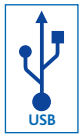
Troubleshooting guide

PROBLEM: Low output voltage	
Possible Cause	*Suggested Remedy*
E:Can+ inverter is overloaded.	Reduce load, not exceeding E:Can+ maximum rating. (Consider upgrade, RINV300 to 3000).
Unsure about the appliance rating.	Check the data label on the appliance or the instructions. If this is unsuccessful consult the manufacturer.
PROBLEM: Re-occurring low battery shutdown	
Possible Cause	*Suggested Remedy*
Inadequate power or excessive voltage drop.	Check connections from battery to E:Can+ inverter.
Poor battery condition.	Replace or charge battery.
PROBLEM: No power output	
Possible Cause	*Suggested Remedy*
E:Can+ inverter in thermal shut down condition.	Remove power and load, allow to cool (10 minutes).
Low battery voltage.	Charge or replace battery.
E:Can+ inverter blown fuse.	Check / replace the 15 Amp fuse in the DC plug.
Vehicle blown fuse (DC socket).	Check vehicle handbook to locate relevant fuse.
Poor DC plug connection.	Use the DC plug switch to ensure a good connection.
PROBLEM: Liquid ingress	
Possible Cause	*Suggested Remedy*
Drinks spillage.	Unplug the E:Can+ and wipe immediately with a dry cloth (Permanent damage can occur with liquid ingress).
PROBLEM: No power output from USB socket	
Possible Cause	*Suggested Remedy*
Appliance is not rechargeable	Check appliance is rechargeable and does not use replaceable batteries.
USB not inserted correctly	Check connections are the correct way up with the USB symbol facing up.



SPECIFICATIONS

PowerSource Model	**E:Can+**
Part Number	**RINVC150**
Max. Continuous power (Watts)	**150w (30 mins) 120w (4 hours)**
Peak Power (Watts) 0.01 Seconds	**240w**
Standby current (Amps)	**<0.4A**
Waveform	**Modified Sine Wave**
Efficiency*	**90%**
Input Voltage Range	**10v – 15v DC**
AC Socket	**3 Pin mains 230v AC**
USB socket	**USB2 DC5v / 150mA**
Cooling Fan	**Yes / Continuous**
Product Dimensions (mm) (D x H)	**66 x 180**
Pack Dimensions (mm) L x W x H	**150 x 100 x 210**
Coiled Cable length (mm)	**1000 (extended length)**

*Percentage of battery power to mains voltage power.

CE and e approved

This inverter should only be used to power Class II (non earthed) products, identified by the symbol: ⧈

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RING Portable Power POWERING

E:Can+ Can Inverter

12v DC to 230v AC Mains Inverter
RINVC150

User Manual

www.ringautomotive.co.uk

RETAIN THESE INSTRUCTIONS
FOR FUTURE REFERENCE

Introduction

The Ring E:Can+ inverter is an electronic device that converts a low voltage 12v DC current from a battery, or other power supply and provides 230v AC current.

Special attention should be made to CAUTION statements in this user manual.

CAUTION statements identify conditions or practices that could result in damage to your E:Can+ or to the equipment you are using with it.

CAUTION

- Do not exceed the maximum input voltage (15 Volts DC).
- Improper use of the E:Can+ inverter can cause damage to property and possibly harm to the user.
- The E:Can+ contains no user serviceable parts – Do not open.

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).

The power supply used may be a battery or a regulated DC power supply. In order to find out if your power supply is large enough, divide the power consumption of the load (in watts) by the voltage (12v in the case of the E:Can+ inverter) this will give you the current (in amps) that the power supply must deliver.

EXAMPLE: Load is rated at 48W / 12v = 4 Amps

Connecting to your power supply

Connect the DC plug on the E:Can+ inverter to the vehicle battery by plugging directly into the 12v DC socket (cigarette lighter socket). The LED power monitor illuminates green when power is on. The E:Can+ must only be used on vehicles where the centre contact of the cigarette lighter socket holder is positive. Ensure the load requirements are within the specification (max 150w) of the E:Can+ output. Plug your appliance into either the 3 pin or USB socket of the E:Can+ inverter.

Positioning of the E:Can+ inverter

The following points should be noted:

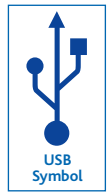
CAUTION

- The E:Can+ inverter is not waterproof.
- Take care if adjacent drinks holders contain or have contained liquids.
- The E:Can+ should be used in a ventilated area.
- Do not obstruct the vents at the rear and near the USB socket of the E:Can+.
- Do not put the E:Can+ on or near sources of direct heat or expose to direct sunlight.
- Do not operate the E:Can+ in or around flammable environments.
- Ensure cables and leads connected to the E:Can+ do not interfere in the safe operation of the vehicle.
- When not in use store securely in a cool, dry dust free environment.
- Do not leave connected to 12v DC socket unattended.
- Remove from 12v DC socket when not in use as the unit will continue to draw 0.3 Amps stand-by current.
- Do not operate continuously for more than 4 hours.
- Do not use the power lead to move or carry the E:Can+.
- The USB socket is for charging only NOT data transfer.

Operating Tips

NOTE: The PowerSource is not designed to run products that provide heat, such as hair dryers, heaters and irons.

- Do not handle the E:Can+ inverter with wet hands or if it has come into contact with liquid.
- Ensure while driving all accessories powered by the E:Can+ inverter are positioned securely.
- Do not use distracting accessories such as mobile phones whilst driving.
- To ensure optimum performance from the E:Can+ adjust the DC plug switch for the correct fit in the vehicles DC socket.
- Ensure the USB is inserted correctly in the socket. With the USB symbol facing up.
- The E:Can+ uses a USB2 type socket and will therefore charge USB1 & USB2 devices.



Maintenance

Cleaning

- Only clean the E:Can+ inverter using a clean dry cloth.
- Do not use cleaning products.
- Ensure the USB socket is clear of any dust or other debris before connection.

Fuse Replacement

- The fuse is located in the E:Can+ DC plug. Unscrew the end of the DC plug and extract the 15 Amp fuse. Check the fuse and replace if necessary with an equivalent 15 Amp fuse.

Protective features

Auto shutdown – The E:Can+ inverter will automatically shut down if the supply voltage is less than 10v. At this point the green LED will go out. The inverter will automatically restart when the input voltage is above 10v.

Overload protection – The E:Can+ inverter will automatically shut down if the continuous power draw exceeds the maximum rating.

Short circuit protection via automatic thermal resetting fuse.

Temperature Protection – If the temperature of the internal heat sink reaches >65˚C the E:Can+ will shut down automatically. Remove from power and allow to reset when cool before using.

Cooling Fan – The internal cooling fan runs continuously once the E:Can+ is connected to a power supply, to optimise performance.