INSTRUCTIONS FOR:

HYBRID ULTRA CAPACITOR JUMP START 12V 900A, 1200A

PART NO'S: **SHY900S, SHY1200S**


Refer to Instruction Manual


Warning: Explosive Risk


Wear Eye Protection


Wear Protectlve Gloves


Warning: Electricity

1. SAFETY

- ✓ Read the manufacturer's manual for the vehicle being started: the manufacturer may have specific cautions and instructions regarding emergency starting procedures.
- ✓ Ensure that the vehicle is in a well ventilated area.
- ✓ Apply the handbrake and select neutral or 'park' before attempting to start.
- ✓ Ensure that the ignition switch and all ancillary electrical equipment is switched off.
- ✓ Keep clear of any pulleys, belts etc. that will move once the engine starts.
- ✓ Take care to ensure correct connection polarity; red clamp to positive, black clamp to negative.
- ✓ Charge the jump start only at ambient temperatures between -40°C and 65°C.
- ✓ When not in use, switch off and store in a cool, dry place out of the reach of children.
- × **DO NOT** allow this jump starter to become wet.
- × **DO NOT** dismantle: there are no user-servicable parts inside.
- × **DO NOT** use in explosive atmospheres (e.g. the presence of flammable liquids, gases or dust).
- × **DO NOT** use if the jump starter appears damaged in any way.
- × **DO NOT** use this product for any purpose other than that for which it is designed.
- × **DO NOT** leave in direct sunlight or expose to heat.
- × **DO NOT** use abrasive or solvent cleaners on this product.
- × **DO NOT** allow children to play with this product
- × **DO NOT** allow the positive and negative clamps to touch.

Modern vehicles contain extensive electronic systems. It is a requirement to check with the vehicle manufacturer, for any specific instructions regarding the use of this type of equipment on each vehicle.

No liability will be accepted for damage/injury, where this product is not used in accordance with all instructions.

BATTERY SAFETY

❒ **WARNINGS**

There are no user serviceable components. Do not dismantle.

DO NOT expose to temperatures above 60°C (140°F).

Replace the battery pack with genuine Sealey replacement product only.

If in doubt about electrical safety, contact a qualified electrician.

2. INTRODUCTION

Innovative capacitor technology, incorporating a 11.1V 2200mAh lithium battery pack to energise unit when vehicle battery is not sufficient to energise capacitors. Digital display and LED front panel gives easy indication of battery voltage, capacitor charge, lithium battery charging, reverse polarity and function selection. Simply connect to a flat vehicle battery and the unit will draw power from it and energise itself fully in a matter of minutes. Full power is then safely put back through the starting system, jump starting the vehicle. Features a glow mode for cold starts on diesel engines and a bypass mode for use when vehicle battery is disconnected. If the vehicle battery is faulty or is holding less than 5 volts (average) the Sealey/Schumacher Hybrid units can be pre-charged via an internal lithium battery pack, another vehicle's battery or 12V accessory lead. The lithium battery pack can be recharged by a Micro USB charging cable (2A or over). Capable of operating between -40°C and 65°C. Internal lithium battery can hold charge whilst not in use meaning no waiting for the battery to charge which means it is ready to use in a matter of minutes. Compact, lightweight and designed for portability for easier handling and storage yet still delivers the same result as heavy, bulky, lead acid battery equivalents. Fitted with heavy duty clamps and a rubber boot for durability, the capacitors in these units have a 1,000,000 cycle life. Ideal for both professional mechanics and DIY users.

3. SPECIFICATION

Model No:	**SHY900S**	**SHY1200S**
Output:	12V	12V
Output Start Peak(EN):	900A(450A)	1200A(600A)
Lithium battery:	11.1V 2200mAh	11.1V 2200mAh
Maximum Starting Capacity:	Petrol: 5ltr, Diesel: 2ltr (Cold Weather) 3ltr (Warm Weather)	Petrol: 6.5ltr, 4ltr (Cold Weather) 5ltr (Warm Weather)
Cable & Clamp Length:	940mm	940mm
Size (W x D x H):	255 x 155 x 240mm	255 x 155 x 240mm

4. CONTROL PANEL

fig.1

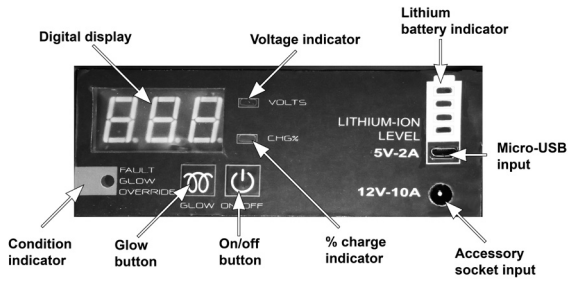


fig.2

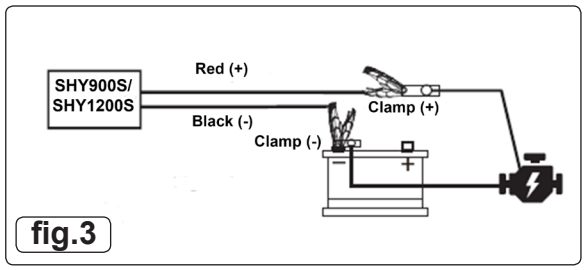
5. OPERATION

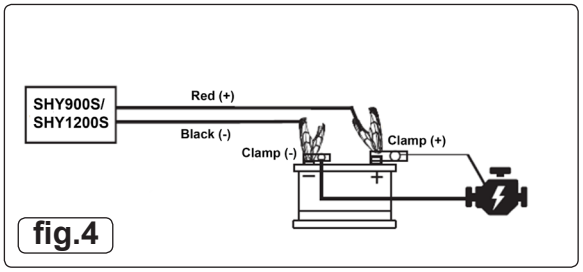
5.1. Standard mode

5.1.1. Switch off all electrical load on the vehicle.
5.1.2. Ensure that the unit is switched off.
5.1.3. Connect the battery leads (fig.2) to the battery terminals by means of the battery clips.
❒ **Warning:** ensure that the correct polarity is observed.
5.1.4. When connected, the jump starter will switch on automatically and display the voltage of the vehicle battery and the lithium battery charge.
51.5. Press the on/off button (fig.1) and the digital display will show the % charge of the internal capacitor.
5.1.6. When the digital display shows 'FUL' and a intermittent bleep is heard, the capacitor is full and it the starter of the vehicle can be operated.
5.1.7. If there is insufficient charge in the vehicle battery, the internal lithium battery will automatically take over and charge the internal capacitor. When 'FUL' shows, proceed as in 5.1.6.
5.1.8. When the engine has started, switch the unit off and remove the battery leads.

5.2. Override mode

5.2.1. When there is no battery connected to the vehicle, connect the jump starter as shown in fig.3.
❒ **WARNING:** There is no polarity protection in the 'override' mode; take extra care to observe correct polarity when connecting.





5.2.2. Press the on/off button for 2 seconds and then release. This will allow the internal lithium battery to charge the capacitor.
5.2.3. When the digital display shows 'Ful', press the on/off button again for 2 seconds .
5.2.4. When the condition indicator (fig.1) shows a steady green aspect, operate the vehicle's starter.
Note: The ability for an engine to continue running without a battery connected will vary, depending on the make and model of the vehicle.
❒ **Warning: Do not leave the engine running without either the jump starter or the battery being connected. Failure to comply could result in damage to the vehicle ECU.**
Sealey will not be accept responsibility for any damage caused by incorrect use of this product.
5.2.5. As soon as the engine starts, whilst keeping the jump starter clamp and battery lead connected, attach the positive lead to the positive battery terminal and tighten the terminal clamp (fig.4).
5.2.6. After the positive lead has been secured to the battery terminal, switch off the jump starter and disconnect from the battery.

5.3. Glow mode

5.3.1. In cold weather, the glow plugs on most diesel vehicles will energise first to heat the combustion chamber before starting the engine. This is indicated by the glow indicator on the vehicle dashboard. This process normally takes 4-6 seconds.
5.3.2. In this case, after the jump starter is fully recharged and connected, press the glow button and switch on the ignition.
Note: Glow is inactive in the override mode.

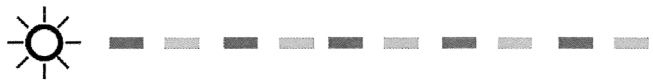
5.4. Lithium back up battery pack

5.4.1. The jump starter is equipped with a lithium battery pack. The battery pack may be recharged by means of the 5V 2A micro USB input. Once the input lead is connected, press the on/off button to start the charge. Charging via USB will take 5-8 hours.
5.4.2. The charge state of the lithium battery pack may be checked by pressing the on/off switch, illuminating the lithium battery indicator.
5.4.3. Recharge the lithium battery fully at least once a year.

Display Indications

1. Reverse connection : steady red

2. GLOW mode: red-green alternately

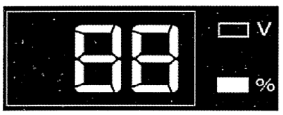


3. OVERRIDE mode: blinking for 5 seconds then steady green

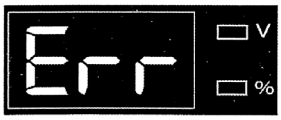
4. READY: steady green

Digital Display:

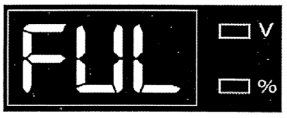
→ Voltage of vehicle's battery



→ Charging percentage of Ultracapacitors



→ Error – Reverse Polarity connection



→ Ultracapacitors are fully charged

→ OVERRIDE mode is activated

→ CHARGE: Lithium battery is charging

6. DUTY CYCLE

6.1. The jump starter will perform 5 consecutive operations. Allow the unit to cool for 15 minutes between sessions.

7. MAINTENANCE

7.1. Changing the Battery

To change the battery: remove the battery compartment cover (fig.2) and disconnect the battery. Replace the battery and secure the cover.

7.2. Cleaning

Clean with a damp cloth. **DO NOT** use abrasive or solvent cleaners.

WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

BATTERY REMOVAL

Li-ion

Under the Waste Batteries and Accumulators Regulations 2009, Jack Sealey Ltd are required to inform potential purchasers of products containing batteries (as defined within these regulations), that they are registered with Valpak's registered compliance scheme. Jack Sealey Ltd's Batteries Producer Registration Number (BPRN) is BPRN00705.

For battery removal see section 7.1.

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 this product.

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

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