

## Electric brake controller remote head



After many years of manufacturing the renowned EB1AX (1- 2 axle) and EB3AX (3 axle) trailer brake controllers Redarc have reacted to industry demands for a more user-friendly way of controlling auxiliary brakes of trailers, caravans and camper trailers.

The new 'Remote Switch' trailer brake controller EB-RH is an extension to the current range of trailer brake controllers and can be used to control a trailer with up to three axles (six wheel brakes).

The design of the modern-day vehicle, interior layouts and the introduction of lower leg frontal airbags has made

the installation of accessories like trailer brake controllers difficult or very impracticable... until now.

The Redarc EB-RH has all the features of previous models and more. It now features a dual purpose remote mountable switch which:

- Increases or decreases the amount of braking power supplied to your trailer brakes when your vehicle brakes are applied.
- Has a push button feature which can be used to manually apply the trailer brakes independently of the vehicle brakes. This function assists in controlling a trailer should it start to sway and or become unstable.
- Whilst in override/manual mode, the operator can easily adjust sensitivity levels.

As well as the remote mountable switch Redarc has included a remote dual colour LED indicator which has two functions:

- The LED will illuminate green indicating to the operator of the vehicle that they are towing a trailer which incorporates electric brakes.
- The same LED will illuminate red when the vehicle brakes are applied. The brightness of the red LED will indicate the sensitivity level you have the trailer brakes set to, i.e. the brighter the LED, the stronger the brake setting.

### Installation

Major benefits are realised when it comes to the installation of the EB-RH trailer brake controller. The installer can simply remove one (or two) of the available spare switch panels to mount both the



trailer brake control switch and the LED indicator. This eliminates the need to drill holes in the vehicle dash and also positions the controls in an easy position for the operator to access.

**Part number** EB-RH

**Description** 12V 1, 2 or 3 axle remote switch trailer brake controller

**Release date** October 13, 2008

**For further information please contact Mark Bruce, National Customer Development Manager, or any of the friendly team at Redarc on 08 8322 4848, send an email to [power@redarc.com.au](mailto:power@redarc.com.au) or visit [www.redarc.com.au](http://www.redarc.com.au).**

### TECH TIP

#### Measuring 4 - 5 volts on electric brake controller output with no load

*Q. When I measure the output voltage from an electric brake controller on the trailer socket brake pin, with the trailer not plugged in, I read 4 - 5 volts on my multimeter? Is this OK?*

A. Yes, this is OK. The electric brake controllers have a trailer brake circuit detection LED. When the trailer is plugged in to the vehicle the green LED will light

up to indicate it is correctly connected and operational. However if this pin is measured without a trailer connected, the multimeter will show the trailer brake detection voltage between 4 and 5 volts. This can be checked by connecting a 5W test lamp to the pin whilst measuring the voltage. This will result in the meter showing 0 volts and the green LED will light up.

A metering voltage may also be seen on other circuits if the vehicle has trailer lamp fail detection. Likewise, these

voltages should only be seen if a trailer is not plugged in or if the trailer lighting circuit is open circuit.

**For further information please contact Lex Clarke, senior technician, or any of the friendly team at Redarc on 08 8322 4848, send an email to [power@redarc.com.au](mailto:power@redarc.com.au) or visit [www.redarc.com.au](http://www.redarc.com.au).**

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# Low coolant alarm



## Did you know undetected coolant loss is a significant cause of engine failure?

And yet very few engines are fitted with low coolant alarms as standard equipment by manufacturers.

Redarc has manufactured a low coolant alarm, part number LCA1224 that suits a wide variety of applications including passenger vehicles, 4WD vehicles, trucks, buses, motorhomes, generators, forklifts, tractors and earthmoving equipment.

If the radiator fluid is lost due to a worn hose, physical damage to the radiator, a crack in the top plastic header tank, a faulty seal or simply because the radiator cap wasn't replaced properly then the Low Coolant Alarm will provide an early warning before serious engine damage and malfunction.

Most engine temperature gauges and protection systems will not detect loss of coolant fluid. This is due to the fact that gauges and temperature switches rely on sensing the coolant temperature and when there is no coolant, the gauges cannot sense the temperature.

The radiator, an integral part of the cooling system, is designed to protect an engine from the destructive forces of too much heat. The radiator's function is to lower the temperature of hot coolant coming from the engine by cooling air that passes through the radiator. When a stone or rock damages the radiator core, coolant is lost. If you are lucky the temperature gauge will rise and you may notice it in time. If you miss it or the coolant is lost rapidly, preventing the gauge from working then you risk serious engine damage.

If the vehicle is parked shortly after the hit, the coolant will seep out under the car. Some time later the driver returns to a vehicle with little coolant in it and drives away. Before they are aware of a critical situation the engine suffers a cracked cylinder head. A Low Coolant Alarm will warn the driver of this disaster waiting to happen as soon as the ignition is turned on.

Hoses provide a flexible connection for coolant flow between the engine and the radiator and the engine and the heating block. When a heater or radiator hose splits the coolant is suddenly lost in a matter of seconds. The temperature gauge reading drops, the engine overheats and big dollar damage bill can result.

A car's water pump is the heart of the car's cooling system. If the water pump fails the car will run hot, overheat and cease to function. Most water pump seals when they fail, first weep a little bit of coolant when the engine is running. When the engine is switched off for the night, the coolant steadily leaks out under the vehicle as the system is no longer under pressure. Next morning the engine is started and the vehicle driven away. The coolant level is low, the temperature gauge doesn't read correctly and the result is a cracked cylinder head.

Poor radiator cap sealing can lead to loss of system ability to draw coolant back from the overflow reservoir, to boiling of the coolant under severe operating conditions and to the loss of coolant. Coolant loss can happen at any time and very rarely occurs in a convenient place.

The low coolant alarm is good insurance against the problems that arise from an engine overheating. The product has a number of smart features including an anti-slosh delay. If the radiator is not quite full, the LED flashes after ½ second but the audible alarm will not turn on for 3-4 seconds... there is a visual reminder to top up but no annoying alarms.

The low coolant alarm can be used in a 12V or 24V automotive system or remote water pumping system to monitor radiator coolant level. It will provide both a visual and audible alarm if the coolant falls

below the chosen level or if the pump loses priming.

There is a self-test process on ignition turn on, the LED flashes twice and the audible alarm emits four short bursts. The unit is also designed with broken wire detection. If the wire to the probe is broken it will sound the alarm and operate the buzzer.

Another important design feature is the AC sensing. The probe is supplied with AC; therefore it doesn't produce electrolysis that causes corrosion. Chemical corrosion can often be a cause of premature radiator failure.

The product also has an external warning lamp output. It allows a dashboard lamp to be used when the low coolant alarm (LCA1224) is not visible to the driver or to operate a relay to provide an alarm for a remote engine/pump. The low coolant alarm is supplied with a coolant level probe and also a threaded brass boss for use when installing the unit in a metal tank.

**For further information please contact Dylan Pinkard, customer service technician or any of the friendly team at Redarc on 08 8322 4848, power@redarc.com.au or visit www.redarc.com.au.**



## Redarc attend annual Wire & Gas Convention

Redarc were pleased to participate in the Wire & Gas Convention which was held on the Gold Coast in June this year. Mark Bruce, our National Customer Development Manager, represented Redarc at the event, ably supported by his fiancée, Amanda Gladstone.

Mark felt the event offered Redarc an excellent opportunity to showcase its brand and product. He said "people travelled from all over Australia and New Zealand just to attend this event. It was held over three days giving people in attendance the opportunity to liaise with the various

manufacturers and distributors, providing them an opportunity in learning more about industry news and new product opportunities.

The Redarc stand received fantastic support throughout the show and it gave me a great opportunity to showcase our new products to our clients including the remote head electric brake controller, low coolant alarm and hand brake alarm."

He added "the hands-on training was a big draw card, with everyone who attended learning how to make their day-to-day work a little less complicated, more efficient and more profitable".

*National Customer Development Manager, Mark Bruce, demonstrates some of the Redarc product range*



## VIP VISITORS

### Launch of the South Australia Innovation and Investment Fund

Redarc Electronics was privileged to be chosen to host Senator the Hon Kim Carr, Minister for Innovation, Industry, Science and Research and the Hon Kevin Foley, South Australia's Deputy Premier and Minister for Industry and Trade on Friday, 25

July 2008 to launch the \$30million South Australia Innovation and Investment Fund (SAIIF).

SAIIF has been set up by the Australian and South Australian governments to assist with industry development in South Australia following the decision of Mitsubishi Motors Australia Limited to cease manufacturing in Tonsley Park, Adelaide.

*Senator the Hon Kim Carr, Minister for Innovation, Industry, Science and Research*



## CLIENT PROFILE

### Remote Control Technologies

Remote Control Technologies Pty Ltd (RCT) is a wholly owned Australian company specialising in the manufacture and installation of safety and productivity products for the mining, earthmoving, transport, agricultural, construction and materials handling industries.

Established in 1972 in the Kalgoorlie region, RCT have been in operation for over 35 years and has a proven history of excellence in providing customer-driven safety and productivity solutions, industry-leading innovations and an outstanding level of customer service.

Over these years, RCT has cemented its place in the market by providing its client base with high-quality levels of service and innovative solutions. RCT has three major branches across Australia including Perth, Kalgoorlie and Mt Isa. These branches are positioned to service the key local mining and industrial markets in each region. RCT currently employ over 100 full-time staff Australia wide.

National Parts Manager Andrew Sells commented that "as an original equipment manufacturer (OEM), RCT has worked with Redarc to produce quality items to complement our existing range of products. In using Redarc we believe we increase product reliability. A recent example involves the implementation of the Redarc voltage reducers to protect our Maxi Vision Rear View Camera systems. The failure of the camera which occurred due to voltage spikes has become a thing of the past. With great technical support and product development, Redarc was able to produce exactly what we required and in a timely manner."

"Purchasing an Australian made product with quick turnaround times has helped us in delivery



*Robert Walker (right) with two of his team members*

and most importantly has helped our customers with their requirements. RCT is extremely customer focused and it helps when your suppliers are too."

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Visit [www.redarc.com.au](http://www.redarc.com.au) for tech-tips and up-to-date info



**What size fuse do I fit?**

Installers must select the circuit protection device according to regulatory requirements and manufacturer's recommendations. In all circuits some form of current interrupt or limiting device should be fitted for protection not only of the particular wiring but also of the equipment, vehicle and user from disastrous failure.

Fuses are a deliberate resistive weak-link included in a circuit for protection of equipment, devices or wiring against over-heating due to excessive current flow. Excessive current flow through a fuse will cause it to blow.

A fuse's rating is the DC current it can carry continuously (100%) at the rated voltage. The higher the excess current the faster the fuse will blow. Note this is not a linear relationship. Normally it is recommended that the fuse be selected so that it operates at about 75% of its rating at 25°C ambient.

For DC applications a fuse is typically fitted as close as possible to the power source positive terminal so as to protect the wiring further along the circuit. When determining a circuit fuse rating it is important to consider not only the current requirements of the load and resistance of the wire conductor (size and length) but also of any other resistances which are in the circuit such as connectors and the earthing points. If a circuit is changed from the original design, such as by the addition of extra circuit length when a trailer or caravan is added, then the fuse rating and the size of the conductor should both be reviewed. The extra conductor length (and corresponding resistance) may be sufficient to prevent the fuse from blowing should the load develop a short circuit.

The key criteria for selecting a fuse for a DC circuit are: load current, operating voltage, whether the load is resistive or reactive, conductor size, conductor length, ambient temperature, allowable

conductor and connector temperature rise, and necessary fuse reaction time both at circuit turn-on and with a circuit fault.

Over the coming months Redarc are eliminating the "glass fuses" from our product wiring due to requests from our customers. We appreciate that the type of protection device fitted is a personal choice whether it be a circuit breaker or a particular brand of fuse. Our product instructions will recommend the rating of the fuse to be fitted in conjunction with the product. It is important for the above reasons that these are fitted by the trade.

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STAFF PROFILE

Receptionist/Administration Assistant

**Maxine Cuthbertson**



Redarc are pleased to welcome Maxine Cuthbertson to the key frontline customer contact position of receptionist. Maxine joined Redarc in November, 2007 as an electronic assembler, where she spent five months building and testing a wide range of our products including smart battery isolators and trailer lighting reducers. This experience was an excellent introduction to Redarc's business and our friendly team. In April, 2008 a vacancy existed, within Redarc, for the role of Receptionist/Administration Assistant. Maxine, having had previous experience in this field, was approached to fill this position and she happily accepted. Maxine and her partner, Dan, emigrated to Australia, from the UK, in early 2007 as Dan had accepted an offer to join the SA Police Force. In the

UK, Maxine had worked for Rockwell Automation for 7 years. She gained experience in a number of areas including electro-mechanical assembly, reception and travel coordination.

Maxine gives 110% to any task that she undertakes. She welcomes new challenges and has excellent communication skills on all levels. Maxine's interests outside of work include home renovation, gardening, travel, adventure activities, reading, running, cycling and walking her two dogs, a Tibetan Spaniel named "Oscar" and a Pugalier named "Cooper".

We welcome Maxine and are sure our customers will be delighted by her friendly approach.

**Redarc Electronics**

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