



POWERED BY SCHUMACHER

# PRO SERIES™

MODEL

## DSR128

Lithium Ion Jump Starter, Power Pack and Backup Power

OWNERS MANUAL



**PLEASE SAVE THIS OWNER'S MANUAL AND READ BEFORE EACH USE.**

This manual will explain how to use the unit safely and effectively. Please read and follow these instructions and precautions carefully.

## 1. IMPORTANT SAFETY INSTRUCTIONS

### SAVE THESE INSTRUCTIONS. WARNING – RISK OF EXPLOSIVE GASES

WORKING IN THE VICINITY OF A LEAD-ACID BATTERY IS DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL OPERATION. IT IS IMPORTANT THAT YOU FOLLOW THESE INSTRUCTIONS EACH TIME YOU USE THE UNIT.

To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of any equipment you intend to use in the vicinity of a battery. Review cautionary markings on these products and on the engine.

#### WARNING! RISK OF ELECTRIC SHOCK OR FIRE.

- 1.1 Read the entire manual before using this product. Failure to do so could result in serious injury or death.
- 1.2 Keep out of reach of children.
- 1.3 Do not put fingers or hands into any of the unit's outlets.
- 1.4 Do not expose the unit to rain or snow.
- 1.5 Use only recommended attachments. Use of an attachment not recommended or sold by Schumacher® Electric Corporation may result in a risk of fire, electric shock or injury to persons or damage to property.
- 1.6 To reduce the risk of damage to the electric plug or cord, pull by the adaptor rather than the cord when disconnecting the unit.
- 1.7 Do not operate the unit with damaged cables or clamps.
- 1.8 Do not operate the unit if it has received a sharp blow, been dropped or otherwise damaged in any way; take it to a qualified service person.
- 1.9 Do not disassemble the unit; take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.

#### WARNING! RISK OF EXPLOSIVE GASES.

- 1.10 To reduce the risk of a battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of any equipment you intend to use in the vicinity of the battery. Review the cautionary markings on these products and on the engine.
- 1.11 Do not set the unit on flammable materials, such as carpeting, upholstery, paper, cardboard, etc.
- 1.12 Never place the unit directly above battery being jumped.
- 1.13 Do not use the unit to jump start a vehicle while charging the internal battery.

## 2. PERSONAL PRECAUTIONS

#### WARNING! RISK OF EXPLOSIVE GASES. A SPARK NEAR THE BATTERY MAY CAUSE A BATTERY EXPLOSION. TO REDUCE THE RISK OF A SPARK NEAR THE BATTERY:

- 2.1 NEVER smoke or allow a spark or flame in the vicinity of a battery or engine.
- 2.2 Remove personal metal items such as rings, bracelets, necklaces and watches when working with a lead-acid battery. A lead-acid battery can produce a short-circuit current high enough to weld a ring to metal, causing a severe burn.
- 2.3 Be extra cautious, to reduce the risk of dropping a metal tool onto the battery. It might spark or short-circuit the battery or other electrical part that may cause an explosion.
- 2.4 Do not permit the internal battery of the unit to freeze. Never charge a frozen battery.
- 2.5 To prevent sparking, NEVER allow clamps to touch together or contact the same piece of metal.
- 2.6 Consider having someone nearby to come to your aid when you work near a lead-acid battery.
- 2.7 Have plenty of fresh water, soap and baking soda nearby for use, in case battery acid contacts your eyes, skin, or clothing.
- 2.8 Wear complete eye and body protection, including safety goggles and protective clothing. Avoid touching your eyes while working near the battery.
- 2.9 If battery acid contacts your skin or clothing, immediately wash the area with soap and water. If acid enters your eye, immediately flood the eye with cold running water for at least 10 minutes and get medical attention right away.
- 2.10 If battery acid is accidentally swallowed, drink milk, the whites of eggs or water. DO NOT induce vomiting. Seek medical attention immediately.
- 2.11 Neutralize any acid spills thoroughly with baking soda before attempting to clean up.

**2.12 This product contains a lithium ion battery.** In case of fire, you may use water, a foam extinguisher, Halon, CO<sub>2</sub>, ABC dry chemical, powdered graphite, copper powder or soda (sodium carbonate) to extinguish the fire. Once the fire is extinguished, douse the product with water, an aqueous-based extinguishing agent, or other nonalcoholic liquids to cool the

product and prevent the battery from re-igniting. NEVER attempt to pick up or move a hot, smoking, or burning product, as you may be injured.

**2.13 WARNING:** This product contains one or more chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

### 3. PREPARING TO USE THE UNIT

**WARNING! RISK OF CONTACT WITH BATTERY ACID. BATTERY ACID IS A HIGHLY CORROSIVE SULFURIC ACID.**

- 3.1 Make sure the area around the battery is well ventilated while the unit is in use.
- 3.2 Clean the battery terminals before using the jump starter. During cleaning, keep airborne corrosion from coming into contact with your eyes, nose and mouth. Use baking soda

and water to neutralize the battery acid and help eliminate airborne corrosion. Do not touch your eyes, nose or mouth.

- 3.3 Determine the voltage of the battery by referring to the vehicle owner's manual and make sure that the output voltage is 12V.
- 3.4 Make sure that the unit's cable clamps make tight connections.

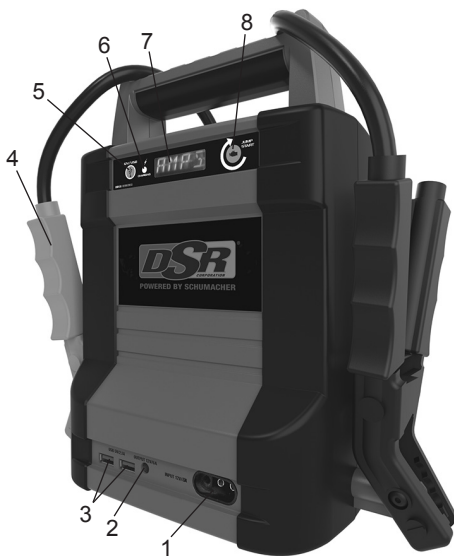
### 4. FOLLOW THESE STEPS WHEN CONNECTING TO A BATTERY

**WARNING! A SPARK NEAR THE BATTERY MAY CAUSE A BATTERY EXPLOSION. TO REDUCE THE RISK OF A SPARK NEAR THE BATTERY:**

- 4.1 Attach the output cables to the battery and chassis as indicated below. Never allow the output clamps to touch each other.
- 4.2 Position the DC cables to reduce the risk of damage by the hood, door and moving or hot engine parts. **NOTE:** If it is necessary to close the hood during the jump starting process, ensure that the hood does not touch the metal part of the battery clips or cut the insulation of the cables.
- 4.3 Stay clear of fan blades, belts, pulleys and other parts that can cause injury.
- 4.4 Check the polarity of the battery posts. The POSITIVE (POS, P, +) battery post usually has a larger diameter than the NEGATIVE (NEG, N, -) post.
- 4.5 Determine which post of the battery is grounded (connected) to the chassis. If the negative post is grounded to the chassis (as in most vehicles), see step 4.6. If the positive post is grounded to the chassis, see step 4.7.

- 4.6 For a negative-grounded vehicle, connect the POSITIVE (RED) clamp from the Power Pack to the POSITIVE (POS, P, +) ungrounded post of the battery. Connect the NEGATIVE (BLACK) clamp to the vehicle chassis or engine block away from the battery. Do not connect the clamp to the carburetor, fuel lines or sheet-metal body parts. Connect to a heavy gauge metal part of the frame or engine block.
- 4.7 For a positive-grounded vehicle, connect the NEGATIVE (BLACK) clamp from the Power Pack to the NEGATIVE (NEG, N, -) ungrounded post of the battery. Connect the POSITIVE (RED) clamp to the vehicle chassis or engine block away from the battery. Do not connect the clamp to the carburetor, fuel lines or sheet-metal body parts. Connect to a heavy gauge metal part of the frame or engine block.
- 4.8 When disconnecting the unit, press the jump start button to turn off, remove the clamp from the vehicle chassis, then remove the clamp from the battery terminal.

## 5. FEATURES



1. 12V 3-pin socket for recharging
2. 12V DC port
3. USB ports
4. Battery clamps
5. 12V/USB button
6. Charging LED indicator



7. Digital display
8. Jump Start button
9. 100~120V AC wall charger
10. 12V DC car charger
11. 12V port adaptor

## 6. CONTROL PANEL

### DIGITAL DISPLAY

When the clamps are connected to a vehicle's battery, the digital display indicates the battery's voltage. When not connected to a battery, the digital display is used to indicate the percent of charge of the jump starter's internal battery. See *Display Messages* for a complete list of messages.



**NOTE:** If the vehicle's battery voltage is too low to detect, the display will remain blank; the voltage will not display. A manual start procedure is required to enable the jump start function. See Section 8.2, *Starting a Battery with Low Voltage*.

**NOTE:** During charging, the display will go into sleep mode and will not display any messages. To turn the display back on, press any button.

### LED INDICATOR

- **Green LED solid:**  
The internal battery is charging.
- **Green LED flashing:**  
Charging has aborted.
- **Green LED pulsing:**  
The internal battery is fully charged.

### FUNCTION BUTTONS

-  **12V/USB** – Enables the 12V DC port and the USB ports
-  **JUMP START** – Enables the jump start function



## 7. CHARGING THE INTERNAL BATTERIES

**IMPORTANT! CHARGE IMMEDIATELY AFTER PURCHASE, AFTER EACH USE AND EVERY 3-6 MONTHS, TO KEEP THE INTERNAL BATTERY FULLY CHARGED AND PROLONG BATTERY LIFE.**

7.1 To reduce the risk of electric shock, unplug the unit's charger from the outlet before attempting any maintenance or cleaning. Simply turning off the controls will not reduce this risk.

7.2 When charging the internal batteries, work in a well ventilated area and do not restrict the ventilation in any way.

### 7.3 CHECKING THE LEVEL OF THE INTERNAL BATTERIES

To check the internal battery charge level, make sure the unit is turned OFF, then press the  or  button. The digital display will show the battery's percent of charge. A fully charged internal battery will read 100%. Charge the internal battery if the display shows it is under 100%.

### 7.4 CHARGING THE INTERNAL BATTERIES, USING THE SUPPLIED AC CHARGER

**WARNING!** Use only the charger included with the unit to charge the internal battery. Using any other charger will damage the unit.

1. Plug the AC charger into the unit's 12V input socket (3 PIN connector).
2. Connect the wall charger to a 120VAC electrical wall outlet.
3. The green LED on the charger will light, and the display will show **CHARGING-xx%**. Complete charging may take 6-8 hours.

4. When the internal battery is completely charged, the green LED will pulse, and the display will show **FULLY CHARGED**.

5. When the batteries are fully charged, disconnect the charger from the AC outlet, and then unplug the charger from the unit.

6. Charge the unit as soon as possible after use.

### 7.5 CHARGING THE INTERNAL BATTERIES WHILE DRIVING

You may also charge the internal batteries while driving, using the 12V DC car charger (included).

1. Make sure the car is running.
2. Plug the 12V DC adaptor cable into the unit's 12V input socket.
3. Insert the other end of the accessory cable into the vehicle's accessory outlet (lighter socket).
4. The green LED will light, and the display will show **CHARGING-xx%**. Complete charging may take 6-8 hours.
5. When the internal batteries are completely charged, the green LED will pulse, and the display will show **FULLY CHARGED**.
6. When the batteries are fully charged, disconnect the accessory cable from the unit, then from the lighter socket of the vehicle.
7. Charge the unit as soon as possible after use.

**NOTE:** Completely disconnect the charger cable when the engine is not running.

## 8. OPERATING INSTRUCTIONS

### 8.1 JUMP STARTING A VEHICLE ENGINE

**IMPORTANT:** Do not use the jump starter while charging its internal batteries.


**IMPORTANT:** Using the jump starter without a battery installed in the vehicle will damage the vehicle's electrical system.

1. Turn the ignition OFF.
2. Lay the DC cables away from any fan blades, belts, pulleys and other moving parts.
3. Plug the battery clamp cable into the jump starter's input socket.



**NOTE:** Make sure all of the vehicle's electrical devices are turned off.


4. For a negative-ground vehicle (as in most vehicles), connect the unit's POSITIVE (RED) clamp to the POSITIVE (POS, P, +) battery post. Next, connect the NEGATIVE (BLACK)

clamp to the vehicle chassis or engine block, away from the battery.

5. For a positive-ground vehicle, connect the NEGATIVE (BLACK) clamp to the NEGATIVE (NEG, N, -) battery post. Next, connect the POSITIVE (RED) clamp to the vehicle chassis or engine block away from the battery.
6. After a proper connection has been made, press the  button. When the display shows **JUMP START READY**, the jump starter is ready for use.


### **WARNING! RISK OF EXPLOSION.**

If you have connected the clamps backwards, an audio alarm will sound, and the display will show **WARNING-CLAMPS REVERSED**. Press the  button to turn off the unit. Reverse the connections. Press the  button to turn the unit back on.

7. Crank the engine. If the engine does not start within 5-8 seconds, stop cranking and wait at least 1 minute before attempting to start the vehicle again. The display will show **BATTERY COOL DOWN xx SEC REMAINING**. When the display shows **JUMP START READY**, the jump starter is ready for use.
8. After the engine starts, press the  button to turn the unit off. Disconnect the black clamp (-) and then the red clamp (+), in that order.
9. Recharge the unit as soon as possible after each use.

## 8.2 STARTING A BATTERY WITH LOW VOLTAGE

If the vehicle's battery voltage is too low for the jump starter to detect that the clamps are connected, there is a manual start procedure to enable the jump start function.


1. **Make sure the clamps are correctly connected.**
2. Press and hold the  button for 5 seconds. When the display shows **JUMP START READY**, the jump starter is ready for use.

**WARNING!** This overrides a safety feature. It will energize the clamps and cause sparking if they are touched together. If the clamp connections are reversed, damage to the unit, battery and possibly the car's electrical system will occur.

## 8.3 POWERING A 12V DC DEVICE (up to 6A)

The Fuel Pack is a power source for most DC accessories that are equipped with a 12V accessory plug.

**NOTE:** Charging while operating a DC device (USB, memory saver) will extend run time, but will also extend recharge time. If the load exceeds 1A, it will discharge the battery.



1. Make sure the device to be powered is OFF before inserting the 12V DC accessory plug into the 12V DC outlet.
2. Plug the 12V port adaptor into the unit's 12V output port.
3. Plug your device into the 12V adaptor port and turn on the device (if required).
4. Press the  button on the unit, twice.
5. When finished, turn off the DC device (if required) and disconnect the device. Press any button to turn on the display.

Then press the  button, to turn off the 12V function.

6. Recharge the Fuel Pack immediately after unplugging the device.

## 8.4 USING THE USB PORTS

The USB ports provide up to 2.1 A at 5V DC.

1. Press the  button on the unit.
2. Plug the USB connector into the USB port of the unit.
3. Plug the other (micro) end of the adaptor into your device. Turn device on, if necessary.
4. When finished using the USB port, turn off the device (if necessary) and unplug the device. Press any button, to turn on the display. Then press the  button twice, to turn off the USB function.
5. Recharge the unit.

**NOTE:** The USB power will automatically turn off if not used for 10 minutes.

## 8.5 USING A MEMORY SAVER (not included).

The unit can be used with a memory saver to save the vehicle's on-board diagnostic computer settings (radio programs, diagnostic codes, etc.) while the battery is disconnected from the vehicle during repair or maintenance. Connect your memory saver adaptor to the 12V DC accessory input adaptor. We recommend the SECF-12V-OBD or OBD-L memory savers.

# 9. DISPLAY MESSAGES

**Messages during recharge:**

**CHARGING - XX%** (Green LED lit) – Plugged into the AC or DC charger and internal battery is recharging .

**FULLY CHARGED** (Green LED pulsing) – Plugged into the AC outlet and internal battery is completely charged.

**BATTERY TOO HOT TO CHARGE** – Remove charger and allow battery to cool down before recharging.

**BATTERY TOO COLD TO CHARGE** – The temperature of the internal battery is too low.

**CHARGING-USB ON** – The USB function is in use while the internal battery is recharging.

**CHARGING-12V ON** – The 12V function is in use while the internal battery is recharging.

**FULLY CHARGED-USB ON** – The internal battery is fully charged and the USB is in use.

**FULLY CHARGED-12V ON** – The internal battery is fully charged and the 12V port is in use.

**UNPLUG CHARGER** – Attempting to use the jump starter while the unit is recharging.

**CHARGE ABORTED-SEE MANUAL** – Charging cannot be completed normally.

**Messages during use of 12V/USB:**

**USB ON-BATTERY XX%** – The USB port is in use. The % shows the battery’s charge.

**12V ON-BATTERY XX%** – The 12V port and USB are in use.

**USB/12V OVER LOAD** – The 12V/USB port is overloaded.

**BATTERY LOW-RECHARGE** – While using the 12V/USB, the battery voltage has dropped.

**Messages during use of jump starter:**

**xx.xV** – Clamps are connected to a car battery, but jump start button was not pressed.

**CONNECT CLAMPS-BATTERY XX%** – Unit is turned on, but does not detect battery clamps.

**WARNING-CLAMPS REVERSED** (alarm sounds) – The clamps are connected backwards to a battery.

**BATTERY LOW-RECHARGE** – The jump start button has been pressed, and the internal battery is discharged (will beep).

**TURN OFF USB/12V** – Attempting to jump start when 12V/USB function is activated.

**OFF** – The jump start button has been pressed twice.

**BATTERY TOO HOT** – The internal temperature of the battery is too warm. Allow battery to cool down before attempting another jump start.

**BATTERY TOO LOW** – The internal battery voltage is too low. The unit will shut off.

**RECHARGE - JUMP START ABORT** – The internal battery voltage is too low. The unit will shut off.

**JUMP START READY-BATTERY COLD REDUCED PERFORMANCE** – The temperature of the internal battery is too low, which reduces cranking performance.

**JUMP START READY** – The jump start button has been pressed, unit is correctly connected to a car battery, and the unit is ready for jump start.

**JUMP START OVERLOAD** – The peak current is more than 2000A within 2 seconds and the cranking current is more than 650A in 2-10 seconds.

**10** – Maximum 10-second-down counter for engine start.

**BATTERY COOL DOWN 60 SEC**

**REMAINING** – Shows waiting time needed before attempting another engine start.

**10. MAINTENANCE INSTRUCTIONS**

**10.1** After use and before performing maintenance, unplug and disconnect the unit.

**10.2** Use a dry cloth to wipe all battery corrosion and other dirt or oil from the battery clamps, cords, and the outer case.

**10.3** Do not open the unit, as there are no user-serviceable parts; any servicing should be performed by qualified service personnel.

**11. STORAGE INSTRUCTIONS**

**11.1** Charge battery to full capacity before storage.

**11.2** Store this unit at temperatures between -4°F–+104°F (-20°C–+40°C).

**11.3** Never completely discharge the battery.

**11.4** Charge after each use.

**11.5** Charge at least once every 3 to 6 months if not in frequent use, to prevent over-discharge.

**12. TROUBLESHOOTING**

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>REASON/SOLUTION</b>
When recharging the unit, the display shows <b>BATTERY TOO HOT TO CHARGE</b> or When jump starting, the display shows <b>BATTERY TOO HOT.</b>	When the internal temperature is too warm, the unit will not recharge (or jump start), to protect itself from damage.	Disconnect unit. Move the unit to a cooler, well-ventilated location and allow it to cool down before attempting to recharge (or jump start).
When recharging the unit, the display shows <b>BATTERY TOO COLD TO CHARGE.</b>	The internal battery temperature is too low.	Disconnect unit. Move the unit to a warmer, well-ventilated location and allow it to warm up before attempting to recharge.

PROBLEM	POSSIBLE CAUSE	REASON/SOLUTION
Alarm is sounding and display shows <b>WARNING-CLAMPS REVERSED.</b>	Connections are reversed.	Disconnect the unit and reverse the clamps.
The unit won't jump start my car.	<p>Clamps are not making a good connection to the battery.</p> <p>The internal battery is not charged.</p> <p>The temperature of the internal battery is above 131°F (55°C).</p> <p>The vehicle's battery voltage is over 15V.</p> <p>The vehicle's battery voltage is below 1V.</p> <p>The outside temperature is less than 14°F (-10°C).</p> <p>The vehicle's battery is defective.</p>	<p>Check for poor connection to battery and frame. Make sure connection points are clean.</p> <p>Check the battery charge status and recharge, if necessary.</p> <p>Place the unit in a well-ventilated area, to cool the battery.</p> <p>You cannot use this jump starter for this vehicle.</p> <p>Press and hold jump start button for 5 seconds, until display shows <b>JUMP START READY.</b></p> <p>Try starting several times. If not successful, place the unit in a warmer area for a short time.</p> <p>Have the battery checked.</p>
The unit won't power my 12V or USB device.	<p>The device is not turned on.</p> <p>The internal battery is not charged.</p>	<p>Turn on the device.</p> <p>Check the battery charge status and recharge, if necessary.</p>
The display shows <b>JUMP START READY-BATTERY COLD REDUCED PERFORMANCE.</b>	The temperature of the jump starter's internal batteries is too low.	Try to jump start a few times, to warm up the internal battery of the jump starter.
The display shows <b>JUMP START OVERLOAD.</b>	Over current protection.	Press the jump start button to turn off the unit.
Beeping sound and display shows <b>BATTERY LOW-RECHARGE</b> or <b>BATTERY TOO LOW.</b>	The internal battery is discharged.	Recharge the internal battery.
The green LED is flashing and the display shows <b>CHARGE ABORTED-SEE MANUAL.</b>	Charging has aborted. The battery is not accepting a charge.	Reset the charger by briefly unplugging the unit. If problem persists, call customer service.
The display shows <b>RECHARGE - JUMP START ABORT.</b>	The battery is low.	Recharge the battery.



### 13. SPECIFICATIONS

Internal battery type .....	Lithium Iron Phosphate (Lithium Ion)
Chargers .....	100V~120V charger 12V DC car charger
Capacity .....	24,000 mAh/76.8 Wh
12V DC power output.....	6A
USB output.....	5V DC, 2.1A
Jump start .....	2000A peak/650A cranking
Overload protection.....	Yes

### 14. REPLACEMENT PARTS

SC2 AC wall charger.....	2299003078Z
12V DC port adaptor.....	3899003396Z
3-pin 12V adapter .....	3899003731Z