12 Volt to 24 Volt
Multi Chemistry Booster Charger

Operating Instructions
Please read these instructions before use

Notes: Before installation the user shall determine the suitability of the product to ensure correct application. A large spark can sometimes be generated during the connection sequence due to the current required to charge the internal capacitors inside the charger.

The following connection sequence is to be followed: Ground (Black), Input (White), Output (Red), Control (Blue).

1. Disconnect the battery supply.

2. Choose a mounting position. It is recommended to mount the unit inside the vehicle as the unit is not waterproof. Select a position with good ventilation where air can pass freely around the unit. Avoid locations such as fuel lines or where external heat is produced e.g. exhaust system or where the batteries are located.

3. Ensure the unit is protected from water spray and other sources of contamination e.g. oil, grease and dust.

4. Ensure that unit is installed away from any flammable fumes, liquids or materials.

NOTE: A large spark can sometimes be generated during connection, due to the current required to charge the capacitors in the charger.

Operation Guide

Thank You for purchasing another quality GSL Product. This Micro Controlled Booster Charger has been designed to charge 24V batteries from 12V charging systems. It is a full 3 stage 20Amp Peak / 12.5A Continuous Charger which will operate from input voltages as low as 10.5Volts up to 27Volts give an optimial 24V charge to Lead Acid based chemistries as well as Lithium Iron Phosphate batteries. It is also fitted with a Low Voltage Disconnect at 10.5V to protect the main battery from discharge. Ensure when fitting the unit to the vehicle that all directions on the page overleaf are followed. Once the unit is fitted and is ready to go, select the “Chemistry” Switch to Li ($LiFePO_4$ Lithium), Pb ($PbSO_4$ Lead Acid) and F (Fixed Output @ 27V).

NOTE: After changing the Chemistry Switch you will need to cycle the charger turning it off and back on again using the Ignition Switch of your vehicle.

LED Indicators Guide

Input LED Indicator: If the indicator is flashing it is showing that the Input Voltage is lower than 12.1Volts. When it is solid it is indicating that the voltage is above 12.1Volts.

Output LED Indicator: This indication flashes when the battery is being charged. When the indicator is solid the battery is fully charged.

Operational Parameters	
Maximum Current at Bulk Charge (Peak/Cont.)	20A/12.5A
Lowest operating Voltage	10.5Volts
Maximum Operating Voltage	27Volts
Maximum Charge Voltage for Lead Acid(PbSO4 Based)	28.8Volts
Maximum Charge Voltage for Lithium Batteries (LiFePO4)	29.2Volts
Maximum Voltage for Fixed Output	27Volts
Float Voltage (Lead Acid Only)	27Volts

GSL Electronics
www.gsl.com.au
ABN 30 053 250 472

Phone: (02) 9620 9988
Fax: (02) 9620 9899

Unit 2, 110 Station Road, Seven Hills ,NSW, 2147, Australia

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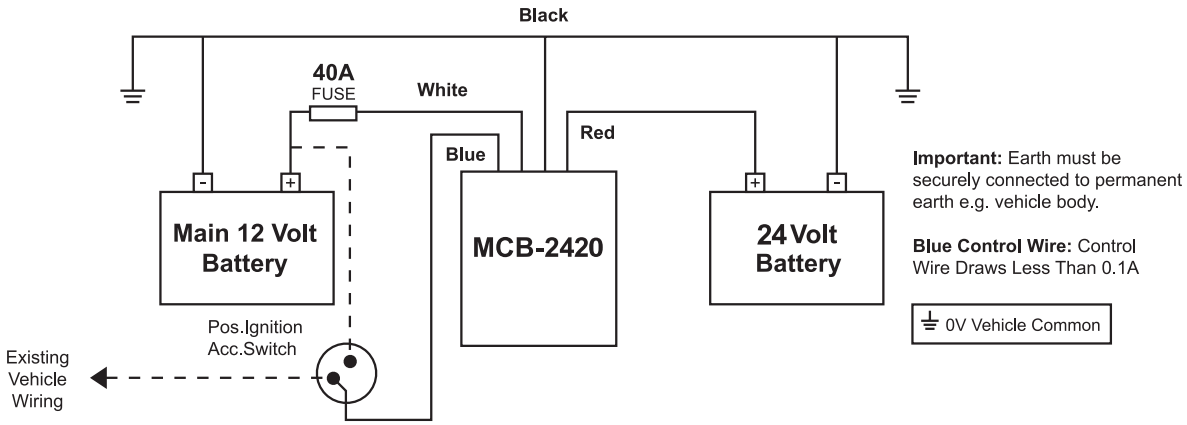
Fig 1. Typical Installation Diagram

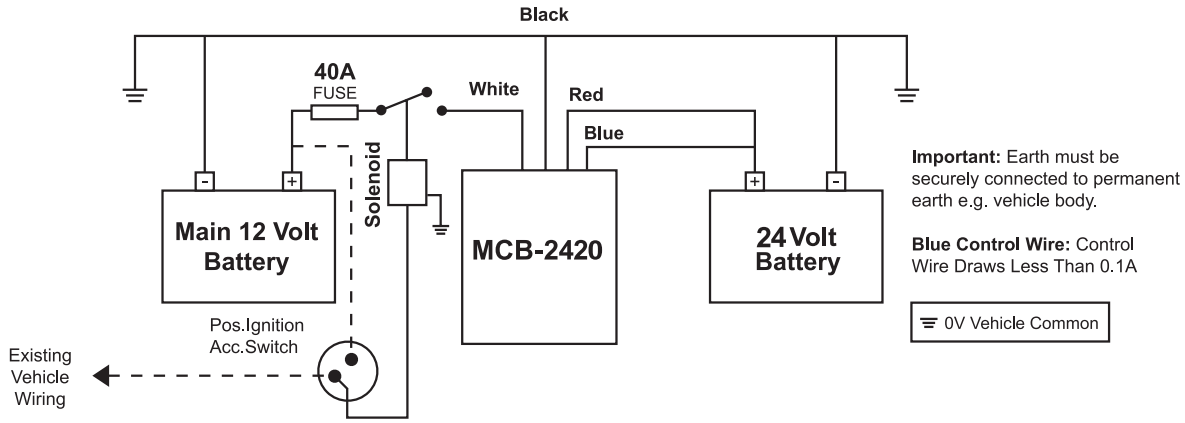
Chose a cable size suitable for your application. We recommend a minimum of 6mm automotive cable be used for the White, Red and Black wires for runs up to 10 meters. For runs over 10 meters a larger diameter cable must be used.



WARNING!: External 40A Input Fuse Must Be Fitted!

Fig 2. When Ignition Not Available At Charger

Chose a cable size suitable for your application. We recommend a minimum of 6mm automotive cable be used for the White, Red and Black wires for runs up to 10 meters. For runs over 10 meters a larger diameter cable must be used.



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Warranty Conditions: Our products come with guarantees that cannot be excluded under the Australian Consumer Law.
The customer is entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. The customer is also entitled to have the products repaired or replaced if the products fail to be of acceptable quality and the failure does not amount to a major failure.
GSL Electronics (GSL) warrants that its products will, under normal use and service, be free of defects in material and workmanship for a period of two (2) years from the date of the original purchase by the customer as marked on the customer's original invoice. Please refer to our website for full warranty and return information which can be found at http://www.gsl.com.au/faq.html

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