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STARTRONIC HYBRID 950

SAFETY INSTRUCTION



This manual contains safety and operating instructions. Read it carefully before using the device for the first time and keep it in a safe place for future reference. Read and understand the following safety recommendations before using or servicing the unit. Any change or servicing that is not specified in the instruction manual must not be undertaken. The manufacturer is not liable for any injury or damage due to a non-compliance with the instructions featured in this manual. In the event of problems or uncertainties, please consult a qualified person to handle the device properly. This machine should only be used for start-up operations indicated on the machine and in the instruction manual. The operator must respect the safety precautions. In case of inadequate or unsafe use, the manufacturer cannot be held liable.

Cet appareil peut être utilisé par des enfants âgés d'au moins 8 ans et par des personnes ayant des capacités physiques, sensorielles ou mentales réduites ou dénuées d'expérience ou de connaissance, s'ils (si elles) sont correctement surveillé(e)s ou si des instructions relatives à l'utilisation de l'appareil en toute sécurité leur ont été données et si les risques encourus ont été appréhendés. Les enfants ne doivent pas jouer avec l'appareil. Le nettoyage et l'entretien par l'utilisateur ne doivent pas être effectués par des enfants sans surveillance.

Do not use for charging non-rechargeable batteries.

Never charge a frozen or damaged battery.

Do not cover the device.

Do not place the device near a fire or subject it to heat or to longterm temperatures exceeding 60°C.

Risk of explosion or acid projection in case of short-circuit of the clamps or if the 12V booster is connected to a 24V vehicle or vice versa.

The automatic mode of operation and usage restrictions are explained below in these operating instructions.



Risk of explosion and fire!

A battery being charged can emit explosive gas.

- Protect the electrical contacts of the battery against short-circuiting.



Acid projection hazard!

- Wear safety goggles and protective gloves
- If your eyes or skin come into contact with battery acid, rinse the affected part of the body with plenty of water and seek immediate medical assistance.



Connexion / déconnexion :

- The terminal of the battery that is not connected to the car frame must be connected first. The other connection must be made on the car frame, far from the battery and the fuel line. The battery charger must be connected to the power supply network.
- After the start-up operation, disconnect the booster. First remove the chassis connection and then the battery connection, in the order shown.



Class III device



Maintenance:



- Service should be performed by a qualified person
- Warning! Always remove the power plug from the wall socket before carrying out any work on the device.
- Under no circumstances should solvents or other aggressive cleaning agents be used.
- Clean the device's surfaces with a soft, dry cloth.



Regulations

- The device complies with European Directive.
- The certificate of compliance is available on our website.
- EAC conformity mark (Eurasian Economic Commission)
- Equipment in compliance with British requirements. The British Declaration of Conformity is available on our website (see home page).
- Equipment in conformity with Moroccan standards.
- The declaration C_م (CMIM) of conformity is available on our website (see cover page).



Disposal:

- This product should be disposed of at an appropriate recycling facility. Do not dispose of in domestic waste.
- The battery must be dropped off at a suitable recycling facility.

IMPORTANT SAFETY INSTRUCTIONS – SAVE THESE INSTRUCTIONS

This product has been designed to jump start 12V vehicles only.

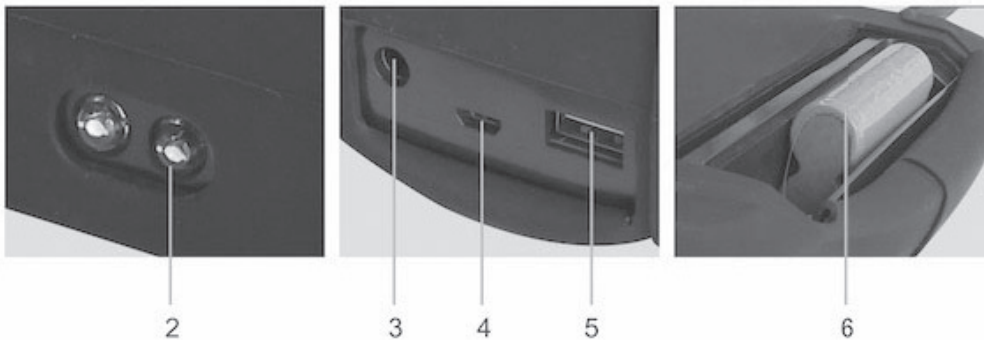
1. Working in the vicinity of a lead-acid battery is dangerous. Batteries generate explosive gases during normal operation. It is important that you follow these instructions each time you use the Hybrid Booster.
2. To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of any equipment you intend to use in the vicinity of a battery. Review cautionary marking on these products and on the engine. Read vehicle owner's manual: the vehicle manufacturer may have specific precautions and instructions about jump starting your vehicle, which you should be aware of.
3. Keep out of reach of children.
4. Do not disassemble the Hybrid Booster. Do not operate it if it has received a sharp blow, been dropped or otherwise damaged in any way. Incorrect assembly may result in fire or electrical shock.
5. Do not set the Hybrid Booster on flammable materials, such as carpeting, upholstery, paper, cardboard, etc.
6. Place the Hybrid Booster as far away from the battery being jumped as the cables will permit.
7. Never place the Hybrid Booster directly above battery being jumped.
8. To prevent arcing, never allow the clamps to touch together or to contact the same piece of metal.
9. The Hybrid Booster is NOT designed to be installed as a replacement for a vehicle battery.

10. Do not use for dry cell batteries that are commonly used with home appliances.
11. Turn off ALL electronics in your vehicle (air conditioner, heat, radio, lights, chargers, etc.).
12. Make sure the key is in the "OFF" position. For smart-key fobs (push-to-start vehicles), make sure the vehicle is completely OFF before jump starting.

PERSONAL SAFETY INSTRUCTIONS

1. Neutralize any acid spills thoroughly with baking soda before attempting to clean up.
2. Remove all personal metal items from your body, such as rings, bracelets, necklaces and watches. A battery can produce a short circuit current high enough to weld a ring to metal, causing a severe burn.
3. Never smoke or allow a spark or flame in the vicinity of the battery or engine.


FEATURES




1. Hybrid Booster	2. Light
3. Cigarette lighter input	4. Micro USB input
5. USB output	6. Lithium battery pack compartment
7. Lithium backup battery level indicator	8. Internal failure indicator
9. Reverse connection indicator	10. Ignition symbols
11. Vehicle battery voltage sign	12. Capacitor sign
13. Capacitor charging percentage	14. Vehicle battery voltage
15. Light switch	16. Glow switch
17. On/Off switch	



OPERATING INSTRUCTIONS



Standard connection



- 1  Ensure that the vehicle battery terminals are clean, free of grease and corrosion.


- 2  Connect the clamps to the battery terminals. The booster lights up by itself.

Standard mode

- 1  STARTRONIC detects a battery. The digital display shows the voltage of the vehicle battery .

- 2  Les supercondensateurs du booster se rechargent automatiquement. L'affichage numérique indique leur pourcentage de charge .
If the vehicle's battery is too low to recharge the Startronic's supercapacitors, the lithium backup battery automatically switches on to recharge them.

- 3  When the charging of the supercapacitors comes to an end, the ignition signal appears .

- 4  Wait until «FUL» appears on the display and the beep sounds and then start the engine.

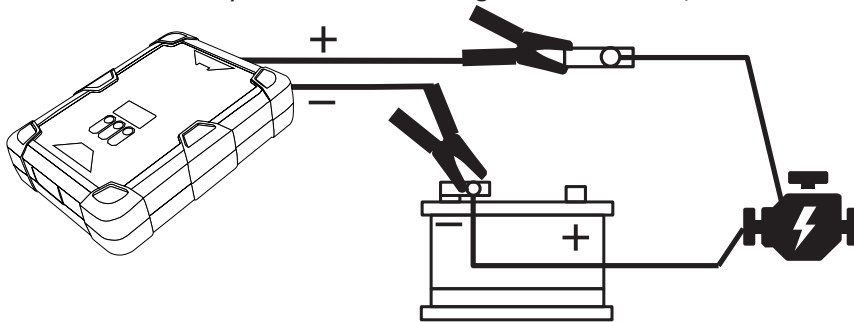
- 5 **Working cycle :**
If the motor does not start on the first attempt, make a maximum of 3 start attempts consecutively.
Plan an interval of 20 minutes between each session (1 session = 3 starts).

Bypass mode

If the supercapacitors do not recharge during a standard mode procedure,

Or

If there is no battery mounted on the engine to be started, connect as shown below:



1



Long press ON/OFF (2 seconds and release). The back-up lithium battery will start to recharge the Ultracapacitors.

2



After digital display shows ignition symbol, long press ON/OFF again (2 seconds and release)

3



Wait for the device to emit the ignition signals: visual on the screen and audible signal. Start the engine.

4



As soon as the engine starts, and keeping the Hybrid Booster clamp and battery lead connected, attach the positive lead to the positive battery terminal and tighten the terminal clamp. After the positive lead has been secured to the battery terminal, switch off the Hybrid Booster and disconnect from the battery.

WARNING - Do not leave the engine running without the Hybrid Booster or the battery being connected. Failure to comply could result in damage to the vehicle ECU. The manufacturer will not accept responsibility for any damage caused by incorrect use of this product.

Glow Mode



In cold weather, the glow plugs in most diesel vehicles will energize first to heat up the engine chamber before the engine start, as indicated by the GLOW sign on the dashboard. The process takes about 4-6 seconds. In this case, after the Hybrid Booster is fully recharged and connected, press the GLOW button, and then turn on the ignition.

NOTE:GLOW is inactive under Bypass mode.

LITHIUM BACK-UP BATTERY PACK

This jump starter is equipped with a lithium battery pack. Recharge the battery pack with any micro USB charger with a current output of min. 2 Amps. Once Micro USB charger is connected, the back-up battery will be charged automatically.

Recharging the lithium battery

It is recommended to fully charge this lithium battery at least once a year.

Recharge the battery with the supplied USB microphone cable.

Once the Micro USB charger is connected, the backup battery is automatically charged.











To check the charge level of the lithium battery, press ON/OFF, the indicator  shows the battery status.

LITHIUM BATTERY FOR STARTRONIC HYBRID 950	
Ref. 027411	
Battery pack specifications	7.4 V / 2200 mAh
Recharge time	5-8 hours

Contact your distributor for battery replacement.

DIGITAL DISPLAY AND INDICATORS

1		Vehicle battery voltage
2		Capacitor charging percentage
3		As long as ignition sign  appears, it's ready for start
4		GLOW mode is activated
5		Backup battery pack charge
6		Error: Reverse polarity
7		Error: Internal failure, do not use <i>If the battery symbol flashes, recharge the lithium battery (USB plug).</i>

SPECIFICATION

Input: DC12V 10A, DC5V 2A
Working temperature: -40°C to 65°C

Starting current	950 A
Peak current	1900 A
Recharge time	180 secondes

WARRANTY

The warranty covers faulty workmanship for 2 years from the date of purchase (parts and labour).

The warranty does not cover:

- Transit damage.
- Normal wear of parts (eg. : cables, clamps, etc..).
- Damages due to misuse (power supply error, dropping of equipment, disassembling).
- Environment related failures (pollution, rust, dust).
- The lithium backup battery.

In case of failure, return the unit to your distributor together with:

- The proof of purchase (receipt etc ...)
- A description of the fault reported



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