

# Battery Chemistry Module

## Multi Chemistry Multi Output charging device

12V/60A 24V/30A

The Battery Chemistry Module (BCM) is a retro fit device designed to be installed on the output of a current limiting multi output battery charger to allow the battery charger to have independent chemistry selection on each output. More and more so, individuals are having different battery styles/chemistry and different voltage scales (12V and/or 24V) all within their DC system. Due to this quagmire, the BCM is the solution to allow one battery charger to charge different battery chemistries at different voltage scales and at their correct charging profile. So, the BCM can essentially turn a very simple battery charger into a multi output, multi chemistry advanced battery charger with other inherent advantages.



### Most cost effective method for multi chemistry multi output battery charging on the market.

**Simple to install.** Simply connect the input of the BCM to an output of a current limiting battery charger and connect the output of the BCM to the battery bank.

Converts a single output charger into a multi output charger using multiple units.

Converts a multi output charger into a multi chemistry multi output charger.

Ideal set up would be a 12V AGM house bank and a 24V deep cycle bow thruster bank. From one charger you can charge both banks at their correct voltage scale and correct charging profile.

**4 Models:**  
12V - 12V  
12V - 24V  
24V - 24V

**8 selectable charging profiles.** AGM, Gel, sealed lead acid, flooded lead acid and lithium. There is also a desulphation mode.

Remote voltage compensation. To do away with voltage drop across long cables there is a feature which allows the charger to compensate for a voltage drop up to about 1 volt.

Do not install on a charger where the current exceeds the BCM's rating.

Battery temperature compensation and high battery temperature trip.



### Battery Chemistry Module or a Battery to Battery Charger?

We are frequently asked this question. For an in depth reason to choose the BCM over the **Battery to Battery Charger**. We recommend that you refer to our FAQ page. Here we shall discuss the main differences, essentially the benefits of current limiting in the versatility of the battery to battery charger. The BCM is a more cost effective method when connected to a battery charger.



**Temperature Sensor**  
1 x battery analogue temperature sensor



**Optional Remote Control**  
cut hole: 54 mm  
total diameter: 68 mm  
thread depth: 44 mm

**Additional Specifications:**

- 1) 6 LEDs projecting over 20 individual charge and warning information events.
- 2) Fail safe, reverts to basic charge function - about 1V less in event of a failure. Product can be replaced/repaired at convenience.
- 3) High battery temperature "daisy chain" trip (optional). Every battery can be monitored and the unit switched off. This can be done in the event of a battery overheating - causing high battery temperature problem.
- 4) Ignition fed generator to link in with sterling Pro Split R alternator splitter, this allows the output to be further split.

**A common problem that the BCM solves.**

Typically people have a mix of battery types in their system. A 12V AGM house bank and a flooded 24V bank for the bow thrusters. These batteries ideally want to be charged at different profiles. With a conventional charger this is not possible as you are fixed to 12V at an AGM setting. The BCM allows the user to charge at a flooded lead acid profile at 24V, while maintaining the charging profile for the starting battery at 12V. There are numerous combinations.

## Typical Wiring Examples

**2 or 3+ output charger** **How to use this product**

Typical example with 3 output charger

**The Problem**  
Chemistry, attach 2 Chemistry modification modules to each of the other outputs, then set.

**IP68**  
WATERPROOF  
Main Electronics  
IP55  
replaceable fan

12V ENGINE STARTER BATTERY AGM (Battery chemistry) 12V  
12V DOMESTIC BATTERY SYSTEM Open lead acid Calcium (Battery chemistry) 12V  
24V BOW THRUSTER Gel (Battery chemistry) 24V

**Single output charger** **How to use this product**

**Single output charger.**  
Remove the original charger cable, reduce the charger to its lowest chemistry setting (if it has one) then all the current must go direct to a chemistry module and no cable must be directed to the battery bank.

**How NOT to use this product**

**Single output charger.**  
For a single output charger the battery must not be left directly connected to a battery bank as this effectively connects the modules directly to a battery bank and this could damage the unit.

For this to work you must remove this wire and add another module

### Long cable runs

Long cables, often to bow thruster/anchor winch batteries, can suffer from large voltage drops across the cables. By connecting a BCM near these end batteries you can compensate for large voltage drops and you can also charge at a 24V 4 stage charging profile.

14V ----- 13V

Cable length = voltage drop (1.0V for example)

voltage increased to:  
14.1V - 15.1V (12V)  
28.2V - 30.2V (24V)

ENGINE STARTER BATTERY AGM (Battery chemistry) 12V  
DOMESTIC BATTERY SYSTEM Open lead acid Calcium (Battery chemistry) 12V  
BOW THRUSTER Gel (Battery chemistry) 24V

Battery Chemistry Module	
SKU	Description
BCM1260	12V-12V up to 60A Max 60A 12V charger
BCM2430	24V-24V up to 30A Max 30A 24V charger
BCM1224	12V-24V 10A (at 24V) Current limiting any 12V charger
BCM2412	24V-12V 20A (at 12V) Current limiting any 24V charger
TSD50	50 deg C = 122 deg F Digital temp sensor
TSD60	60 deg C = 140 deg F Digital temp sensor
TSD70	70 deg C = 158 deg F Digital temp sensor
TSD80	80 deg C = 176 deg F Digital temp sensor
BCMR	Battery Chemistry remote control plus 10 m cable