

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 OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. RETAIN THESE INSTRUCTIONS FOR FUTURE USE.

1. GENERAL FEATURES

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

GENERAL FEATURES

- ✓ **850 amps - initial peak power.** More than enough to start most vehicles.
- ✓ 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 button and LED lights. Solid state circuitry.
- ✓ AC charging adaptor
- ✓ DC cigar socket interconnection cable

SAFETY FEATURES

- ✓ Safety storage holsters prevent accidental sparking of clamps.
- ✓ The Roadstart contains the latest technology with its 12 volt sealed lead acid battery. This means the Roadstart RS850 may be stored in any position without fear of leakage.

2. SPECIFICATIONS

Built-in battery	Sealed lead acid, maintenance free, re-chargeable.
DC Output	12 Volts.
Cold cranking amps	185amps
Charging time	.30 to 72 hours depending on state of discharge.
Breaker	12 Amp (for DC power port).
Weight	3.7kg.
Dimensions	235 x 210 x 90mm.



3. SAFETY INSTRUCTIONS

⚠ DANGER! - RISK OF EXPLOSIVE GASES.



WORKING IN THE 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 RS850.

IMPORTANT: To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the 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 or with a 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 and limitations of the unit, as well as the specific potential hazards.
- ✓ 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 non-recommended items may be dangerous and will invalidate your warranty.
- ✓ The Roadstart must only be opened and checked by qualified service personnel. DO NOT dis-assemble for any reason.
- ✓ Keep children and unauthorised persons away from the working area.
- ✓ Keep working area clean and tidy and free from unrelated materials and ensure 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 three 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 the vicinity of flammable liquids or gases.
- x DO NOT recharge the unit with plugs, cables or attachments that are damaged. Replace damaged 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 positive is to positive and negative is to negative.
- ✓ Ensure the unit is fully charged before storage.

Note: The RS850 may be used under any weather conditions. Rain, snow, heat, as well as cold temperatures.

3.3. ELECTRICAL SAFETY. ⚠ WARNING! It is the user's responsibility to check the following:

You must check electrical AC adaptor to ensure it is safe before using. **You must** inspect power supply lead, plugs and all electrical connections for wear and damage. **You must** ensure the risk of electric shock is minimised by the installation of appropriate safety devices. An RCCB (Residual Current Circuit Breaker) should be incorporated in the main distribution board. We recommend that an RCD (Residual Current Device) is used with all electrical products. It is particularly important to use an RCD with portable products that plug into an electrical supply not protected by an RCCB. If in doubt consult a qualified electrician. Obtain a Residual Current Device through your dealer. **You must** read and understand 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 person, 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 the appliance and the safety of the appliance operator. If in any doubt about electrical safety, contact a qualified electrician.
- 3.3.3. DO ensure that the insulation on all cables and the product itself is safe before connecting to the mains power supply.
- 3.3.4. DO ensure that cables are always protected against short circuit and overload.
- 3.3.5. DO regularly inspect power supply, leads, plugs for wear and damage and power connections to ensure that none is loose.
- 3.3.6. DO check product voltage is the same as the power supply to be used and check that all fused plugs are fitted with correct capacity fuse.
- 3.3.7. DO NOT pull the powered appliance by the AC adaptor.
- 3.3.8. DO NOT pull the AC adaptor plug from the mains socket by the cable.
- 3.3.9. DO NOT use the AC adaptor if damaged or the lead is worn. Replace items immediately.
- 3.3.10. DO NOT disassemble the AC adaptor. There are no user serviceable items inside the unit.

4. CHARGING CHARACTERISTICS

4.1 Initial charging information. This unit has a sealed lead acid battery that should be kept at full charge. All batteries are fresh and fully charged at the point of manufacture. By the time you purchase the unit it will have discharged to some degree from disuse depending on how much time has elapsed since manufacture. If the unit has become fully discharged it could take some considerable time (as much as 72 hours) to reach the fully charged state. Recharge your unit when first purchased, immediately after each use, and every three months if not used.

Permanent damage to the battery may result if the RS850 portable power source is left in a totally discharged state for any period of time, resulting in poor performance and greatly reduced battery life.

4.2 Regular charging information. The RS850 is equipped with a non-automatic charger. **It is the users responsibility to monitor the battery power level and disconnect the charger when the battery reaches full charge.** The charger supplied has a 'tapered' output meaning that the charging current will be high when the battery is fully discharged and low when the battery is approaching a full charge. When the green 'CHARGED' light comes on the battery is approximately 95% charged and the charger output slows to a trickle. This means that it can take up to 30 hours to go from 95% charged to 100%. The advantage of this system is that the battery will not be damaged if you fail to disconnect the charger immediately the 'CHARGED' light comes on. Once the light has illuminated the charger must be disconnected within 30 hours. **The charger should never be left charging the battery indefinitely.**

4.3 The RS850 must only be charged with the charger provided. Charging from any other source will result in permanent damage to the battery and will invalidate your warranty.

5. CHARGING INSTRUCTIONS

WARNING! YOU MUST FOLLOW SAFETY INSTRUCTIONS



5.1 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.

Amber light illuminated. This means that the charger is properly connected to the RS850 and charging has commenced.

Three red lights illuminated + green 'charged' light. When all three power level lights are illuminated plus the green 'charged' light the unit has sufficient charge to be used for boosting depleted batteries. NOTE. If the unit is stored in a fully charged state prior to use, the charge level will settle at a value slightly less than the value achieved immediately after charge. When the test light is pressed the green light may not illuminate but the unit remains in a fully charged state provided it is used in the near future.

Two red lights illuminated. If only two red lights are illuminated the unit is in a 50% charge status and could be used to operate most accessories. If the unit is required for boosting it should be charged until all three red lights are illuminated

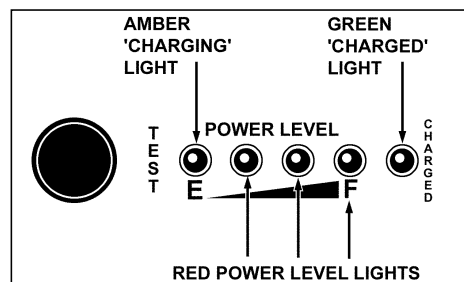
One red light illuminated. If there is only one red light illuminated the unit is low in power and must be recharged.

5.2 Recharging the mobile power source. When new the unit should be charged for a minimum of 30 hours and may take up to 72 hours to reach full charge. Should the battery subsequently become completely flat, then a 72 hour charge will again be necessary.

5.2.1 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 RS850 at the top of the rear label. Plug the charger itself into any 230 Volt AC outlet. The amber 'Charging' indicator will illuminate and the power level lights will indicate the level of charge. The unit will now commence charging. When the green 'CHARGED' light illuminates it is preferable to leave the unit charging for a further 6 hours to achieve full capacity or longer if the unit was fully depleted.

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



6. OPERATING INSTRUCTIONS

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

6.1. To use as an emergency jump starter. (Remember to apply safety rules from Section 3).

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

For best results do not store the RS850 below 50°F when using the unit as a jump starter.

6.1.1. Put hand brake on and place in neutral gear (or "Park" if automatic transmission). Turn ignition and electrical accessories off.

- 6.1.2. Use in a well ventilated area and wear protective eye shields and clothing.
- 6.1.3. Note that when connecting the clamps, only one side of each clamp jaw is wired back to the unit. When connecting a clamp make sure that the wired side is in full contact with the positive battery terminal or grounding point as described below.
 WARNING! Do not allow the red and black clamps to touch each other. Ensure the correct clamps are placed on the correct battery terminals.
- 6.1.4. 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.
- 6.1.5. Attach the Negative (BLACK -) clamp to the (ground) engine block or frame of the vehicle. Ensure the cables are not in the path of moving engine parts, such as fan, and are away from the battery, carburettor/injection system, fuel lines etc.
- 6.1.6. Make sure that no one is standing near the battery. When all is OK, start the engine.
- 6.1.7. Once the vehicle has started, disconnect the Negative (BLACK -) clamp first.
- 6.1.8. Then disconnect the Positive (RED +) clamp and store the clamps in the unit holsters.
IMPORTANT: If vehicle does not start within 6 seconds, DO NOT continue. Let the Roadstart's internal battery cool for 3 minutes before attempting to start the vehicle again. Failure to do so may damage the unit.
- 6.2. Use as an alternative power supply.**
 Use the RS850 to protect electrical components with built in memory such as radios, alarm systems, computers, phones, etc.
- 6.2.1. Plug the DC charging cable into the unit charge socket and the other end into the vehicle cigarette lighter socket.
- 6.2.2. Ensure all vehicle electrical equipment is switched off and then switch ignition on.
- 6.2.3. 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.
- 6.2.4. When the vehicle battery, fully charged, has been replaced, the RS850 may be disconnected.
- 6.3. Use as a multi-purpose power supply.**
- 6.3.1 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 automatic overload protection.

7. TROUBLESHOOTING

THE PROBLEM	THE SOLUTION
One or two red lights come on, you plug in the charger for 24 hours and there is no change in status of lights.	Check charger to see if it is charging. Charger should be warm. Check all wire connections. Remember that if the unit is in a very low state of power it could take up to 3 days to recharge.
All the lights come on when the AC adaptor is plugged into the RS850	The internal battery may be damaged as a result of intensive jump start use without a rest period of 3 minutes between every 6 seconds of use. The battery must be replaced.
Roadstart is fully charged but appears to have no power.	Check where the wire meets the jaw on the Roadstart clamp. Make sure they are well crimped. Check that the side of each clamp jaw that is wired back to the unit is in contact with the battery terminal or vehicle chassis.
When using an accessory through cigarette lighter outlet on the power pack, clicking is heard coming from inside the pack.	Accessory is drawing too many amps causing circuit breaker to cycle on and off. Check accessory for problem eg. short circuit.

8. QUESTIONS & ANSWERS

QUESTION:	ANSWER:
How many jump starts can a fully charged Roadstart do before needing to be recharged?	Between 1 and 5 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, its 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 charging and 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.

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

**AC/DC Adaptor
Model No. RS850**

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



The construction file for this product is held by the Manufacturer and may be inspected on request by contacting Jack Sealey Ltd.

Signed by Mark Sweetman

23rd July 2003

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