

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.



IMPORTANT: BEFORE USING THIS PRODUCT, PLEASE READ THE INSTRUCTIONS CAREFULLY. MAKE CAREFUL NOTE OF SAFETY INSTRUCTIONS, WARNINGS AND CAUTIONS. THIS PRODUCT SHOULD ONLY BE USED FOR ITS INTENDED PURPOSE. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. RETAIN THESE INSTRUCTIONS FOR FUTURE USE.

1. GENERAL FEATURES

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- ✓ Initial peak power 1000 amps - RS1, 1600 amps - RS102, 2000 amps - RS2. More than enough to start most vehicles. May also be used in DEEP CYCLE applications.
- ✓ The Roadstart is also a portable power source for accessories equipped with a male cigarette lighter plug. The DC outlet has automatic 12 amp overload protection.
- ✓ Test switch and LED lights. Solid state circuitry.

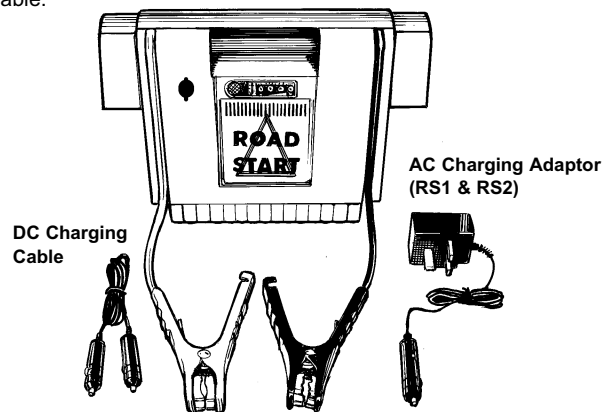
SAFETY FEATURES

- ✓ Safety storage holsters prevent accidental sparking of clamps.
- ✓ The Roadstart contains the latest technology with its 12 volt sealed lead acid battery (x2 in RS2). This means the Roadstart RS1, RS102 and RS2 may be stored in any position without fear of leakage.

IMPORTANT: READ SAFETY INSTRUCTIONS BEFORE ATTEMPTING TO USE WITH THE ROADSTART.

2. SPECIFICATIONS

Built-in battery(ies)	Sealed lead acid, maintenance free, re-chargeable.
DC Output (volts)	RS1/RS10212
	RS224
Peak Current (amps)	RS11000
	RS1021600
	RS22000
Cold Cranking Current (amps)	RS1300
	RS102600
	RS2800
Charging Time	Up to 30 hours with AC charger.
Breaker	12 amp (for DC power port)
Weight	RS18.2kg
	RS1029kg
	RS215kg.
Dimensions (mm)	RS1335 x 260 x 90
	RS102335 x 235 x 130
	RS2345 x 400 x 180



3. SAFETY INSTRUCTIONS

⚠ DANGER! - RISK OF EXPLOSIVE GASES.



WORKING IN VICINITY OF A LEAD-ACID BATTERY IS DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL OPERATION. FOR THIS REASON, IT IS VERY IMPORTANT TO READ AND FOLLOW THESE INSTRUCTIONS EXACTLY EACH TIME YOU USE THE RS1, RS102 or RS2.

IMPORTANT: To reduce risk of battery explosion, follow these instructions and those published by battery manufacturer and manufacturer of any equipment you intend to use in vicinity of the battery. Remember to review warning marks on all products and on engines.

3.1. PERSONAL PRECAUTIONS

- ✓ Ensure there is another person within hearing range of your voice, or close enough to come to your aid should a problem arise when working near a lead-acid battery.
- ✓ Have fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.
- ✓ Wear safety eye protection and protective clothing. Avoid touching eyes while working near battery.
- ✓ Wash immediately with soap and water if battery acid contacts skin or clothing. If acid enters eye, flush eye immediately with cool, clean running water for at least 15 minutes and seek immediate medical attention.
- ✓ Remove personal metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short-circuit current high enough to weld a ring or the like to metal, which may cause severe burns.

3.2. OTHER IMPORTANT SAFETY INSTRUCTIONS

- ✓ Familiarise yourself with the application, limitations and potential hazards of the unit.
- ✓ Keep the unit in good working order and condition. Take immediate action to repair or replace damaged parts.
- ✓ Only use recommended attachments and parts. To use unapproved items may be dangerous and will invalidate your warranty.
- ✓ The Roadstart must only be opened and checked by qualified service personnel. DO NOT disassemble for any reason.
- ✓ Keep children and unauthorised persons away from the work area.
- ✓ Keep work area clean and tidy and free from unrelated materials and ensure that there is adequate lighting.
- ✓ If the unit receives a sharp knock or blow, it must be checked by a qualified service agent before being used.
- ✓ When not in use re-charge every six (6) months.
- x DO NOT smoke or allow a spark or flame in the vicinity of the battery or engine.
- x DO NOT drop any metal tool onto the battery as it may spark or short circuit the battery, which could cause an explosion.

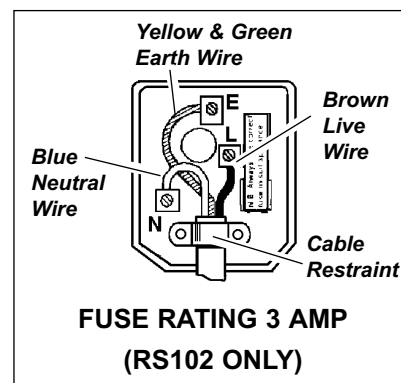
- x DO NOT use the unit to recharge dry cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and damage to property.
- x DO NOT charge or boost a frozen battery.
- x DO NOT allow clamps to touch each other, or to contact the same piece of metal, as this will result in arcing.
- x DO NOT use attachments other than those recommended. To do so may risk damage to the unit, equipment and possible injury.
- x DO NOT pull or carry the unit by its cables or wires and do not pull the negative and positive clamps from the battery terminals.
- x DO NOT operate in vicinity of flammable liquids or gases.
- x DO NOT recharge the unit with plugs, cables or attachments that are damaged. Replace such items immediately.
- x DO NOT use this product to perform a task for which it is not designed.
- x DO NOT store the unit in damp or wet locations or where temperature may exceed 50°C.
- x DO NOT submerge the unit in water.
- x DO NOT use whilst under the influence of drugs, alcohol or intoxicating medication.
- x DO NOT leave the unit in a totally discharged state for an extended period of time as this may result in permanent damage.
- x DO NOT cross-connect the power leads from the Roadstart to the battery. Ensure that positive is to positive and negative is to negative.
- ✓ Ensure the unit is fully charged before storage.

Note: The RS1, RS102 and RS2 may be used under any weather conditions. Rain, snow, heat, as well as cold temperatures.

3.3. ELECTRICAL SAFETY IN RELATION TO BATTERY CHARGERS

⚠ WARNING! It is the responsibility of the owner and the operator to read, understand and comply with the following:
 You must check all electrical products, before use, to ensure that they are safe. You must inspect power cables, plugs, sockets and any other connectors for wear or damage. You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices. A Residual Current Circuit Breaker (RCCB) should be incorporated in the main distribution board. We also recommend that a Residual Current Device (RCD) is used. It is particularly important to use an RCD with portable products that are plugged into a supply which is not protected by an RCCB. If in any doubt consult a qualified electrician. You may obtain a Residual Current Device by contacting your Sealey dealer. **You must** also read and understand the following instructions concerning electrical safety.

- 3.3.1. The **Electricity at Work Act 1989** requires all portable electrical appliances, if used on business premises, to be tested by a qualified electrician, using a Portable Appliance Tester (PAT), at least once a year.
- 3.3.2. The **Health & Safety at Work Act 1974** makes owners of electrical appliances responsible for the safe condition of those appliances and the safety of the appliance operators. **If in any doubt about electrical safety, contact a qualified electrician.**
- 3.3.3. Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply. See 1.1.1. and 1.1.2. and use a Portable Appliance Tester.
- 3.3.4. Ensure that cables are always protected against short circuit and overload.
- 3.3.5. Regularly inspect power supply cables and plugs for wear or damage and check all connections to ensure that none is loose.
- 3.3.6. **Important:** Ensure that the voltage marked on the appliance matches the power supply to be used and that the plug is fitted with the correct fuse - see fuse rating at right.
- 3.3.7. **DO NOT** pull or carry the appliance by the power cable.
- 3.3.8. **DO NOT** pull the plug from the socket by the cable.
- 3.3.9. **DO NOT** use worn or damaged cables, plugs or connectors. Immediately have any faulty item repaired or replaced by a qualified electrician. When an ASTA/BS approved UK 3 pin plug is damaged, cut the cable just above the plug and **dispose of the plug safely.** Fit a new plug according to the following instructions (UK only).



- a) Connect the GREEN/YELLOW earth wire to the earth terminal 'E'.
- b) Connect the BROWN live wire to the live terminal 'L'.
- c) Connect the BLUE neutral wire to the neutral terminal 'N'.
- d) After wiring, check that there are no bare wires, that all wires have been correctly connected, that the cable outer insulation extends beyond the cable restraint and that the restraint is tight.

Double insulated products, which are always marked with this symbol , are fitted with live (brown) and neutral (blue) wires only. To rewire, connect these two wires as indicated above - **DO NOT** connect either wire to the earth terminal.

4. CHARGING INSTRUCTIONS

WARNING! YOU MUST FOLLOW SAFETY INSTRUCTIONS



PLEASE NOTE THE FOLLOWING: - There are two ways to recharge the RS1, RS102 and RS2 mobile power systems.

- 4.1.1. The first method is to use the AC charger provided. This is the preferred method as it is automatic and does not require the user to monitor the progress of the charge. Furthermore whenever the unit is not in use it can safely be left connected to the charger.
- 4.1.2. The second method is to charge the units from the cigarette lighter socket of a vehicle when the engine is running. This method is not automatic and could result in the unit being overcharged if the user fails to monitor the charge and disconnect the power source when full charge is reached. Overcharging could result in permanent damage to the unit.

4.2. Reading the power level indicators

The charge level of the unit can be seen at any time by pressing the test button and noting the number of red power level lights that are illuminated.

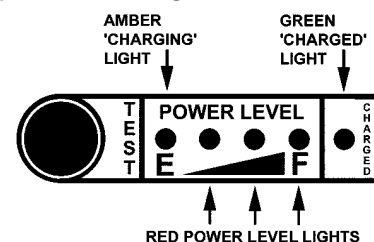
When all three power level lights are illuminated the unit is fully charged and is ready to be used. If only two red lights are illuminated the unit is in a 50% charge status and could be used to operate most 12 volt (RS1& RS102) /24 volt (RS2) accessories. If the unit is required for starting it should be charged until all three red lights are illuminated

If there is only one red light illuminated the unit is low and must be recharged.

4.3. Recharging

When new the unit should be charged for a minimum of 30 hours and may take up to 72 hours to achieve a full charge.

⚠ WARNING! Use supplied adaptor, cables and connectors. Unauthorised parts may damage the unit and will invalidate the warranty. Ensure you strictly apply the safety regulations as stated in Section 3.



4.3.1. To recharge with the AC charging adaptor (Parts Diagram - Item 5)

- a) Ensure the power clamps are in the appropriate holsters.
- b) Plug the AC charger cable into the charge input socket of the unit. This socket is situated on the back of the RS1 and RS102 and on the front of the RS2. Plug the charger itself into any 230 Volt AC wall outlet. The amber 'Charging' indicator will illuminate. The unit will now charge automatically and the power level lights will indicate the level of charge. When the green 'Charged' LED comes on, charge for a further 3 to 6 hours to achieve full capacity. When not in use the Roadstart can be left connected to the charger.

4.3.2. To recharge with the DC charging cable (Parts Diagram - Item 4)

Note: This method of charging is not automatically protected against overcharging and must be constantly monitored by the user as described below. **IMPORTANT: Always ensure that the vehicle voltage matches the voltage of the Roadstart unit.**

- a) Ensure that the power clamps are in the appropriate holsters.
- b) With the vehicle engine running plug the DC charging cable into the charge input socket on the unit and then the other end into the vehicle cigarette lighter socket. The unit will be charged by the alternator. It will be necessary to press the test button once every hour to monitor the level of charge. When all of the red lights are illuminated plus the green 'charged' light continue to charge for another 1 to 2 hours and then disconnect the unit from the vehicle lighter socket to avoid overcharging which could damage the unit.

Note: Should the battery become completely flat, then a 72 hour charge will be necessary using the AC charger.

5. OPERATING INSTRUCTIONS

WARNING! YOU MUST FOLLOW SAFETY INSTRUCTIONS AND ENSURE THAT THE ROADSTART AND VEHICLE VOLTAGES ARE THE SAME.

5.1. To use for jump starting (Remember to apply safety rules from Section 3)

NOTE: Before using for the first time, re-charge the Roadstart unit.



- 5.1.1. Apply the vehicle hand brake and place in neutral gear (or "Park" if automatic transmission). Turn ignition and electrical accessories off.
- 5.1.2. Use in a well ventilated area and wear protective eye shields and clothing.
 - WARNING!** Do not allow the red and black clamps to touch each other. Ensure that the correct clamps are placed on the correct battery terminals.
- 5.1.3. Attach positive (RED +) clamp to positive terminal on the vehicle battery (for a negative ground system). Ensure connecting points are clean.
Note: On vehicles with multiple batteries connect positive clamp to positive battery terminal which is connected to vehicle electrical system.
- 5.1.4. Attach the negative (BLACK -) clamp to the (ground) engine block or frame of the vehicle. Ensure that the cables are not in the path of moving engine parts, such as the fan, and are away from the battery, carburettor/injection system, fuel lines etc.
- 5.1.5. Make sure that no one is standing near the battery. When all is OK, start the engine.
- 5.1.6. Once the vehicle has started, disconnect the negative (BLACK -) clamp first and then the positive (RED +) clamp. Store clamps in their holsters.
IMPORTANT: If the vehicle does not start within 6 seconds, DO NOT continue. Let the Roadstart's internal battery(ies) to cool for 3 minutes before attempting to start vehicle again. Failure to do so may damage the unit.

5.2. Use as an alternative power supply

Using the RS1/RS102 to protect electrical components with built in memory such as radios, alarm systems, computers, phones, etc. when the vehicle battery is disconnected.

- 5.2.1. Plug the DC charging cable into the unit charge socket and the other end into the vehicle cigarette lighter socket.
- 5.2.2. Ensure that all vehicle electrical equipment is switched off and then switch ignition on.
- 5.2.3. Disconnect and remove the vehicle battery, taking care to prevent the positive cable terminal from contacting any metalwork as it will be 'live' (cover it with a heavy duty plastic bag).The unit will now provide the power supply to maintain any electronic memories.
- 5.2.4. When the vehicle battery, fully charged, has been replaced, the Roadstart may be disconnected.

5.3. Use as a multi-purpose power supply

- 5.3.1. The Roadstart may be used as a portable power source for DC accessories, of the appropriate voltage, equipped with a male cigarette lighter plug. For example: Portable light, coffee maker, portable TV etc. The DC outlet has an automatic overload protection of 12 amps.

6. TROUBLESHOOTING

THE PROBLEM	THE SOLUTION
One or two lights come on, you plug in the charger for 20 hours and there is no change in status of lights.	Check charger to see if it is charging. Charger should be warm. Check all connections.
Charger works well but still no change in status of lights.	Possible defective battery or faulty breaker. Try a DC device (such as a light) fitted with a lighter plug to see if it works. If it works, Roadstart breaker is OK and the battery is the problem.
No lights comes on, but when the AC adaptor is plugged into the Roadstart, all the lights come on.	The internal battery(ies) of the Roadstart must be replaced
Roadstart is fully charged but has no power.	Check where the wire meets the jaw on the Roadstart clamp. Make sure they are well crimped.
When using an accessory through cigarette lighter outlet on the power pack, clicking is heard coming from inside the pack.	Accessory is drawing more than 12 amps causing circuit breaker to cycle on and off. Check accessory for problem (i.e. short circuit).

7. QUESTIONS & ANSWERS

QUESTION:	ANSWER:
How many jump starts can a fully charged Roadstart do before needing to be recharged?	Between 1 and 20 (30 for RS2) depending upon operating factors such as temperature, general condition of the vehicle, engine type and size.
Can the Roadstart be recycled?	Yes, in accordance with local authority regulations.
What is the ideal in-use storage temperature of the Roadstart?	Room temperature. The Roadstart will also operate at temperatures below zero, power, however, will be lessened. Intense heat will activate self discharge.
I have a regular 10 amp battery charger, can I use it to recharge the Roadstart?	NO, only the supplied AC charging adaptor can be used.
Is the Roadstart fool proof?	No. All jump starting instructions must be followed carefully.
Can I replace the power pack battery?	Yes, but note: the battery is not covered by warranty as it is a consumable item.

8. DECLARATION OF CONFORMITY

Declaration of Conformity We, the sole importer into the UK, declare that the products listed below are in conformity with the following standards and directives.

AC/DC Adaptor
Model Nos. RS1/AX, RS102/AX & RS2/AX

73/23/EEC Low Voltage Directive
 89/336/EEC EMC Directive
 93/68/EEC CE Marking Directive



The construction files for these products are held by the Manufacturer and may be inspected, by a national authority, upon request to Jack Sealey Ltd.

Signed by Mark Sweetman

23rd August 2002

For Jack Sealey Ltd. Sole importer into the UK of Sealey Power Products.



NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No liability is accepted for incorrect use of product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

INFORMATION: For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.



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