

# **INTELLI-START LITHIUM EMERGENCY JUMPSTARTER**

## **and Portable Power Bank**



Pour le manuel en français, visitez  
**PROJECTA.US** ou appelez le **1-888-489-9820**.

Para obtener el manual en español, visite  
**PROJECTA.US** o llame al **1-888-489-9820**.



**WARNING:** Cancer and Reproductive Harm.

**ADVERTISSEMENT:** Cancer et problèmes e reproduction.

**ADVERTENCIA:** Cáncer y daño reproductivo.

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## IMPORTANT SAFETY INFORMATION

Please read this manual thoroughly before use and store in a safe place for future reference.

### WARNINGS

- This unit has been designed for 12V vehicles only.
- Risk of explosive gas. Working in the vicinity of car batteries can be dangerous. Batteries release explosive gases during normal operation, charging and while jumpstarting a battery. Before using this Jumpstarter, read and follow the instructions carefully. Follow all manufacturer's instructions and warnings of the vehicle's battery and other equipment being used.
- Jumpstart 12V lead acid and LiFePO<sub>4</sub> batteries. Do not use to jumpstart dry cell batteries commonly found in household appliances. These batteries may burst and cause injury and/or property damage.
- Do not smoke, use matches, use a cigarette lighter, or allow a spark or flame near the battery.
- Do not allow metal to come in contact with the battery posts. It may spark or short-circuit the battery and cause an explosion/fire.
- Remove rings, bracelets, necklaces, and watches when working at the vehicle and/or jumpstarting a vehicle.
- The Jumpstarter contains a sealed non-spillable Lithium Iron Phosphate battery (LiFePO<sub>4</sub>). This must be disposed of properly.
- Ensure correct polarity when connecting clamps to vehicle.
- The Jumpstarter is not designed to be left outside for extended periods of time or submerged in water.
- Do not store the Jumpstarter in temperatures above 140°F (60°C) or below 14°F (-10°C), as this can affect the health of the battery.
- Always wear eye protection when operating the Jumpstarter.
- Although the Jumpstarter has been designed to protect the battery, do not drop the Jumpstarter or try and pierce it in anyway. This can result in an explosion/fire.
- If the Jumpstarter is physically damaged in any way, it should not be used.
- Not intended for people (including children) with reduced physical or mental capability.
- Do not try and charge via the USB output as this will damage the Jumpstarter and the USB output.

## **IMPORTANT CHARGING INFORMATION**

- Charge the Jumpstarter prior to first use. This may take up to 4 to 8 hours depending on the model.
- Fully recharge the Jumpstarter after every use to ensure your Jumpstarter is ready for use in case of an emergency.
- The Jumpstarter has a micro-USB charging port. This allows the user to charge the Jumpstarter using a micro-USB cable.
- To extend the life of your Jumpstarter do not let the battery charge level fall below 20%.
- To extend the life of the Jumpstarter battery, do not charge in an environment above 113°F (45°C) or below 32°F (0°C).

## **FEATURES**

### **RAPID RECHARGE TECHNOLOGY (RRT)**

- The Lithium Iron Phosphate (LiFeP04) battery can rapidly recover charge from the vehicle's alternator following a successful jumpstart. Leaving the clamps connected to the vehicle's battery for 40 seconds will recharge the Jumpstarter to 100% of the original charge status. If left connected, will recharge for up to 10 minutes. Once the jump starter is fully charged, the RRT will shut off avoiding overcharging.

### **LITHIUM SAFE**

- Intelli-Start Lithium Iron Phosphate (LiFeP04) batteries are specifically designed for cranking therefore purpose built for jumpstarting and are safer than Lithium Cobalt (LiCo02) battery types. The LiFeP04 batteries provide more starts and have an operational life of up to 1800 battery cycles.

### **JUMPSTARTING PERFORMANCE**

#### **PJ-IS920-2**

- The PJ-IS920-2 is suitable for starting vehicles with 4-6 cylinder gas engines.
- With 40 seconds of Rapid Recharge after each jumpstart, the PJ-IS920-2 will not need to be recharged during the working day.

#### **PJ-IS1220-2**

- The PJ-IS1220-2 is suitable for starting vehicles with 6-8 cylinder gas engines and vehicles with up to 4.5 liter diesel engines.
- With 40 seconds of Rapid Recharge after each jumpstart, the PJ-IS1220-2 will not need to be recharged during the working day.

### **Built in LED FLOOD LIGHT**

- Provides illumination for safer and more convenient operation at night.
- The flood light is not on a timer and will continue to operate until the battery reaches 20% of its state of charge, then it will shut down.

## **POWER BANK WITH 2.1AMP USB PORT**

- Allows charging of phones, tablets, and other small portable devices.

## **12V USB CHARGING**

- Allows the Jumpstarter to be charged from your vehicle USB socket or cigarette socket.

## **PREMIUM SPARK FREE CLAMPS**

- Ensures safe jumpstarting.

## **EASY TO READ BATTERY STATUS INDICATOR**

- Shows battery status and when recharge is required.

## **CONNECTION INDICATION**

- Confirms clamp connectivity and status.

## **UNPARALLELED SAFETY AND RELIABILITY**

### **REVERSE POLARITY PROTECTION & ALARM**

- Prevents sparking from accidental reverse connection. The alarm sounds when the Jumpstarter clamps are connected incorrectly.

### **OVER-TEMPERATURE & UNDER-TEMPERATURE PROTECTION**

- The Jumpstarter has different layers of temperature protection in respect to environmental conditions. The Jumpstarter will not allow:
  - Charging over 113°F (45°C)
  - Jumpstarting over 140°F (60°C)
  - Charging below 32°F (0°C)
  - Jumpstarting below -4°F (-20°C)
- Should the unit overheat by continuous or numerous jumpstarts, the unit will shut off automatically and restart once the over-temperature condition subsides.

### **OVER-VOLTAGE & UNDER-VOLTAGE PROTECTION**

- The Jumpstarter will deactivate and sound an alarm if connected to a vehicle battery which is higher than 14.6V, or if the internal battery is discharged to a level whereby the battery might be damaged.

### **SURGE PROTECTION**

- Features built in surge protection so you can safely jumpstart vehicles with Electronic Fuel Injection (EFI) and computer management systems.

### **TOTAL SAFEGUARD PROTECTION**

- The PJ-IS920-2 and PJ-IS1220-2 Jumpstarter offers total safeguard protection including additional protections like Battery & Switch Short Circuit Protection, Over Current Protection, Over Cranking Protection, Low Voltage Indication.

## SPECIFICATIONS

P/No.	PJ-IS920-2	PJ-IS1220-2
<b>Battery</b>		
Battery Capacity	6,400mAh/20.48Wh	12,000mAh/38.4Wh
Battery Chemistry	Lithium Iron Phosphate (LiFeP04)	Lithium Iron Phosphate (LiFeP04)
Peak Amps	900A	1200A
Clamp Power	240A	400A
Voltage	12V only	12V only
Battery Cycles	1800	1800
<b>Jumpstarter Leads</b>		
Length	Positive: 12" Negative: 10.5"	Positive: 12" Negative: 10.5"
Cable	8AWG	8AWG
Polarity Protection	MCU controlled with electronic switch	MCU controlled with electronic switch
Overload Protection	MCU controlled with electronic switch	MCU controlled with electronic switch
<b>Recharging</b>		
Cable	3' long USB to micro-USB	3' long USB to micro-USB
Micro USB Charging port	2.1 Amp micro-USB charging port 3rd party 10W 120VAC USB adaptors can be used. (Not provided)	2.1 Amp micro-USB charging port 3rd party 10W 120VAC USB adaptors can be used. (Not provided)
12V DC Charging	12V to 5V 2.1 Amp USB charger (provided)	12V to 5V 2.1 Amp USB charger (provided)
DC Charging	4 hours	8 hours
<b>Jumpstart Connection Voltages</b>		
Vehicle Voltage Range	0V ~ 15V	0V ~ 15V
<b>USB</b>		
USB Output	2.1A, 5.0V	2.1A, 5.0V
USB Low Voltage Disconnect	Battery voltage at 10.5V	Battery voltage at 10.5V
<b>Dimensions, Weight &amp; Environmental</b>		
Length	7"	7.75"
Width	3.5"	3.75"
Height	1.85"	2"
Weight	1.35 lbs	1.75 lbs
Operating Temperature	-4°F(-20°C) to 140°F (60°C)	-4°F(-20°C) to 140°F (60°C)
Operating Temperature (charging)	32°F (0°C) to 113°F (45°C)	32°F (0°C) to 113°F (45°C)
Storage Temperature (long term)	14°F(-10°C) to 140°F (60°C)	14°F(-10°C) to 140°F (60°C)
Ingress Protection	IP53 (Rain Proof) with covers over the ports	IP53 (Rain Proof) with covers over the ports

# PRODUCT OVERVIEW



# JUMPSTARTER INSTRUCTIONS

- Notes:
- Instructions for negative grounded vehicles only. (Most vehicles after 1970 are negative grounded).
  - Before jumpstarting a vehicle make sure that the Jumpstarter is fully charged

## JUMPSTARTING

Step	Instruction	Display												
1	Your Jumpstarter should be charged for around 8 hours prior to first use and as soon as possible after each use.													
2	Before making any connections, check the Jumpstarter battery status by turning the Jumpstarter ON. The Jumpstarter's battery capacity should be at least 50% charged (2 bars).	<div><b>BATTERY STATUS INDICATOR</b> When Jumpstarter is turned on battery gauge LEDs are displayed.</div> <table><tr><th>State of Charge</th><th>Battery Gauge LED Display</th></tr><tr><td>&lt;20%</td><td> ~ Red flashing</td></tr><tr><td>20–25%</td><td> ~ Red</td></tr><tr><td>25–50%</td><td> ~ Yellow</td></tr><tr><td>50–75%</td><td> ~ Green</td></tr><tr><td>75–100%</td><td> ~ Green</td></tr></table>	State of Charge	Battery Gauge LED Display	<20%	~ Red flashing	20–25%	~ Red	25–50%	~ Yellow	50–75%	~ Green	75–100%	~ Green
State of Charge	Battery Gauge LED Display													
<20%	~ Red flashing													
20–25%	~ Red													
25–50%	~ Yellow													
50–75%	~ Green													
75–100%	~ Green													
3	Before connecting the Jumpstarter's clamps to the vehicle turn the vehicle's ignition to OFF.													
4	On a Negative grounded vehicle, connect to the positive battery post and a battery ground. Connect the Red positive (+) clamp to the positive (+) terminal of the vehicle battery, then connect the Black negative (-) clamp to the negative (-) terminal of the battery or a non-moving metal part of the engine block. Ensure you have a good clamp connection; this will guarantee optimal jumpstarting. DO NOT CONNECT TO FUEL LINE. Always double check you have proper connections.													
5	The "JUMPSTART"  button should begin to flash. Press the "JUMPSTART" button. The clamp LED should turn on to green.													
6	If the "JUMPSTART" button does not flash, it would indicate the battery is less than 3.0V. The user will need to press and hold the "JUMPSTART" button for 3 seconds. The JUMPSTART button will have a double flash. The clamp LED will now be illuminated and the Jumpstarter is ready to use. The override will timeout after 60 seconds.													
7	Turn the vehicle's ignition to ON and start the vehicle. After the engine has started, leave the Jumpstarter connected for a minimum of 40 seconds to allow the Jumpstarter to rapidly recover charge from the vehicle's alternator. Once the Jumpstarter is fully charged, the Rapid Recharge Technology (RRT) will shut off and avoid overcharging. If the Jumpstarter fails to start your vehicle refer to the clamp connection LED table on page 8 to review the error. Additionally, check that the clamps are connected correctly with good contact.													
8	Turn the Jumpstarter off using the power button.													
9	Disconnect the Black clamp and then the Red clamp.													

Note: In general, with the use of Rapid Recharge Technology (RRT) the Jumpstarter does not require charging. However, while not in use it is recommended to check the Jumpstarter’s charge status via the **BATTERY STATUS INDICATOR**. If required, charge the Jumpstarter using the supplied 12V USB charger or a 3rd party 10W 120VAC USB adaptor (not provided). This will ensure the Jumpstarter is ready when required.

UNDERSTANDING YOUR JUMPSTARTER






CLAMP CONNECTION LED








Jumpstart Status	LED
Jumpstarter clamps connected to vehicle and ready to jumpstart	Green solid
Jumpstarting for more than 5 seconds	Yellow flash twice, pause & repeat
Battery or Jumpstarter switch, over-temperature	Red / Green alternate flashing
Battery charging temperatures >113°F ( >45°C) or 32°F (<0°C)	Red / Green alternate flashing & siren
Short circuit	Red flashing & beeping siren
Clamps reverse connected to battery	Red solid & siren on
Jumpstarter input voltage (EC5 connector) > 15.0V	Red / Yellow alternate flashing & siren on
Low voltage indication	Red flashing, no beeping siren
Hardware failure	Red fast flash, steady siren on

BATTERY STATUS INDICATOR

When Jumpstarter is turned on the battery gauge LED’s are displayed as follows:

State of Charge	Battery Gauge LED Display
<20%	 – Red flashing
20–25%	 – Red
25–50%	 – Yellow
50–75%	 – Green
75–100%	 – Green

When Jumpstarter is charging the battery gauge LED’s are displayed as follows:

State of Charge	Battery Gauge LED Display
<20%	 – Scrolling
20–50%	 – Red with Yellow & Green scrolling
50–75%	 – Yellow with Green scrolling
75–99%	 – Green with Green flashing
100%	 – All solid Green



## CHARGING


Your Jumpstarter is shipped partially charged. Therefore, you should charge the Jumpstarter before using it for the first time. It is recommended to fully charge the Jumpstarter after each use to ensure it is ready to use when required using one of the methods below:

Option	Detail	Method
1	<p>Plug the 12V to 2.1A USB charge adaptor into a 12V socket. Use the provided USB to micro USB cable and connect the USB end into the 12V USB socket. Connect the micro-USB end to the Jumpstarter. (Note: Ensure you use the provided USB to micro-USB cable provided, using other cables does not guarantee charging performance.)</p> <p>The Jumpstarter will now turn ON and start charging. The BATTERY STATUS INDICATOR will now start to scroll in the following ways depending on its state of charge. See battery status indicator table on page 8.</p> <p>When the Jumpstarter is fully charged, after 4 hours for the PJ-IS920-2 and 8 hours for the PJ-IS1220-2. Simply disconnect the leads and put the Jumpstarter away.</p>	12V to 2.1A USB charge adaptor
2	<p>After a successful jumpstart, the Jumpstarter can rapidly recover charge from the vehicle's alternator. Leaving the clamps connected to the vehicle battery for at least 40 seconds (max. 10 min) after starting the vehicle will recharge the Jumpstarter to 100% of the original charge status.</p> <p>Once the Jumpstarter is fully charged the RRT will shut off and the user can disconnect the Black clamp and then the Red clamp. The clamps can also be disconnected before the RRT completes, should it be required.</p>	Rapid Recharge Technology (RRT)
3	<p>Plug the 3rd party charger into a mains 120VAC socket.</p> <p>Use the provided USB to micro-USB cable and connect the USB end into the charger. Connect the micro-USB end to the Jumpstarter.</p> <p>The Jumpstarter will now turn ON and start charging. The BATTERY STATUS INDICATOR will now start to scroll in the following ways depending on its state of charge. See battery status indicator table above on page 8.</p> <p>When the Jumpstarter is fully charged, after 4 hours for the PJ-IS920-2 and 8 hours for the PJ-IS1220-2. Simply disconnect the leads and put the Jumpstarter away.</p>	3rd party 10-Watt USB 120VAC charger

**Note:** To prolong the life of your Jumpstarter battery it is recommended to charge the Jumpstarter after each use. If the Jumpstarter is not being used, it is recommended to leave the Jumpstarter permanently on charge. This ensures the battery is always maintained, fully charged, and ready for use. It is recommended to charge the Jumpstarter before the first use, as the Jumpstarter is shipped only partially charged.

The Jumpstarter will use an audible warning (beep) to indicate a low battery status. If the internal battery of the Jumpstarter falls below 10.5V, the Jumpstarter will automatically switch off and prevent further discharge which could damage the internal battery.

## FLOOD LIGHT

Step	Detail	Display
1	<p>Press the light button and the light will turn on. Press the light button again to turn the light off when you are finished.</p> <p>Note: If the Jumpstarter is off and the light button is pressed, the button will need to be pressed for at least half a second before the light will turn on.</p>	

## POWER BANK

The Jumpstarter has a 2.1A USB output. It is suitable to charge phones, tablets, cameras, and GPS devices. The Jumpstarter will turn off after 5 minutes of no activity or the USB device has been fully charged.

If the USB output becomes overloaded (stops working), remove the device, and check it. Turn the Jumpstarter off and back on again, the USB output should work again.

**WARNING:** Charging devices from the Jumpstarter will drain the battery. This can cause the Jumpstarter to fail in starting your vehicle in an emergency. Recharge the Jumpstarter as soon as possible.

## FREQUENTLY ASKED QUESTIONS

### **Q. Why didn't my Jumpstarter start my vehicle?**

A. There could be a number of reasons why the Jumpstarter did not start your vehicle.

Check the following:

1. Ensure the Jumpstarter battery is fully charged. Refer to page 8 ('Battery Status Indicator') for further information.
2. Ensure you have followed the correct operating procedure. Refer to page 7 ('Jumpstarter Instructions').
3. Ensure the vehicle operates on 12V DC.
4. Ensure the vehicle being jumpstarted is in the specified vehicle engine size of the Jumpstarter. For PJ-IS920-2 vehicles with 4-6 cylinder gas engines and for PJ-IS1220-2 vehicles with 6-8 cylinder gas engines and up to 4.5 liter diesel engines.

### **Q. Can I leave my Jumpstarter connected to the car after it has started?**

A. Yes. The Jumpstarter is using Rapid Recharge Technology (RRT) that can rapidly recover charge from the vehicle's alternator. Leaving the clamps connected to the vehicle for at least 40 seconds after starting the vehicle will recharge the Jumpstarter to 100%<sup>2</sup> of the original charge status. Once the Jumpstarter is fully charged the RRT will shut off and the user can disconnect the Black clamp and then the Red clamp.

### **Q. How often should I charge my Jumpstarter?**

A. The Jumpstarter uses Lithium technology which self-discharges only a very small amount. To be safe the Jumpstarter should be charged at least every year to be sure it is ready in case of an emergency.

### **Q. Can I charge the Jumpstarter and use the USB output at the same?**

A. Yes, the USB output can be used at the same time as charging via the USB input. However, the USB output is disabled if the Jumpstarter is charging using RRT.

### **Q. What is Peak Amps?**

A. Peak amps is the maximum current the battery in the Jumpstarter can produce.

### **Q. What is Clamp Power?**

A. Clamp power is the maximum current available at the clamps to start the vehicle.

### **Q. Why isn't my Jumpstarter charging?**

A. The Jumpstarter will not charge or perform Rapid Recharge above 113°F (45°C). If the alternator is above 14.6V or faulty, Rapid Recharge will not work.

# WARRANTY STATEMENT

Brown & Watson Incorporated USA (BWI USA) warrants their products to be free from failure in material and workmanship from the date of original purchase for the noted period under normal use. The warranty is voided due to misuse, abuse, alteration or damage caused by customer and product must be intact with no modifications. The warranty covers the product only and not any related damages.

The product is not to be returned to the place of purchase. Warranty claims must be made directly with BWI USA. Warranty claims can be made electronically via [support@bwi.inc](mailto:support@bwi.inc) or by contacting BWI USA at **888-489-9820**. All warranty claims must be made by the original purchaser and include proof of purchase. Pictures of the product may be required as well.

Products may be repaired or replaced at discretion of BWI USA. Product returned to BWI USA must be sent prepaid using include the RMA number supplied by BWI USA or shipment will be returned. Replacement or repaired products will be shipped out prepaid by BWI USA.

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