KrankingKART® Mini HD

Portable 12V Jump Start Device

Powered By

KrankingKAP™ Supercapacitors

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Protected by one or more U.S. Patents:
http://www.koldban.com/About-us

KrankingKART Mini HD Introduction.

The patented KBI KrankingKART Mini HD jump start device is capable of delivering large amounts of power to start cars, light trucks, ATV's, boats, lawn equipment, and most other 12 Volt powered equipment.

Identifications:

KrankingKART Mini HD Unique Features.

- Maintenance Free
- Built heavy duty for harsh environments
- Unique patented design
- Unparalleled Power and Reliability
- Cycle life upwards of 1,000,000 cycles
- Recharge to 100% in as little as 30 seconds
- Performance unaffected by cold temperatures
- Extremely long life regardless of storage voltages
- Weighs up to 60% less than lead acid battery alternatives
- Water proof, built using IP67 components
- Can sit unused for months and still start engines
- Recharges off any running vehicle, never needs to be plugged in
- Made in the U.S.A.

ALWAYS WEAR EYE PROTECTION (WEAR SAFETY GLASSES) WHEN USING AND WHEN WORKING AROUND BATTERIES.

NONCOMPLIANCE WITH THE REQUIREMENTS SET FORTH IN THIS MANUAL MAY RESULT IN DEVICE FAILURE OR FAILURE OF THE SUPERCAPACITOR WITHIN THE DEVICE.

Use your jump start device safely.

⚠ WARNINGS AND CAUTIONS

THIS DEVICE IS POWERED BY A SUPERCAPACITOR. THIS CAPACITOR OR CAPACITORS ARE VERY POWERFUL AND SHOULD BE TREATED WITH RESPECT. FOR THIS REASON WE ISSUE THE FOLLOWING “WARNINGS” AND “CAUTIONS”.

- Do not short circuit the cable clamps. Short circuiting of the clamps may result in burning or igniting of combustible materials adjacent to the point of short circuit. In case of an accidental short circuit it is necessary to disconnect the clamps immediately from the electrical circuit taking relevant safety measures.
- Do not touch the clamps to any conductive material other than battery terminals.
- Do not use the device if any cable clamp or cord is damaged.
- Do not use the jump start device on a damaged or broken battery.
- Do not attempt to repair the unit or replace parts. Unauthorized repairs will void your warranty.
- If your KrankingKART Mini HD requires service, follow the directions in the warranty section or contact Kold-Ban International, Ltd..
- Check vehicle battery terminals on the battery being jump started before using the Mini HD. If needed clean and tighten the battery terminals. Loose terminals can create sparks, which can ignite hydrogen gas produced by batteries.
- After approximately 10 seconds of continuous cranking, if the disabled vehicle fails to start, stop and wait for 1 minute. This prevents damage to your vehicle’s starting system.
- Avoid storing in direct sunlight, in extreme heat, or very moist areas.
- Never attempt to jump start a battery with frozen electrolyte. A frozen battery could explode from applying a charge.
- If the battery being jump started is less than 2V check battery prior to proceeding since the battery may no longer be in working condition.
- When LED is on steady, unit is active, and the cables are live. When LED is flashing at 1Hz, unit is on ready to be activated.
- Do not disassemble unit. Do not open unit case.
- Never operate MINI HD if unit is damaged.

- 12 Volt use ONLY.
- Use in well vented area.
- Read owner's manual before using.
- Contact with battery acid may cause severe burns and blindness.
- Failure to follow these instructions may result in personal injury, destruction of the jump starter, or damage to your vehicle.
- ALWAYS WEAR EYE PROTECTION (WEAR SAFETY GLASSES) WHEN USING AND WHEN WORKING AROUND BATTERIES.
- WARNING – Risk of Explosion or Fire (ALL BATTERIES can release hydrogen gas that is explosive and/or flammable).

KrankingKART Mini HD jump start procedures.

Before using the jump start device it should be charged. Unlike ordinary battery powered jump start devices, the Mini can be charged with as little as 10V and still provide enough power to start an engine. Differences in engine size, engine oils, parasitic loads, and temperature may affect the amount of charge needed. As a result, until you become familiar with the Mini's charge characteristics for your application, it is recommended that you charge the device prior to use. In most cases the charge process will take place between 90 and 180 seconds. If more than 5 minutes pass with the unit active, the unit will automatically shut off and enter standby mode. If the unit is left "ON" longer than 10 minutes, the device will enter sleep mode. To wake from sleep mode press the boost button, or press the activation button

To charge the KrankingKART Mini HD using a running vehicle:

1. BE SURE the Activation button is "OFF".
2. Open the hood of a running vehicle and locate the battery.
3. Connect the RED POSITIVE (+) clamp to the POSITIVE terminal first, then connect the BLACK NEGATIVE (-) clamp to NEGATIVE terminal.
4. Turn the device "ON" using the Activation button. The LED should illuminate Steady on. If the LED is flashing at 1Hz the "boost" button must pushed prior to the start attempt. The less time between switching the device on and engine starting the better. If you accidentally connected the clamps backwards a warning LED will flash at 4Hz and the unit will disable itself, turn off the activation button off and reverse the clamp connections.

To charge the KrankingKART Mini using a running vehicle (continued):

5. After 2 to 3 minutes the jump starter should be charged.
6. The digital voltage display will indicate charge level, which should be between 12 and 14.3 volts.
7. Turn the Activation button “OFF”.
8. After turning the Activation button “OFF” disconnect the clamps. The RED POSITIVE (+) first then the BLACK NEGATIVE (-). Be sure the Activation button is “OFF” before disconnecting the clamps. Failure to do so could cause damage.
9. The KrankingKART Mini HD is now ready for use.

Notes about charging.

1. If more than 5 minutes pass with the unit active, the unit will automatically shut off and enter standby mode. If the unit is left “ON” longer than 10 minutes, the device will enter sleep mode.
2. Different Vehicles may provide different levels of maximum charge. This is because the unit can only charge up to the system voltage of the vehicle used to recharge it.
3. The device will charge to a maximum of 14.3V. Do NOT charge the device to a voltage greater than 14.3V. Irreversible damage and safety issues may occur. Use 12V power source only.
4. Charging methods may vary. As a result, use common sense, use safety measures, and adhere to warnings & cautions at all times.
5. A 12V battery charger may be used to recharge the Mini HD. Follow all of the above instructions substituting “vehicle” for your battery charger. Follow all instructions on the battery charger as well.

6. The voltage source must be below 15.5V or the unit will not recharge, If voltage source is above 15.5V LED will flash at a 4Hz frequency.

ALWAYS WEAR EYE PROTECTION (WEAR SAFETY GLASSES), AND REMOVE METAL JEWELRY, RINGS, WATCH BANDS, ECT. WHEN USING AND WHEN WORKING AROUND BATTERIES.

USE COMMON SENSE, USE SAFETY MEASURES, AND ADHERE TO WARNINGS & CAUTIONS AT ALL TIMES.

To jump start a vehicle or engine:

1. Turn the ignition key to the “OFF” position before connecting clamps to the vehicle battery.
2. Be sure the Activation button is “OFF” before the clamps are connected to the battery.
3. Connect the RED POSITIVE (+) clamp to the POSITIVE terminal first, then connect the BLACK NEGATIVE (-) clamp to NEGATIVE terminal.
4. Turn the device “ON” using the Activation button. The LED should illuminate Steady on. If the LED is flashing at 1Hz the “boost” button must pushed prior to the start attempt. The less time between switching the device on and engine starting the better. If you accidentally connect the clamps backwards a warning LED will flash at 4Hz and the unit will disable itself, turn off the activation button off and reverse the clamp connections.
5. Start the engine. After starting the engine leave the jump starter attached for approximately 3 minutes, or until the unit has reached system voltage. This will ensure the jump starter is fully charged for its next use.
6. After 2-3 minutes turn the Activation button “OFF”.
7. After turning the Activation button “OFF” disconnect the clamps. The RED POSITIVE (+) first then the BLACK NEGATIVE (-). Be sure the Activation button is “OFF” before disconnecting the clamps. Failure to do so could cause damage.
8. The KrankingKART Mini is now ready to be used again, or to be placed in storage.

If LED is flashing at 4Hz after connecting cables:

1. Unit may be hooked up backwards (reverse polarity scenario). Check to make sure unit is correctly attached to battery terminals. Follow instruction number 3 from list above.
2. System voltage could be above 15.5 volts. In this scenario LED will remain flashing at 4Hz, and the unit will not activate. It is designed to work with 12 volt vehicles only.

Frequently asked questions.

What kind of battery is in this device?

The device does not contain a battery. It contains a Supercapacitor.

How is a Supercapacitor different than a battery?

A Supercapacitor contains NO LEAD. Unlike a battery, a Supercapacitor stores and releases energy using a physical process not a chemical process like a battery. As a result, it does not suffer any of the drawbacks associated with lead acid batteries.

What are some of the advantages a Supercapacitor has over a battery?

- Maintenance Free
- Unparalleled Power and Reliability
- Cycle life upwards of 1,000,000 cycles
- Recharge to 100% in as little as 30 seconds
- Extremely long life regardless of storage voltages
- Weighs up to 60% less than lead acid battery alternatives

What are some of the disadvantages a Supercapacitor has over a battery?

Supercapacitors are capable of supplying large amounts of power but not energy. As a result, Supercapacitors are not a good replacement for batteries running energy demanding loads.

What is the difference between power and energy?

Power is ‘how much can I give something?’ I.e.: Starting an engine requires a lot of power but only for a short duration. Energy is ‘how long can I run something?’ I.e.: Running a radio, fan, or refrigerator overnight. This requires a small amount of power but a large amount of energy.

How long will the device hold a charge?

On average the device should hold a charge between 3 and 6 months.

What happens if the voltage in the device is very low or reaches zero volts?

Nothing, just simply recharge the device. Storing the device at low voltages does not affect its performance or life. Unlike battery powered devices, you do not have to keep the device constantly charged above a set voltage.

Why does the device shut off on its own?

If more than 5 minutes pass with the unit connected to a vehicle, the unit will automatically isolate itself from the vehicle's system (rest mode). If the unit is left "ON" longer than 10 minutes, the device will enter sleep mode. To wake from sleep, or resting mode cycle the activation button.

What should I do to maintain the device?

Nothing except keep the cables and device in clean working order. Avoid storing in direct sunlight, in extreme heat, or very moist areas.

How can the device crank an engine with as little as 10V?

The internal resistance inside a Supercapacitor is so much less than a lead acid battery that it can release its power more efficiently than a lead acid battery. Therefore, an engine starter, in most cases can effectively use the power with as little as 10V.

I keep recharging the device but the voltage seems to drop off quickly?

This is normal. There is a balancing circuit in the device that causes the voltage to drop as the Supercapacitor cells charge and balance between themselves. The voltage drop will be high at first and then slow down once the cells get synchronized.

I am trying to use the device but nothing seems to be working. What am I doing wrong?

In most cases there is insufficient charge in the device. Charge the device and try again. If still nothing, than call our help line.

I am trying to recharge the device but nothing seems to be working. What am I doing wrong?

If the voltage source the unit is attempting to recharge from is above 15.5V the device will not enter recharge mode and the LED will flash at a 4Hz frequency.

I am positive something is wrong, can I open unit up to fix it myself?

Never open the Mini HD up yourself. If you suspect product failure call our help line.

Where can I obtain help or service?

Call Kold-Ban International, Ltd. For help or service.
1-800-527-8278 or 1-847-658-8561.

Notes:

Supercapacitor contents.

This capacitor is a manufactured electronic product that contains primarily non-hazardous materials, including metal and plastic. Supercapacitors are sealed, metal containers (steel or aluminum) which enclose layers of activated carbon which is saturated by an electrolyte solution, aluminum and plastic. The electrolyte solution contains a quaternary salt compound (tetraethyl aluminum tetrafluoroborate) dissolved in the solvent acetonitrile. The assembled layers are inserted into the outer metal container and are saturated with the electrolyte, sealed and stored in an uncharged state. There are minor hazards that can arise from exposure to the activated carbon. If the contents of these Supercapacitors remain sealed in the outer shell and they are kept uncharged, persons handling this product will avoid most of the risks described herein* for all hazardous components of the electrolyte. As such, precautions should be taken to avoid rupture or overheating the sealed metal containers.

* Herein describes and refers to the Material Data Safety Sheet (MSDS).

** The MSDS can be downloaded from the information center area of KBI's website. www.koldban.com If you are not able to download the MSDS sheet, a MSDS sheet can be faxed, mailed, or emailed by calling Kold-Ban International, Ltd. Directly at 1-800-527-8278 or 1-847-658-8561.

Dispose of properly by recycling.

Call KBI 1-800-527-8278 or 1-847-658-8861

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Limited warranty:

The Supercapacitor contained in the device is warranty for a period of three (3) years. All other components fall under the warranty described below. KBI products are warranted to the original purchaser against failure due to defective material and/or workmanship for a period of one (1) year from the date of purchase except when a variance is expressly stated in the Owners Manual.

This warranty does not cover any product worn out or altered, used for a purpose other than for which it is intended, or used in a manner inconsistent with any instructions regarding its use. The exclusive remedy for any product found to be defective under this warranty is limited to the repair or replacement of the defective product without charge, and KBI shall not be liable for any consequential or incidental damages, including labor charges.

In order to qualify for this warranty, the alleged defective product must be returned directly to the KBI factory (or authorized Service Center), postage or freight prepaid. Before the product is returned, a Return Material Authorization (RMA) number must be issued. Call KBI for a RMA number. Final determination of defects will be made by KBI in accordance with procedures established by KBI. No agent, employee, or representative of KBI has any authority to bind to any affirmation representation, or warranty concerning KBI Products, except as stated herein. See comprehensive policy for complete details.

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