

THE POWER OF

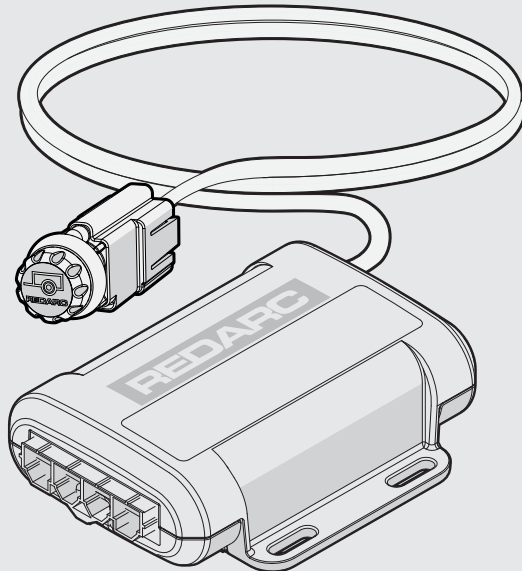
REDARC®

Tow-Pro® Liberty

Electric Trailer Brake Controller – 12V

MODEL:

▪ EBRH-ACCNA



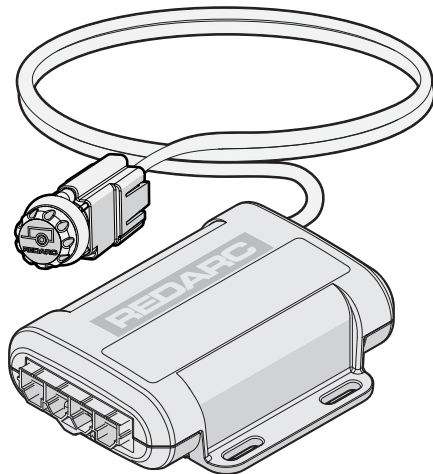
Tow-Pro® Liberty

Electric Trailer Brake Controller (EBRH-ACCNA)

The Tow-Pro® Liberty is a proportional electric trailer brake controller designed to suit most common trailer braking applications while requiring minimal dash space and being simple to install and operate.

The Tow-Pro® Liberty features Active Calibration which constantly monitors the direction of travel and will even calibrate with no trailer attached whilst maintaining the ability to mount in any orientation. On vehicles which only activate the trailer lighting circuits when a trailer is detected by the vehicle, calibration will commence immediately a trailer is detected.

The Tow-Pro® Liberty is able to operate electric or electric over hydraulic trailer brakes from 12V vehicle systems without the need for manual selection or extra components.



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WARNINGS AND SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS — This manual contains important safety instructions for the Tow-Pro® Liberty Electric Trailer Brake Controller.

Do not operate the controller unless you have read and understood this manual and the controller is installed as per these installation instructions.

⚠ WARNING

- This product may contain chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.
- Ensure that your trailer brakes are installed and are operating correctly; Improperly installed and/or faulty trailer brakes can cause erratic vehicle or trailer behaviour with the potential to cause a road accident. For this reason, it is of utmost importance that your trailer braking system be installed/maintained by a qualified installer.
- Always check brakes at low speed each time a trailer is attached to your vehicle.

⚠ CAUTION

1. Ensure that the Tow-Pro® Liberty is mounted securely in a fixed location. Failure to mount securely will result in inaccurate braking force measurements and incorrect braking of the trailer.
2. Ensure that the Tow-Pro® Liberty is installed inside the vehicle cabin and away from any environmental conditions that may cause damage, including engine heat, submersion in water, salt spray and humidity. Exposure to these conditions may cause damage to the unit's circuitry and may cause erratic trailer braking.
3. A Fuse or Circuit Breaker of appropriate rating must be installed to protect the vehicle system. Please refer to the wiring instructions starting on [page 10](#) for specific instructions on where to install the Fuse or Circuit Breaker and for appropriate Fuse or Circuit Breaker rating. The Fuse or Circuit Breaker must be installed as close as possible to the battery.
4. Ensure the remote head push-button activates correctly when installed into surfaces with a thickness greater than 0.12" (3.0 mm). Failure to activate correctly would result in not being able to activate the override function or change modes.
5. Ensure that the wire(s) and all connections used to install the Tow-Pro® Liberty are suitably rated to supply the required current to simultaneously operate the trailer electric brakes and stop lamps. Incorrect wiring can result in reduced (or total loss of) trailer braking and/or damage to property or persons.
6. The Tow-Pro® Liberty is suitable for trailers with electric brakes up to two axles. Note that Federal and State laws apply to trailer weights and brake controller requirements. Please consult your local authority to ensure you comply with the legal requirements.
7. Do not drive with the Tow-Pro® Liberty while a fault code is active. Fault codes of the Tow-Pro® Liberty may indicate conditions that make it unsafe or illegal to drive, including unreliable trailer brakes or failure of brake lights.

8. During the calibration step of the Tow-Pro® Liberty, braking of the trailer may be inconsistent. REDARC recommends calibrating the Tow-Pro® Liberty without a trailer attached. A normal drive of a few miles will do for this purpose. If calibrating with a trailer attached, then the recommended dial setting for the Tow-Pro® Liberty is 4 or less.

NOTICE

1. Ensure that a correct grounding point is used. Vehicles often have ungrounded metal reinforcements under the dash and these points are not suitable grounds. Bad grounding of the unit will result in poor or no operation.
2. The Tow-Pro® Liberty does not act as a trailer lights voltage converter. If the trailer brake lights operate on a different voltage, damage to the vehicle; trailer and/or Tow-Pro® Liberty and associated wiring may result. This may also result in reduced (or total loss of) trailer braking.
3. When installing the Tow-Pro® Liberty Remote Control to a thin panel, washers are recommended to reinforce the structure of the panel.
4. Do NOT exceed Tow Vehicle and Trailer weights and specifications. Failure to abide by the towing regulations, including maximum loads, may result in a fine, or in case of an accident, refusal of the insurance claim, and the possibility of further legal action.

If the tow vehicle or trailer's maximum load is exceeded, police and transport authorities have the power to order the combination off the road until the issue is corrected. This may necessitate leaving the trailer on the side of the road while a vehicle with suitable towing capacity is sourced or the trailer load is reduced. Please contact your local authorities for further information.

5. If no trailer is connected, Active Calibration may occur as normal without any indication from the LED. The LED will already be Blue when the trailer is connected. Essentially, whether a trailer is connected or not, just drive normally and Active Calibration will ensure the Tow-Pro® Liberty learns the correct direction of travel.
6. The State of California regulations require that the manual override function illuminates the trailer brake lights. Once the Tow-Pro® Liberty is installed it should be tested with your vehicle to confirm the wiring configuration to make sure the brake lights are illuminated when the override button is pressed.

SAFETY MESSAGE CONVENTIONS

Safety messages in this manual include a signal word to indicate the level of the hazard as follows:

WARNING

Indicates a potentially hazardous situation which, if not avoided, **could result in death or serious injury to the operator or to bystanders**. Carefully read the message and follow instructions precisely.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, **may result in moderate or minor injury to the operator or to bystanders**. Read the message and follow instructions precisely.

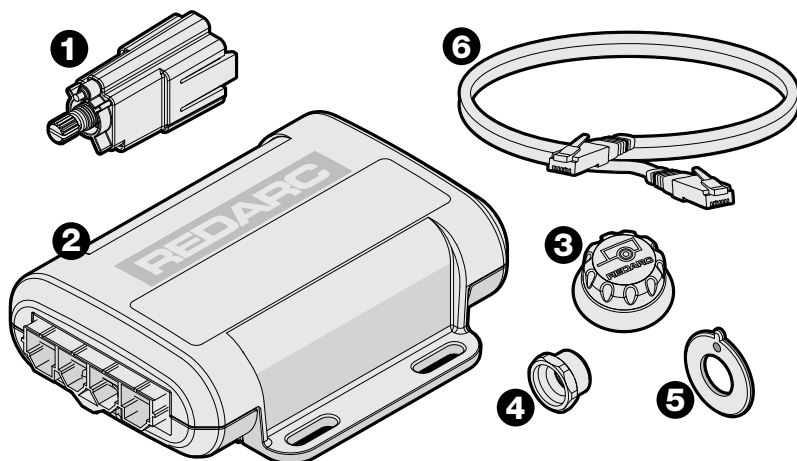
NOTICE

Indicates a situation that **may cause equipment damage**.

1 SPECIFICATIONS

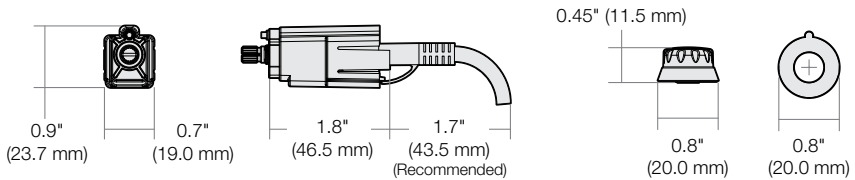
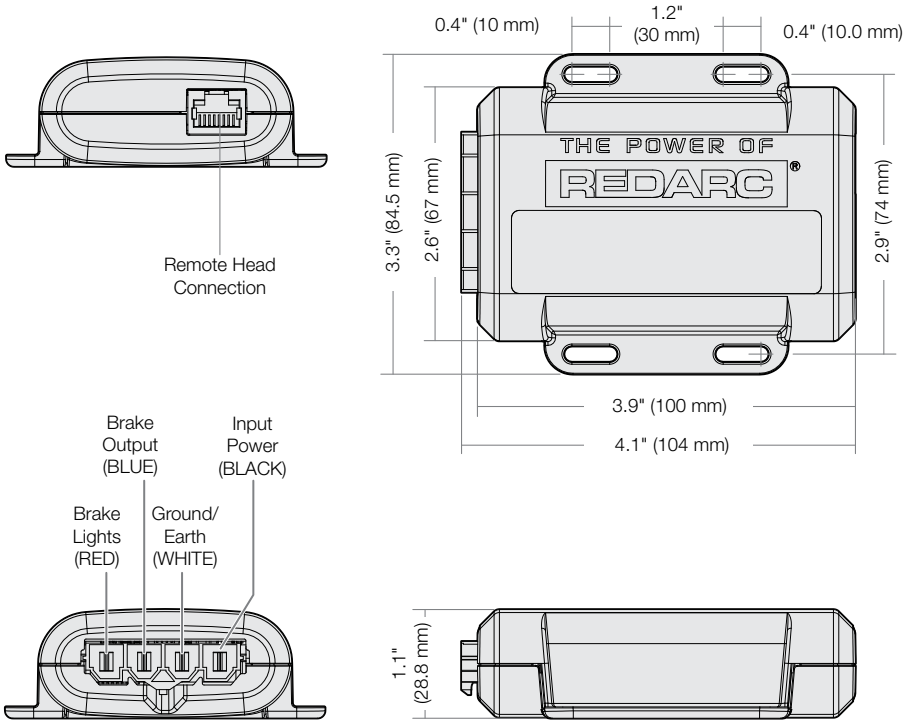
Part Number	EBRH-ACCNA
Operating Voltage	9V to 16V
Nominal Input System Voltage	12+V
Brake Input Signal Voltage	OFF: 0V ON: +12V nominal
Brake Coil Voltage	12V
Max. Trailer Axles	2 Axles
Nominal Current Draw	12A
Max. Rated Current	18A
Standby Current	<5 mA
Operating Temp	-4°F to 140°F (-20°C to +60°C)
Weight	7.05 oz (200 g)
Warranty	2 years

1.1 Kit Contents



Reference	Description
1	Remote Head Assembly
2	Main Unit
3	Remote Head Knob
4	Remote Head Nut
5	Remote Head Bezel
6	Remote Head Cable 3'3" (1 m)

1.2 Dimensions and Connection



2 INSTALLATION

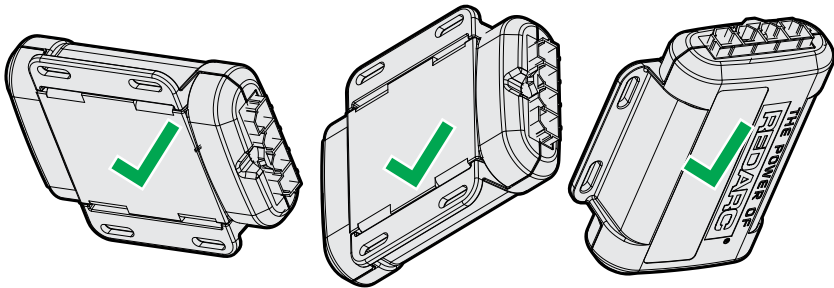
2.1 Mounting the main unit

The Tow-Pro® Liberty should be mounted inside the vehicle cabin using either $\frac{5}{32}$ " (M4) diameter screws or other secure fitting methods at the mounting points provided. It is essential to mount the unit in a location which allows access to the intended remote head location via the included remote head cable.

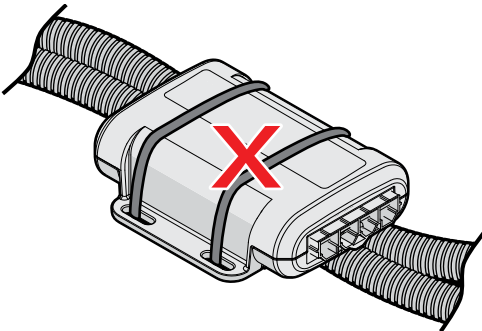
The Tow-Pro® Liberty can be mounted in any orientation as long as the installation is secure and the main unit cannot move or change orientation once installed. A change of orientation will affect the system calibration.

⚠ CAUTION

- Ensure that the Tow-Pro® Liberty is mounted securely in a fixed location. Failure to mount securely will result in inaccurate braking force measurements and incorrect braking of the trailer.
- Ensure that the Tow-Pro® Liberty is installed inside the vehicle cabin and away from any environmental conditions that may cause damage, including engine heat, submersion in water, salt spray and humidity. Exposure to these conditions may cause damage to the unit's circuitry and may cause erratic trailer braking.



Any Secure Orientation OK



Do Not Mount to Cables/Wiring Looms (Must be mounted to a rigid or solid object or surface)

2.2 Wiring the brake controller

The Tow-Pro® Liberty is sold without a wiring harness.

REDARC manufactures a universal wiring harness as well as a number of vehicle-specific wiring harnesses for quick and easy installation.

For older vehicles not covered by our range of wiring harnesses where a custom installation is required, the TPH-025 'Universal Harness' should be used. Please follow the subsequent instructions for all custom installations.

▲ CAUTION

- A Fuse or Circuit Breaker of appropriate rating must be installed to protect the vehicle system. Please refer to the wiring instructions starting on [page 10](#) for specific instructions on where to install the Fuse or Circuit Breaker and for appropriate Fuse or Circuit Breaker rating. The Fuse or Circuit Breaker must be installed as close as possible to the battery.
- Ensure that the wire(s) and all connections used to install the Tow-Pro® Liberty are suitably rated to supply the required current to simultaneously operate the trailer electric brakes and stop lamps. Incorrect wiring can result in reduced (or total loss of) trailer braking and/or damage to property or persons.

2.2.1 RED WIRE (VEHICLE BRAKE LIGHT) CONNECTION

The requirements for a suitable connection of a brake controller trigger wire are specific. This connection point must:

- Provide a voltage of the same voltage level as the Start Battery* while the vehicle brakes are applied.
- Have 0 volts output while the vehicle brakes are not applied.
- Accept battery voltage input when the brake controller manual over-ride is operated and illuminate at least the trailer brake lights.
- Accept the battery voltage input as above without causing any damage, spurious vehicle operation or erroneous fault indication.

A relay should not be installed to drive the red wire as this would prevent the override feature from working and may introduce dangerous voltage spikes.

*Start Battery voltage output means directly from the Start Battery and within 0.4V of Supply (Black wire) voltage.

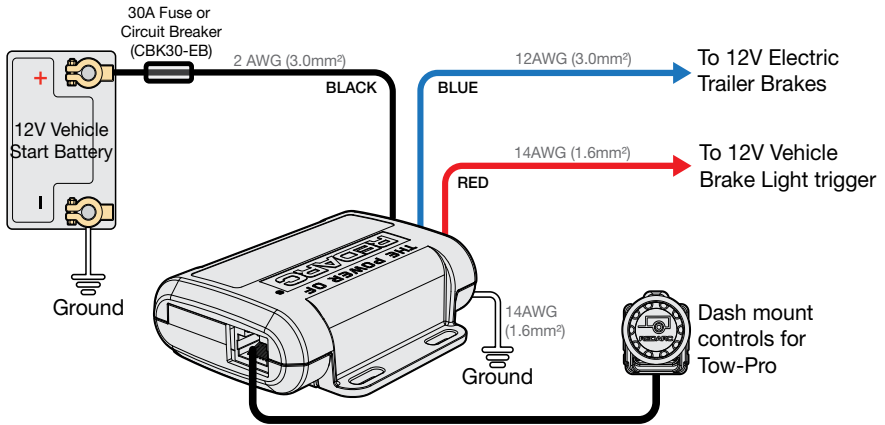
2.2.2 WIRING – ELECTRIC BRAKES

The Tow-Pro® Liberty is designed to operate electric brakes in 12V electrical systems only. For wire selection refer to the wiring gauge guide "[Wiring Gauge Guide](#)" on page 20.

NOTICE

The Input Power (Black) wire must be connected directly to the positive terminal of the start battery via a Fuse (30A) or Circuit Breaker (30A) and not through an Ignition source.

Figure 2.2.2.1: Typical Setup



For red wire connection, see [Section 2.2.1, "Red Wire \(Vehicle Brake light\) Connection"](#) (page 9).

2.2.3 WIRING – ELECTRIC/HYDRAULIC BRAKES

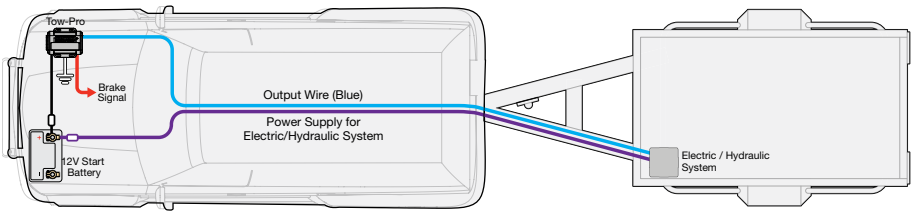
NOTICE

Always refer to the manufacturer's specifications for your Electric/Hydraulic Braking system prior to installation and usage of the Tow-Pro® Liberty.

ELECTRIC / HYDRAULIC TRAILER BRAKE SYSTEMS

The Tow-Pro® Liberty is designed to operate both Electric trailer brake systems and Electric/Hydraulic trailer brake systems. However, most Electric / Hydraulic systems require a separate 12V power feed for the hydraulic pump. For example:

Figure 2.2.3.1: Electric / Hydraulic Trailer Brake Systems

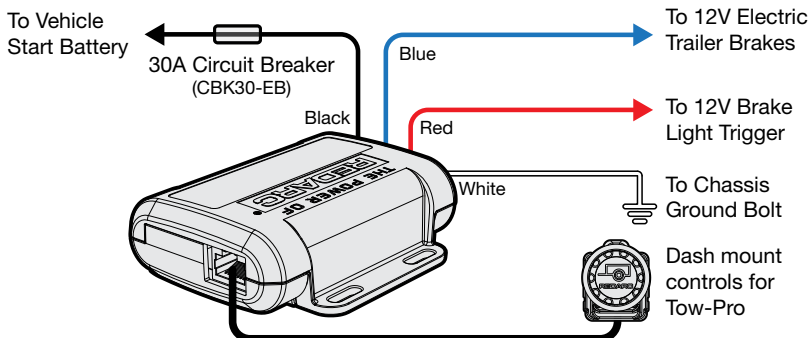


For wire selection refer to the wiring gauge guide in Section 4, "Wiring Gauge Guide" (page 20).

2.2.4 WIRING – VEHICLES WITH CAN BUS SYSTEM

Many modern vehicles use a CAN Bus system for signalling when to apply the vehicles brakes as required by safety systems including adaptive cruise control, stability control, Autonomous Emergency Braking (AEB) and hill descent control. For these vehicles, REDARC recommend the following wiring configuration.

Figure 2.2.4.1: Vehicles with a Can Bus System



2.2.5 BRAKE SIGNAL SOURCE – BRAKE PEDAL SWITCH

Sourcing the brake signal at the brake pedal may only detect braking events when the brake pedal is depressed (and the switch activated) and not brake applications activated by other on board systems such as AEB.

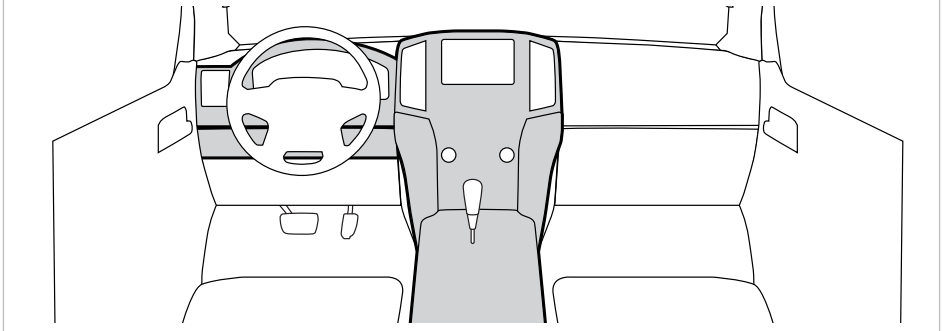
Note: Only connect to the brake pedal switch if specified by the vehicle manufacturer.

2.3 Mounting the Remote Head Control Knob

The Tow-Pro® Liberty remote head is designed to be mounted at a distance from the main unit, allowing for a neat, convenient installation and not impeding on lower leg airbags or driver leg room. The Tow-Pro® Liberty remote head is designed to be mounted on or around the vehicle dashboard and when installed correctly, complies with Federal Motor Vehicle Safety Standards No. 201, which sets requirements for devices mounted on the dashboard.

The Tow-Pro® Liberty remote head can be mounted directly to the dashboard, to the centre console or through a spare knock-out switch panel and requires two holes to be drilled as per the Mounting Guide below. For easy access in an emergency situation, REDARC recommend installing the remote head within reach of the driver such as the regions shaded in the diagram below.

Figure 2.3.5.1: Suitable Remote Head Mounting Locations

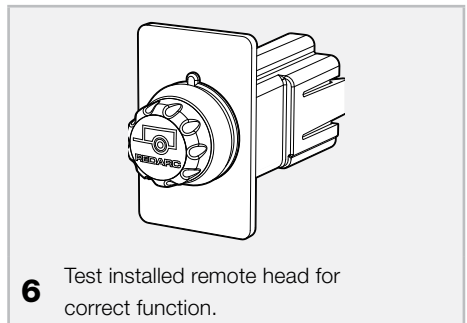
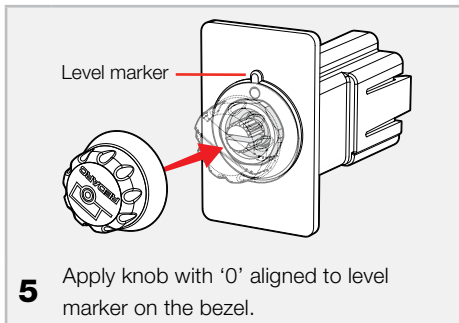
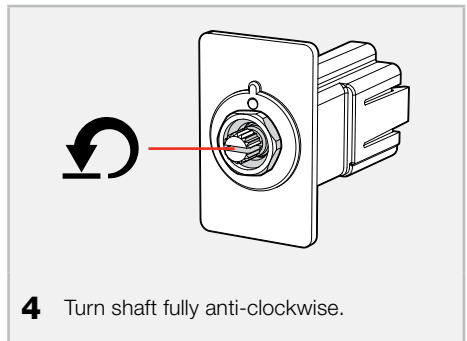
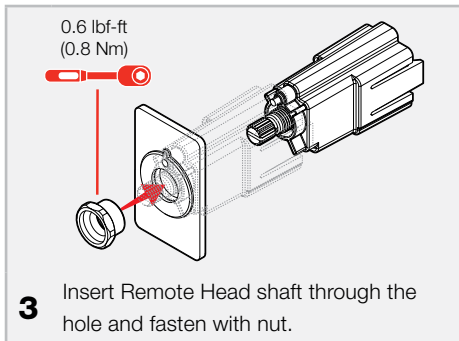
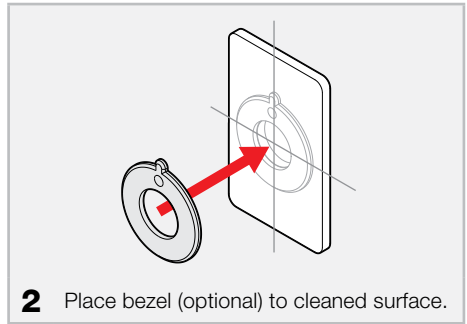
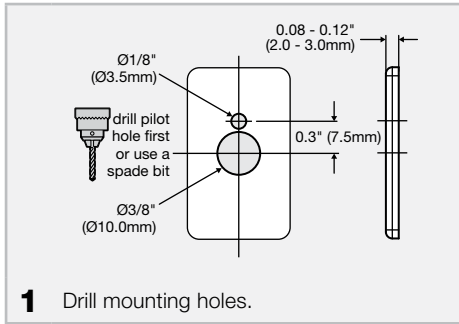


NOTICE

Do NOT install the Remote Head in any location that may influence the activation of vehicle air-bags.

2.4 Remote Head Mounting Guide

Test the push-button after installation. If the LED does not illuminate when you push the button, REDARC recommend installing the remote head without the Bezel.



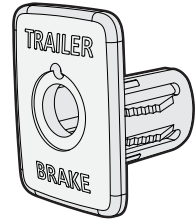
⚠ CAUTION

Ensure the remote head push-button activates correctly when installed into panels with a thickness greater than 0.12" (3.0mm). Failure to activate correctly would result in not being able to activate the override function or change modes.

2.5 Installation Accessories

REDARC offer a range of vehicle specific switch inserts and vehicle specific wiring kits designed to make the installation of the Tow-Pro® Liberty easier.

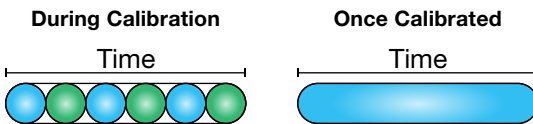
The range includes most popular SUV & LCV's and is frequently being updated and added to. A full listing of Switch Inserts and Wiring Kits is available online and can be purchased from the REDARC website.



2.6 Active Calibration

Active Calibration constantly monitors the vehicle's direction of travel and allows the Tow-Pro® Liberty to 'learn' and continuously confirm its mounting orientation. This process occurs whilst the vehicle is moving and the brake is applied and will occur with or without a trailer connected, for most vehicles.

When the unit is first powered, Active Calibration must first become confident in the vehicle direction of travel. Until this time the LED will flash Blue/Green.



NOTE: If there is no trailer is connected, Active Calibration will occur as normal, however the LED will not alternate Blue/Green. The LED will already be Blue when the trailer is connected. Whether a trailer is connected or not, drive normally and Active Calibration will ensure the Tow-Pro® Liberty learns the correct direction of travel.

When the Tow-Pro® Liberty is first installed it will begin learning its mounting orientation through Active Calibration as soon as you start driving.

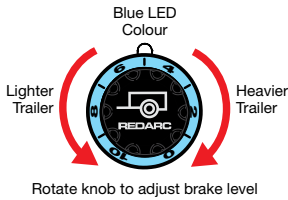
Until the Tow-Pro® Liberty has fully determined its mounting orientation the unit will apply the brakes based on the level set on the control knob, this is indicated by the LED glowing green with blue flashes. As the Tow-Pro® Liberty becomes more confident of its direction of travel the length of the Blue flash will increase, to the point that the LED is solid Blue which indicates it is now calibrated.

Under normal driving conditions the Tow-Pro® Liberty will learn its mounting orientation within 20 brake applications. Note that the braking must be perceptible (applying the brake while stopped will not assist calibration).

If power is disconnected (for example, if the vehicle battery is changed) calibration memory will be lost and the unit will recalibrate itself using active calibration. This is similar to a radio losing its clock or preset station memory.

3 OPERATION

3.1 Adjusting the Braking Force



The braking level can be adjusted to suit varying trailer loads, braking requirements or user comfort by adjusting the control knob on the remote head.

The lower end of the scale (below level 5) should be used as a starting point and adjusted accordingly once braking requirements are established.

If a lighter braking level is required, turn the control knob to a lower number (anti-clockwise) to reduce the trailer braking force. Similarly, turn the gain control knob to a higher number (clockwise) to increase the trailer braking force.

The braking level will be indicated by the LED changing to a shade of RED when the brakes are applied. The higher the braking level, the more RED the LED will glow.

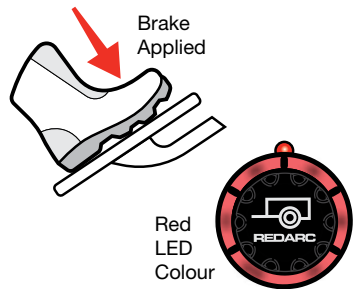
A setting of '0' will result in no trailer braking output.

3.2 Normal Brake Application

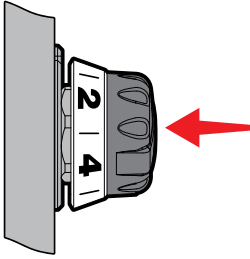
Once calibrated, the Tow-Pro® Liberty operates the trailer brakes Proportional to the vehicle braking level.

Proportional means that the Tow-Pro® Liberty will apply the trailer brakes at a level proportional to the vehicle deceleration. The control knob setting, 0 to 10, will set the brakes from a lighter to a heavier trailer brake application. Simply put, the harder the vehicle is decelerating, **the harder the trailer will brake.**

A setting of 0 will result in no braking.



3.3 Manual Override



Pressing the control knob whilst driving will apply the manual override brake. The manual override brake will apply the trailer brakes only; if wired correctly it will also apply the trailer brake lights and will turn the LED indicator a shade of RED. Depending on the vehicle wiring it may possibly also apply the vehicle brake lights.

The manual override is designed to be used when the trailer brakes need to be applied without the vehicle brakes, such as correcting trailer 'sway' whilst travelling.

The manual override will apply the trailer brake to a level equivalent to 'light' vehicle braking, which is sufficient to pull the trailer back into line.

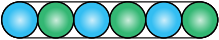
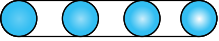


The braking force can be adjusted by turning the control knob, either higher or lower, even whilst applying the manual override brakes.

Manual override should not be used in place of the regular vehicle brakes.

3.4 Led Indication

The Tow-Pro® Liberty will indicate Operation and Fault Conditions through colour and flash sequences of the LED indicator. The table below shows how the Tow-Pro® Liberty will indicate Normal Operation of the unit.

NOTE: LEDs will glow full brightness when control is adjusted or manual override is pressed. After release of the control knob the LED brightness will reduce. This is designed to be less intrusive on driver's vision at night.

Status	Indication	
Calibration	Blue/Green flashing	
Sleep Mode*1	Blue breathing once with button push*2	
Trailer Connected	Solid blue	
Braking	Blue to Red*3	
Fault Code (trailer braking performance potentially compromised)	Flashing in any sequence (other than Blue/Green) please refer to troubleshooting on page 17 or contact an experienced auto-electrician.	

*1 Sleep Mode occurs when there is no trailer connected to the vehicle.

*2 Breathing, as opposed to flashing, is the LED gradually getting brighter until its brightest point and then gradually dimming until off. In the event of trailer disconnection, breathing will occur, with a button push, after 1 minute.

*3 The LED will vary between the Blue and Red depending on the braking force.

3.5 Park Brake Feature

If the Tow-Pro® Liberty detects that the vehicle brakes are applied for longer than 3 seconds whilst the vehicle is stationary, it will apply the trailer brakes in an intelligent manner to reduce the required braking effort whilst decreasing the risk of rolling forward or backward whilst stopped. If the controller determines the trailer brakes are not required to keep the vehicle stationary, the output will be decreased to Zero.

3.6 Troubleshooting

The Tow-Pro® Liberty features sophisticated diagnostics to warn the operator of faults in the vehicle and trailer brake wiring. Wiring faults are indicated by a series of colour coded flash patterns on the Tow-Pro® Liberty LED.

Most faults turn out to be something simple such as a poor connection from a dirty trailer socket, however a fault indication should not be ignored! It is a warning; if left unattended such wiring faults can become worse and may lead to deterioration or loss of trailer braking.

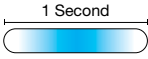
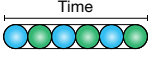
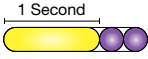
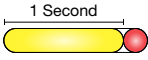
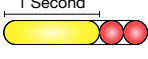
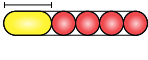

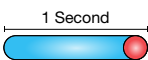


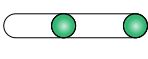
Refer to [Section 3.6.1, "Fault Codes – Flash Patterns"](#) below for the list of flash patterns. It shows the cause and recommended course of action for each of the conditions which may be detected.









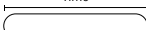

NOTICE

Even intermittent faults are detected and may be indicated until cleared.

Fault codes can be cleared by unplugging the trailer for 1 minute then reconnecting.

3.6.1 FAULT CODES – FLASH PATTERNS

LED Sequence	Symptom/Description	Possible Cause	Suggested Action
	BLUE Breathing when the Override button is pushed	The trailer brakes have not been detected OR the trailer is not plugged in	Check the trailer plug and all connections between the controller & brakes
	Flashing a Blue/Green sequence	The unit is in the process of calibrating, this is NOT a fault	Keep driving normally and the unit will calibrate
	The LED is YELLOW and flashes PURPLE twice	There is a fault with the unit and/or the installation	Check and clean trailer plug connection. Please contact REDARC or visit your local auto-electrician for further assistance
	The LED is YELLOW and flashes RED once per second	There is a short circuit somewhere on the brake output line (BLUE wire)	Check all wiring from the unit to the trailer brakes for any wiring faults, including at trailer plug or within brake hubs
	The LED is YELLOW and flashes RED twice per second	There is a short circuit somewhere on the brake light circuit (RED wire)	Check all wiring from the unit to the brake light trigger for any wiring faults
	The LED is YELLOW and flashes RED four times per second	There is a break/open circuit somewhere along the Tow-Pro® Liberty's Ground circuit (WHITE wire)	Check all ground connections and associated wiring for any wiring faults
	The LED is YELLOW for 1 second followed by OFF for 1 second, repeatedly	Overload on trailer brake (BLUE) circuit or extreme cold trailer brakes	Check trailer has a Maximum of 2 axes (4 brakes), wait for brakes to warmup
	The LED is BLUE and flashes RED once per second when vehicles brake not applied	The unit has detected that the Remote Cable is faulty, or it is in calibration mode with a permanent input on the brake light trigger	Check the Remote cable is fully plugged in, otherwise replace; check red wire has 0 V when vehicle brake is not applied
	The LED is flashing RED	The unit has detected an internal fault of your Al-Ko iQ7 hydraulic/pneumatic system There is a voltage drop between the trailer ground and the vehicle ground	Check for faults according to the manual for the Al-Ko iQ7 actuator If you don't have an Al-Ko iQ7, check for suitable wiring on the trailer ground circuit
	The LED is flashing GREEN only whilst braking	Loss of supply power or Circuit Breaker cycling	Check supply (BLACK) wire for good connection and check circuit breaker/fuse not blown and correct value
	The LED is flashing GREEN at any time	Hesitation during connection of BLACK wire possibly causing incomplete startup sequence	Disconnect BLACK wire, wait 1 minute and reconnect BLACK wire to the battery

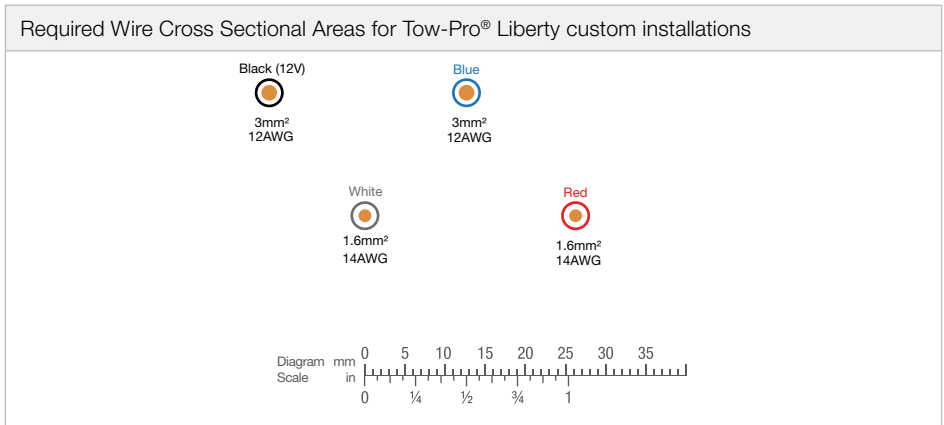
LED Sequence	Symptom/Description	Possible Cause	Suggested Action
	The LED is flashing GREEN at any time or only when not braking	Low continuous voltage on brake light (RED) wire	Check that RED wire is connected to a point that is 0V when the brakes are off and 12V with the brakes applied
	Flashing green any time with knob fully CW	The unit is not yet calibrated	Keep driving normally and the unit will calibrate
	The LED is flashing BLUE	The Remote Head cable may be damaged	Replace the cable between the Remote Head and the Main Unit
	The LED is flashing BLUE	The power supply to the unit is not stable	Check the BLACK and WHITE wires for loose connections
	The LED is flashing BLUE	The RED wire is (constantly) at a low voltage	Check the voltage at the RED wire and reassess the connection point if necessary
	The LED flashes an unusual colour sequence randomly whilst braking	There is a short circuit on the output (BLUE) wire or the Fuse or Circuit Breaker is overloaded	Check for short circuit on trailer brake (BLUE) circuit, including moving brake swing arms Check that no other devices are running from the same Fuse or Circuit Breaker as the Tow-Pro® Liberty
	LED only lights up when braking	The power wire is most likely not connected brake light fuse may have blown	Check supply (BLACK) wire for connection problems and check circuit breaker/fuse is not blown
	The LED is not working at all	There is a bad connection to the trailer	Check the trailer wiring as the unit is not recognising that a trailer is connected
	The LED is not working at all	There is a bad connection between the Main Unit and Remote Head	Check that the Remote Head cable is correctly plugged in to both the Main Unit and Remote Head
	The LED is not working at all	The light tube may have been lost or misplaced during installation	Find and fit the light tube or contact supplier for a new light tube

4 WIRING GAUGE GUIDE

Whilst Tow-Pro wiring harnesses are available for most vehicles on the market, some older vehicles will require manual wiring. For this purpose REDARC offers the TPH-025 Universal Wiring harness for custom installation.

Below is a diagram outlining the required wire cross sectional areas for the Tow-Pro® Liberty custom installations detailed in [Section 2.2, "Wiring the brake controller"](#).

All wire ratings refer to the **minimum** required cross sectional area of copper only (not including insulation). Always use a wire gauge equal to or greater (in cross sectional area) than what is specified in this guide.



5 PERIODIC MAINTENANCE AND CHECKS

⚠ WARNING

Ensure that your trailer brakes are installed and are operating correctly:

- **Improperly installed and/or faulty trailer brakes can cause erratic vehicle or trailer behaviour with the potential to cause a road accident.** For this reason, it is of utmost importance that your trailer braking system be installed/maintained by a qualified installer.
- **Always check brakes at low speed each time a trailer is attached to your vehicle.**
- **Immediately After Installation (to be done by a qualified Auto-Electrician),** test the installation/vehicle wiring. Testing your vehicle wiring is best done by connecting a test light (max. 21 W filament globe) to the brake output, pushing the manual override and having someone check that the test lamp lights up.

BEFORE EACH TRIP

It is important to ensure that your system is operating correctly before you set out. The following should be checked, along with standard mechanical maintenance, each time you attach your trailer:

- Correct brake light operation on both your vehicle and trailer.
- Correct operation and setting of the electric brake controller.
- Correct operation of your trailer brakes.
- Check that your breakaway system is operating correctly and that the breakaway battery is healthy (if applicable).
- Ensure that the tow hitch, and safety chains and weight distribution systems are setup correctly.

PERIODICALLY

It is important to have a qualified technician check the function of your trailer system on a periodic basis to ensure that everything is operating correctly. REDARC recommend that you visit a qualified technician before the beginning of each holiday season to ensure that any towing aids or systems are working correctly.

OTHER CONSIDERATIONS

Please consider these points whilst towing a trailer:

- Ensure that your vehicle is capable of towing the trailer.
- Ensure that you adjust your driving style to allow more time to change lanes and brake.
- Always remember that your electric brake controller is designed to supplement your vehicle brakes; DO NOT use the Tow-Pro® Liberty manual override in place of your vehicle foot brake.

6 FREQUENTLY ASKED QUESTIONS

The LED is flashing Blue/Green, what does this mean?

A Blue/Green flash sequence indicates that the unit is in the process of calibration, as the unit becomes more confident in its calibration the Blue will appear for longer. Continue driving and eventually this will turn to a solid Blue.

Is the Tow-Pro® Liberty approved to use with the my Electronic Trailer Stability Control system?

The Tow-Pro® Liberty is approved for use with the AL-KO ESC and the DexKo Sway Control systems. Visit the manufacturers website for more information.

Will it work with electric over hydraulic trailer brakes?

Yes, see [Section 2.2.3, "Wiring — Electric/Hydraulic Brakes"](#) (page 11).

Can it be mounted in any orientation? How do I set the levelling of the main unit?

Yes, the unit can be installed inside the vehicle at any angle, provided it is firmly secured and in a location which allows access to the intended remote head location. For more information, see:

- ["Mounting the main unit" on page 8](#)
- ["Mounting the Remote Head Control Knob" on page 12](#)
- ["Remote Head Mounting Guide" on page 13](#)

My trailer is 3.5 tonnes fully loaded; Is the Tow-Pro® Liberty strong enough to stop that much weight safely?

The controller is capable of supplying 2-axle setups at 12 V inputs up to the maximum rated braking ability of the brakes. You must also ensure that your trailer brakes are adequate for the trailer load.

Can the remote head cable be extended?

Yes, the remote head cable is a standard RJ45 network cable and can be replaced by an off the shelf cable up to 5 m in length. If the cable used is longer than 39.4" (1 m) however we recommend using a ferrite bead clipped onto the cable as close as possible to the main unit.

Can the braking level of the manual over-ride be adjusted?

Yes, the manual override can be adjusted whilst it is being applied by turning the gain control knob. For more information on manual override, see [Section 3.3 on page 16](#).

Will my trailer brakes work while I am reversing?

The Tow-Pro® Liberty is designed to apply the trailer brakes whether the vehicle is travelling forward or in reverse. The effectiveness of the brake application in reverse will depend on the mechanical design of your particular electric brake system.

I have a 2 axle trailer, is the Tow-Pro® Liberty suitable for my trailer?

Yes, the Tow-Pro® Liberty is designed to operate up to and including 2-axle trailers.

Can I connect the Tow-Pro® Liberty through my cigarette lighter socket?

No, as most 'power sockets' are rated around 10A which is insufficient to power trailer brakes and stop lamps circuits. In addition, these outlets may not be powered continuously and do not make a reliable contact.

FCC Declaration

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

7 WARRANTY

LIMITED WARRANTY

For full warranty terms and conditions, visit the Warranty page of the REDARC website. Refer to the web address and contact details applicable to your region.

Australia, New Zealand & Europe

www.redarc.com.au/warranty

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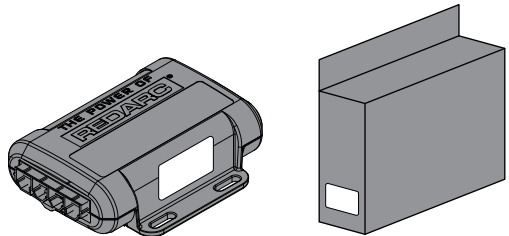
www.redarcelectronics.com/warranty

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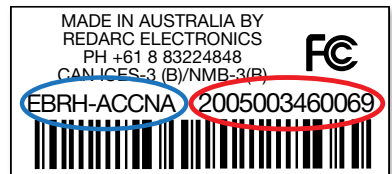
CHECKING THE PRODUCT SERIAL NUMBER

The Product Serial Number is located on the side of the Main Unit and on the side of the Product Packaging.



The Serial Number Label contains the Part Number (circled in BLUE) and the Serial Number (circled in RED).

The first 4 digits of the serial number indicate the YEAR and MONTH of manufacture, in the format YYMM.



PATENTS

Patents apply.

Australia

Australian Registered Design: 352577, 352578, 352674

Australian Registered Patent: 2014224076

Australian Registered Innovation Patent: 2017100513

U.S.A

US Patent No.: US 9,446,747

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