vehicle owner or service centre performing the warranty repair. The owner or Service Centre's obligation may include overseas shipping charges, border fees, and any other additional fee of the like.
4. Warranty labour will be reimbursed only for claims that have prior written or verbal authorisation from a Redfoot Levelling representative. Warranty labour compensation is required to correspond with the "Warranty parts replacement time guideline" published by Redfoot Levelling. Any warranty repair not listed in this guideline will require prior authorisation from an Equalizer Systems representative. A reasonable time allowance will be determined by the Equalizer Systems representative. Any warranty repair that is not listed in this guideline that is performed without prior authorisation will be denied without exception. Time associated with learning about the repair or excessive diagnostic and installation time will not be reimbursed. Warranty labour will be reimbursed at the authorised service centre's published shop rate for that region. Overtime labour will not be reimbursed without exception.
5. Labour, parts, and freight credit (if applicable) will be sent after the parts are tested and the warranty claim is validated. Returned parts that are found to be in normal operating condition are not warrantable and will be charged to the owner or service centre. Redfoot Levelling reserves the right to charge back the service centre for labour claim payments previously submitted if the installation of the warranted part is found to be inadequate later.
6. Claims will be denied if the date submitted is greater than 30 days from the repair.

7. Prior authorisation is required before parts may be returned to Redfoot Levelling. Redfoot Levelling will supply a connote for the return goods.
8. Complete systems are not warranted unless authorised by a Redfoot Levelling representative. There are absolutely no exceptions to this clause.
9. Consideration should be taken regarding the location and protection of Redfoot Levelling's components prior to installation. Please reference our installation manuals for recommended locations and maintenance or visit [www.Redfootlevelling.com.au](http://www.Redfootlevelling.com.au) for more information. The failure of any Redfoot Levelling components due to extreme environmental conditions, improper installation or lack of maintenance will not be covered under the warranty.
10. Warranty coverage for parts or systems sold by non-authorized resellers (such as live or internet auctions) will be at the discretion of Redfoot levelling.
11. This warranty begins upon the sale date of the vehicle and is transferable, with limitation, to the subsequent owners upon furnishing the original sale date of the vehicle and proof of purchase.
12. Redfoot Levelling is not liable for loss of time, manufacturing costs, labour, material, loss of profits, direct or indirect damages incurred by the vehicle manufacturer.
13. Excessive warranty labour resulting from inadequate access to the Redfoot Levelling product will not be reimbursed.
14. Redfoot Levelling will not pay mark-up on warranty parts unless required by law.
15. Travel expenses, hotel, telephone, fuel, or any other expense of the like are not covered under the warranty.
16. All "out of warranty" repairs will have a flat rate inspection fee of \$190 Inc GST. There will be an additional charge of \$95 Inc GST per hour for repair work carried out beyond the inspection diagnostic.

## **Replacement Parts**

Replacement parts are warranted under the same guidelines listed above for the remainder of the original warranty or 90 days, whichever is longer. Proof of warranty repair date and original vehicle purchase date are required via any means possible.

No additional warranties expressed or implied are authorised by Redfoot Levelling.

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