REDARC In-vehicle Dual Battery Chargers

Built tough for Australian conditions

THE POWER OF REDARC

REDARC's range of In-vehicle Dual Battery Chargers are designed, built and tested in Australia for our unique conditions to make sure they won't let you down.

With features like fully sealed construction and fan-free cooling - water, dust and vibration are no match for the In-vehicle Dual Battery Charger... you can be assured they can handle the roughest tracks in outback Australia and the deepest water crossings at Cape York.

REDARC's knowledge of Australian conditions is engineered into every unit. All models operate up to a market-leading 80°C meaning they are going to work in even the most extreme heat of the Simpson Desert.

A higher operating temperature and compact in size also allows for flexible installation options, from the engine bay to inside a van or camper trailer.

Look at all the benefits...

- Multi-stage charging saves you money by maximising battery life
- Increase run time of loads like fridges and lights
- Allows for flexible installation in 12 or 24 volt vehicles
- Overcomes voltage drop caused by long cable runs

MADE IN AUSTRALIA

AUSTRALIAN DESIGNED · AUSTRALIAN BUILT · TWO YEAR WARRANTY

The BCDC In-vehicle Dual Battery Charger range

The REDARC BCDC range features a wide 9-32 volt input range, allowing an auxiliary battery to be charged from either a 12 or 24 volt vehicle electrical system. All models incorporate dual battery isolation as well as fault recognition that includes protection against voltage spikes, overheating and reverse polarity connection, to ensure complete protection of all your batteries.

12 volt auxiliary battery chargers

There are four output current options to choose from - 6, 20, 25 or 40 amps - to charge lead acid auxiliary batteries while driving. The 25 and 40 amp models also feature a fully integrated MPPT solar regulator, extracting the maximum amount of power from solar panels to charge an auxiliary battery, even during low light conditions.

A relay kit is required to allow you to automatically switch between charging your auxiliary battery from the vehicle or solar panel when using either a BCDC1225 or BCDC1240.

BCDC1206

BCDC1220, BCDC1220-IGN

BCDC1225, BCDC1225-LV

BCDC1240, BCDC1240-LV

12 volt dual input auxiliary battery charger

This next-generation, 25 amp model with a fully integrated MPPT solar regulator is able to charge common lead acid auxiliary batteries as well as lithium iron phosphate batteries.

The BCDC1225D dual input battery charger, charges from solar and DC inputs simultaneously (no external relay is required as with standard BCDCs). With built in 'Green Power Priority' it will select solar first, meaning less load on the alternator.

The unit will also suit standard and variable voltage/smart alternators.

BCDC1225D

24 volt auxiliary battery charger

To meet the demands of 24 volt auxiliary battery charging, a 24 volt, 20 amp charger is available.
It also features a fully integrated MPPT solar regulator.

The BCDC2420 is ideally suited for charging 24 volt battery banks used for powering electric hydraulic pumps, tailgate lifters, spreader decks, ramps and sleeper cab air-conditioning systems, the applications are endless.

BCDC2420

With more and more electrical devices being used when travelling around Australia, along with more complex vehicle electrical systems, having the right battery charging solution has never been more important.

The REDARC range of BCDC In-vehicle Dual Battery Chargers ensure optimum performance of electrical equipment such as fridges, lights, CPAP machines and even hydraulic pumps when they're powered from a dual battery setup.

By employing a unique, multi-stage charging algorithm, BCDC In-vehicle Dual Battery Chargers have been designed to charge any commonly-used automotive auxiliary battery to 100% while you're on the move and from solar (if available).

Unique charging profile

Most vehicle alternators are not designed to fully charge an auxiliary battery, an insufficient charge rate will, at best, shorten the life and performance of the auxiliary battery but may result in the battery being flat when least expected.

Whether you need an auxiliary battery for leisure or business, you need an auxiliary battery charger you can really rely on, the REDARC BCDC in-vehicle battery charger will ensure your auxiliary battery will achieve and maintain an optimal charge regardless of its type or size.

The charging algorithm has also been independently verified and tested to ensure battery life is maximised.

Charging algorithm

The BCDC In-vehicle Battery Charger range features a three stage charging algorithm.

When the vehicle has started charging the main battery and it reaches the required voltage level the BCDC charger will commence charging the auxiliary battery in boost, the boost stage maintains a constant current until the battery reaches its predetermined 'absorption' voltage.

The BCDC charger will then remain in the absorption stage holding its set voltage until the battery is 100% charged.

The BCDC charger then switches to the 'float' stage where it retains 100% charge until a load on the auxiliary battery causes the battery voltage to drop below a predetermined voltage where it then re-enters the boost stage.

The **lithium charging profile** (available in the BCDC1225D) features a two stage charging algorithm.

When the lithium profile commences charging the auxiliary battery it will charge in a constant current stage, this stage maintains a constant current until the battery voltage reaches its set point. The lithium profile will then move to constant voltage stage which keeps the battery at 100% charge.

When a load is applied to the battery and the battery voltage drops, the lithium profile will move back into constant current stage.

The advanced electronics in the BCDC In-vehicle Battery Chargers constantly monitor the vehicle battery input charge to ensure that your auxiliary battery always receives the ideal voltage and current for maximum battery life and performance. Additionally a highly advanced battery isolator constantly monitors the vehicle battery input charge level, protecting your start battery from excessive discharge.

If it's worth having an auxiliary battery, it's worth protecting it with a REDARC In-vehicle Battery Charger.

ECU-controlled variable voltage alternators

A number of late model vehicles on the market have ECU-controlled variable voltage alternators to achieve better fuel economy and increased performance.

These systems vary the voltage from the alternator based on driving conditions. When the alternator voltage is low, the system voltage can drop below 12.7 volts turning the standard BCDC or isolator off.

In these instances we recommend using our BCDC-IGN or BCDC-LV.

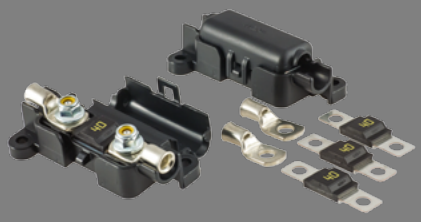
The next-generation BCDC1225D can be used for 12 or 24 volt vehicle systems with standard or variable voltage/smart alternators, ensuring the unit will deliver the best charge to your auxiliary battery.

The extensive range of BCDC In-vehicle Dual Battery Chargers are designed and manufactured in Australia for Australian conditions. Regardless of which charger you choose, you'll be assured of the high quality and reliability that comes with every REDARC product.

Works best with...

REDARC has a comprehensive range of accessories including fuse kits, relays, cables, connectors and mounting hardware to complete your installation.

Relay kit - RK1260
(not required for BCDC1225D)



Fuse kits - FK40, FK60 and FK100

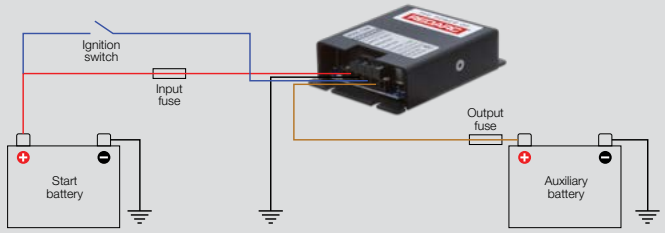
Gauge value packs

If visual monitoring of a 12 volt dual battery setup is required, REDARC have a range of BCDC In-vehicle Dual Battery Chargers, each packaged with a G52-VVA dual voltage gauge.

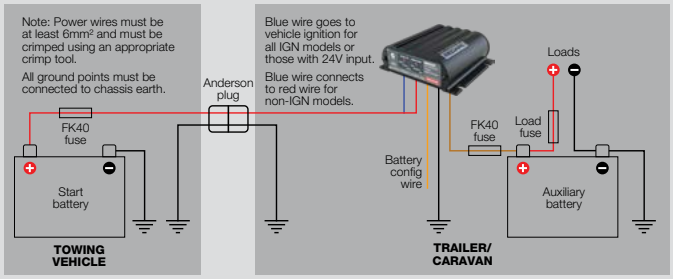
Value Pack	Contains
BCDC1220-GK	BCDC1220 and G52-VVA
BCDC1220I-GK	BCDC1220-IGN and G52-VVA
BCDC1225-GK	BCDC1225 and G52-VVA
BCDC1225L-GK	BCDC1225-LV and G52-VVA
BCDC1240-GK	BCDC1240 and G52-VVA
BCDC1240L-GK	BCDC 1240-LV and G52-VVA

THE POWER OF REDARC®

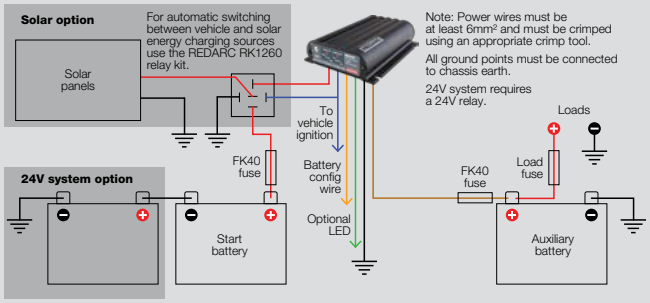
BCDC1206 typical setup



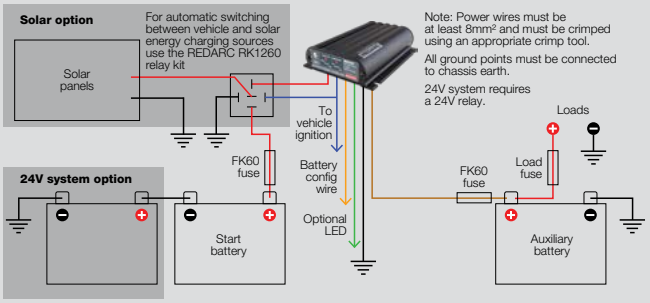
BCDC1220 typical setup



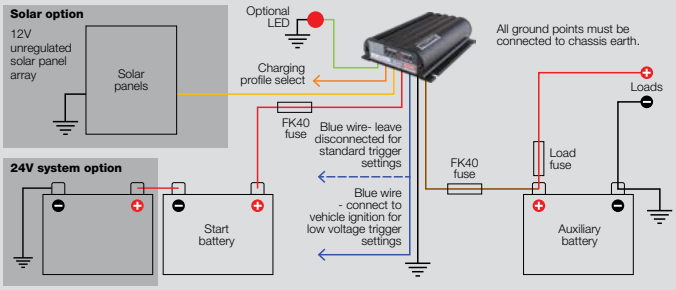
BCDC1225 typical setup



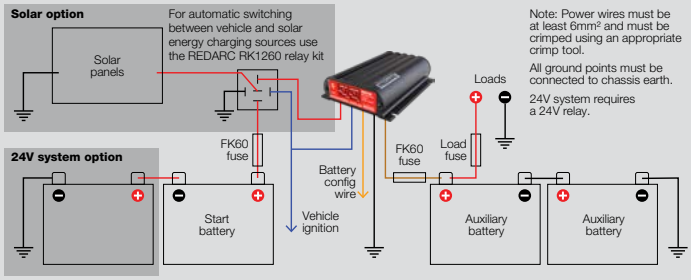
BCDC1240 typical setup



BCDC1225D dual input typical setup



BCDC2420 typical setup



	 BCDC1206	 BCDC1220 BCDC1220-IGN	 BCDC1225 BCDC1225-LV	 BCDC1240 BCDC1240-LV	 BCDC1225D	 BCDC2420
Input voltage range†	9V-32V	9V-32V	9V-32V	9V-32V	9V-32V	9V-32V
Vehicle voltage range (LV models)†	N/A	N/A	9V-16V	9V-16V	N/A	N/A
Solar voltage range†	N/A	N/A	9V-28V	9V-28V	9V-32V	9V-28V
Solar switch on voltage (unregulated)†	N/A	N/A	17.5V	17.5V	9.0V	17.5V
Maximum charging voltage†	14.5V	14.5V/14.9V/15.3V	14.5V/14.9V/15.3V	14.5V/14.9V/15.3V	14.6V/15.0V/15.3V/14.6V	29.0V/29.8V/30.6V
Output current	6A	20A	25A	40A	25A	20A
No load current	<100mA	<100mA	<100mA	<100mA	<100mA	<100mA
Standby current	<1mA	<5mA	<8mA	<8mA	<8mA	<8mA
Recommended input fuse‡	10A	40A	40A	60A	40A	60A
Recommended output fuse‡	7.5A	40A	40A	60A	40A	40A
Output power	72W	300W	375W	600W	375W	600W
MPPT solar regulator	No	No	Yes	Yes	Yes	Yes
Ambient temperature	-20°C to +70°C		-20°C to +80°C		0°C to +80°C	-20°C to +80°C
Dimensions	80 x 60 x 20mm	100 x 120 x 37mm	150 x 120 x 37mm		165 x 120 x 37mm	150 x 120 x 37mm
Weight	200g	450g	680g	680g	850g	680g

† Voltages specified are ±100mV. ‡Fuses not supplied.

Visit **redarc.com.au** for more information. REDARC In-vehicle Dual Battery Chargers are available at your nearest auto electrician or 4WD specialty store.

Want to know more?
Scan this QR code with your smartphone to go to the Redarc website

REDARC Electronics
ABN 77 136 785 092
power@redarc.com.au

23 Brodie Road (North)
Lonsdale, South Australia
Australia 5160

Australia
Phone 08 8322 4848
Fax 08 8387 2889

International
Phone +61 8 8322 4848
Fax +61 8 8387 2889

THE POWER OF REDARC®

5051-161031