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**Connection  
Systems**



**RED BOX  
AVIATION**

# PS50 MANUAL

**LPA Connection Systems**

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## 14 / 28 Volt 50Amp DC Power Supply System

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### Specifications

Input Voltage	95 to 270 Volt AC 50/60Hz (Autoranging)
Input Rating	1800 VA
Output Voltage	14 / 28 Volt DC – Mode selectable 14.0 ± 0.5 Volts DC - 28.0 ± 0.5 Volts DC
Output Current	50 Amp (Maximum)
Operating Temp.	0 to 50° C
Cooling	Forced - Fan
Protection	Input Current, Short Circuit, Over Voltage, Over Current

### AC Input Wiring

This unit is supplied and configured from the factory with UK / European wiring colours, however it will work on worldwide voltages as detailed above but must be connected as detailed below. Any doubts or the suitability of connection plugs please contact LPA or a qualified Electrician before connection.

**BROWN** is Live    **BLUE** is Neutral    **GREEN / YELLOW** is Earth

## Health and Safety Information

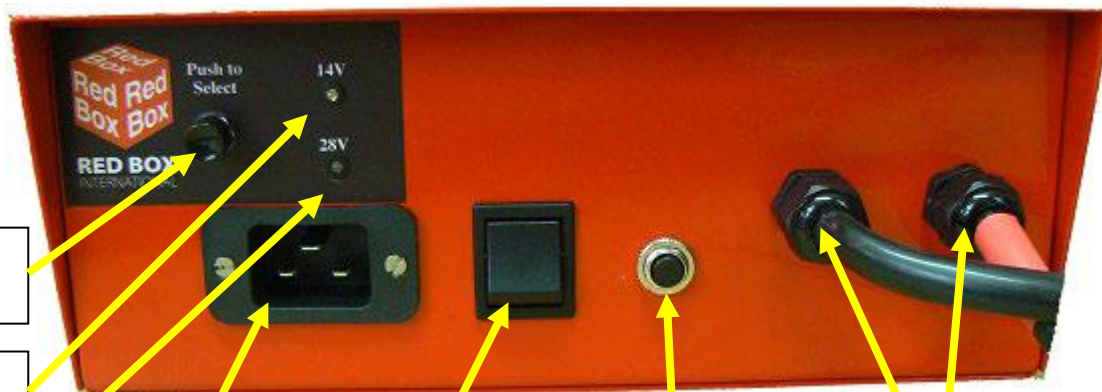
This portable power supply should only be used by personnel who have received instruction on the correct operating procedures. Failure to follow the correct procedures or to take adequate precautions could cause damage to electrical systems, result in injury to the operator, or damage to equipment.

### SAFETY

1. The AC supply should always be fed from a 30mA Residual Current Device (RCD) protected supply.
2. This unit is not weatherproof and should not be used in rain or excessively damp conditions.
3. **Never** block or obstruct the vents on either end of the unit.
4. **Never** short circuit the equipment - check there are no bare leads that could touch the aircraft or vehicle.
5. These units are not configured for Battery Charging.
6. Do NOT open the unit; there are very high, DANGEROUS voltages inside.
7. When not being used, always disconnect from the AC supply and remove the output cable.

## RBPS Layout

### RBPS25/50



Push to select  
voltage button

14V output  
indication

28V output  
indication

Mains Input

On/Off

Reset circuit  
breaker

DC Out

## Operational Procedure

1. Ensure the unit is Switched Off.
2. Connect the input to a suitable AC Supply.
3. Switch on the Unit at the Main Isolator.
4. The Amber LED will illuminate to show the power is available and the unit is in 12/14 volt output. If 24/28 volt output mode is required, then press the selector button and the LED will change to the Red one showing the unit is now in 24/28 volt output.
5. Connect the Aircraft plug to the Aircraft.

When the AC mains supplied is removed from the unit for a few seconds it will reset back to the 12/14 volt mode – to change to the 24/28 volt mode press the button. This system is to prevent a 24/28 volt source being connected to a 12/14 volt aircraft.

**Note – The current is limited to 50 Amps Output, but if the load is further increased this will lower the output voltage. The unit will supply 14/28 volts up to the full rated current. If this occurs reducing the load will restore the output voltage back to its full level**

## Battery Charging

The RBPS50 is not configured for charging battery systems, as it is a fixed voltage power supply. Although it can be used short term to top up discharged batteries, DO NOT leave connected to charged batteries for an extended period of time as overcharging of the battery cells may occur and result in damage to them. Please consult LPA before any charging is attempted as we can offer suitable multi-voltage and stage systems.

## Maintenance & Troubleshooting

The unit is essentially maintenance free and only requires to be kept clean and free from liquid ingress. The vents both inlet and outlet must be kept clear at all times and should be periodically checked for obstructions.

If a reduced Voltage is observed, it is because the maximum current of the unit has been exceeded. Reduce the load to below 50 Amps or use a larger model with increased capability.

Ensure the unit is fed from a suitably rating AC supply and the input lead is correctly configured. If any doubts, please consult a qualified electrician.

Should the unit become over heated, the voltage (or current) will reduce as the thermal management system becomes operative. Ensure the vents on both ends are unobstructed and clear. When the unit cools it will automatically reset.

There are no user serviceable parts inside – Do NOT open; there are very high, Dangerous voltages inside.

Opening the unit will invalidate the warranty. The unit is warranted in the event of faulty workmanship or parts for a period of one year from the date of purchase.



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