

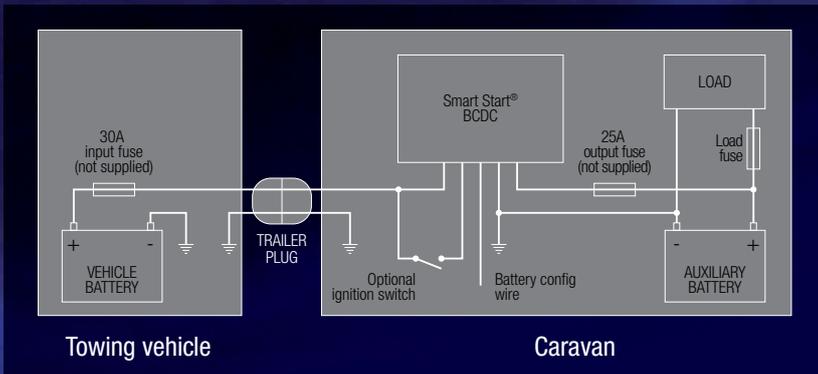
# Another Redarc innovation: the in vehicle smart battery charger

Redarc Electronics are excited to announce the release of their new Smart Start BCDC1220 DC/DC 12V 20A three stage battery charging system designed to charge your auxiliary/house batteries, from your vehicle, to their optimum levels.

The BCDC accepts inputs between 9 and 32 volts and provides a three stage smart charging algorithm whilst also protecting your input battery system from over discharge.

### Basic operation:

- 1 The BCDC automatically senses the vehicle has started charging your main battery, then turns to charging your auxiliary batteries.
- 2 The three stage charging process starts with its 'boost' stage providing maximum voltage and current until the battery reaches its predetermined 'absorption' voltage.
- 3 The BCDC remains in its 'absorption' stage holding a set voltage until the input current falls below its cut-off current.
- 4 The BCDC then switches to its 'float' stage and will remain there until the auxiliary battery voltage falls below 12.7 volts whereupon it will recommence the 'boost' stage.
- 5 During these charging stages (including 'float') the BCDC is able to



supply loads (up to 20 amps) without switching back to its first 'boost' stage. This protects the battery from over-charging.

6 The microprocessor constantly monitors your main vehicle battery input charge levels, automatically switching off the BCDC should the main battery fall below 12.7 volts, protecting it from over discharge

### Features include:

- Compact size and ease of installation.
- Fully encapsulated in our special elastomer making it suitable for harsh and marine environments.
- Multi voltage inputs will operate from 12 or 24 volt vehicle inputs.
- Smart three stage charging incorporating boost, absorption and float stages ensures optimal charging whilst protecting your batteries from over current and over voltage situations, which lead toward premature battery failures.
- Three different charging algorithms enable the installer to select the optimal charging profile for specific battery chemistries - i.e. AGM/gel, calcium and standard lead acid

batteries. This allows dissimilar battery types (including deep cycle) to be charged by the same alternator.

- Main battery isolation protects your main battery from over-discharge.

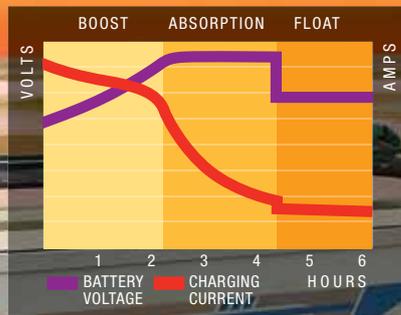
### No longer will you be troubled by:

- Long cable runs and voltage drop
- Charging dissimilar battery types
- Over charging your batteries leading to damage and failures
- Limited charging levels resulting in reduced battery output.

Easy to install, the new charger is just 100x120x37mm in size, weighs only 450g and the fully encapsulated housing incorporates convenient flanges for mounting as close to the auxiliary battery as possible. The new Redarc BCDC1220 has a recommended retail price of \$495.00.

Dual and auxiliary battery charging has never been so easy, efficient or affordable.

**For further information and free technical assistance contact the friendly staff at Redarc Electronics.**  
 Email: [power@redarc.com.au](mailto:power@redarc.com.au)  
 Phone: (08) 8322 4848



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Summer 09/10

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# Redarc's 30th anniversary

On Tuesday the 20th of October, the staff at Redarc Electronics took time out to officially celebrate 30 years of designing and manufacturing electronic products and service to the automotive and transport industries. The event was celebrated with a special morning tea.

A DVD presentation on the history of Redarc was presented to the staff. The DVD provided our newer staff members with an appreciation of how Redarc has grown, under the ownership of Bob

Mackie from operating, in its infancy, in a shared house located in Blackwood to occupying a whole house in Reynella, before purchasing more appropriate premises in Lindsay Road at Lonsdale.

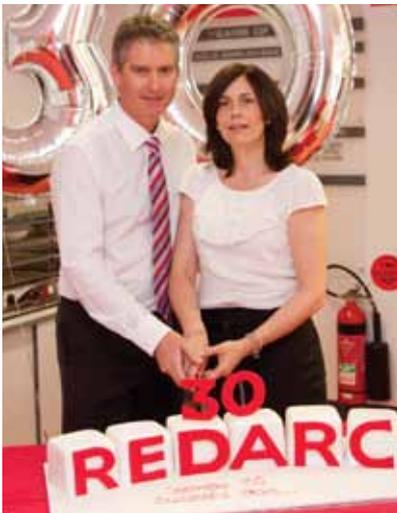
Following the purchase of the business in 1997 by Anthony and Michele Kittel, where due to rapid growth of the business another move was made to Heath Street at Lonsdale before our latest move to our new state of the art premises in Brodie Road, Lonsdale. During this time Redarc has grown from 8 staff to almost 60 full time employees.

Anthony and Michele cut a specially-made 30th birthday cake and the Redarc

team were captured in a group photo in front of our new manufacturing facility of which we are all enormously proud.

We thank everyone involved in organising this event and a special mention for Joel and Emma Kittel whose excellent work was provided on the 30th birthday DVD presentation and David Greenwell for photographing the occasion.

However, the biggest thanks must go to you our loyal customers for your commitment to Redarc by supporting our Australian designed, manufactured and backed power conversion products. We look forward to another 30 successful years of business!



*Redarc proprietors Anthony and Michele Kittel cut the 30 year celebration cake*



*The original 1997 crew (l to r) Thanh Duc Bui, Barbara Cromwell, Lex Clarke, Caterina Taylor, Paul Savage, David Downie and Des Hutchinson*



*The Redarc team celebrates 30 successful years*

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## TIA Gold Cup win!

The Technology Industry Association (TIA) is the peak body in South Australia representing the \$7.5 billion electronics, digital technology, telecommunications and ICT industry. The 2009 TIA Gala Dinner and Excellence Awards were held on October 8, 2009 at the Adelaide Hilton, Victoria Square. This event was a glitz and glamour 'Hollywood Style'... just like being at our own Oscars.

High-class entertainment featured throughout the evening, adding to the excitement of this prestigious event.

The winner of the prestigious TIA Gold Cup for Excellence in Engineering and Commercialisation was awarded to Redarc Electronics.

The Gold Cup is the most prestigious TIA award, given to a company that performs best in taking an innovative idea through product development and onto global markets.

Redarc Electronics won the Gold Cup for their Smart Start battery charging suite of products. Consisting of a choice of four vehicle battery-related products, Redarc have completely designed and manufactured the products at their Lonsdale based Innovation Centre. Currently working with a French company regarding distribution of Smart Start battery chargers, Redarc aims to tap into the lucrative European motor home market that boasts more than half a million caravan-related vehicles.



The Redarc team (l to r) Clinton Smith, Anthony Kittel, Shane Wreford, Milan Grcic, Melissa Bickley, Ben Baldwinson, Dylan Pinkard, Barbara Cromwell, Paul Savage, Mark Bruce and Michael Hammer



Mike Heard, CEO of Codan Group of Companies (sponsor of the Gold Cup) with Anthony Kittel, MD of Redarc

### TECH TIP

## Fitting a probe for the LCA1224 in the top radiator hose

The LCA1224 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 a visual and audible alarm if the coolant falls below the chosen level or if the pump loses priming.

It will give warning of a sudden loss of coolant (from a burst radiator hose, for example) alerting you to switch off the engine, preventing any damage due to overheating.

Redarc technicians are regularly asked about how to fit the temperature probe into a plastic header tank. Their ideal solution is not only limited to plastic header tanks.

If fitting the LCA1224 probe to the top tank is not suitable, an alternative is to install a stainless steel bolt in the top radiator hose.

#### Additional parts required

(all stainless steel):

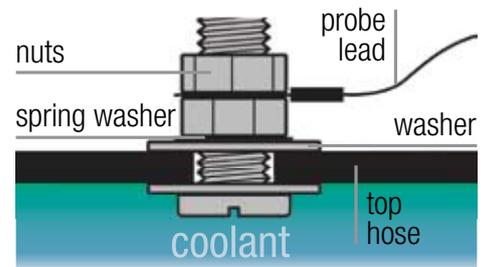
- Bolt (M5x20 is a good choice)
- Two flat washers, spring washer and two nuts to suit
- Lug to fit on the bolt, crimped on to the LCA1224 blue wire

#### Instructions:

- 1 When the radiator is cool, remove the radiator cap and drain some coolant to lower the level
- 2 Remove top radiator hose (it may only be necessary to remove one end)
- 3 Drill or punch a hole in the hose (e.g. 4mm so it is a tight fit for the bolt). The hole should be close enough to the radiator end to be reached but not close enough to contact the pipe when it is put back in place
- 4 Place a flat washer on the bolt & push the bolt/washer through from the inside of the

hose (hopefully you can reach the hole to do this if step 3 was followed)

- 5 Place the other flat washer and a spring washer on the bolt outside the hose
- 6 Place the first nut on the bolt and tighten sufficiently to seal the hose between the two washers without crushing/splitting the hose
- 7 Place the crimped lug with the blue wire on the bolt & secure with the second nut (using a "Nyloc" nut will give better security)
- 8 Replace and clamp hose
- 9 Top up coolant
- 10 Test run and check for leaks



Cross sectional view of probe installation in top radiator hose

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

Director of First Impressions

## Casey McBeath

Casey McBeath is our new receptionist/administration assistant. Casey takes over the role vacated by Maxine Cuthbertson who has decided to return home to the UK after working with Redarc for the last two years.

Maxine has been a great ambassador for Redarc as the first point of contact for our customers and we wish her every success for the future.

Casey joins us after working for ANZ as a Service Consultant.

Casey is conscientious and has a vibrant, happy personality. Casey is currently undertaking a Certificate III in Business Administration. Casey lives in the south of Adelaide and is a keen netballer, loves going to the beach and spending time in the gym.

Casey has a great career objective "to go above and beyond the best of my ability".

We are sure our customers will quickly get to know Casey and we wish her every success in her new role with Redarc.



## Christmas holiday break



The festive season is near and all of us at Redarc would like to take this opportunity to thank you for your support over the past year and wish you all a merry Christmas and a prosperous new year. Our last working day for 2009 will be Wednesday December 23. We will recommence trading on Monday January 4 2010.

## Need urgent technical support?

If you require urgent technical support over the Christmas break please call Mark Bruce on 0437 865 646 or Michael Hammer on 0417 808 892 and they will respond to your call as soon as possible.

## HIGH ACHIEVERS



(left to right) William Newman, Kyle Dix and Redarc Project Supervisor Clinton Smith

## CAN Bus project

William Newman and Kyle Dix both from Bachelor of Engineering (Computer and Electronic) at Flinders University were successful in winning a high commendation for their project entitled "Can Converter CAN1224" at the recent 2009 EDN Innovation Awards.

The product, the "Can converter part number: CAN1224", was designed to connect the CAN Bus networks of two vehicles of different voltages, such as a 24V truck and a 12V trailer, in order to facilitate use of electronic braking

systems. The CAN1224 can be used to interface between two CAN networks of different voltages, specifically one at 12V and one at 24V.

It has two CAN interfaces, one hardwired to each voltage level, and a power supply connection which will accept input voltages from 9V to 32V.

Anthony Kittel, Managing Director of Redarc commented 'We are also pleased to advise that both William & Kyle have signed up with Redarc to commence as Graduate Electronic Engineers in January 2010. I believe they both have very bright futures ahead.'

### Redarc Electronics

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