Specifications

PowerSource Model | RINV150 | RINV300
---|---|---
Max. Continuous power (Watts) | 150 | 330
Peak Power (Watts) 0.01 Seconds | 300 | 600
No load current draw (AMPS) | <0.15 | <0.25
Waveform | Modified Sine | Modified Sine
Input Voltage Range | 10 – 15 Volts DC | 10 – 15 Volts DC
AC Socket | 3 Pin Mains | 3 Pin Mains
Fuse | 20 amp | 40 amp
Weight (kgs) | 0.8 | 1.1
Dimensions (mm) | 140 x 137 x 52 | 203 x 137 x 52

Troubleshooting Guide

Symptom
AC appliance will not operate; the audible alarm is sounding.

Possible causes
1. Battery has discharged to 10v.
2. The inverter has overheated. This could be due to poor ventilation.
3. Poor battery condition

Possible solution
Turn off the inverter on/off switch and recharge the battery.

AC appliance will not operate; the audible alarm is not sounding.

Possible causes
1. Inverter is overloaded.
2. Internal fuses have blown.
3. Fuse in cigarette lighter plug has blown.
4. Vehicle fuse has blown as the maximum wattage using the cigarette lighter plug is 180 watts.

Possible solution
Reduce load, not exceeding maximum rating.
Fuse replacement (qualified electrician only).
Replace fuse in cigarette lighter plug - 15 amp.
Replace vehicle fuse and ensure if using cigarette lighter plug the wattage does not exceed 180 watts. Above this connect directly to the vehicle battery.

Run time is less than expected

Possible causes
1. Internal battery is not fully charged.
2. AC appliance power consumption is higher than expected.

Possible solution
Recharge the battery.
Check AC appliance wattage rating is within scope of inverter.

For further assistance: Technical Helpline: +44 (0)113 276 7244

Distributed by:
Ring Automotive Gelderd Road, Leeds LS12 6NB
Tel: +44 (0)113 276 7676 Fax: +44 (0)113 231 0266
Email: autosales@ring.ltd.uk
**Introduction**
The Ring PowerSource is an electronic device that converts a low voltage 12v DC current from a battery, or other source, to 230 volts 50 Hz AC mains power.

Special attention should be made to **CAUTION** statements in this users manual. **CAUTION** statements identify conditions or practices that could result in damage to your PowerSource or to equipment that you are using with it.

**Power Supply**
The battery or power supply must provide between 10.5 and 14.5 volts DC (a car battery will usually provide this) and must be able to provide sufficient current to operate the load (the item you require to power) in order to find out if your power supply is big enough, divide the power consumption of the load (in Watts) by the input voltage (12v in the case of most vehicle batteries) this will give you the current (in amps) that the power supply must deliver.

**Example:** Load is rated at 100 watts
Power supply must be able to deliver: 100 / 12 = 8.3 amps

**CAUTION** THE RINV150 OR RINV300 MUST ONLY BE CONNECTED TO BATTERIES OR REGULATED POWER SUPPLY WITH A NOMINAL DC OUTPUT VOLTAGE OF 12 VOLTS. THE POWERSOURCE WILL NOT OPERATE FROM 24V POWER SUPPLY.

**Connecting to power supply**
**RINV150**
The RINV150 Powersource is fitted with a cigarette lighter plug (internally fused) with 0.5m of cable for connection to the cigarette lighter in your vehicle. The tip of the plug is positive and the side contact is negative. Push firmly into the cigarette lighter socket in order to ensure a good contact.

**RINV300**
The RINV300 PowerSource is fitted with two 4mm socket/screw connectors that enable connection to be made to a leisure battery. The red is the positive and the black is negative cable. The cables allow you to un-screw the socket screw on the PowerSource and connect according to the correct colour, the crocodile clamps should then be connected to a 12v leisure battery onto the correct terminals designated. Red (+) and black (-).

The RINV300 is also fitted with a cigarette lighter plug (see RINV150 for details). An appliance with a maximum rating of 180 watts only is permissible when connecting the RINV300 to the cigarette lighter plug. Above this rating connect directly to the battery.

**CAUTION** DO NOT USE WITH POSITIVE GROUND ELECTRICAL SYSTEMS
The majority of modern cars have negative ground electrical systems. If you are in any doubt, please check with a qualified auto electrician or your local vehicle main dealer.

**Connecting your PowerSource**
Connect the Powersource input to the vehicle/leisure battery using the cables (cigarette plug for RINV150) supplied. Ensure the load requirements are within the parameters of the Powersource output; plug your appliance into the socket of the Powersource.

**CAUTION** Certain rechargeable devices are designed to be plugged directly into an AC socket to be recharged. These devices can damage the PowerSource. When first using a rechargeable device, monitor its temperature for 10 minutes to ensure overheating does not occur.

**Fuse replacement**
**RINV150** – 20amps
**RINV300** – 40amps
Please consult a qualified electrician to replace any fuses.

**Positioning of PowerSource**
The following points should be noted:
• The PowerSource is not waterproof.
• The PowerSource should be placed on a ventilated flat surface.
• Do not put the PowerSource on or near direct heat or expose to sunlight.
• Do not place the PowerSource in or around flammable environments.

**Operating tips**
Inductive loads such as TVs and Stereos (devices with a coil or transformer in it) may require more current to operate than a resistive load of the same wattage reading. Televisions may require several times their wattage reading to ‘Start up’
This condition may require repeated ON/OFF switching of the inverter in order to get them started.

**NOTE:** The PowerSource is not designed to run products that provide heat, such as hair dryers or irons.
It is recommended that if you are using the PowerSource from you vehicle battery you regularly run your engine in order to recharge the battery.

**Protective features**
**Low battery alarm** – An alarm will sound when voltage from the battery drops to 10.6 volts. This indicates that the battery the PowerSource is running off requires recharging. The PowerSource will automatically shutdown if is voltage is allowed to drop to 10 volts.

**Over Voltage Protection** – The PowerSource will automatically shutdown if the input voltage exceeds 15 volts DC.

**Short Circuit** – Reverse polarity or short circuit of the load will usually result in the blowing of the external blade fuses. If this occurs immediately disconnect the shorted load.

**Overload protection** – The PowerSource will automatically shut down if the continuous draw exceeds its maximum rating

**Temperature Protection** – If the temperature of the internal heat sink reaches 65°C the Powersource will shut down automatically. Allow to cool before using again.

**CAUTION**
• When connecting directly to a battery or other power supply ensure that you observe correct polarity
• Do not exceed the maximum input voltage (15 Volts DC)
• Do not remove the protective cover under any circumstances unless by a qualified electrician
• Improper use of this PowerSource can cause damage to property and can cause loss of life.