LEMANIAENERGY®
Switzerland

START BOOSTER

12V - 24V - 12/24V

USER MANUAL

ENGLISH

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1. GENERAL INFORMATION

Thank you for purchasing this handcrafted Start Booster manufactured in Switzerland. This device was designed for professional use only. Our focus is to provide quality Start Boosters for professionals who will depend on them to get the work done.

Make sure the user of this Start Booster has read and understood this user manual before the first use. It contains important safety instructions.

Please also make sure to recharge your Start Booster completely before every jump start attempt. Make sure you only use the supplied chargers.

Depending on the type of jump starter that you have, please refer to the appropriate section of this manual for specific precautions. We have developed various technologies to jump start vehicles and each one has its own specifications.

If you have a question after reading this manual, please do not hesitate to contact us or your distributor directly for more information.

2. SAFETY PRECAUTIONS

This device has been designed for trained professionals and according to the codes of practice valid at that time. It is safe to operate, but please make sure to read and understand this user manual beforehand. It can be dangerous if it is used by non-professionally trained personnel or in an incorrect way. The manufacturer cannot be held responsible for an incorrect use of this device. Please follow these steps for maximum safety:

- Always wear safety equipment:
  o Goggles, gloves, ear protection and appropriate attire.
- Only use accessories or attachments approved by the manufacturer.
- Always keep this manual close to this device.
- Modifications or alterations to this device are forbidden.
- Repairs and services can only be performed by an official authorized center.

- Only use the supplied automatic or smart chargers.
- Damaged chargers or devices must be immediately fixed or replaced.
- Always use this device in a well-ventilated area. Never use in potentially explosive areas or near flammable areas.

- Never leave your Start Booster discharged. Always make sure it is fully charged, otherwise it could void the warranty.
- Avoid short circuits and never have the clamps touch each other, or any metal part at the same time.
- Never submerge in water, burn or throw away in domestic waste.
- Safety equipment, such as fire extinguisher or water to rinse eyes, should always be nearby. Also make sure someone else is nearby in case of emergency.

- Do not smoke, use a lighter or matches near batteries. Do not wear vinyl clothing when using this device, because it could create electric sparks.
- Remove personal metal items when working near engins/motors & batteries.
- Always read the vehicle's user manual before trying to jump start it.
- This device is only meant to start lead acid batteries, and no lithium or dry cell

batteries that could be found in home appliances for example. Lead can be dangerous for pregnancy.

- This device is not meant to be used by people (including children) with reduced physical or mental capabilities, or by people without experience or that have not been previously trained.
- Please keep out of reach of children to make sure they do not play with it.
- Always keep this device on the OFF (or disconnected) position when not in use.
- If this device has been dropped, is damaged or is leaking, please have it controlled right away by an authorized agent.
- Always attach the clamps correctly on the device after each use.
- Batteries' acid and gases can be dangerous, never touch or inhale them.
- Be careful when operating inside engins. Moving parts may cause injuries.
- Never start or recharge a frozen (very cold) battery. It could be very dangerous.
- Always check the voltage of the vehicle's battery before trying to jump start it.
- Please recycle this device, its battery and packaging properly.

- Always keep the device at room temperature (15-25°C) when stored. Never leave for an extended period of time in the rain, in the cold or in warm temperatures.

3. FEATURES

A. SAFETY FUSE

If your Start Booster is equipped with a Safety Fuse please read the following:
Fuses have been developed to protect your Start Booster and vehicle against reverse polarities. If your jump starter is not already equipped with a safety, you still have the possibility to add a new type of clamp with a built-in safety fuse. Please contact your distributor directly to ask if your device is compatible.

Different Types of Fuses:

Fuses exist in various sizes: 300A – 500A – 1000A. Please check which fuse was installed in your device before ordering a new one. You can ask your distributor if you need to change a fuse. Please make sure that you use a recommended fuse only. Using a fuse that is not approved will void the warranty.

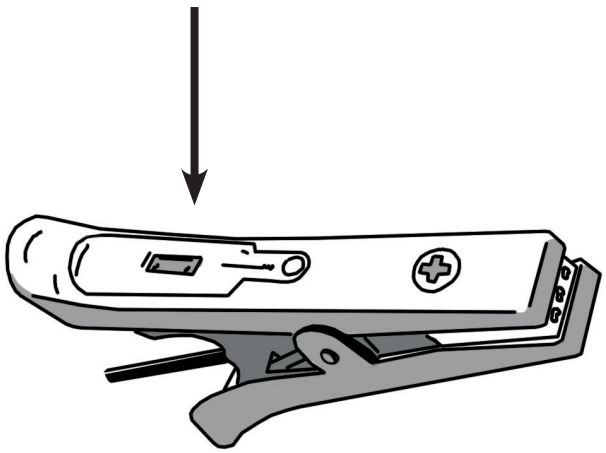
Locations of the fuses:

Depending on the model of Start Booster, the fuse can be located in various places:

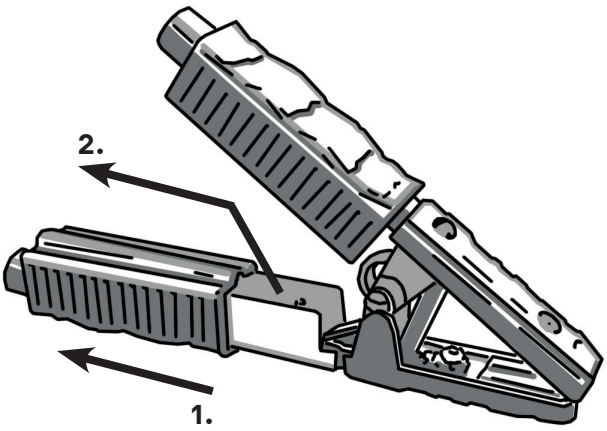
- On the booster itself, either on the front or the back of the unit.
- Inside the handle of the positive clamp.

Our fuses come with a small window to see if the fuse is broken or not. Sometimes, depending on the features, you might have an extra spare fuse directly built-in the unit itself to be able to change it if the one connected has burst. Fuses are very easy to change. First open the window with a screwdriver and then remove the two bolts holding the fuse. Be careful not to remove the two bolts behind the fuse. Then replace the fuse and tighten the two bolts to hold the fuse. Please also note that the physical dimension of the fuse will vary, depending if it is a fuse for the Booster itself or a fuse that is installed inside the clamp.

Fuse on the positive clamp.



1: slide handle backwards
2: take out fuse



B. ON/OFF SWITCH

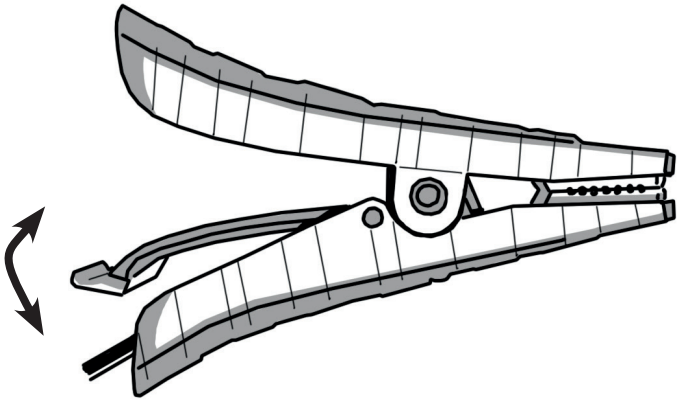
If your Start Booster is equipped with an ON/OFF Switch, please read the following.
Different types of switches:

- On the Booster itself.
- Inside the handle of the negative (black) clamp.

On the unit itself, please just turn it OFF or ON according to the labels on the switch. Inside the clamp, push the clip upwards to turn it ON and downwards to turn it OFF. There is a sign on the handle as well to remind you. See the image below. Always have your device turned OFF when not in use or when connecting your clamps to your vehicle or battery. Only turn it ON after you made sure the clamps are properly connected to the vehicle. Once the vehicle has started please remove the Negative clamp first, then turn your ON/OFF switch OFF and then the positive clamp.

ON / OFF Clip on Negative clamps

- UP position is ON
- DOWN position is OFF



C. REVERSE POLARITY ALARM

The reverse polarity alarm, or Buzzer, will emit a sound and a light when it detects a reverse polarity.It can only work with an ON/OFF switch located on the Booster or on a 12/24V model. To make sure it is used properly, always have the booster turned OFF or disconnected before use. Then connect the clamps to the vehicle's terminals or battery and at this moment the alarm will emit a noise and light if it detects a reverse polarity connection. If the clamps are properly connected, nothing will happen. In this case, you can then turn your unit ON, or select the proper voltage on a 12/24V model before jump starting your vehicle.

D. 12/24V CONNECTOR / SWITCH

The 12/24V models are either equipped with a Switch or with a Red Connector. In both cases the unit can be turned OFF, by either placing the switch in the center (position OFF), or by pulling the red connector out (please make sure not to pull on the cables but only on the connector handle).
Then to select the proper voltage, please refer to the battery of the vehicle (by reading the user manual of the vehicle itself). Once you have made sure of the voltage, either turn the switch on 12V or 24V, or plug the red connector on the side of the 12V or the side of the 24V. It is important to select the correct voltage to avoid damaging the vehicle, or Booster and to void any explosion due to over charge.

Before turning it ON, make sure that the clamps are properly connected and that there is no reverse polarity. Then turn the Booster ON to jump start the vehicle. Once the vehicle has started, please remove first the negative clamp, then turn the Booster OFF and then remove the positive clamp.

E. CHARGE STATUS

Different models will have different charge status. These voltmeters are here to let you know if your Start Booster is charged or not. There are different types of voltage indicators:

- **LED Voltmeter**: composed of 5 LED lights going from Red to Orange to Green. This method is easy to understand whether your unit is charged or not. When 4 LED lights are ON, it means that your unit is ready for use. The 5th LED light will only turn ON when your device is connected to a charger (and is fully charged), or when your device is connected to a working alternator. After you started your vehicle, leave your Booster connected to the alternator for 10 seconds **maximum**. If the 5th Green LED light does not turn ON, it means that your alternator is not working properly.

- **Digital/Analog Voltmeter**: These two voltmeters will only indicate the voltage of the Booster. If your Booster is below 12.7V, you need to recharge it. When you leave your Booster connected on the vehicle for 10 seconds **maximum**, the voltmeter should read the voltage output of the alternator, which will let you know if the alternator is working properly or not. (a working alternator has an output of approximately 14V).

F. CHARGING METHODS

There are different types of chargers available for the Start Boosters:

Automatic Chargers:
This series is called the LESA series. It comes in 12V or 24V. This series is fully automatic, which means that it will not overcharge your Booster.

LESA1 Car Charger:
This Charging cord is designed only for Start Boosters with batteries. It is meant to recharge your Booster from the cigar socket of your vehicle whilst driving. Make sure to disconnect it when the vehicle is not turned ON, to avoid discharging the battery.

Smart Chargers:
It is also a full series of chargers in 6V, 12V and 24V. When the charger is plugged inside the socket or connected to the clamps directly, please press the 'snow flake' (AGM) mode on the charger to start the charge. Make sure to select the correct voltage according to the vehicle or battery.

Batteryless Start Booster Chargers:
This series is called CAP. It comes in various sizes and is designed for our line of Batteryless Jump Starters. When the unit is fully charged, please remove the charger and do not keep it in charge.

Other methods to recharge your Batteryless Start Booster:
You can recharge your Batteryless Start Booster by connecting its clamps to a good

well charged 12V battery. Depending on the size of the battery, it can take up to a few minutes to recharge your Booster.
Another way to recharge a Batteryless Start Booster would be to leave it connected for 10-15 seconds **maximum** to the engine/alternator of the vehicle after it has started. The alternator will recharge it immediately. (Please make sure to remove the clamps after 15 seconds max.)
Make sure to only use the supplied charger. Using a non-authorized charger will void the warranty and can be dangerous. Batteries or Capacitors that are overcharged will inflate and start producing gases, which may cause an explosion or a fire. That is why we only recommend using the supplied charger in a well ventilated area.

4. OPERATING INSTRUCTIONS

Always wear safety equipment before trying to jump start your vehicle. Make sure the area is well ventilated and that the terminals are clean.
Also make sure that your unit is fully charged before attempting to jump start.
If you have a 12/24V unit, make sure that the voltage selector switch is on "OFF" or that the red voltage connector plug is unplugged. If you have a 12V (or 24V) unit with ON\OFF switch, make sure it is turned OFF. Please also make sure that the cables are not in the path of moving parts of the vehicle's engine.

The battery terminal not connected to the frame should be connected first. The other terminal should be connected to the frame, far from the battery and the fuel line. After the start, remove the frame connexion first, then the connexion from the battery in the same order.
Please turn OFF the air conditioning, the radio and the lights before the jump start.

A. BATTERY START BOOSTER

1. Connect the positive (red) clamp to the positive terminal.
2. Connect the negative (black) clamp to the frame of the vehicle (ground).
3. If you have a 12/24V unit, choose the voltage with the voltage selector switch or with the voltage connector plug 12V or 24V. If you have a 12V or 24V unit with ON/OFF switch, turn it ON.
4. Then start your engine and stay clear of the battery and the Start Booster while jump-starting. Make sure that it cannot fall inside the engine compartment.
5. Once started, first disconnect the black (negative) clamp, then place the voltage selector switch on OFF; or unplug the voltage connecter plug from the 12/24V unit.
6. Then disconnect the red (positive) clamp.
7. Store both clamps immediately in their respective placing.
8. Recharge the Jump Starter with the supplied automatic charger.

Important: Should the vehicle refuse to start within 10 seconds, have the Start Booster cool down for 3 minutes before the next attempt. If it still doesn't start,

have your car battery or engine checked. It may be that the car battery is defective as well and refuses to accept the current from the Jump Starter.

This Start Booster can also be used as a source of power. For example, you can use a 12V OBD Memory Saver cable or 12V LED lights which you can connect to the socket of the Booster. Please always recharge the Start Booster after use.

B. BATTERYLESS START BOOSTER

1. Make sure the unit is fully charged and turned OFF (or that the voltage selector for 12/24V units is disconnected).
2. Connect the positive (red) clamp to the positive terminal.
3. Connect the negative (black) clamp to the frame of the vehicle (ground).
4. If you have a 12/24V unit, choose the voltage with the voltage selector switch or with the voltage connector plug 12V or 24V. If you have a 12V or 24V unit with ON/OFF switch, turn it ON.
5. Then start your engine and stay clear of the battery and the Start Booster while jump-starting. Make sure that it cannot fall inside the engine compartment.
6. Before removing the clamps, you can leave your unit on the engine/alternator for 10-15 seconds **maximum** to allow the alternator to recharge your device.
7. Once started, first disconnect the negative clamp, then place the voltage selector switch on OFF, or unplug the voltage connecter plug from the 12/24V unit.
8. Then disconnect the red (positive) clamp and store them directly.

Note: It is normal that your Booster will get discharged quickly. It will also get recharged very fast if you connect it to a battery (please see charging section).

C. HYBRID START BOOSTER

1. Connect the positive (red) clamp to the positive terminal.
2. Connect the negative (black) clamp to the frame of the vehicle (ground).
3. If you have a 12/24V unit, choose the voltage with the voltage selector switch or with the voltage connector plug 12V or 24V. If you have a 12V or 24V unit with ON/OFF switch, turn it ON.
4. Then start your engine and stay clear of the battery and the Start Booster while jump-starting. Make sure that it cannot fall inside the engine compartment.
5. Before removing the clamps, you can leave your unit on the engine/alternator for 10 seconds **maximum** to allow the alternator to recharge your device.
6. Once started, first disconnect the negative clamp, then place the voltage selector switch on OFF, or unplug the voltage connecter plug from the 12/24V unit.
7. Then disconnect the red (positive) clamp and store them directly.

Important: Should the vehicle refuse to start within 10 seconds, have your unit cool down for 3 minutes before the next attempt. If it still doesn't start, please have your car battery or engine checked. It may be that the car battery is defective and refuses to accept the current from the Booster.

5. SERVICE & MAINTENANCE

No special maintenance is needed on any of the Start Boosters. The most important is to always make sure that your Battery Start Booster or Hybrid Start Booster is always fully charged. Keeping your unit discharged would damage it and void the warranty. Please also only use the supplied battery charger to recharge it. Do not try to open the unit yourself. Have an authorized agent do it for you. Keeping your unit clean and stored at room temperature would be best. Extreme temperatures will damage the batteries. When not in use for an extended period of time, always make sure it is fully charged at least once a month.

6. FREQUENTLY ASKED QUESTIONS

Q. My Start Booster doesn't have power at the clamps.
A. Please check the On/Off switch, the 12/24V connector or that the Safety Fuse has not burst. It could be that the connector is not connected properly.

Q. The Booster is not taking the charge.
A. Please check the fuse inside the charger or the tip of the charger. Please also check that the charger is working by checking its voltage output on the tip with a voltmeter.

Q. Can a battery, charger or clamp be replaced?
A. Yes, anything on this Booster can be repaired or replaced.

7. WARRANTY INFORMATION

The warranty of this unit depends on the conditions granted by your retailer. The manufacturer shall have no liability whatsoever at any time for any warranty, personal injury or property damage. Transport is never included.
Please dispose of the packaging in a responsible manner. It should be recycled by your local amenity or placed in appropriate recycling bins. Never dispose of electrical equipment or batteries in your domestic waste. Have them recycled by your retailer or your local amenity.

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