



# Battery Chemistry Module

# STERLING POWER

5 stage regulated voltage booster



## Battery Chemistry Module

This all new **battery chemistry module (BCM)** is a versatile and intelligent solution to charging multiple battery chemistries and different voltage levels (12V and 24V) from one multi-output battery charger. Simply install the unit between the charger and the batteries to regulate the voltage given out.

### A device for common problems

#### The problems:

1) With the myriad of battery chemistries on the market comes the unique challenge of charging them at the correct bulk / absorption and float voltages (as recommended by the manufacturers'). Failing to charge them at these profiles shall lead to shortened life spans and/or significant under / over charging of them.

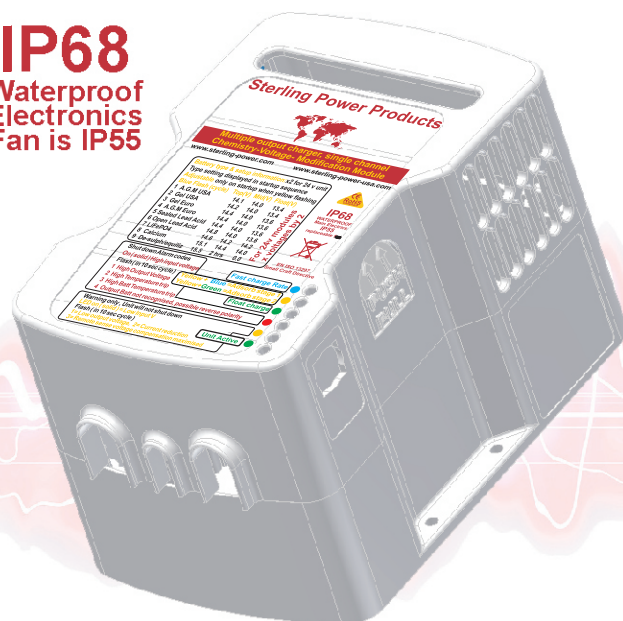
A common setup would be a 3 output charger feeding: a Gel starter battery (abs. 14.1V), a flooded/open lead acid house bank (abs. 14.8V) and a sealed lead acid generator starter (abs. 14.4V). Gel batteries are the most sensitive to high voltage so the charger would have been set at the Gel profile at risk of reducing its life span. In this example, the Gel gets charged at its optimal profile. However, the open lead acid battery is significantly under charged due to its much higher internal resistance. Therefore, the charge rate could be in the region of 3 - 4 times lower at 14.1V than at its optimal 14.8V.

2) There are many cases of both 12V and 24V battery banks being used onboard - e.g. a 12V starter and a 24V bow thruster. Resolving this issue typically involves the use of two chargers (12V & 24V). However, this method incurs much extra cost (two AC plugs, two AC cables and the cost of the extra charger etc). The BCM provides a solution.

#### The solution:

The BCM will take the input voltage from a battery charger and boost the voltage up to a user selectable 5 stage charging profile (9 selectable). It will work with any battery charger and will rise the voltage from 12V to a 24V charging profile if required, or vice versa.

**IP68**  
Waterproof  
Electronics  
Fan is IP55



Waterproof Temperature Sensor  
w/ 5 metres cable



Optional 60 deg C temp  
trip sensor (daisy link)

### Product Information

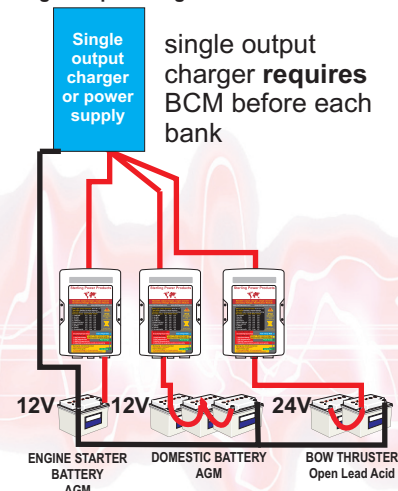
- 1) Easy installation, break the charge cable and insert the unit w/ negative cable.
- 2) **Will convert any single stage charger into a multiple stage charger.**
- 3) 12-24V, 24-12V, 24V-24V and 12V-12V models
- 4) Retro fit with an existing charger.
- 5) 9 selectable battery chemistries (FLA, SLA, AGM, Gel, Calcium, LiFePO<sub>4</sub>)
- 6) Temperature compensation sensor, charge rate fluctuates with ambient temperature.
- 7) Remote battery sense for each module.
- 8) 6 LED charge and warning information LEDs
- 9) Fail safe, reverts to basic charge function in event of a failure.
- 10) High battery temperature trip. Every battery can be monitored and unit's voltage reduced in event of battery temperature problems on any battery.
- 11) Ignition / signal feed to link in with a Sterling Pro Split R alternator splitting system. This allows the output to be further split.
- 12) **Requires multi output charger with live voltage on terminals to activate this unit.**

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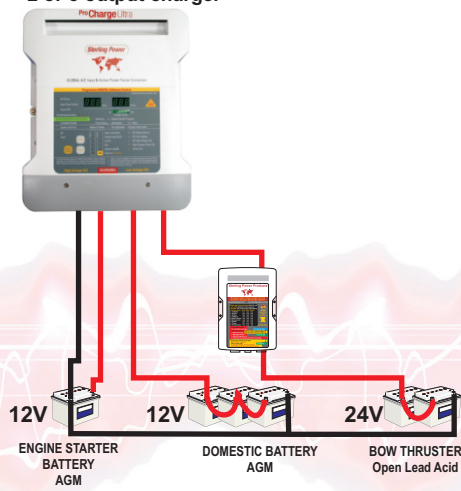


## Possible wiring examples

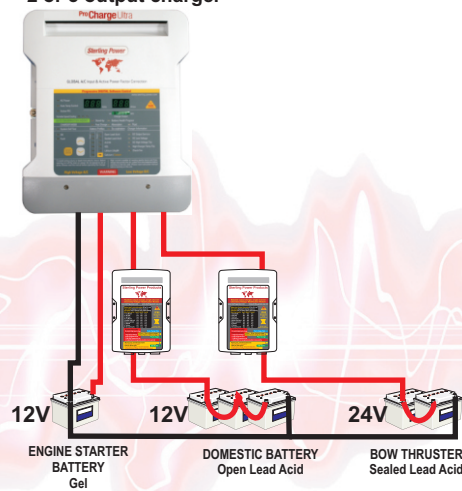
Single output charger



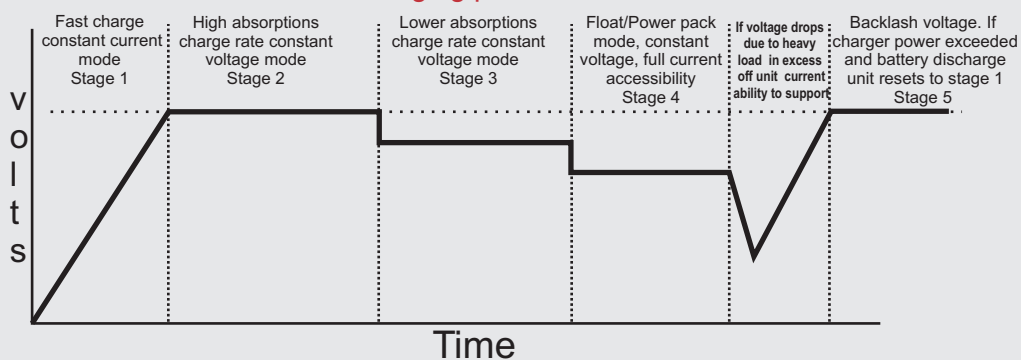
2 or 3 output charger



2 or 3 output charger



## Charging profile Information



Volt in	Volt out	Amps (in)	Code
12 v	12 v	60	BCM1260
12 v	24 v	60	BCM1224
24 v	24 v	30	BCM2430
24 v	12 v	30	BCM2412

**STERLING  
POWER**

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