

Newsletter and Technical Tips – Winter 2006

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First Aussie calcium battery charger to guarantee 100% charge



Smart Battery Charger

Having trouble charging your battery? But not sure why.

It is more likely to be your battery charger! When Australia's leading battery manufacturers and automotive roadside assistance associations come to Redarc for help, you know there must be a problem. Redarc is the first all Australian company to develop a unique method of recharging the new type of construction in lead-acid batteries (Calcium-Calcium plates) used by many OEM's in today's new vehicles. The "Smart Battery Charger" by REDARC, is the first calcium and regular lead antimony battery charger that can prove to the industry its ability to recharge today's batteries to a full 100% charge, quickly and within an economical compact unit. Industry testing, by AAA Associate Club – RAA of South Australia, of various other brands of battery chargers, who "claim" to have calcium charging capability, has not proven to be the case. Redarc's Smart Battery Charger not only charges standard lead-acid and calcium batteries but also AGM and gel batteries. Simply select what type of battery you intend to charge and Redarc's intelligent microprocessor will do the rest. The Redarc Smart Battery Charger (SBC) will look for faults within the battery while charging and if it finds a fault, it will automatically shutdown and indicate to you what type of fault has occurred. If there is no fault, it will continue charging and indicate the current stage of charge until the battery is 100% fully charged. At this point the SBC will automatically switch to maintenance mode.

More than a battery charger – a Computerised Battery Management and Charging System!

Redarc is a 100% Australian owned company and has built a solid reputation over the last 27 years for high quality products and for solving customer's problems through innovative solutions.

www.redarc.com.au

NEW CUSTOMER DEVELOPMENT MANAGER

REDARC are pleased to announce the appointment of Mark Bruce as our National Customer Development Manager.

Mark joins us after many successful years employed by ASHDOWN in various roles in Western Australia. Mark has some 18 years experience in the Auto Electrical industry including his trade background as an Auto Electrician. Since 2003 Mark has been based in Karratha in the Northwest of WA developing the Pilbara and Kimberley Territories. He has made numerous contacts throughout the Auto Electrical Industry and we greatly welcome the expertise and enthusiasm that Mark brings to REDARC Electronics. As well as various other tasks, Mark's new position will involve regular trips throughout Australia to liaise with Distributors and the Automotive Electrical Trade to actively work toward developing new business and product opportunities for REDARC and our business partners. It is with great pleasure that we welcome Mark to REDARC Electronics and hope both he and his fiancée Amanda enjoy their new lives based in South Australia. If you would like to contact Mark please email mbruce@redarc.com.au or call him on (08) 8186 5633 or mobile 0437 865 646.



Mark Bruce

ELIZABETH AUTO ELECTRICS (SA) Long established supporter of REDARC

Elizabeth Auto Electrics was founded by John Riley in 1962 at Elizabeth South. It has been at the Hooke Road location for almost 30 years. John's son Steve has owned the business for many years. Steve recently invited David Benzie and Gavin James, who both served their apprenticeships with the company, to become partners in the business. The business specialises in Auto Electrical, Air-conditioning, EFI & Mechanical and is a local RAA Road Service Contractor. They employ four Auto Electricians, one Auto Electrical Apprentice, one Mechanic & one Apprentice Mechanic. A highlight for Steve is that they have put through 15 apprentice auto electricians over the years. They specialise in passenger cars, 4WD & Light Trucks. The business aim is to be a 'One Stop' for the local community covering all vehicle repair requirements.



Steve commented, "We frequently use and recommend REDARC Products and have often contacted REDARC for Technical Support and Product Advice. Over the years REDARC have provided help with the design of custom products & wiring installation diagrams. We love the fact that REDARC is 100% Australian owned & Australian made. The support and back-up that we receive is second to none".

Steve's ultimate aim is to spend more time on a farming property he owns and hopefully to be able to retire there someday! We wish the team at Elizabeth Auto Electrics every success for the future.

ELIZABETH AUTO ELECTRICS

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If you would like to show your support of REDARC and be featured in our Newsletter please do not hesitate to send us your photos and some information about your business to power@redarc.com.au

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TECHNICAL TIPS

Smart Start in Toyota 100 Series Landcruiser V8 4WD

REDARC have had numerous inquiries about problems experienced when installing SBI12 Smart Start Solenoids in Toyota 100 Series Landcruiser V8 4WD vehicles. The complaint is that the second battery isn't being charged as a result of the Smart Start not switching as the 100 Series Alternator is not reaching the required 13.6 volts.

O'din Randall, owner operator of PMM Auto Electrics in Karratha, Northern Western Australia first brought this to our attention and advised that he's had; "A couple of these vehicles not exceeding the 13.6 volts required to activate the Smart Start and only just reaching 13.5 volts. The alternator field circuit is controlled by the engine ECU and it seems that it is not allowing the voltage to rise above 13.5V. REDARC were able to help out in this situation by reprogramming the control module so that it activates at 13.2 volts bringing the auxiliary battery into the charging circuit. REDARC also reset the Smart Start turn off voltage to 12.5 volts. With these new settings the application worked a treat and I had some very happy customers who appreciated the fast and efficient service".

The Redarc Part Number for future ordering is SBI12-LCV8.

We have had numerous customers contacting REDARC requiring custom voltage settings for the Smart Start for various applications that we have been able to assist. If you have an application which requires custom settings be sure to contact us here at REDARC on (08) 8186 5633 or email: power@redarc.com.au to discuss.



SBI12-LCV8.

Running Two Tubes Off One Fluoro Inverter

Question:

Can the REDARC "RFL" series fluorescent lighting inverters be used to drive twin tube light fittings?



RFL 1220

Answer:

The effect of trying to run a twin tube light like this is that only one tube would ever light. Two tubes set up in a twin tube fitting are "parallel". They cannot be driven this way by the RFL inverter. The reason is that the RFL starts with a high output voltage until the tube "strikes", then the tube current loads the inverter down to a lower voltage, suitable for running the tube. If two were set up parallel, the first tube to strike would load the inverter output down so that there is insufficient voltage to strike the second tube.

Two tubes can be run in "series". This requires significant rewiring of the fitting and should only be attempted by a competent tradesman.

NOTE: As with all inverters producing high voltage, care must be taken during installation/wiring.

For further assistance, please call REDARC on (08) 8186 5633
or email: power@redarc.com.au to discuss.

www.redarc.com.au

TECHNICAL TIPS

Protecting your Smart Start from the environment

We have had a number of customers request information regarding extra protection they can apply to our Smart Start to protect it from water, salt and the elements, particularly in boating applications. One product that customers are successfully using is shown below. The CRC Battery Terminal Protector spray is ideal to give the Smart Start that little extra protection against corrosion. The details are as follows:-



Product Code: CRC-5098

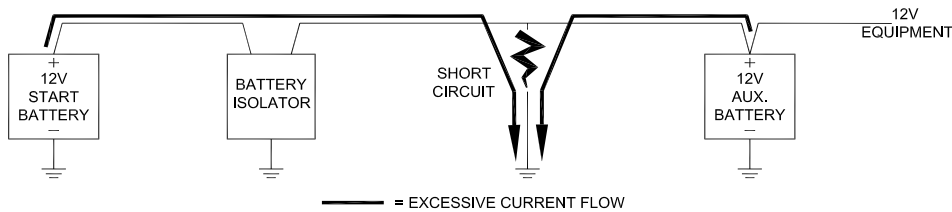
Product Name: Battery Terminal Protector 300g Aerosol

Description: Instant protection against battery terminal corrosion, CRC Battery Terminal Protector is specially designed to protect battery terminals from corrosion which is a major cause of hard starting and battery failure. Ideal for marine applications as it is highly resistant to saltwater and salt spray. Dries quickly to a soft film

Why fit fuses to cables on a battery isolator?

For safety and to reduce the risk of fire, fuses should be fitted to any cable connected to a battery. This is especially important whenever there is any possibility of the cable being overloaded or short-circuited.

Consider the example below:



- A second battery (with a battery isolator) has been fitted. No fuses have been fitted.
- A short circuit appears on the line between the two batteries. This could have been caused, for example, by a screw point piercing the insulation or by the cable coming into contact with the exhaust manifold and melting through.
- Very high current flows through the cable from both batteries, limited only by cable resistance and battery capacity.
- This could result in fire and/or damage (possibly explosion) of one or both batteries.

To protect against this, fuses should be fitted in the cable, close to the positive terminals of each battery. Fitting a fuse to one battery will protect that battery but will not protect the other one and will not prevent the fire risk. A fuse should also be fitted in the line to the 12V equipment to protect the auxiliary battery in the event of a short on that line. The diagram below shows recommended fuse locations.



Please refer to your Smart Start SBI12 instruction sheet for recommended fuse and cable sizes.

Please note that if you are wiring the vehicle with an emergency jump start switch via the blue override wire from our Smart Start then the above is not applicable. This is due to the high starting currents experienced that will result in blown fuses. In this case battery starter cables must be installed between the start battery and the auxiliary battery. The same risks apply as described above therefore please ensure the cables are well protected.