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 In-vehicle Dual Battery Charger 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 protection against voltage spikes, overheating and reverse polarity connection, to ensure complete protection of all your batteries.

12 volt auxiliary battery chargers

There are two output current options to choose from - 6 and 20 amps - they charge AGM, gel, calcium content, VRLA and standard lead acid batteries while driving. The IGN-model is suitable for vehicles with an ECU-controlled, variable voltage alternator.

BCDC1206

BCDC1220, BCDC1220-IGN

12 volt dual input auxiliary battery chargers

The next-generation 25, 40 and 50 amp models with fully integrated MPPT solar regulators are able to charge common lead acid auxiliary batteries as well as lithium iron phosphate batteries ($LiFePO_4$).

They charge from solar and DC inputs simultaneously, with built in 'Green Power Priority' they will select solar first, meaning less load on the alternator.

They also suit standard and variable voltage/smart alternators.

BCDC1225D

BCDC1240D

BCDC1250D

24 volt auxiliary battery chargers

To meet the demands of 24 volt auxiliary battery charging, a range of 24 volt, 20 amp chargers are available. They feature a fully integrated MPPT solar regulator.

The BCDC2420 charges AGM, gel, calcium content, VRLA and standard lead acid batteries. The LFP2420 and LFP2420-LV are designed to charge Lithium Iron Phosphate ($LiFePO_4$) batteries.

The LV model features a lower voltage setting so it can operate with variable voltage alternators.

BCDC2420

BCDC2420-LV

LFP2420

LFP2420-LV

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 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, the 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 (model dependent).

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. A REDARC 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 In-vehicle Battery Charger range features a three stage charging algorithm. The BCDC1250D features a four stage charging algorithm.

When the vehicle has started charging the main battery and it reaches the required voltage level the BCDC/LFP 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 charger will then remain in the *absorption* stage holding its set voltage until the battery is 100% charged.

The 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 BCDC1250D features an additional *SoftStart* stage that increases current flow into the auxiliary battery over a short period.

The advanced electronics in REDARC's In-vehicle Dual Battery Chargers constantly monitor the auxiliary battery charge to ensure that your battery always receives the ideal voltage and current for maximum battery life and performance. Additionally, a highly advanced battery isolator, which includes Smart Start® technology, constantly monitors the vehicle battery 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.

Connecting in parallel

For batteries requiring a higher charge rate than our 25, 40 and 50 amp chargers, the good news is that up to four BCDC In-vehicle Dual Battery Chargers can be used in parallel.

Many vehicle charging systems, including smart alternator-equipped vehicles, can produce in excess of 80 amps of current, over and above what the vehicle would use under normal conditions.

In ideal operating conditions, where the vehicle's own electrical load, start battery, vehicle accessories and engine management systems demands are relatively low and engine speed is above idle, the alternator will have some surplus capability. The BCDC is able to adapt its input current draw to deliver more power to the auxiliary battery.

Using Adaptive Current Management technology, the BCDC ensures that, under all vehicle operating conditions, your auxiliary battery system is receiving the optimal charge available from your vehicle without compromising its safety and reliability.

The extensive range of 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.

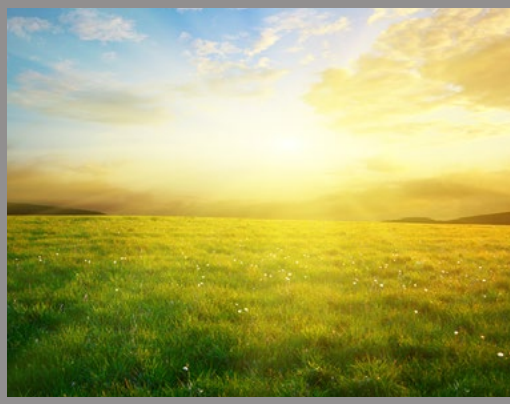
Works best with...

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

Relay kit - RK1260 (Required for 2420 BCDC/LFP range)

Fuse kits - FK40, FK60 and FK100

Collect more power from the sun



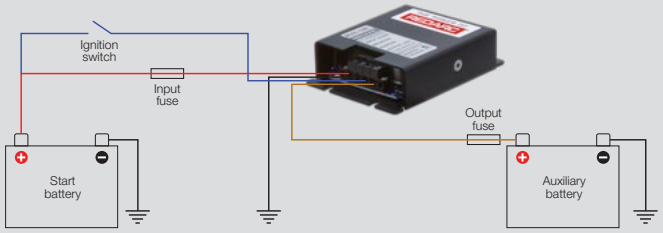
The 12 volt dual input and 24 volt auxiliary battery chargers feature a Maximum Power Point Tracking (MPPT) solar regulator allowing the use of solar power to boost a battery's charge.

The MPPT solar regulator delivers the maximum available amount of power from solar panels to the auxiliary battery, even during low light conditions.

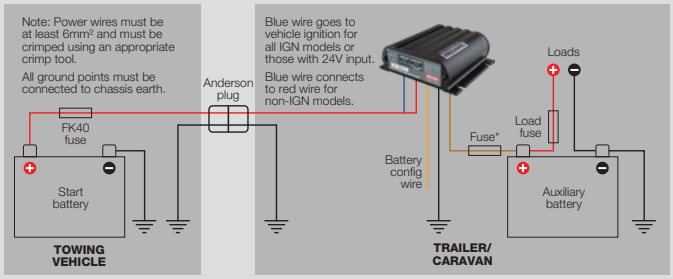
SOLAR READY

THE POWER OF REDARC®

BCDC1206 typical setup

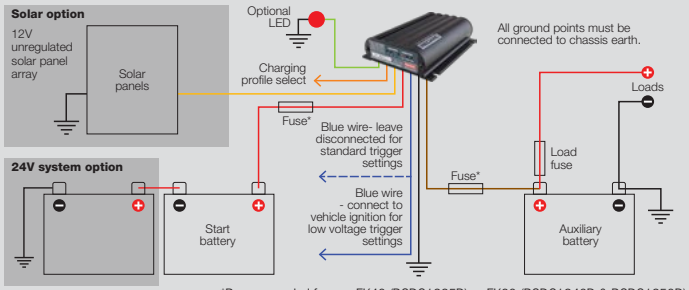


BCDC1220 typical setup



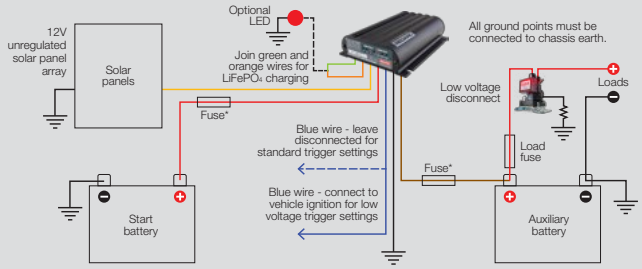
*Recommended fuse - FK40

BCDC1225D, BCDC1240D and BCDC1250D dual input typical setup



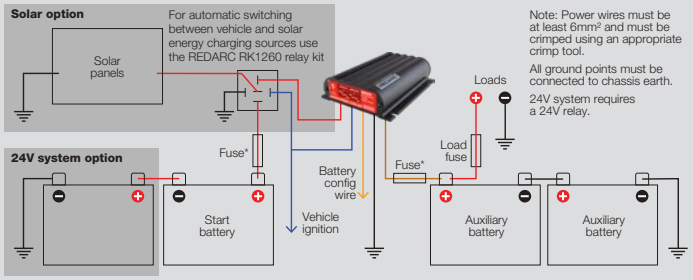
*Recommended fuses - FK40 (BCDC1225D) or FK60 (BCDC1240D & BCDC1250D)

BCDC1225D, BCDC1240D and BCDC1250D dual input Lithium setup



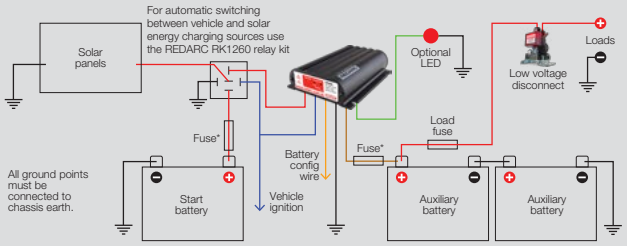
*Recommended fuses - FK40 (BCDC1225D) or FK60 (BCDC1240D & BCDC1250D)

BCDC2420 and BCDC2420-LV typical setup



*Recommended fuses - FK40 (24V systems) or FK60 (12V systems)

LFP2420 and LFP2420-LV typical setup



*Recommended fuses - FK60 (LFP2420 & LFP2420-LV)

	BCDC1206	BCDC1220 BCDC1220-IGN	BCDC1225D	BCDC1240D	BCDC1250D	BCDC2420 BCDC2420-LV	LFP2420 LFP2420-LV
Input voltage range†	9 - 32V						
Solar voltage range†	N/A		9 - 32V			9 - 28V	
Solar switch on voltage (unregulated)†	N/A		9.0V			17.5V	
Maximum charging voltage†	14.5V	14.6V/15.0V/15.4V	14.6V/15.0V/15.3V/14.5V			29.0V/29.8V/30.6V	28.8V
Output current	6A	20A	25A	40A	50A	20A	
No load current	<100mA						
Standby current	<1mA	<5mA	<8mA				
Recommended input fuse‡	10A	40A	40A	60A	60A	60A	
Recommended output fuse‡	7.5A	40A	40A	60A	60A	30A	
Output power	72W	300W	375W	600W	750W	600W	
MPPT solar regulator	No		Yes				
Ambient temperature	-20°C to +70°C	-20°C to +80°C	-10°C to +80°C			-20°C to +80°C	
Dimensions	80 x 60 x 20mm	100 x 120 x 37mm	165 x 120 x 37mm			150 x 120 x 37mm	
Weight	200g	450g	850g		950g	680g	

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

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