

Focus on Quality

Redarc is an ISO-9001 quality endorsed company and have invested heavily in ensuring that every product and service provided is the benchmark by which the competition is measured. Overseeing the quality systems and implementation processes at Redarc is Charlotte Gelder. Charlotte comes from a background in the European automotive industry, in business process and quality system development roles. She migrated to Australia from the UK in late 2008. In her leisure time she enjoys travelling and keeping fit by running and cycling.

Supporting Charlotte is our Senior Manufacturing Engineer, Scott Manning

who oversees quality systems in the production area of the business. Scott's background is also in the European automotive industry working for Aston Martin as a process engineer, before migrating to Australia with his family in late 2003. Scott enjoys spending time with his family and racing motorbikes.

Completing the trio of new recruits to Redarc, is Rodney Pratt who will ensure the quality control process reaches to the engineering area of the business. Rodney is a dedicated Measurement and Test Engineer. His background is both in the automotive industry and more recently in optical lens manufacturing, in a product testing capacity. When Rodney isn't closely inspecting Redarc's testing

facilities and procedures, he enjoys taking the family camping and touring in his 4WD.

With this 3-pronged approach to quality, Redarc hopes to exceed customer expectations by continuing to deliver world-class products that are supported by exceptional customer service.



L to R: Scott Manning, Charlotte Gelder & Rodney Pratt Redarc's dedicated Quality team

Celebrations for first "Gold" Employee

Redarc will take time out on the 11th November 2010 to congratulate its first employee, Lex Clarke, attaining 25 years of service. Anthony Kittel, Managing Director said, "It is an outstanding achievement by Lex to become our first "gold" employee. He is a valued, loyal employee who provides excellent customer technical support and has a wonderful sense of humour".

Lex in reflection on his 25 years, commented as follows:- "When I started at Redarc in 1985, the business was called Labservice, making Redarc branded products. It was located in a house in Blackwood, shared with a real estate agent. We had two rooms and a "sleepout" as production areas, the entrance hallway as a store and one room as an office. There were 5 assemblers, 1 store person, a secretary and the owner/

manager/engineer. Over the years, need for more space to cater for an ever-growing team prompted moves to a larger house in Reynella, a shed in Lonsdale then a larger building in Lonsdale. Today we have a state of the art manufacturing facility that could only be dreamed of back then. Work has always been "interesting and varied" (as the original job advertisement promised). Growing up with the company as well as being closely involved in the development of its increasing product range has enabled me to have the product familiarity needed to provide the service and technical support our customers appreciate. The team environment at Redarc makes it a great place to work. This is demonstrated by the fact that I won't be the only one to reach the 25 year mark".



Lex Clarke wearing his infamous Xmas shirt

Redarc Electronics

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Catch up with Pat Callinan's 4x4 Adventures

Redarc are again delighted to be working with Pat Callinan and his team as they explore Australia in search of 4X4 fun and adventure for the whole family. The new series will be screened every Tuesday night at 6:30pm on ONE HD from the 30th November. For more details and viewing times please visit www.redarc.com.au.



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International

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Summer 2010 Summer 2010

All charged up!

Smart Start® BCDC1240 In-vehicle Battery Charger

On the back of the success of the Smart Start® BCDC1220, Redarc are set to release a 40A unit incorporating an inbuilt solar regulator. The new Smart Start® BCDC1240 in-vehicle 12V, 40A multi-stage battery charger has all the same features that made the previous model so popular, plus more!

The BCDC1240 will be able to charge your batteries faster, provide a highly efficient solar regulator and be capable of handling much more current than ever before whilst still being small and lightweight enough for ease of installation.

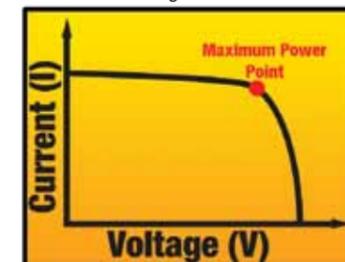
Key features include:

- 40 Amp output
- Inbuilt MPPT solar regulator
- Multi-voltage 12 or 24V input
- 3-stage charging profile, specific to battery chemistry (AGM, Gel, Calcium & Wet Flooded)
- Inbuilt dual battery isolator functionality
- Option for external LED indicator

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

What is MPPT and how does it work?

MPPT stands for Maximum Power Point Tracking, and it relates to the solar cell itself. Each solar cell has a point at which the current (I) and voltage (V) output from the cell result in the maximum power output of the cell. In the diagram below the curve is an example of the standard output expected from a solar cell, the Maximum Power Point is at the position marked on the diagram.



The principle is that if the output from the cell can be regulated to the voltage and current levels needed to achieve a power output at this point, then the power generated by the solar cell will be used most efficiently.

How is this done?

A Maximum Power Point Tracking solar regulator will simulate the load required by the solar panel to achieve the maximum power from the cell. The regulator will work out at which point the cell will output the maximum power and derive from this the voltage and current outputs required for maximum power to be achieved. It will then calculate the load that it must simulate based on these voltage and current levels $R=V/I$. The regulator, now receiving the maximum amount of power in, will then regulate the output according to what it is designed for. In the case of the Redarc BCDC1240, the output is a 3-Stage battery charging profile.

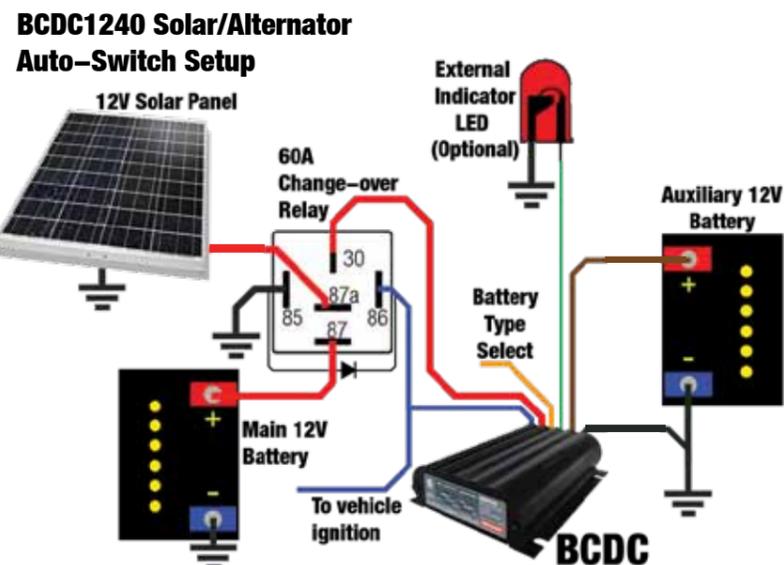
So in layman's terms, how does MPPT benefit me?

Basically all this calculation and regulation results in the output from your solar regulator providing the maximum current possible at the required voltage at any given point. It is particularly useful in low light level situations such as cloud cover or at dusk/dawn, as it will compensate for the low light level and find the new point at which the solar cell delivers its maximum power output.

Available Feb 1st 2011!



STANDARD WIRING



Visit www.redarc.com.au for tech-tips and up-to-date info



Visit www.redarc.com.au for tech-tips and up-to-date info



Redarc on the road

This Spring, the Redarc team have been busy travelling the country to raise awareness about the importance of properly managing a dual-battery setup. Mick Bale, Redarc's dedicated New South Welshman, started the proceedings back in August at the *Mid North Coast Caravan, Camping & 4WD Show* in Wauchope, NSW. A few weeks later Redarc's latest sales recruit and self-confessed 4WD nut, Stuart Peddle joined Mick for the inaugural *Eastern Creek 4WD Adventure Show* at the Sydney Dragway. Come September, the team could be found at the Dubbo Showgrounds for the *Orana Caravan, Camping & 4WD Show*. The shows provided a great opportunity for the Adelaide contingent of Stuart Peddle and Lex Clarke to meet many of the local supporters of Redarc products, who Lex has been, for many years, providing technical support to over the telephone.

With the home of Redarc based in Adelaide, there were more than a dozen volunteers to man the stall at the *SA 4WD & Boating Adventure Show* this October. Everyone from the production floor to engineering and administration joined the sales team to showcase Redarc to the crowds of 4WD enthusiasts.

Upcoming shows where you can meet the team and see the latest range of products include the *South Coast Caravan, Camping & 4WD Show at Bateman's Bay NSW 5th-7th November*. If you are in the West, Redarc will also be exhibiting at the *Perth 4WD Adventure Show on 12th-14th November*.

Please visit www.redarc.com.au for more details about upcoming shows.



The Redarc stand at a recent trade show

COMMUNITY SUPPORT

Redarc provides hands-on support at the 2010 SA Variety Club Bush Bash

Variety the childrens charity SA is a professionally run, international organisation dedicated to inspiring hope and enriching the lives of children in need under the age of 18. The SA Variety Bash is a chance for the people involved in raising this money to go bush in bash cars and visit remote communities and towns, spreading the word and letting their hair down in reward for the year fundraising. There are presentations to communities and individuals along the way, and visits to schools and stations.

Earlier this year, Redarc welcomed Stuart Peddle to their Sales Team. Stuart is a diesel mechanic by trade but more importantly, an avid 4WD enthusiast.

He is well known in the South Australian 4WD fraternity for his adventurous spirit and can-do attitude. For a 6th consecutive year, Stuart and the team along with his trusty 80 Series Landcruiser, provided mobile mechanical support to the participants in the Bash, assisting in situations ranging from mechanical breakdowns to vehicle bog recoveries. Having his Landcruiser optimised with all the latest Redarc gear including the

BCDC1220 and a 3000W Pure Sine Inverter ensured the team was always ready to provide critical support when needed.

This year the event managed to raise over \$1.6m and was hailed a great success by all who participated. Redarc looks forward to supporting the Variety Bash again in 2011.



Stuart Peddle (3rd from right), with his 80 Series Landcruiser

On behalf of all the staff at Redarc, we would like to thank everyone for their continued support & wish you and your family a safe and happy Christmas and New Year.

Regards,

Anthony & Michele Kittel

Adding a Jump Start/Winch Assist feature to a BCDC1220 Dual Battery System

The Smart Start® BCDC1220 is a multi-stage, 12V, 20A, DC-DC battery charger that operates from an input of either 12V or 24V nominal. The input voltage of the Smart Start® BCDC1220 can be above, below or equal to the output voltage making it ideal for charging an auxiliary 12V battery where the distance from the main battery may cause a significant voltage drop. This means that installs suffering voltage drop, or installs in vehicles that are fitted with temperature compensating alternators can still successfully charge auxiliary batteries to 100% state of charge (SOC) by using the Smart Start® BCDC1220.

Charging the auxiliary battery to 100% SOC will prolong the battery life, and ensure the A/Hr's the customer is expecting from their battery will be provided. The Smart Start® BCDC1220 multi-stage charging profile decreases charging time. The Smart Start® BCDC1220 ensures that the battery is charged as the manufacturer intended by using specific charging algorithms for the particular battery chemistry being charged.

With the functionality of a battery isolator, the Smart Start® BCDC1220 also protects your start battery from being discharged by auxiliary loads.

Redarc technicians are regularly asked to recommend an installation method using the Smart Start® BCDC1220 that will allow the customer to jump start their main battery from the auxiliary battery. This may be required in the event that the main battery becomes too discharged for starting, due to leaving headlights on, or a failed main battery. Another common request is how to benefit from connecting the main and auxiliary batteries in parallel at times when extra large current is required, such as when operating a 4WD recovery winch.

For these applications, and any other situation where it is required to draw current from both batteries, the following solution can be applied. Using a switch, a change over relay and a continuous solenoid, the customer can select to draw on the batteries in parallel, or charge the auxiliary with the Smart Start® BCDC1220. This installation method is for 12V charging systems only.

Additional parts required:

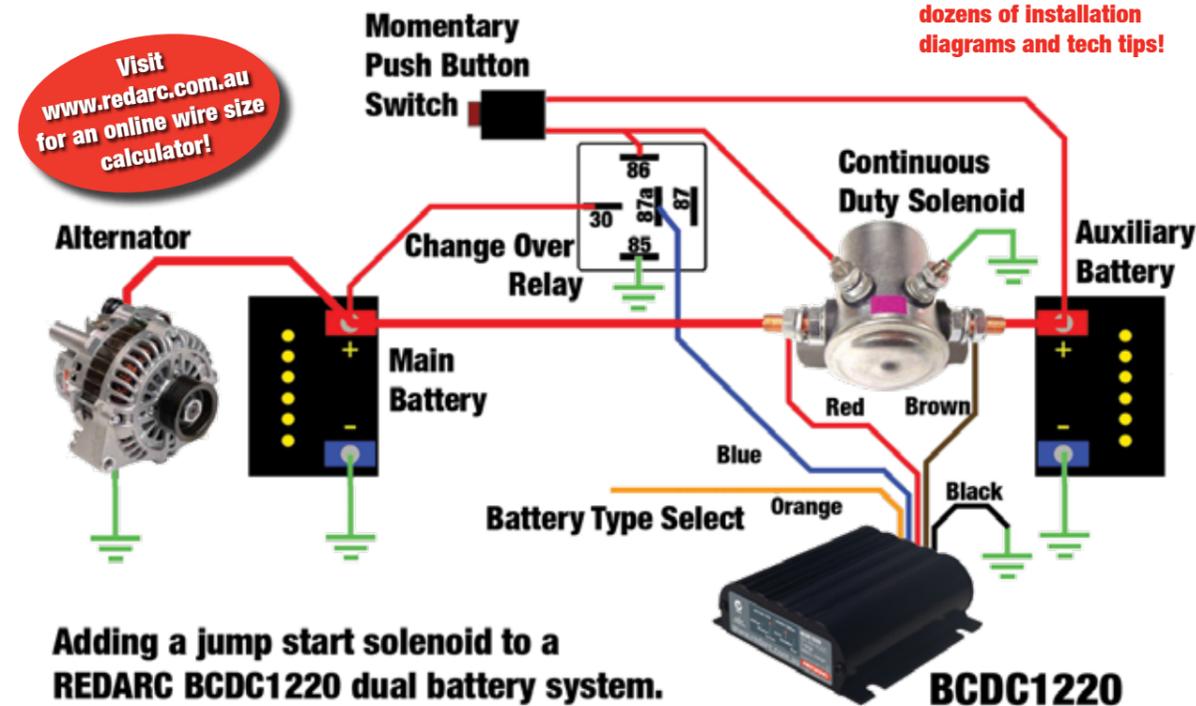
- Suitable continuous solenoid (12V, rated for the current you require it to pass)
- 2 x fuses and holders (rated higher than the current you require to pass)
- 2 x 5A fuses and holders
- Suitable size cable of required length (rated

- for the current and distance you require)
- Change over relay (12V, 20Amp)
- Momentary push button switch (Or illuminating toggle switch, or missile switch cover)

Instructions:

1. Disconnect all battery earth leads
2. Install continuous solenoid, change over relay, and switch in appropriate locations
3. Install the main battery positive lead, and the BCDC1220 input lead (red) to one side pole of the continuous solenoid contacts
4. Install the auxiliary battery positive lead, and the BCDC1220 output lead (brown) to the other side pole of the continuous solenoid contacts
5. Wire PIN 30 of the relay to the main battery positive via a 5A fuse
6. Wire PIN 85 of the relay to earth
7. Wire PIN 87A to the blue wire of the BCDC1220
8. Wire one side of the switch to the auxiliary battery positive via a 5A fuse
9. Wire the other side of the switch in parallel with:
 - a. PIN 86 of the change over relay
 - b. One pole of the coil windings on the continuous solenoid
10. Wire the other pole of the coil windings on the continuous solenoid to earth
11. Connect all battery earth leads
12. Test operation

Visit our website to view dozens of installation diagrams and tech tips!



Adding a jump start solenoid to a REDARC BCDC1220 dual battery system.

Christmas shutdown dates.

This year's Christmas shutdown period will commence 1pm Wed 22nd of December and the factory will re-open 8am Mon 10th of January 2011. For urgent assistance please call Michael Hammer on 0417 808 892 or Stuart Peddle on 0423 115 665.



All charged up!

Summer 2010

