

# THUNDERBOLT JUMP START



## Revision Status

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Rev	Revision Change	Topic
20150205	Document Released	
20150209	Safety Topic - Flammable gas comments consolidated. Icon change for Notes & Notices	Safety & specific topics
20150227	Updated Safety Topic	Safety

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# Safety

**This manual contains important safety and operating instructions for Matson Group Jump Start range. Read this manual carefully before using.**

Consider ALL safety, warning and caution instructions carefully.

## Warning

1. The equipment is intended for use by adults and should not be operated by children
2. The jump starter described in this manual is suitable for portable and emergency power applications. DO NOT exceed ratings nominated in the specifications
3. DO NOT attempt to charge or boost a frozen lead-acid battery
4. The jump start is equipped with polarity protection in the OFF position - prevent clamps from touching each other or contacting metal to stop accidental arcing
5. Only use attachments supplied with the equipment - failure to do so may result in personal injury or equipment damage or void warranty
6. When disconnecting power, pull by the plug - DO NOT pull on the power lead
7. Replace a damaged charger power lead immediately. Do not attempt to recharge the jump start if the equipment is damaged
8. Prevent submersion in water
9. Dispose of any faulty batteries in an environmentally responsible manner
10. DO NOT leave the jump start in a total discharge state for any period of time - permanent battery damage can result. When not in use, leave the jump start connected to the supplied battery charger, or recharge monthly and after every jump start performed.



- Lithium batteries do not generate explosive gasses or contain acid - however, they will be used with batteries that do.
- Avoid contact with damaged lithium batteries
- Apply the following safety notices when working with batteries.

	<p>Avoid contact with battery acid - it is highly corrosive, causing burn injuries and equipment damage.</p>
	<p>Wear safety glasses to prevent eye injuries. If acid contacts eyes - flush immediately with cold water for 10 minutes, and seek medical attention Avoid contact with lithium.</p>
	<p>Wear protective clothing to prevent acid contacting the skin. If battery acid contacts skin - wash immediately with soap and fresh water. Remove all jewellery and personal metal items when working with a lead-acid batteries. Avoid contact with lithium</p>



- A lead-acid battery can generate explosive gases during normal battery operation. To reduce risk of explosion, follow these instructions, those of the battery manufacturer and of any equipment being used in vicinity of battery
- Use the jump start in a well ventilated area. **DO NOT** operate in the vicinity of flammables such as petrol etc
- Short circuiting the contacts can generate a spark, creating a potentially explosive situation - take care with tools and components
- Never smoke while working with a lead-acid battery. Do not allow sparks or flame near the battery

# General Information

## Operational and Safety Design Feature

The jump start :

1. Provides more than enough power for starting most vehicles. May also be used in deep cycle applications
2. Powers most 12 volt DC equipment with a male cigarette DC plug
3. Is equipped with DC automatic overload protection
4. Contains 4 x 12 volt sealed batteries.
5. Is designed for use under all weather conditions

## Alternative Power Supply

Most vehicles have electronic components - alarm systems, radios, etc whose memory can be lost when the battery is disconnected. The jump start is a useful tool when replacing a battery - connect the jump start clamps to the vehicle battery cables / terminals BEFORE disconnecting them from the battery posts. Vehicle remains powered from the jump start.

## Multi Purpose Power Source

1. The jump start also powers any equipment incorporating a 12 volt DC male adapter. The jump start DC outlet has overload protection. DC power is generated only through the DC outlet
2. Used with an inverter, the jump start can operate appliances normally powered by 240 VAC.
3. A maximum 300 Watt inverter is recommended because the THUNDERBOLT DC 12 VOLT socket is powered from 2 of the 4 batteries fitted.



## Antizap<sup>®</sup> Protection

Antizap<sup>®</sup> Surge Protection fitted to the THUNDERBOLT protects against surges and spikes. When the clamps are correctly connected, the Antizap Surge Protection LED illuminates - indicating the entire circuit is protected.

STOP IMMEDIATELY if the REVERSE CONNECTION and WARNING LED sounds / lights - the clamps are connected in reverse. Remove the clamps and reconnect correctly.



- Risk of Short Circuit.
- The REVERSE polarity LED and buzzer only provides an indication of a short circuit if the THUNDERBOLT is switched OFF.

Ignoring these warnings and switching the unit ON could result in:

- Personal injury to people in the vicinity,
- Equipment or vehicle damage,
- Sparks, flame and heat.

- The warranty being void

### Specifications

	<b>THUNDERBOLT</b>
Cable Length	1.7M 50mm <sup>2</sup> high conductivity - including clamps
Clamps	Copper - industrial standard. Arc protected when unit in OFF position
Cold Cranking Amps - CCA	2000 CCA, 8000 Peak Amps @ 12 Volt 1000 CCA, 4000 Peak Amps @ 24 Volt
Voltage Options	12VDC and 24VDC
Voltage and Current Protection	Antizap <sup>®</sup> Surge / Spike protection - when unit is in ON position
Antizap <sup>®</sup> Operational Indication	Green flashing LED
Reverse Connection Warning	Red LED and Warning Buzzer in the OFF position only
Weight	40kgs
DC Power Outlet	12V with overload protection
Voltmeter	Digital
Recharge Capability	From 240VAC
Batteries - 4 off	21Ah Sealed VRLA High Performance
Warranty	1 Year

# THUNDERBOLT Operation

## Initial Charge

Before using the jump start for the first time, charge the unit for 24 hours, or until the RV210 Intelligent Battery Charger supplied with the equipment indicates fully charged.

## Operation



1. Turn the ignition off before making connections
2. Ensure the THUNDERBOLT voltage selector is in the OFF position
3. Attach the red / positive + clamp to the battery positive terminal
4. Attach the black / negative - clamp to the battery negative terminal
5. The THUNDERBOLT voltmeter displays the voltage of the battery being started. If less than 3 volts on 12 volt setting, or 6 volts on 24 volt setting - do not attempt to jump start the vehicle. The battery voltage is too low - an attempted jump start would be dangerous. Replace the battery.
6. If displayed voltage is above 3 volts on 12 volt setting, or 6 volts on 24 - select either 12V or 24V
7. Keep cables clear of moving objects
8. Keep people clear of the battery area
9. Turn vehicle ignition on. **If vehicle does not start after 6 seconds, allow the THUNDERBOLT to cool for 3 minutes before attempting to restart the vehicle. This avoids damage to the unit.**
10. Once started, disconnect the black / negative - clamp from the battery negative terminal. Then remove the red / positive + clamp.



- Risk of Short Circuit.
- The REVERSE polarity led and buzzer only provides an indication of a short circuit if the THUNDERBOLT is switched OFF.



Leave the THUNDERBOLT on charge when not in use - the RV210 is a Charger / Maintainer and will maintain the batteries in peak condition longer. *Turn the THUNDERBOLT 12V & CHARGE / OFF / 24V switch to the 12V & CHARGE position for charging. because In the OFF position - only 2 of the 4 batteries are charged*



# RV210 Charger

## General

The RV Battery Charger is a fully automatic microprocessor controlled battery charger / maintainer. The RV has been designed with the latest technology in Battery Care and Support.



## RV210 Basic Operation

1. Ensure the RV210 and the THUNDERBOLT are switched OFF before plugging RV210 into the THUNDERBOLT
2. **Turn the THUNDERBOLT 12V & CHARGE / OFF / 24V switch to the 12V & CHARGE position for charging.**



- THUNDERBOLT has 4 internal batteries
- In the OFF position - only 2 of the 4 batteries charge

3. Plug RV210 charger into 240VAC and switch power on
4. Select required battery chemistry and current setting.
5. Plug RV210 male plug into the 12VDC socket on the front of the THUNDERBOLT
6. RV210 starts charging when it senses the battery voltage
7. Once charging has started, view battery voltage by pressing BATTERY TYPE button on the front panel. Press again to view Amps
8. FULL displays on the front display when the battery is fully charged.



Leave the THUNDERBOLT on charge when not in use - the RV210 is a Charger / Maintainer and will maintain the batteries in peak condition longer



# Maintenance and Fault Finding

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## Troubleshooting

Problem	Possible Solution
Charger works, but there is no volt charge on the display when the Switching Power Charger is connected to the jump pack	<ol style="list-style-type: none"> <li>1. Possible defective battery or faulty breaker. Try using a device - light, TV, etc with a DC plug on it to see if it works</li> <li>2. If it works, the jump start breaker is operational and the battery may be faulty</li> </ol>
Charger comes to full charge, but display indicates low voltage	<ol style="list-style-type: none"> <li>1. Jump start has a defective battery - could be the result of intense use without allowing a cool down period</li> </ol>
Jump start is fully charged, but has no power	<ol style="list-style-type: none"> <li>1. Check where the wire meets the jaw on the jump start clamp. Ensure they are well crimped, or</li> <li>2. Ensure power switch is in the ON position.</li> </ol>

## Frequently Asked Questions - FAQ

**Q:** How many jump starts can I expect from a fully charged unit before needing to be recharged?

**A:** Depends on the engine type and size, condition of battery and temperature - the jump start may be used up to 20 times before recharging in normal use environments.

**Q:** What is the ideal jump start storage temperature?

**A:** The jump start operates most effectively when stored at room temperature. The unit also operates at below 0° conditions, but with less cranking power. Excessive heat accelerates self discharge.

**Q:** When recharging the unit, when do I know the jump start is fully charged?

**A:** Check RV210 Operating Instructions

**Q:** How long should I charge the jump start?

**A:** Charge the jump start for a minimum of 24 hours when first purchased. The unit can be left on the wall charger continuously without damaging the unit.

**Q:** Can the self contained battery be recycled?

**A:** Yes - refer to REMOVAL AND DISPOSAL instructions

**Q:** How often should I charge the THUNDERBOLT?

**A:** Leave the THUNDERBOLT on charge when not in use - the RV210 is a Charger / Maintainer and will maintain the batteries in peak condition longer

# Warranty

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## Warranty Against Defects Procedure

Matson Group Pty Ltd

100 Links Rd, St Marys, NSW 2760

Phone: 02 98333444

Email: sales@matson.com.au www.matson.com.au

## Warranty

Matson warrants its products to be free of defects for reasonable consumer use for a period of 12 months. Matson will repair or replace the warranted product and it will return the repaired products under warranty to the consumer at Matson's cost.

To make a claim under this warranty, the consumer must:

- Advise Matson of the defect as soon as it becomes apparent within 12 months of the purchase date and obtain a return authority by phoning Matson on the above number
- Provide satisfactory proof of purchase; and
- Send the faulty item to the address supplied above. All expenses related to sending the products back to Matson are at the consumer's cost.

### Exclusions from Warranty

This warranty does not apply to products where:

- There is evidence of Improper maintenance or abuse to the products
- The products have been exposed to harsh environmental conditions or those outside the specified operating conditions
- Unauthorised modification is evident to the products or misuse of products
- Operation outside the products specification.

### Warranty Disclaimers

Matson's liability in respect of a breach of a consumer guarantee or any warranty made under these warranty terms and conditions for any products not of a kind ordinarily acquired for personal, domestic or household use is limited, in relation to the products to the extent permissible by law and at its option to:

- Replacing the products or the supply of equivalent goods
- The repair of the products
- The payment of the cost of replacing the products or of acquiring equivalent goods; or
- The payment of the cost of having the products repaired.

To the extent permitted by law, all other warranties whether implied or otherwise, not set out in these warranty terms and conditions are excluded and we are not liable in contract, tort (including, without limitation, negligence or breach of statutory duty) or otherwise to compensate the customer for:

- Any increased costs or expenses
- Any loss of profit, revenue, business, contracts or anticipated savings
- Any loss or expense resulting from a claim by a third party; or
- Any special, indirect or consequential loss or damage of any nature whatsoever caused by Matson's failure in complying with its obligations.

**MATSON IS NOT RESPONSIBLE FOR DAMAGE THAT OCCURS AS A RESULT OF YOUR FAILURE TO FOLLOW THE INSTRUCTIONS INTENDED FOR THE MATSON PRODUCT**

In the following paragraph, "Our" means Matson and "You" means the customer:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law.

*You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.*

The benefits given to the customer in this warranty are in addition to other rights and remedies under a law in relation to the products to which this warranty applies.

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