



UK's Leading Towing & Touring Company

Electronic Smart Charger

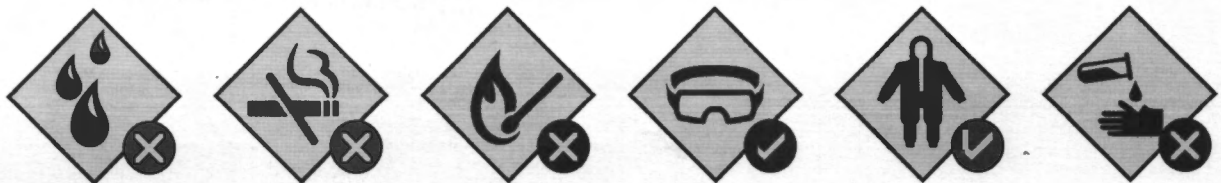
MP7423 6V/12V 4A



INSTRUCTION MANUAL



Keep these instructions for future reference. A more detailed instruction leaflet is available on our website: www.maypole.ltd.uk



www.maypole.ltd.uk

SAFETY – Important Guidelines



1 RISK OF 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 allow battery to overheat by exceeding 40°C.
- Store and use indoors only.
- The charger is designed to charge 6v and 12v Lead-Acid & AGM batteries with capacities 1.2Ah to 120Ah (Ampere hours) only. Charge only one battery at a time. Do not use with non-rechargeable batteries.
- 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.
- Ensure that cables are regularly inspected and kept in good condition.

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

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

Display	Fault	Action
Battery polarity reversal symbol displayed	Battery clamps reversed.	Disconnect and reconnect correctly.
Clamp indication and voltage symbols displayed	Dirty or oxidized battery terminals. Low or unstable charging current.	Clean terminals.
No display	Mains supply not connected.	Check socket.
Display back light on, display showing 0.0V and clamp symbol	Battery not connected.	Check clamps, replace battery.
Bad battery indicator	Battery beyond recovery.	Battery requires replacement.
Clamp connection indicator	Indicates poor connection.	Check clamps.

Output lead fuses should be checked and replaced as necessary (2A blade) in connection with all faults. Also check the fuse in the mains plug, which should only be replaced with a 3A BS 1362 fuse. Persistent fuse replacement may indicate a fault with the charger or leads. Check fuses before each use and do not use if worn or damaged.

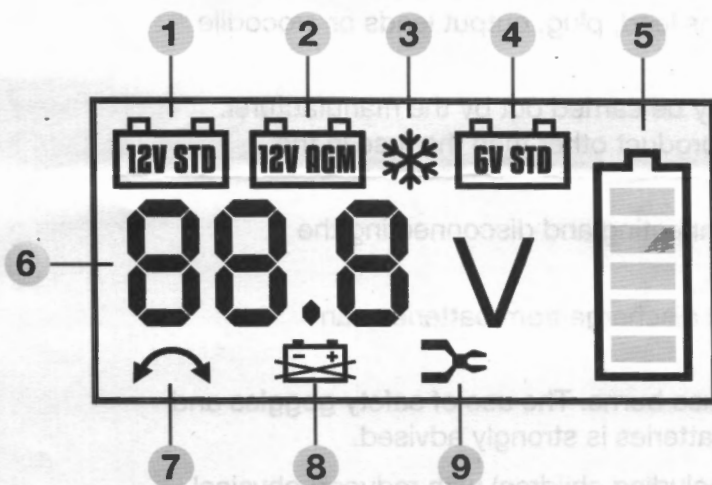


2 LCD DISPLAY

During charging the LCD display backlight will be red, when charging is finished it will turn green.

LCD Display Key:





1. 12V standard lead-acid battery mode.
2. 12V AGM battery mode.
3. Winter mode for 12V STD battery and 12V AGM batteries. Suitable for 5°C or less.
4. 6V standard lead-acid battery mode.
5. Battery level indicator. Each bar represents approximately 20%. The outline border flashes during charging. When the battery is full & during float charging the border and all five bars will be visible.
6. Battery voltage indicator, accurate to 0.1V.
7. Reverse polarity indicator.
8. Bad battery indicator.
9. Clamp connection indicator.



Display	Fault	Action
Battery polarity reversal symbol displayed.	Battery clamps reversed.	Disconnect and reconnect correctly.
Clamp indication and voltage symbols displayed.	Dirty or oxidized battery terminals. Low or unstable charging current.	Clean terminals.
No Display.	Mains supply not connected.	Check socket.
Display back light on, display showing 0.0V and clamp symbol.	Battery not connected.	Check clamps, replace battery.
Bad battery indicator.	Battery beyond recovery.	Battery requires replacement.
Clamp connection indicator.	Indicates poor connection.	Check clamps.
<p>Output lead fuses should be checked and replaced as necessary (5A blade) in connection with all faults. Also check the fuse in the mains plug, which should only be replaced with a 3A BS1362 fuse. Persistent fuse replacement may indicate a fault with the charger or leads. Check these before each use and do not use if worn or damaged.</p>		



3 SUMMARY OF OPERATION

	Step 1	Step 2	Step 3	Step 4	Step 5
	Pulse charging.	Soft start.	Auto-Select Current & Bulk Charging.	Absorption.	Float charging.
12V STD mode 	Connect the charger to the battery, the charger will detect the battery's voltage automatically. (1) If a voltage of more than 7.5V is detected, the charger recognizes battery as 12V (2) If a voltage of 7.5V to 10.5V is found, maintenance charge is activated (0.8A pulse charging until voltage exceeds 10.5V) (3) If the voltage doesn't reach 10.5V within 30 minutes, a battery fault is indicated.	1A charging until the voltage reaches 12.8V	Every 15 to 20min the charger will check the battery voltage. If the voltage has increased by 0.2V or more the charging current will remain the same. If the voltage has not increased by 0.2V the charger will increase the charging current by 1A to 2A. The cycle will be repeated every 15 to 20min. and the charging current can be increased to 3A or 4A. This charging cycle will continue until the battery voltage reaches the maximum value.	Maximum voltage 14.4V 14.4V constant voltage Charging current steps down by 1A at a time until 1A is reached.	Charger will detect the battery's voltage again (1) If the voltage falls below 12V. Battery fault is shown. (2) If voltage is 12 to 13.2V, charger will switch to maintenance charging (3) If the voltage is more than 13.2V charger will wait for the voltage to fall before starting a maintenance charge.
12V AGM mode 	(1) If a voltage of less than 7.5V is detected, the charger recognizes the battery as 6V (2) If voltage of 1.5V to 5V is found, maintenance charge is activated (0.8A pulse charging until voltage exceeds 5.25V) (3) if voltage doesn't reach 5.25V within 30 minutes, a battery fault is indicated			Maximum voltage 14.8V 14.8V constant voltage Charging current steps down by 1A at a time until 1A is reached.	
12V Winter mode 	Maximum voltage 14.8V 14.8V constant voltage Charging current is falling until 1A.				
6V Winter mode 	Connect the charger to the battery, the charger will detect the battery's voltage automatically; (1) If voltage of less than 7.5V is detected the charger recognizes the battery as 6V (2) If voltage of 1.5V to 5V is found, maintenance charge is activated (0.8A pulse charging until voltage exceeds 5.25V) (3) if voltage doesn't reach 5.25V within 30 minutes, a battery fault is indicated	1A charging until the voltage reaches 6.4V	Every 15 to 20min the charger will check the battery voltage. If the voltage has increased by 0.2V or more the charging current will remain the same. If the voltage has not increased by 0.2V the charger will increase the charging current by 1A to 2A. The cycle will be repeated every 15 to 20min. and the charging current can be increased to 3A or 4A. This charging cycle will continue until the battery voltage reaches 7.2V	Maximum voltage 7.2V	Charger will detect the battery's voltage again (1) If the voltage falls below 6V. Battery fault is shown. (2) If the voltage is 6 to 6.6V, charger will switch to maintenance charging. (3) If the voltage is more than 6.6V charger will wait for the voltage to fall before starting a maintenance charge.

1. Preparation of battery

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

2. Charging lead selection

Interchangeable ring terminal and fully-insulated battery clip charging leads are supplied.

- Select the appropriate lead for your application. Quick fit ring terminal leads are useful for applications where the battery is not easily accessible (e.g. some motorcycles).
- Attach to the charger output lead using the quick-fit connector (fitted to each).

This must be done before connecting the charger to either the mains supply or to the battery.

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CONNECTION

Always disconnect the mains supply before making or breaking battery connections.

Connect the battery clips or ring terminals to the battery in the following order:

1. Connect the positive charging lead (RED) to the positive post of the battery (marked + , +ve or P).
2. For vehicles with the battery still installed: connect the negative charging lead (BLACK) to the vehicle chassis (marked - , -ve or N), well away from the battery, fuel line, and 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 as to remove any dirt or oxidization, thus ensuring a good contact.

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CHARGING

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

Switch on the mains power supply. For 12V batteries select the charging mode appropriate for your battery by pushing the **MODE** button. The display will cycle through the available options (12V STD, 12V AGM, WINTER). The charger will now automatically measure the voltage of your battery and diagnose its condition. For 6V batteries the charger will automatically commence the 6V STD charging program.

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WHEN CHARGING IS COMPLETE

Switch off the mains supply, unplug the charger and disconnect the clips from the battery, **negative (BLACK lead) first**. Then disconnect the (RED) positive lead from the battery. Or, if used, disconnect the ring terminal charging lead in the same way. If desired, this lead can be left permanently attached to a vehicle battery, but **the end-cap must be fitted to the quick-fit connector at all times** to prevent short circuit, sparks or dirt and water entry. When not in use the charger should NOT be left connected to this lead.

TECHNICAL SPECIFICATIONS

Protection class	Input voltage	Input current Output	Max lead-acid battery capacity
IP65	230V 50Hz	0.6A 12V:4A 6V:4A	1.2-120Ah

TECHNICAL SPECIFICATIONS

We declare that this product conforms to the following standards EN60335-1, EN60335-2-29, EN55014, EN61000, and the following Directives 73/23 CEE, 93/68 CEE, 2004/108/EC, 2002/95/EC (ROHS)



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