

## Read Carefully Before Use to Protect Your 12/24V BOOSTER BATTERY



**Correctly recharging the Booster battery increases its efficiency and extends its lifetime!**

### RECHARGING YOUR BOOSTER

- The BOOSTER must be put on continuous charge between uses.**  
⇒ Below 12.4V, the BOOSTER'S batteries start to sulphate and irreversibly lose power. The lower the voltage and the longer the time spent at that voltage, the deeper the sulphation. When not in use, the BOOSTER'S batteries must never drop below 12.4V (well charged = 13V).
- Never recharge the BOOSTER on a garage charger or on an automatic charger set on "fast charge" or "booster" position.**  
⇒ If you do so, you risk overcharging the BOOSTER and at higher than 14.7V, hydrogen can form in the batteries, causing an explosion risk and drainage inside the batteries.
- Never recharge the 12/24V BOOSTER via the cigarette lighter plug of the BOOSTER.**  
⇒ The Neutrik® plug is a 4 pole plug, provided to recharge the 2 batteries at the same time. The cigarette lighter plug (12V outlet) is only connected to one battery and is just provided for the connection of a portable 12V lamp for personal use (maximum 16A) or any other 12V accessories.
- Never completely discharge the BOOSTER batteries.**  
⇒ The batteries do not have a memory effect.
- During the charge, the clamps must never touch a metallic surface.**  
⇒ You may melt one or several poles in the charging plug if you touch a metallic surface with the clamps.

### STARTING A VEHICLE

- IMPORTANT: You MUST wait 3 minutes between each starting attempt of maximum 10 seconds.**  
**Three reasons:**
  - To allow the voltage of the BOOSTER'S batteries to build up again.
  - To allow the internal components of the batteries to cool down.
  - To allow the renewal of the gases inside the batteries.

⇒ If you do not wait in between starting attempts, and/or the starting attempt is longer than 10 seconds: You risk reducing the power of your BOOSTER in the long term, you reduce your chances of starting the vehicle on the second attempt, and you risk melting one or both internal fuses.

- Never connect the BOOSTER to a battery or starter which is in short-circuit.**

- Never put the BOOSTER in short-circuit, for example:**

a. By connecting the red clamp (+) to the negative terminal of the battery and the blue clamp (-) to the mass of the engine.

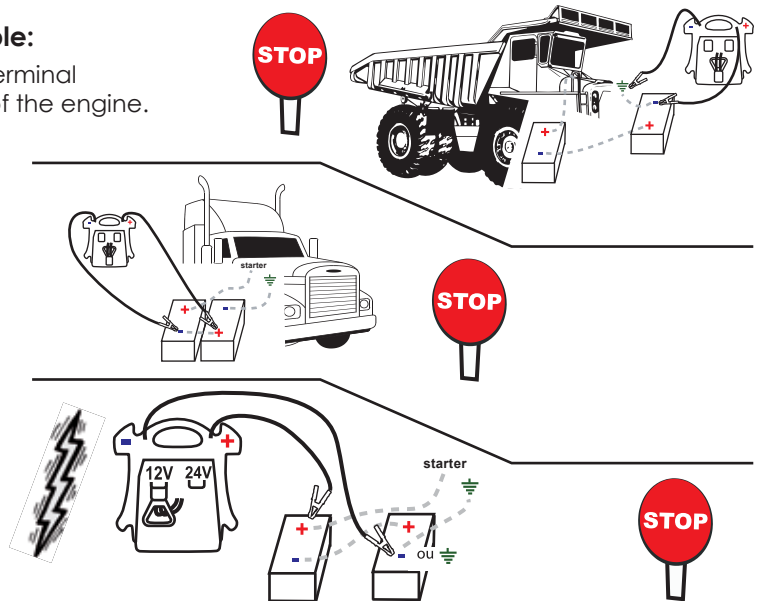
⇒ The inversion of polarity signal will not operate because you are connected twice to the mass and you are not in inversion of polarity.

b. By connecting the clamps on the positive and negative terminal of the 2 batteries which are connected together in a 24V vehicle.

⇒ In these two cases, the fuses on the batteries may melt **in less than one second**.

- NEVER connect the BOOSTER on a 24V vehicle when it is in the 12V position!**

⇒ May cause the forming of hydrogen and is an **EXPLOSION RISK**.



### STORAGE OF THE BOOSTER

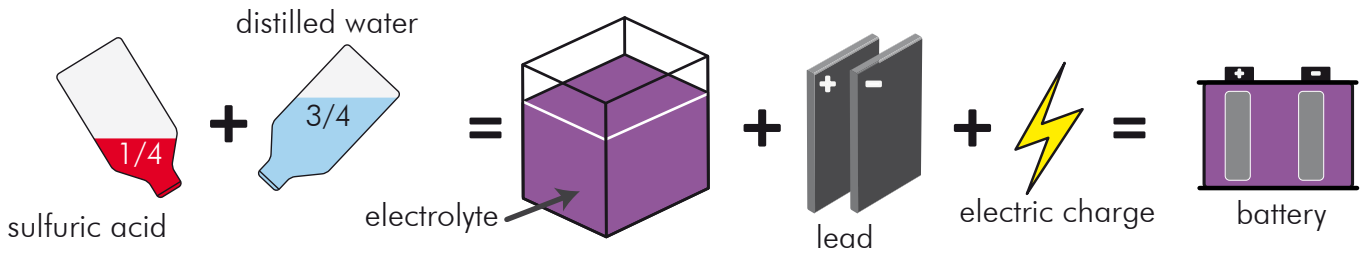
**If the BOOSTER is left unused in storage for an extended period of time, it must be recharged for at least 48 hours every 3 months.**



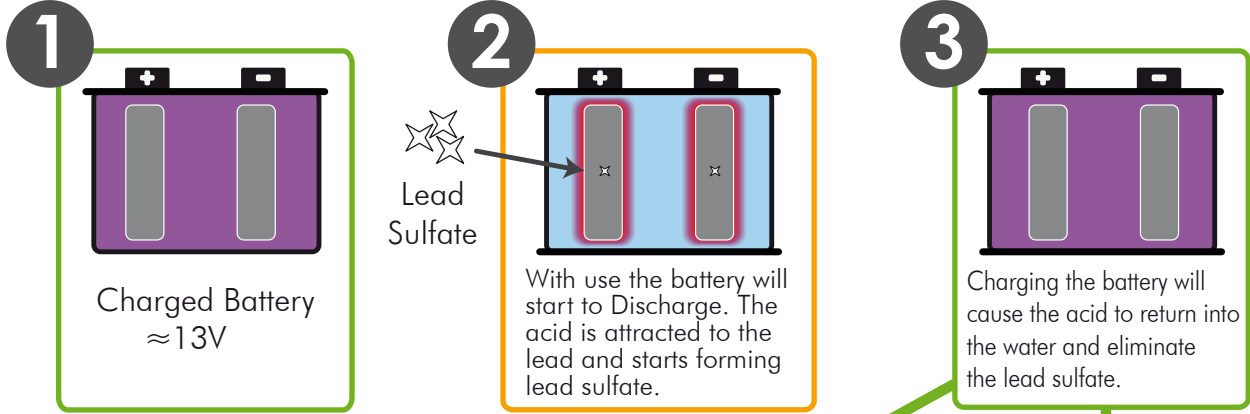
**LEAVE THE BOOSTER ON CONTINUOUS CHARGE WITH THE ORIGINAL CHARGER, TO ENSURE LONG LIFE AND OPTIMISE THE USE OF THE BOOSTER BATTERY**

# WHY PUT YOUR BOOSTER ON CHARGE AS OFTEN AS POSSIBLE?

## Composition of a lead-acid Battery:



## How does a lead-acid battery work ?



	Frost temperature of the electrolyte
	Charged Battery : $-40^{\circ}C$
	Discharged Battery : $-6^{\circ}C$
	Density of the electrolyte
	Charged Battery : $1.28 \text{ kg/dm}^3$
	Discharged Battery : $1.15 \text{ kg/dm}^3$

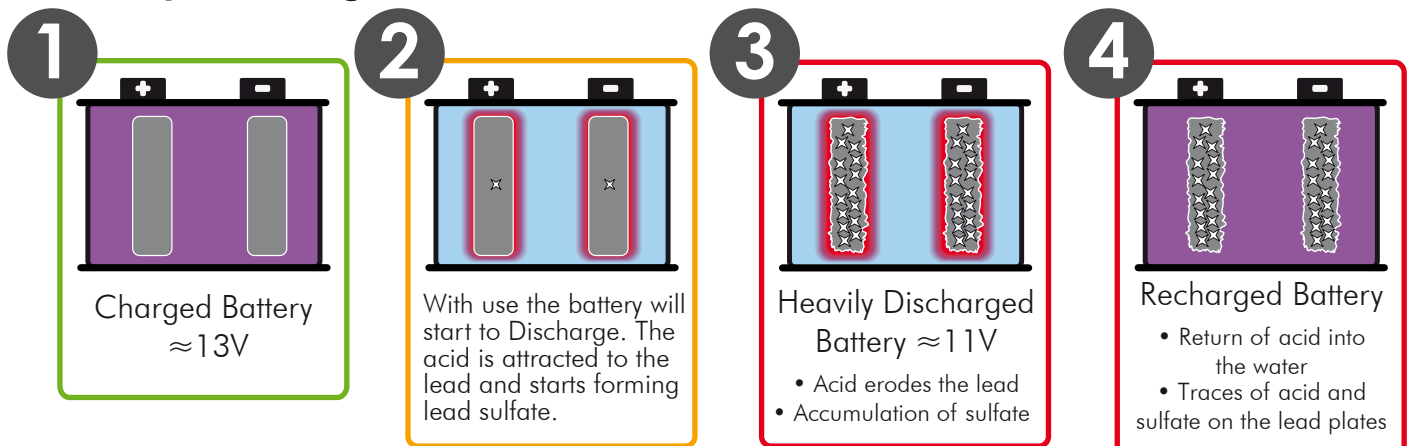
In a vehicle

Immediate charging of the battery through the alternator = Maximum Life Span

With a Jump Starter PROPULSTATION®

Immediate charging of the battery through the PROPULSTATION® Dock = Maximum Life Span

## Consequences of several successive Jump Starts before charging, or heavy discharge\* :



\*Possible Situations which can cause damage: Too many Jump Starts without recharging by consumer, Faulty Alternator, Bad connections, Oxidation, Not charging over long periods... The heavier the discharge and the longer the time before recharge, the more severe the irreversible damage, preventing the current from entering or leaving the lead = Premature death of the battery. Irreversible sulfating begins below  $12.4V$ .

More technical information at [www.ceteor.com](http://www.ceteor.com) and [www.propulstation.com](http://www.propulstation.com)



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