

**INTELLI-START**

# **12V LITHIUM JUMP STARTER**

**and Portable Power Bank**

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

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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 vehicles with 12V DC electrical systems only.
- Risk of explosive gas. Working in the vicinity of car batteries can be dangerous. Batteries release explosive gases during normal operation, charging and jump starting. Before using this jump starter, read and follow the instructions carefully. Follow all manufacturer's instructions and warnings of the vehicle's battery and other equipment being used.
- Jump Start 12V DC lead acid and LiFePO<sub>4</sub> batteries. Do not use to jump start dry cell batteries commonly found in household appliances. These batteries may burst and seriously 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 jump starting a vehicle.
- The jump starter contains a sealed non-spillable Lithium Iron Phosphate battery (LiFePO<sub>4</sub>). This must be disposed of properly.
- Ensure correct polarity when connecting to vehicle.
- The jump starter is not designed to be left outside for extended periods of time or submerged in water.
- Do not store the jump starter in temperatures above 113°F (45°C) or below 14°F(-10°C) as this can affect the health of the internal battery.
- Always wear eye protection when operating the jump starter.
- Although the jump starter has been designed to protect the battery, do not drop the jump starter or attempt to pierce it in any way. This can result in an explosion and/or fire.
- If the jump starter 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 the unit via its own USB output as this will damage the jump starter and the USB output.
- Using any USB cable other than what is supplied may reduce the charging performance of the jump starter.
- Do not allow positive/red and negative/black clamp touching each other when in override mode and 12V DC mode.
- When in manual override, pay careful attention not to reverse-connect clamp or short-circuit.
- Do not charge jump starter from laptop/computer USB ports.
- Do not leave clamps connected to external battery indefinitely for it will continuously drain the jump starter battery.
- Make sure to have strong clamp connection to starting battery to maximize jump starting current.

## **IMPORTANT CHARGING INFORMATION**

- Charge the jump starter prior to use using the supplied USB charger. This may take up to 5 hours.
- Fully recharge the jump starter after every use to ensure your jump starter is ready for use in case of an emergency.
- Do not allow the jump starter battery to become very flat. If the display shows 'Low Battery' ensure the jump starter is charged immediately to ensure the maximum battery life. Refer to "ERROR AND ALARM MESSAGES" section (page 10).
- The jump starter has a USB-C charging port. This allows the user to charge the jump starter using a USB-C cable (5V DC, 3A).
- Always use the USB-C cable and chargers that are provided with the unit.
- To extend the life of your jump starter, do not let the battery charge level fall below 1 bar.
- To extend the life of the jump starter 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 (LiFePO<sub>4</sub>) battery can rapidly recover charge from the vehicle's alternator following a successful jump start. Leaving the clamps connected to the vehicle's battery for 40 seconds will recharge the jump starter to 100%<sup>1</sup> 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 (LiFePO<sub>4</sub>) batteries are specifically designed for cranking therefore purpose built for jump starting and are safer than Lithium Cobalt (LiCoO<sub>2</sub>) battery types. The LiFePO<sub>4</sub> batteries provide more starts and have an operational life of up to 2000 battery cycles.

### **JUMP STARTING PERFORMANCE**

- This PJ-IS1400-2 is suitable for starting vehicles with up to 10 cylinder gas and 5L diesel vehicles.
- With 40 seconds of rapid recharge after each jumpstart, the PJ-IS1400-2 will not need to be recharged during the working day.
- It is recommended that the PJ-IS1400-2 jump starter is charged via the supplied 12-24V DC USB socket charger and USB-C cable to maximize the jump starter performance.

### **INTUITIVE COLOR DISPLAY**

- The intuitive color display makes the PJ-IS1400-2 easy for anyone to use with step by step instructions.

### **BUILT IN LED FLOOD LIGHT**

- Provides illumination for safer, more convenient operation at night.
- The flood light will timeout after 4 hours if left on. Users should take care to turn off flood light when not used to preserve battery life.

## **POWER BANK WITH 3A USB OUTPUT**

- The PJ-IS1400-2 allows charging of phones, tablets, and other small portable devices.

## **5V DC USB CHARGING**

- The PJ-IS1400-2 can be charged via a vehicle's USB output or supplied 12-24V DC socket.

## **PREMIUM SPARK FREE CLAMPS**

- Ensures safe jump starting.

## **ENGINE BAY SAFE OPERATION**

- The PJ-IS1400-2 jump starter is light and compact compared to a conventional lead acid jump starter. With best-in-class over-mold material which provides secure grip and impact protection, it allows users to operate the unit on the engine or starter battery.

## **DESIGN FOR EASY TRANSPORTATION**

- Ergonomically designed, the PJ-IS1400-2 jump starter is portable and compact compared to a conventional high-power lead acid jump starters.

## **HIGH PERFORMANCE BATTERY**

- The high quality 4-cell, 4Ah Lithium Iron Phosphate (LiFePO<sub>4</sub>) battery delivers instant starting power to petrol and diesel vehicles. The battery offers longer life, higher power density and is inherently safer (compared to lead acid batteries and other lithium batteries e.g., Lithium Cobalt (LiCoO<sub>2</sub>)). It is certified to meet International Standard UN 38.3.

## **ULTRA LONG SHELF LIFE**

- The PJ-IS1400-2 features a special circuit designed to prevent the internal battery from consuming current over extended period. Simply put, the user does not need to worry about battery depletion over time between uses.

## **AUTOMATIC CELL BALANCED CHARGE CONTROL**

- Automatically stops charging when the battery is fully charged. This initiates maintenance mode, keeping the battery fully charged and ready for use. You can leave the unit on charge indefinitely without the risk of overcharging.

## **UNPARALLELED SAFETY AND RELIABILITY**

### **NO SOLDERED HIGH CURRENT CONNECTIONS**

- All wired connections within jump starter are crimped and bolted to ensure maximum reliability and current output.

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

- Prevents sparking from accidental reverse connection.
- The PJ-IS1400-2 jump starter displays and sounds an alarm when the jump starter's clamps are connected incorrectly. Refer to "ERROR AND ALARM MESSAGES" section (page 10).

### **OVER-TEMPERATURE PROTECTION**

- The PJ-IS1400-2 jump starter has different layers of temperature protection. Should the unit overheat by continuous or numerous jump starts, the unit will shut off automatically and restart once the over-temperature condition subsides.

## UNDER AND OVER-VOLTAGE PROTECTION

- The PJ-IS1400-2 jump starter will deactivate and sound an alarm if connected to a vehicle battery which is higher than 14.6V DC, or if the internal battery is discharged to a level whereby the battery might be damaged.

## SURGE PROTECTION

- The PJ-IS1400-2 features built in surge protection so you can safely jump starting of vehicles with EFI (electronic fuel injection) and computer management systems.

## SPECIFICATIONS

| P/No.                                         | PJ-IS1400-2                                                                                      |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Battery</b>                                |                                                                                                  |
| Battery Capacity                              | 4.0Ah at 12.8V DC, 16,000mAh at 3.2V DC, 51.2Wh                                                  |
| Battery Chemistry                             | Lithium Iron Phosphate (LiFePO4)                                                                 |
| Peak Amps                                     | 1400A                                                                                            |
| Clamp Power                                   | 500A                                                                                             |
| Nominal Voltage                               | 12.8V DC                                                                                         |
| Battery Cycles                                | 2000                                                                                             |
| <b>Jumpstarter Leads</b>                      |                                                                                                  |
| Length                                        | 15.75" (±400mm) Positive & Negative                                                              |
| Cable                                         | AWG 4                                                                                            |
| Polarity Protection                           | MCU controlled with mechanical relay                                                             |
| Overload Protection                           | MCU controlled with mechanical relay                                                             |
| <b>Recharging</b>                             |                                                                                                  |
| USB Charging Port                             | 5V DC 3A max USB-C charging port, 3rd party 15W 120 AC V USB adaptors can be used (not provided) |
| USB 12/24V DC Socket                          | 5V DC 3A max output (provided)                                                                   |
| DC Charging                                   | May take up to 5 hours                                                                           |
| <b>Jump start Connection Voltages</b>         |                                                                                                  |
| Vehicle Voltage Range                         | 2–14.6V DC                                                                                       |
| <b>USB</b>                                    |                                                                                                  |
| USB Output                                    | 5V DC 3A max                                                                                     |
| USB Low Voltage Disconnect                    | Battery voltage at 12V DC                                                                        |
| Cable                                         | 1m long USB-A to USB-C                                                                           |
| <b>Dimensions, Weight &amp; Environmental</b> |                                                                                                  |
| Height                                        | 2.75"                                                                                            |
| Length                                        | 9"                                                                                               |
| Width                                         | 6.5" (with clamp attached)                                                                       |
| Weight                                        | 3.5 lbs                                                                                          |
| Operating Temperature                         | -4°F(-20°C) to 140°F (60°C)                                                                      |
| Operating Temperature (charging)              | 32°F (0°C) to 113°F (45°C)                                                                       |
| Storage Temperature (long term)               | 14°F (-10°C) to 113°F (45°C)                                                                     |
| Ingress Protection                            | IP65 (Rain Proof) with covers over the ports                                                     |

PRODUCT OVERVIEW



LCD DISPLAY SCREEN LAYOUT

|  |                                                                                                                                                                                                                                                                                                                                                   |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>PJ-IS1400-2 jump starter battery status.</li><li>Message Overview Icon.</li><li>PJ-IS1400-2 jump starter suggested action.</li></ul>                                                                                                                                                                        |
|  | <p>The LCD display shows the PJ-IS1400-2 jump starters status and supports its operation. In addition to the primary function the LCD display shows the following icons:</p> <ul style="list-style-type: none"><li>USB icon (ON/OFF)</li><li>Light icon (ON/OFF)</li><li>PJ-IS1400-2 jump starter battery status icon FULL/DEPLETED/LOW</li></ul> |

# JUMP STARTER INSTRUCTIONS

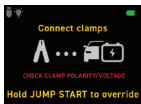
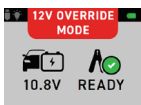
- Notes:
- Instructions for negative grounded vehicles only. (Most vehicles after 1970 are negative grounded).
  - Before jump starting a vehicle, it is recommended to ensure the jump starter is fully charged.

## JUMP STARTING

| Step | Instruction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Display |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1    | The PJ-IS1400-2 jump starter should be charged for around 5 hours prior to first use and as soon as possible after each use.                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |
| 2    | If the PJ-IS1400-2 jump starter has been fully charged, step 3 can be skipped.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |
| 3    | Before connecting the PJ-IS1400-2 jump starter to a battery/vehicle, check the PJ-IS1400-2 jump starter battery status by pressing the  button.<br>If the PJ-IS1400-2 starts up and shows the welcome screen (1 second) following with "Connect clamps" screen, you can proceed to next step.<br><b>The small battery icon should be in green or at least yellow.</b>                                                                                                                                                                                                 |         |
| 4    | Before connecting the PJ-IS1400-2 clamps to the vehicle, turn the vehicle's ignition to OFF.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |
| 5    | 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.<br>Make sure to connect clamps firmly to battery posts to maximize jump start current and the battery posts are clean from grease and dust build-up.<br><b>DO NOT CONNECT TO FUEL LINE.</b> Always double check you have proper connections. |         |
| 6a   | Once the PJ-IS1400-2 has detected the vehicle battery voltage, press the  button to engage the jump start function.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |
| 6b   | The PJ-IS1400-2 is then ready for jump start.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |
| 7    | Turn the vehicle's ignition to ON and start the vehicle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |
| 8    | After the engine has started, leave the clamps connected for a minimum of 40 seconds to allow the PJ-IS1400-2 RRT to charge the unit.<br><b>NOTE</b><br>The PJ-IS1400-2 will not switch OFF as long the clamps are connected to the vehicle battery.<br>RRT (Rapid Recharge Technology) may take more than 40 seconds depending how depleted the jump starter battery is.                                                                                                                                                                                             | <br>    |
| 9a   | To disconnect the PJ-IS1400-2 from the battery/vehicle, disconnect the black negative (-) clamp from the negative battery pole of the battery. Disconnect the red positive (+) clamp from the positive battery pole of the battery.                                                                                                                                                                                                                                                                                                                                   |         |
| 9b   | If clamps are left connected after vehicle has been jump started for an extended period, the PJ-IS1400-2 will ask user to disconnect clamps.                                                                                                                                                                                                                                                                                                                                                                                                                          |         |
| 10   | To turn off the PJ-IS1400-2, press the power button.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |

# **OVERRIDE MODE**

Under normal conditions, the PJ-IS1400-2 automatically detects the jump start voltage. However, the user is required to manually select output voltage if the vehicle battery voltage is under 2V.

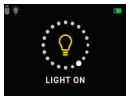
| Vehicle Battery Voltage between 0V to 1V DC |                                                                                                                                     |                                                                                    |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Step                                        | Detail                                                                                                                              | Display                                                                            |
| 1                                           | Press and hold the  button to enter override mode. |  |
| 2                                           | "12V OVERRIDE MODE" has been entered and your vehicle is ready to be jump started.                                                  |  |

# **WARNING**

- **Do not allow positive (+)/red and negative (-)/black clamps to touch each other whilst jump starter is in override mode.**
- **Pay careful attention when enabling manual override; reverse-connection and short-circuit protections are disabled.**

# **FLOOD LIGHT**

PJ-IS1400-2 provides the user with ample light when checking the vehicle’s various compartments in low light conditions.

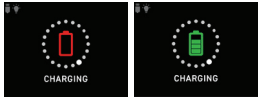
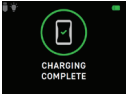
| Step | Detail                                                                                                                                                                                                                                                                                                                                                                                              | Display                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1    | Press  button<br><b>Note:</b> <ul style="list-style-type: none"> <li>• If the PJ-IS1400-2 flood light is in operation, the “LIGHT ON” icon will appear on the display</li> <li>• Flood light will turn off if the internal battery has low charge or after 4 hours if user does not operate the unit.</li> </ul> |  |

# USB OUTPUT

The USB output allows the user to charge external compatible devices.

| Step | Detail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Display                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 1    | <p>If the PJ-IS1400-2 is not in jump starting operation, and the user connects an external device to charge the following screen will be displayed.</p> <p>Note: The USB output will be automatically disabled in the following conditions:</p> <ul style="list-style-type: none"> <li>• PJ-IS1400-2 is turned off</li> <li>• Once USB device is fully charged</li> <li>• Exit mode</li> <li>• Jump start mode</li> <li>• Error mode</li> <li>• Rapid Recharge (RRT) mode</li> <li>• Low battery condition</li> <li>• Battery temperature below -4°F(-20°C) or above 140°F (60°C,) or ambient temperature above 113°F (45°C)</li> </ul> |  |

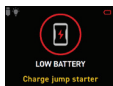
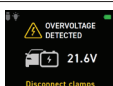
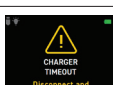
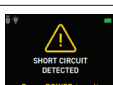
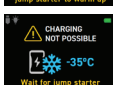
# CHARGING

| Step | Detail                                                                                                                                                                                                 | Display                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1    | <p>Plug a USB-C cable into the USB-C port on the PJ-IS1400-2 to begin charging the jump starter.</p> <p><b>**Using a non-supplied charger and USB cable may extend charge time.**</b></p>              |                                                                                     |
| 2    | <p>The battery charging screen will be shown when the USB-C cable is plugged into the USB-C socket of the PJ-IS1400-2.</p>                                                                             |   |
| 3    | <p>When the PJ-IS1400-2 is fully charged, it will display “CHARGING COMPLETE”.</p>                                                                                                                     |   |
| 4    | <p>The PJ-IS1400-2 will display the “CHARGER TIMEOUT” screen if the charging cycle cannot be completed in 24 hours. The typical charging time is 3 hours if the battery is at 50% state of charge.</p> |  |

**Note:** It is recommended to charge the PJ-IS1400-2 before the first use, as the PJ-IS1400-2 is shipped only partially charged.

# UNDERSTANDING YOUR JUMP STARTER

## ERROR AND ALARM MESSAGES

| Error type                      | Error detail                                                                                                                                                                                                      | Error display                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Low battery</b>              | The internal battery voltage of the PJ-IS1400-2 is too low for a jump start. Please charge the PJ-IS1400-2 immediately.                                                                                           |                                                                                                                                                                                                                                                                                                                                                    |
| <b>Reverse polarity</b>         | The clamps are reverse connected to the vehicle battery. The clamps should be disconnected and reconnect with the correct polarity.                                                                               |                                                                                                                                                                                                                                                                                                                                                    |
| <b>Overvoltage</b>              | The vehicle battery voltage is too high for a 12V DC vehicle. Please disconnect the clamp and ask a qualified mechanic to check the vehicle's alternator.                                                         |                                                                                                                                                                                                                                                                                                                                                    |
| <b>Jump starter timeout</b>     | The PJ-IS1400-2 will display the "CHARGER TIMEOUT" screen if the charging cycle cannot be completed in 24 hours.                                                                                                  |                                                                                                                                                                                                                                                                                                                                                    |
| <b>Short circuit</b>            | The PJ-IS1400-2 detected the clamps are short-circuited. The PJ-IS1400-2 will not jump start until the short circuit is resolved. Please disconnect the clamps and check the vehicle electrical system.           |                                                                                                                                                                                                                                                                                                                                                    |
| <b>Overload</b>                 | The PJ-IS1400-2 detected excess current (more than the contactor and internal battery can handle) occurred. Jump starting will be disabled. Please disconnect the clamps and check the vehicle electrical system. |                                                                                                                                                                                                                                                                                                                                                    |
| <b>Failure</b>                  | The PJ-IS1400-2 detected a malfunction of internal contactors or abnormal internal battery voltage.                                                                                                               |                                                                                                                                                                                                                                                                                                                                                    |
| <b>Low temperature</b>          | The operating temperature is too low for the PJ-IS1400-2 to perform its required functions.                                                                                                                       |                                                                                           |
| <b>High temperature</b>         | The operating temperature is too high for the PJ-IS1400-2 to perform its required functions.                                                                                                                      |      |
| <b>Surge protection failure</b> | The jump starter has detected surge protection system has failed. User is advised to contact customer service.                                                                                                    |                                                                                                                                                                                                                                                                                                                                                  |

## FREQUENTLY ASKED QUESTIONS

### **Q. Can the PJ-IS1400-2 jump start vehicles at below 32°F (0°C)?**

- A. If the PJ-IS1400-2 operates at temperatures below 32°F (0°C), its jump start rated performance will be reduced but it will start vehicles with lower clamp output requirements.

**TIP** Turn on the flood lights to warm up the jump starter at the expense of battery charge.

### **Q. Why didn't my PJ-IS1400-2 start my vehicle?**

- A. There could be a number of reasons why the PJ-IS1400-2 did not start your vehicle. Check the following:
- Ensure you have firm clamp connection to battery posts and the battery posts are clean from grease and dust build-up.
  - Ensure the PJ-IS1400-2 is fully charged. Press the POWER (  ) button to check the battery state of charge.
  - Ensure you have followed the correct operating procedure. Refer to page 7 (JUMP STARTING INSTRUCTIONS)
  - Ensure the vehicle operates at 12V DC.
  - If the ambient temperature is low < 59°F (<15°C), the jump starting performance will be reduced. Repeat the jump start routine 1–3 times as the battery performance will improve with each concurrent jump start.
  - Ensure the vehicle being jump started does not require a clamp output of greater than 500A.

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

- A. Peak amps is the maximum current the battery in the PJ-IS1400-2 can produce.

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

- A. Clamp power is the maximum current available at the PJ-IS1400-2 clamps.

# 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.

## **Brown & Watson International**

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