



# MULTI-VOLTAGE 6/12/24V AUTOMATIC BATTERY CHARGER



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## WARNING

To avoid any personal injury, please read the safety instructions below. This manual contains important safety and operating instructions for the MA61224 Battery Charger. Consider ALL safety, warning and caution instructions carefully.

1. The battery charger is intended for use by adults and should not be operated by children
2. It is designed for use in dry and protected environments. DO NOT expose to the elements i.e. rain, dust, etc.
3. This charger is for 6, 12 and 24 Volt use only. DO NOT exceed ratings nominated in the specifications for the charger described in this manual.
4. The MA61224 charger range requires an earthed 240Volt mains power supply
5. Disconnect from the 240Volt mains power supply before making connections and/or disconnecting clamps from the battery.
6. When disconnecting power, pull by the plug - DO NOT pull on the power lead.
7. DO NOT attempt to use charger if it is damaged or faulty
8. DO NOT charge non-rechargeable batteries
9. Always check the manufacturers recommended charge rates and voltage specifications for the battery prior to charging
10. DO NOT attempt to charge or jump start a frozen lead-acid battery
11. Only use attachments supplied with the charger - failure to do so may result in personal injury or equipment damage or void warranty
12. Dispose of faulty batteries in an environmentally responsible manner



Avoid contact with battery acid - it is highly corrosive, causing burn injuries and equipment damage



Wear safety glasses to prevent eye injuries.  
If acid contacts eyes - flush immediately with cold water for 10 minutes, and seek medical attention



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



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.

**DO NOT** allow sparks or flame near the battery

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

## FEATURES

### THE MATSON MA61224 IS A FULLY AUTOMATIC 7 STAGE BATTERY CHARGER.

- Prevents the battery from overcharging and consequent damage
- Can be connected to the battery indefinitely
- Are programmable for different battery types including REG/AGM, GEL, CALCIUM AND LifePO4
- Has variable Voltage outputs
- Has a unique inbuilt diagnosis program. On connection to the battery, the charger automatically diagnoses the battery condition and changes its charge rate and charge stages accordingly. This optimizes charging conditions and extends battery life
- Has a LED display for: voltage, current, battery capacity & alternator %
- Has electronic touch-button controls
- Has a desulphation stage (Automatic)
- Uses high frequency charging for efficiency
- Incorporates polarity protection
- Prevents output leads from sparking due to reverse connection or short circuit
- Has over temperature protection - internally fan cooled with a set cut off point for additional safety
- Has over current protection - charger automatically reduces current for optimum battery condition



# MULTI-VOLTAGE 6/12/24V BATTERY CHARGER

## SPECIFICATIONS

MODEL	MA61224		
Charging Stages	7		
Input	240vac, 50Hz		
Output Voltage	6/12/24 Volt DC Selectable		
Output Current	6/12 Volt, 2/10/20 Amp. Selectable 24 Volt, 2/5/10 Amp. Selectable		
Power supply mode	12v mode- 13.1v- 13.3v at 10Amps 24 mode- 26.2v – 26.4v at 5Amps		
Min. Start Voltage	2 Volt		
CHARGE CONTROL			
Soft Start	Yes		
Charge Rates	6 Volt REG/AGM - 7.2v Gel - 7.05v Calcium- 7.5v	12 Volt REG/AGM- 14.5v Gel - 14.1 Calcium - 15.1v LiFePO4- 14.4v	24 Volt REG/AGM – 29V Gel - 28.2v Calcium- 30.2v LiFePO4- 28.8v
Absorption	Constant voltage with automatic Amperage control		
Equalization	Automatic		
Analysis / Fault Find	Automatically detects faulty batteries. Error codes indicate fault		
Alternator Function	When selected - indicates alternator is functioning correctly		
Float	6V @ 6.7V – 6.9V	12V @ 13.1V – 13.5V	24V @ 27.V – 29V
Reboot			
FEATURES			
Case Construction	Hard plastic		
Fan Cooled	Yes		
Permanent Mount	Yes		
Weight	1.9kg		
Dimensions	300 x 100 x 75mm (LxWxH)		
Cable length	1.8m		
BATTERY SIZE / TYPE	10 - 240 Ah Charge		

## FRONT PANEL INDICATORS



### MODE SELECTION:

- Battery charging
- Power supply
- Alternator test

### BATTERY CHARGING MODE

#### Battery Type

- Select battery type by pressing battery type button

#### Battery Voltage

- Select voltage by pressing Voltage setting button

#### Charge Rate

- Select Amperage by pressing Charging rate button. Selection cycles through 2A / 10A / 20A. NOTE: If 24V is selected - the selections are 2A / 5A / 10A
- 2A - Slow charge - recommended for optimal battery condition. e.g. A 100Ah charges in approx 20 hours
- 10A - Intermediate charge - e.g. A 100Ah charges in approx 10 hours
- 20A - Boost charge - e.g. A 100Ah charges in approx 5 hours
- These times are a guide only - charge rates will vary depending on a number of conditions

#### Display Indicator

- **Battery %** - % of charge in the battery
- **Voltage** - Voltage of the battery being charged
- **Current** - Current (amperage) going into the battery being charged



You can switch between charge rates during the charge process. The charge rate automatically adjusts to the present charge level



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## CHARGING A BATTERY

1. Turn the charger ON by connecting it to 240VAC mains power
2. Select battery charging mode by pressing MODE button.
3. Press BATTERY TYPE to select the required battery chemistry
4. Select BATTERY VOLTAGE - 6 / 12 / 24 volts
5. Select CHARGE RATE required



If charging a battery in a vehicle, ensure cables are removed from any rotating or crush hazards. Confirm the vehicle is negative earth - vehicle chassis.

6. Attach the black / negative - clamp to the negative terminal of the battery
7. Attach the red / positive + clamp to the positive terminal of the battery
8. There is a 30 second delay between connecting the clamps and switching to charge.
9. Once charging has started, the display will indicate the battery type selected, % of battery being charged, Voltage and Amperage.
10. Once fully charged, 'Charging finished' will appear on the display.
11. When fully charged, you can either;
  - Leave the charger connected and it operates in a maintenance mode, or
  - Disconnect as follows
12. Turn the charger OFF at mains power
13. Disconnect the red / positive + clamp from the battery positive terminal
14. Disconnect the black / negative - clamp from the battery negative terminal

## POWER SUPPLY FUNCTION

- Press Mode Button to select power supply mode. Below screen will appear on the display



- Select the voltage 12V or 24V. Please note the output on 12V is 13.3V at 10A and 26.2V at 5A
- Once voltage selection is complete. Press and hold 'Charging rate button' to start the power supply function.
- Please note – The power supply can only be turned on when the clamps are connected to the batteries.

## ALTERNATOR FUNCTION



Alternator function can only be selected when the clamps are NOT connected to a battery.

1. Turn the charger ON
2. Press MODE to select ALTERNATOR %
3. Connect the RED DC clamp from the charger to the Positive (+) battery post and the BLACK DC clamp from the charger to the Negative (-) battery post.
4. Start the engine and rev the motor -

If alternator is working correctly, display indicates a value higher than 50

If the display indicates less than 50 - the alternator is not performing as designed and requires checking by a qualified technician.

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## TROUBLESHOOTING

LED/ERROR CODE	FAULT / CONDITION	COMMENT
F01	Bad cells in battery	Replace battery
F02	Charge time exceeds 48 hours	Bad cells in battery - replace battery
F03	Reverse connection	Check clamps for correct polarity
F04	Overheating	Charger starts again when temperature drops. Ensure charger vent is not covered
F05	Aging battery	Battery cannot be efficiently charged - replace battery
F06	Incorrect voltage setting	Set correct charge rate voltage
F07	Over voltage	Charger has detected the voltage is over 30v. Ensure the correct voltage setting

## WARRANTY POLICY

Products developed and sold by Tridon Australia Pty Ltd come with a guarantee for the reasonable life of the product, for the purpose it is commonly used. This is in addition to the rights of the consumer under the Australian Consumer Law.

To be considered for warranty please take the product with proof of purchase to the store where you purchased the product or contact Tridon Australia

The warranty is given by: Tridon Australia, 21-25 Derby St, Silverwater, NSW 2128.

Tel: 1300 362 263.

Email: [mail@tridon.com.au](mailto:mail@tridon.com.au)

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 incurred if the product fails when used for the purpose for which it was intended. 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.

Tridon Australia will bear costs associated with claiming legitimate warranties. Proof of expenses incurred must be submitted to Tridon Australia Pty Ltd.