

# BATTERY LINK

By HAIGH

## Pro Series

MICROPROCESSOR CONTROLLED

# 6V - 12V

# BATTERY CHARGER

WITH MULTI-STAGE CHARGING SYSTEM

INSTRUCTION  
MANUAL



SAA APPROVAL No.  
SGSEA/080476

Part No. CHS075

**IT IS ESSENTIAL YOU READ THE ENTIRE CONTENTS OF THIS MANUAL BEFORE USING THIS PRODUCT. FAILURE TO DO SO COULD RESULT IN INJURY, PROPERTY DAMAGE OR PRODUCT FAILURE.**

**KEEP THIS MANUAL FOR FUTURE REFERENCE**

## **INTRODUCTION**

The CHS075 charger is designed for charging single 6 & 12 volt lead acid (starting) batteries widely used in smaller motor vehicles such as ride on mowers, petrol engine golf carts, quad bikes, motorcycles and jet skis. It will also charge smaller deep cycle batteries. These batteries are often referred to as WET CELL, GEL or AGM with capacities ranging from 6 volt (1.2Ah to 20Ah) & 12 volt (1.2Ah to 20AH or up to 250CCA). The charger is NOT to be used as a power supply or for any other application other than charging and maintaining these types of batteries. **NOT TO BE USED ON NON-RECHARGEABLE BATTERIES.** In all applications you must NOT connect the charger to mains power until battery connection has been completed. Prior to disconnecting the charger from a battery, you must **FIRST** turn off mains power supply at power point.

## **WHAT DOES MCU STAND FOR?**

MCU stands for (MICRO CONTROL UNIT) meaning there are different stages of the charging process:

1. Bulk Charging
2. Float Charging
3. Maintenance Charging

These different stages enable the battery to be recharged to almost 100% capacity. The charger can remain connected to the battery indefinitely without any damage being caused to the charger or battery.

## **PRE - CHARGING INSTRUCTIONS**

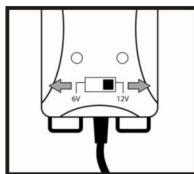
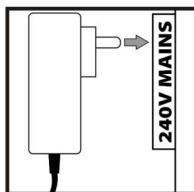
1.0 Please read this manual carefully prior to operation.

2.0 Make sure that the 240V power outlet you will be using for the charger is in the OFF position before inserting the charger.

3.0 Slide the voltage switch to either the 6 or 12 volt charging position.

4.0 Before connecting the charger to the battery we strongly recommended that battery is removed from the vehicle and charged in a well ventilated location.

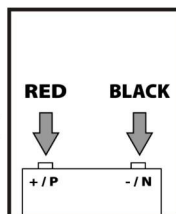
*For more information please see the 'CAUTION' section of this manual*



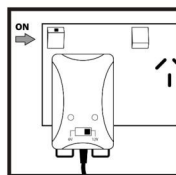
## **CHARGER TO BATTERY CONNECTION INSTRUCTIONS**

**5.0** When connecting the charger to the battery:

- a.** Ensure the battery posts are clean and free of corrosion.
- b.** Connect the charger clamps or terminals to the battery in the following order:  
RED to the positive post of the battery (marked P or +) and BLACK to the negative post of the battery (marked N or -)
- c.** It is important to ensure that either battery clamps or terminals make solid contact with each terminal post.

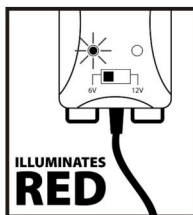
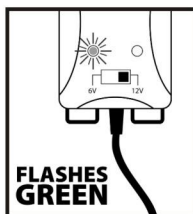


**6.0** Once this is completed switch on the mains power supply to activate the charger.



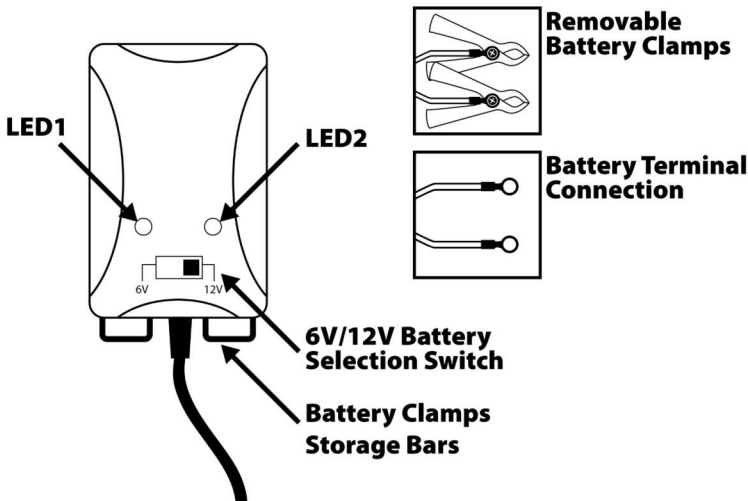
## **CHARGER OPERATION AND ANALYSIS INSTRUCTIONS**

- The battery charger automatically detects the voltage of the battery.
- If (LED1) flashes GREEN this is an indication that the voltage is less than  $3.75V \pm 0.25V$  for a 6 volt battery or  $7.5V \pm 0.25V$ , for a 12 volt battery. This suggests the battery may be faulty and/or severely discharged and most likely will not capable of being recharged.  
Auto electricians, battery suppliers or larger automotive outlets have equipment that can determine its condition. This facility is often offered as a free service. Automotive batteries have an average life of 3 years in Australian conditions.
- If (LED1) illuminates RED this is an indication that the voltage is greater than  $3.75V \pm 0.25V$  for a 6 volt battery or  $7.5V \pm 0.25V$ , for a 12 volt battery the charger will commence bulk charging. When the battery is charged up to  $7.2V \pm 0.25V$  (for 6 volt batteries) or  $14.4V \pm 0.25V$  (for 12 volt batteries), the (LED1) will illuminate GREEN and a trickle current will maintain the battery at full capacity. During the maintenance charging mode, if the battery charger detects a voltage drop to either 6.5V for a 6 volt battery or 13.0V for a 12 volt battery, the charger will return to "Bulk Charging" mode and undertake a charging cycle and then revert to the Maintenance mode.



## INDICATION

- |                      |                          |
|----------------------|--------------------------|
| 1.0 Bulk Charging    | LED1 (RED) illuminates   |
| 2.0 Fully Charged    | LED1 (GREEN) illuminates |
| 3.0 Faulty Battery   | LED1 (GREEN) flashes     |
| 4.0 Reverse Polarity | LED2 (RED) illuminates   |

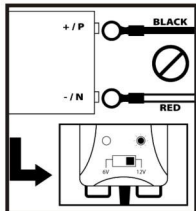


## CHARGER PROTECTION FUNCTIONS

- The battery charger has inbuilt "SHORT CIRCUIT" protection with means positive and negative leads will not "SPARK" if touched together.



- If the leads are connected incorrectly e.g. Positive on Negative the Reverse Polarity Protection will cut-in automatically and (LED2) will illuminate RED and the battery charger will switch off.



## **SPECIFICATIONS**

<b>Input:</b>	<b>240V AC 50Hz 15W</b>
<b>Output Voltage:</b>	<b>Nominal: 6V and 12V</b>
<b>Charging Voltage:</b>	<b><math>3.75V \pm 0.25V</math> (6V battery) or <math>7.5V \pm 0.25V</math> (12V battery)</b>
<b>Input Current:</b>	<b>130mA RMS max</b>
<b>Charging Current:</b>	<b>6V/12V DC --- <math>0.75A \pm 10\%</math></b>
<b>Cut Off Voltage:</b>	<b><math>7.2V \pm 0.25V</math> (6V battery) or <math>14.4V \pm 0.25V</math> (12V battery)</b>
<b>Temperatures:</b>	<b>Storage Temperature: -20°C to 50°C Operation Temperature: 0°C to 40°C</b>
<b>Type of Charger:</b>	<b>Three step, fully automatic with maintenance charging</b>
<b>Type of Batteries:</b>	<b>6V/12V Lead-Acid Batteries (WET, MF, AGM and GEL)</b>
<b>Battery Capacity:</b>	<b>1.2-20Ah (200-250CCA)</b>

## **FAULT FINDING**

- 1. PROBLEM:** The plug of the battery charger is inserted into 240V AC mains power supply, battery clamps or terminals have been connected to the battery but no charging occurs.

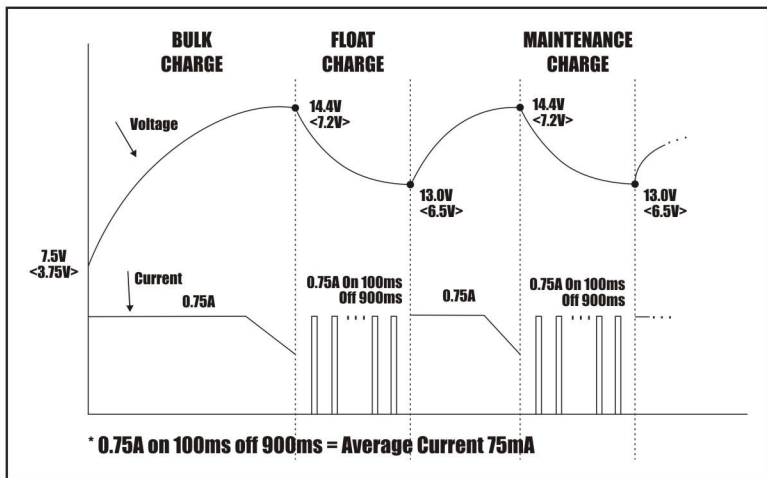
**POSSIBLE FAULT:** Double check that both battery clamps or terminals are making good contact with the respective terminals.

Battery is not 6V or 12V Lead-acid type.

Battery is below 3.75V (for 6V battery) or 7.5V (for 12V battery).
- 2. PROBLEM:** No spark when charging clamps or terminals touch together.

**ANSWER:** The charger features an inbuilt safety device to prevent sparking if clamps or terminals accidentally touch.
- 3. PROBLEM:** Multimeter will not provide a reading between charging clamps prior to connection to battery.

**ANSWER:** The charger will only operate when connected to a 6V battery with more than 3.75V or to a 12V battery with more than 7.5V. A multimeter voltage reading will only be provided when the charger is connected to the battery.



## ! CAUTION !

- This battery charger is designed for **INDOOR USE ONLY** - **DO NOT** expose to rain.
- **ALWAYS** disconnect the charger from the mains supply before connecting to or disconnecting from the battery.
- **WARNING: EXPLOSIVE GASES** - Prevent flames and sparks. Provide adequate ventilation during charging.
- **DO NOT** charge a battery near flammable materials, naked flames, gas pilot lights or gas hot water systems.
- This charger is specially designed for charging one single 6V or 12V Lead Acid Battery at a time. **DO NOT** use this charger for charging **NON-RECHARGEABLE** batteries.
- **DO NOT** leave the charger connected to the battery when the charger is **NOT** connected to mains power supply.
- If the battery is found to be too hot or is leaking fluid during the charging process, immediately stop operation. Fluid from the battery is **ACIDIC** and can cause burns and corrosion.
- It is strongly **RECOMMENDED** that batteries (in motor vehicles) be removed before charging. If this is **NOT** practical please make sure that the battery terminal **NOT** connected to the chassis is connected to the charger first. The other connection is to be made to the chassis, clear of any battery cables and fuel lines. The charger can now be connected to the mains power supply.
- After charging battery in automotive vehicle, disconnect the battery charger from mains power supply. Then remove the chassis connection and then the initial battery connection.
- The **ACID/FLUID** within a battery is a highly corrosive and poisonous. It can produce flammable and toxic gases when recharged and will explode if ignited. When working with batteries, always wear eye protection, remove jewellery and ensure the area is well ventilated. If spilt - it will cause severe burning to eyes, skin, clothing, damage paintwork and corrode many metals. Ensure that 240V AC power is disconnected from any appliance in the vicinity of the spill and immediately wash any area that has been affected with water.
- **DO NOT** allow battery acid to mix with salt water. This will produce chlorine gas which may be deadly.
- This charger is **NOT** intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely.
- Young children should be supervised to ensure that they **DO NOT** play with the appliance.

