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
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.

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 (LiFePO₄).

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.

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 (LiFePO₄) batteries.

The LV model features a lower voltage setting so it can operate with variable voltage alternators.
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 BCDC-1250D 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 SmartStart® 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.
**BCDC1206 typical setup**

**BCDC1220 typical setup**

**BCDC1225D, BCDC1240D and BCDC1250D dual input typical setup**

**BCDC1225D, BCDC1240D and BCDC1250D dual input Lithium setup**

**BCDC2420 and BCDC2420-LV typical setup**

**LFP2420 and LFP2420-LV typical setup**

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**Input voltage range**: 9 - 32V

**Solar voltage range**: N/A

**Solar switch on voltage (unregulated)**: 9.0V

**Maximum charging voltage**: 14.5V

**Output current**: 6A

**Standby current**: <1mA

**Recommended input fuse**: 10A

**Recommended output fuse**: 7.5A

**Output power**: 72W

**MPPT solar regulator**: No

**Ambient temperature**: -20°C to +70°C

**Dimensions**: 80 x 80 x 20mm

**Weight**: 200g

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

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**THE POWER OF REDARC**