



A stable connection

THE AWARD WINNING R&D DEPARTMENT AT REDARC ELECTRONICS HAS DEVELOPED A NEW DC POWER SUPPLY UNIT, DESIGNED TO PROVIDE A SMOOTH, STABLE OUTPUT WITH WIDE INPUT VOLTAGE FOR SENSITIVE ELECTRONIC EQUIPMENT.

To help transport operators ensure their increasing numbers of sensitive computer-based equipment works to the best of its ability, the team at Redarc Electronics has developed a brand new DC Power Supply

(DPS) unit. Based on its award winning BCDC In-Vehicle Battery Charger platform, the DPS can be installed anywhere on a vehicle and set to send the exact voltage required for a device to operate at its best.

The DPS units are designed to provide a stable 12V or 24V output, which is integral to the performance of auxiliary loads where the input voltage is critical, such as for GPS devices, weighing machinery, or radio equipment. "The new DPS stands out because there's a wide range of specific functions that it can perform," says Redarc OEM Business Development Manager, Stuart Piddle.

Stuart explains that devices may not be getting the voltage required, because voltages can spike when an engine starts, or drop from engine cranking or if there is a particularly large load on the battery. Voltage drops can also happen with the long cable

runs typical to semi-trailers, where the voltage sent from the power source at the truck will often lose voltage by the time it gets to the other end of the trailer.

"The voltage inconsistencies can stop a device from working properly. For example, with ABS and EBS systems, the actuators are a great distance away from power source in the truck, especially when they're in the back of an A or B trailer. Losing a few volts means the ABS or EBS may not respond as quickly," says Stuart – adding that the DPS unit can raise, lift, smooth and make voltages stable.

The unit also takes care of noise on the circuit, which can be generated by electric functions like tarp winders and pumps. "Circuit noise cannot be tolerated by sensitive equipment like computers, GPS or weighing machinery," says Stuart. "It's vital to have consistent voltage if you're using computers to measure airbag weights, load weights or



Euan Bragg and Tom McNamara, working in the Redarc Surface Mount Technology room.

“It’s vital to have consistent voltage if you’re using computers to measure airbag weights, load weights or other sensitive function components.”

other sensitive function components.” The DPS doesn't only boost voltage and smooth spikes, but can also specify voltages up or down to an exact number, which Stuart says is ideal for radio equipment. "Radio equipment uses very specific voltages, wherein a radio might work best at 13.8 volts. With the DPS, you can plug in any appliance that has an input of 24 or 12 volts and run it. It has really broad types of application," Stuart adds. "We've had them out on extensive trials spread out across Australia, just like we do with anything we make. They've been tested on radio, EBS and ABS applications, both boosting and reducing voltages." According to Stuart, every device that Redarc develops is tested in the harshest environments in Australia to ensure it can stand up to the extreme heat, cold, dust or moisture that can wreak havoc on traditional



electronics. "The DPS is robust enough to be mounted on the chassis rail or wherever else you need it to be, heat dust and moisture can't affect it." While Stuart agrees that the DPS does a very specific job, he adds that there are many different applications it can be used for. "With its wide input range, you can plug it into any truck and get a stable output for the

range. It will ensure electronics are always getting the exact voltage they should for ideal operation." 

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