

# 15A Smart Charger with 20A Boost Charge (MP7215)



**Fully automatic. Suitable for 12V heavy duty lead acid; AGM or GEL batteries.**

## USER MANUAL

Please read and follow this operating manual and all safety instructions for the batteries to be charged before using this device.

Keep these instructions for future reference. When passing the device on to others be sure to also include all documentation. The instruction leaflet is also available on our website

[www.maypoleltd.com](http://www.maypoleltd.com)





## **RISK OF FIRE OR EXPLOSION**

Explosive gases may escape during charging. This is normal, but please follow the following guidelines:

Do not charge near flames or sparks – do not smoke in the area.

Ensure adequate ventilation during charging.

Keep the charging area completely clear of combustible materials.

Do not leave charging batteries unattended for long periods or overnight.

Do not allow battery to overheat by exceeding 40°C.

Store and use indoors only, do not expose to rain or moisture.

The charger is designed to charge 12V Lead-Acid, AGM & GEL batteries with capacities as shown in the specifications table.

Charge only one battery at a time. Do not use with non-rechargeable batteries.

## **WARNING – GENERAL SAFETY**

Never attempt to charge a frozen battery or dry cell battery.

This charger should not be used as a continuous DC power source or for any purposes other than those listed – any other use will invalidate warranty.

Never use the appliance if the charger has been dropped.

Ensure that cables are regularly inspected and kept in good condition.

Never use the cable to carry or pull the device.

Never use the charger if the mains lead, plug, output leads or crocodile clips are worn or damaged.

In order to avoid a hazard, replacement of the mains cable should only be carried out by the manufacturer. There are no user-serviceable parts in this product other than the fuse in the mains plug.

Locate the charger as far away from the battery being charged as the cables will permit.

Never place charger directly on or above the battery being charged, gases from the battery will corrode and damage the charger.

The use of an extension cable is not recommended. If an extension cable must be used ensure that the capacity of the cable is greater than the rating of the charger.

Be sure to position the mains lead to prevent it from being stepped on, tripped over or damaged.

Always disconnect mains supply before connecting and disconnecting the battery leads.

Follow instructions for safe use, electrical discharge from batteries can be dangerous.

Battery electrolyte is acidic and likely to cause burns. The use of safety goggles and gloves when working with lead acid batteries is strongly advised.

Remove metal items such as rings, necklaces and watches while working with batteries.

This appliance is not for use by a person (including children) with reduced physical, sensory or medical capabilities or lack of experience or knowledge.

NOTE: A marine battery installed in a boat must be removed and charged on shore. To charge it on board requires equipment specially designed for marine use.



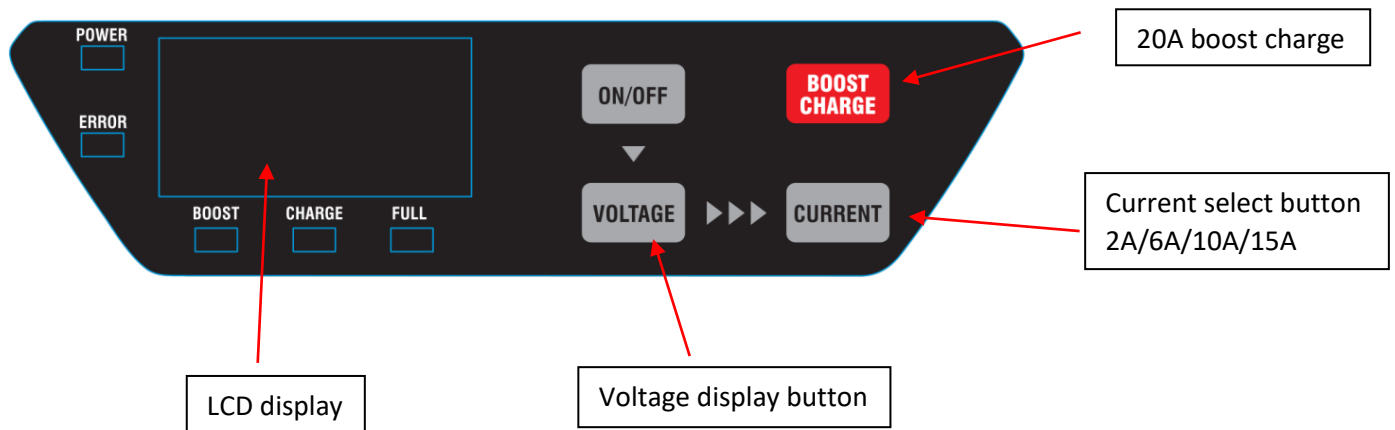
## The manufacturer is not responsible for damages caused by:

Exterior force, damage to the device and / or damage to parts of the device caused by mechanical impact or overload.

Consequential damages caused by non-intended and / or improper use, and / or defective batteries.

The unauthorised opening of the device will void the warranty.

## PRODUCT OVERVIEW





## PREPARATION OF THE BATTERY

Refer to the vehicle manufacturer's handbook for battery maintenance and charging guidelines.

If the battery must be removed from the vehicle before charging, ensure all other electrical loads in the vehicle are switched off. Always disconnect the earthed connector from the battery first.

## CONNECTION

Always disconnect the mains supply before making or breaking battery connections. Ensure the battery poles are clean. Connect the battery clips to the battery in the following order:

First connect the positive charging lead (RED) to the positive post of the battery (marked +, +ve or P).

Then for vehicles with the battery still installed: connect the negative charging lead (BLACK) to the vehicle chassis, well away from the battery, fuel line, hot or moving parts.

For batteries removed from the vehicle: Connect the negative charging lead (BLACK) to the negative post of the battery (marked -, -ve or N).

After connecting the clips, rotate them slightly so to remove any dirt or oxidization, thus ensuring a good contact. The charger must now be connected to the mains supply.

## CHARGING

Connect the charger to a battery as per the connection instructions.

Connect the charger mains plug to an AC outlet and switch on.

There are 4 different charging rates (2A/6A/10A/15A) which can be selected by pressing the current button.

The LCD display will show the selected current rate and the CHARGE LED will illuminate.

The 8 step the charging cycle will automatically start.

Pressing the Voltage button will show the battery voltage on the LCD display.

When charging is complete the FULL LED will illuminate and the CHARGE LED will turn off.

NOTE – the charger will automatically switch from full charge to maintenance status to maintain batteries.

The charger has a built in Auto-memory which automatically shows the last selected mode (excludes boost mode). Charging will commence in the last mode within 5 seconds.

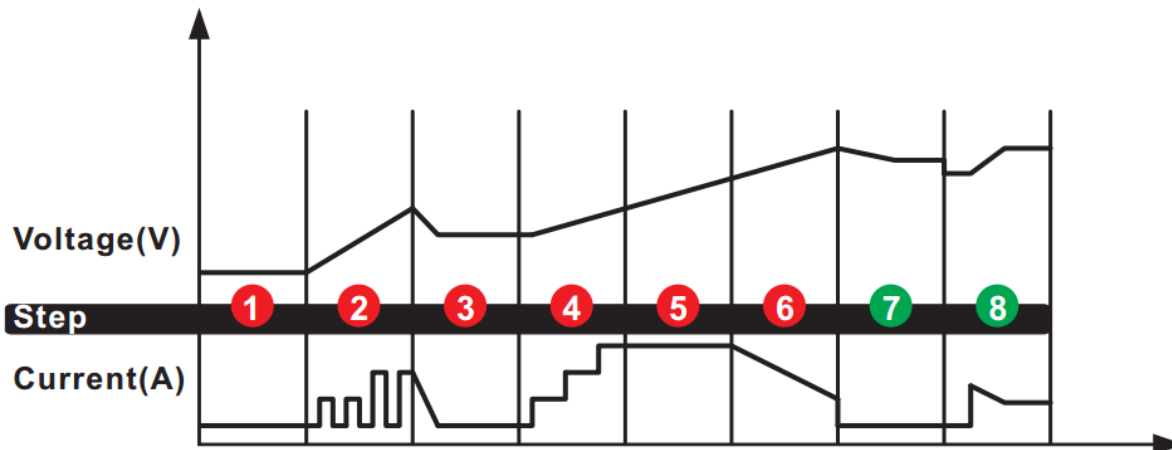
NOTE - When the charger is not connected to a battery it will automatically enter supply mode – the digital display will show 'P12'. Connecting the charger to a battery and pressing the ON/OFF button twice will activate the charging mode.

**WARNING! DO NOT ATTEMPT TO START THE VEHICLE WITH THE CHARGER CONNECTED TO THE BATTERY. THIS MAY DAMAGE YOUR BATTERY CHARGER.**



## CHARGING CYCLE

The charger uses an 8-stage charging process designed to efficiently charge and maintain batteries. The below chart shows the charging cycle when charging a 12V deeply discharged battery.



**Stage 1** — Diagnosis: The battery is analysed to ensure it can be charged, so as to prevent charging a defective battery.

**Stage 2** — Desulphation: If the battery is sulfurized, the charger will clear the sulphide with higher current and voltage to recover battery capacity.

**Stage 3** — Analysis: Checks the battery voltage after desulphation stage.

**Stage 4** — Soft start: The charger gradually charges.

**Stage 5** — Bulk charging: Charging with constant maximum current until the battery voltage is reaches a threshold.

**Stage 6** —absorption charging: The charging current reduces gradually until the battery is fully charged.

**Stage 7** — Analyse: Testing if the battery can hold charge.

**Stage 8** — Maintenance: Continuously monitors the battery. The charger will intelligently adapt to the variable battery voltage.



## LCD DISPLAY

MODE	DISPLAY	POWER LIGHT	BOOST LIGHT	EXPLANATION
STANDBY	-----	Blink		Not charging or providing any power. If you want charging to pause, press ON/OFF button and it will enter STANDBY mode.
12V/2A	02A	On		When connected to battery, 2A can be selected by pressing the CURRENT button. This mode is recommended for 2-60AH batteries.
12V/6A	06A	On		When connected to battery, 6A can be selected by pressing the CURRENT button. This mode is recommended for 14-230AH batteries.
12V/10A	10A	On		When connected to battery, 10A can be selected by pressing the CURRENT button. This mode is recommended for 25-300AH batteries.
12V/15A	15A	On		When connected to battery, 15A can be selected by pressing the CURRENT button. This mode is recommended for 30-400AH batteries.
BOOST	FAS	On	On	When connected to battery, 20A Boost charge can be selected by pressing the BOOST button. This is a faster (20A) rate of charge for a 5 minute time period.
SUPPLY	P12	On		When the charger is not connected to a battery, it automatically enters SUPPLY mode. If you want to switch from Supply to Charge, connect the charger to a battery and press ON/OFF button twice.

**Using 12V 20Amp BOOST CHARGE** before attempting to start a vehicle.

To operate **BOOST**, the charger must be connected to a 12V lead-acid battery. For optimal results, allow boost to complete its 300 second (5-minute) charge. After the 300-seconds countdown, the digital display will show “000”, and you are ready to start your vehicle (whether FULL light is illuminated or *not*).

If unsuccessful when starting your vehicle, let the battery rest for 15 minutes and try boost again. Most vehicles will start with one (1) boost. Do not use boost more than two (2) times within a 24-hour period. If two (2) boosts cannot successfully start your vehicle, have your battery replaced or evaluated by a local battery store.

The boost charge function can be stopped at any time by pressing the CURRENT button.

## 13.6V SUPPLY

The 13.6V outlet at the rear of the charger can be used to provide a 7A constant voltage and constant current. This can be used to power 12VDC accessories or can be used to maintain the car battery during diagnostic and software updates. When the charger is not connected to a battery it will automatically enter supply mode – the digital display will show ‘P12’. In this mode the 13.6V supply outlet can be used.





## ERROR LED

When the ERROR LED is illuminated it means the charger detects one of the following faults:

Low battery voltage (< 6V)

Reverse connection

Overload (> 7A supply mode only)

An illuminated ERROR LED combined with a buzzer sound indicates the internal temperature is too high. After the temperature reduces, the charger will automatically start charging again.

## Cleaning, care and maintenance

Clean clamps after every charge to prevent corrosion, wipe off any battery fluid which may have come into contact with the clamps.

Clean the product with a soft, dry cloth. Store the machine in a clean, dry place.

**Disposal:** Do not throw electrical appliances in with domestic waste!

In accordance with European Directive 2012/19/ EC for waste electrical and electronic equipment (WEEE) must be collected separately and taken to a recycling point for disposal.

## TECHNICAL SPECIFICATIONS

<b>Model No.</b>	<b>MP7215</b>
AC Input	230V , 50-60Hz, 2.5A
DC Output	12VDC, 2A/6A/10A/15A; 12VDC, 20A, 300s (BOOST); Temperature Controlled.
Efficiency	85% Approx.
Power	320W Max
Start Voltage	> 3V
Charger Type	8 steps, Full-automatic Charging Cycle
Battery Type	All Types of 12V Lead-acid Batteries, AGM or GEL
Battery Capacity	2-400Ah, Maintains All Battery Sizes; 2A for 2-60Ah; 6A for 14-180Ah; 10A for 50-300Ah; 15A for 50-400Ah
Boost Mode	20A Output for 300 Seconds
Supply Mode	13.6V/7A
Housing Protection	IP20
Ambient Temperature	0°C ~ +40°C
Fuse Mains Plug	5A



## Declaration of Conformity

We declare under our sole responsibility that the product described under "Technical Specifications" is in conformity with the following regulations including their amendments



EMC Directive 2014/30/EU  
LVD Directive 2014/35/EU  
ROHS 2011/65/EU



Electromagnetic Compatibility Regulations 2016 SI. 2016 No. 1091  
Electrical Equipment (Safety) Regulations 2016 SI. 2016 No. 1091  
The RoHS in EEE Regulations 2012 S.I. 2012 No.3032

### And complies with the following standards:

EN55014-1:2006/+A1:2009/+A2:2011  
EN55014-2:2015  
EN61000-3-2:2014  
EN61000-3-3:2013  
EN60335-2-29:2004 + A2:2010  
EN60335-1:2012+A11:2014  
EN62233:2008



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