



## Rotortuner Backup

Portable Backup Power Supply

**Designed by Aircraft Engineers for Aircraft Engineers**

The RT-Backup is a rugged, lightweight, portable 28V DC power source and 28V DC voltage regulator. It can be used as a standalone 28V DC power supply for up to 30 minutes duration whilst powering a maximum of two Rotortuners products. It can also be used to maintain a 28V DC supply in the event of aircraft voltage fluctuations.

During aircraft operating and testing procedures it is possible that the aircraft 28V supply may fluctuate or become unavailable, particularly during engine tests. RT-Backup has been designed to automatically and seamlessly compensate for these aircraft voltage fluctuations to provide a stable and reliable power source by instantly switching to its internal batteries.

As a stand alone 28V DC supply, RT-Backup can be used to power Rotortuners without the need to connect large ground power units or run from the aircraft batteries.

RT-Backup incorporates lithium battery technology to achieve: a long in service life, excellent low temperature performance and a short recharging time.

The RT-Backup has a built-in charging circuitry operating from supply voltages of 11V DC to 32V DC. RT-Backup will automatically activate the charging circuit upon availability of a suitable power supply such as the aircraft 28V DC or Rotortuner AC Adaptor Pn.007920. LED displays on the front panel indicate the charging status and remaining battery capacity.

The unit is designed to be operated either standing vertically or laying down on its rear surface. Rubber feet are provided for both mounting options along with twin mounting lugs to restrain the unit using 30mm web strapping.



**Specification**

Part No.	003086-1
NSN Number	6130-99-812-5937
Number of Outputs	2
Power Supply	Mil 704C For 28V DC Operation
Input Current	Factory Configurable limit at 4.5A, 8A & 12A
Output Voltage	28V DC
Capacity	4.0Ah (@ 20°C)
Maximum Current	3.6A
Maximum Pulse Current (5 sec)	4.3A
Maximum Power	100W
Maximum Pulse Power (5 sec)	120W
Recharge Time at 20°C	4.5 hrs approx (from 0% capacity, no external load)
Battery Life	500 cycles at 100% discharge (to 70% of initial capacity)
Internal Charger	3-stage fully automatic, operating from 11V DC - 32V DC supplies
EMC Certification	CE Emissions EN55022 1998 CE Immunity EN50024 1998 RTCA DO 160E Sections 16 to 21 Cat B
Vibration	RTCA DO 160E Section 8
Operation Shocks and Crash Safety	RTCA DO 160E Section 7
Transportation Certification	UN Manual of Tests and Criteria, Part III, Sub-Section 38.3 Lithium Batteries International Air Transport Association (IATA) 2004 Dangerous Goods Regulations, 45 <sup>th</sup> Edition
Electrical Safety	Low Voltage Directive EN 61010-1: 1993 + A2: 1995
Case	Alloy
Finish	Powder-coated black
Size	Height: 80mm Width: 240mm Depth: 240mm
Weight	5 Kg
Operating Temperature	-20 to +55°C
Storage Temperature	-40 to +60°C, optimum long term storage temperature 20°C
Optimum Battery State of Charge for Storage	50% of capacity

Note: 30 minutes power support based upon a single powered equipment. Thermal protection circuits prevent operation outside of specified range. Front panel LED indicator will illuminate to inform user.



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Helitune is registered to BS EN ISO 9001 / AS9100

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