

**Next Generation DC to DC
Booster Battery Charger / Doubler**
12VDC to 24VDC 20A
Operating Instructions
Please read these instructions before use



The NGBC2420 joins our new NGBC series of units that uses the next generation topology reducing the size and increasing the output power compared to its previous VI and BC series of units.
In an extremely compact package (373cm³) the NGBC2420 combines the features of a doubler and a battery charger in a weather, dust and vibration resistant package.

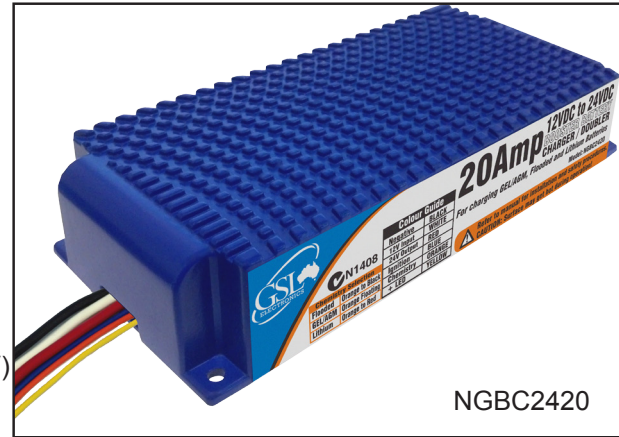
Features include:

- Dual Option - 3-Stage 24V Battery Charger or Voltage Doubler
- Peak Output : 20A (in Doubler Mode) and 15A Cont.
- Selectable output voltages for Lithium (28.8V/26.4V), Sealed Lead Acid (28.4V/27V), Vented Lead Acid (29.2V / 27V) or Doubler (25V/27V/28V)
- Over Current and Temperature protections for extra product reliability.
- High Efficiency : Typical >93%
- Precise under voltage protection : No need for external isolator.
- Latched overload protection for preventing dangerously charging faulty batteries
- Remote LED indication for battery charge status.
- Very low standby current: <3mA

Note: Before installation the user shall determine the suitability of the product to ensure correct application.

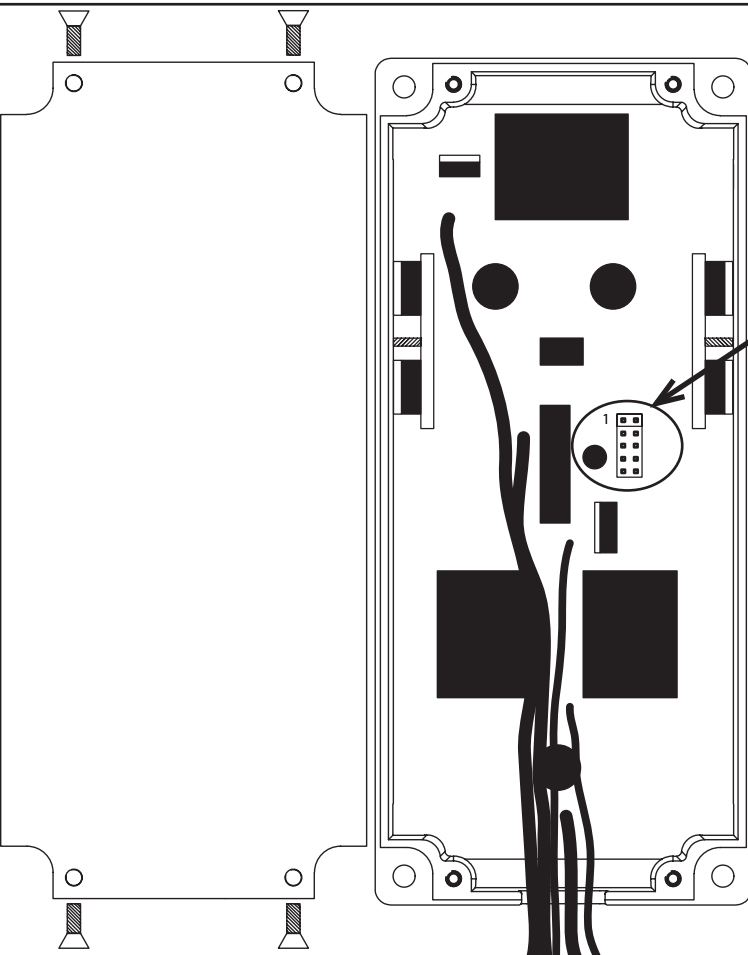
To improve the load transient response we recommend the use of a 24V battery on the output of the unit & set for 28V.

1. Disconnect the battery supply.
2. Set the internal jumper to the setting required ON = Charger, OFF (Factory Default) = Doubler (See Fig.1 below)
3. The following connection sequence is to be followed: Ground (Black), Input (White), Output (Red), LED (Yellow), Chemistry/Output Selection (Orange), Control (Blue). The Black and White wires are to be connected as directly as possible to the 12V input battery.
4. The unit is protected from weather and dust but do not pressure wash or mount to areas that will be submerged. Avoid locations such as fuel lines or where external heat is produced e.g. exhaust system or where the batteries are located.
5. Chose a position with good ventilation where air can pass freely around the unit.
6. Ensure the unit is protected from sources of contamination e.g. oil, grease and dust.
7. Ensure that the unit is installed away from any flammable fumes, liquids or materials.



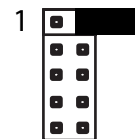
NGBC2420

Fig 1. Changing Operating Mode



To switch between the two operating modes of the NGBC2420:
Remove the 4 x Phillips Head screws affixing the bottom plate.
Remove bottom plate to expose internals
See diagram on left for location of **Operation Selection Jumper**

Operation Selection Positions:



Doubler

Jumper Storage Position (Default)
No Link



Charger Mode

Pins 1 and 2 Linked



Warning: Only connect jumper as directed above.
Linking any other pins may harm the unit.

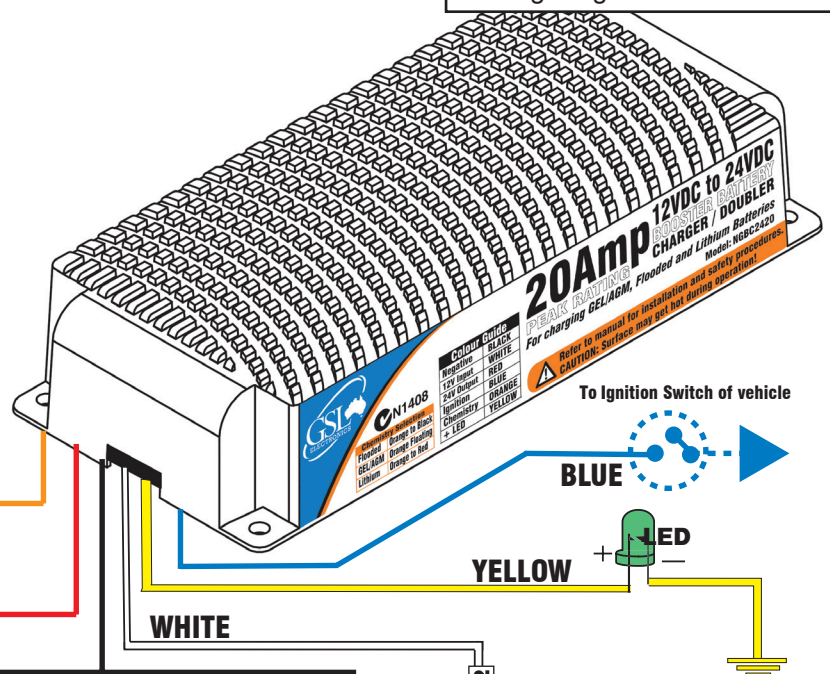
Chemistry Selection in Doubler Mode

To Ground	27V Output
To 12V+	28V Output
Floating	25V Output

Floating/ No Connection



ORANGE



To Ignition Switch of vehicle

BLUE

YELLOW

WHITE

BLACK

Optional: Add 24V Battery to improve transient response.

Fuse Ratings

Fuse 1	20A
Fuse 2	40A

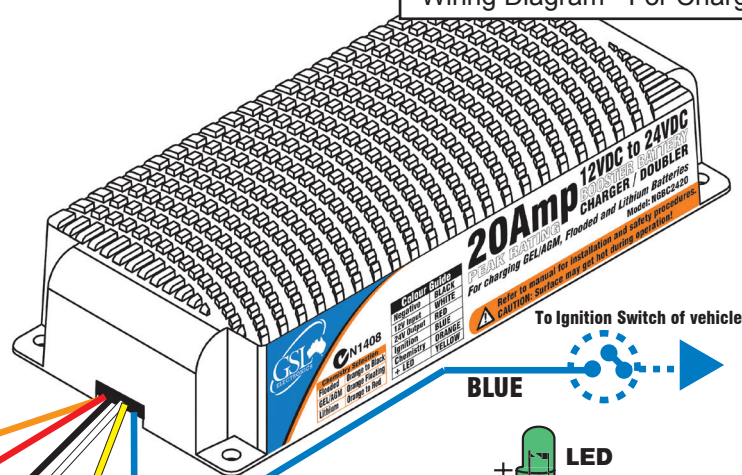
Chemistry Selection

To Ground	Vented Lead Acid
To 12V+	Lithium
Floating	Sealed Lead Acid

Floating/ No Connection



ORANGE



To Ignition Switch of vehicle

BLUE

YELLOW

WHITE

BLACK

Fuse Ratings

Fuse 1	20A
Fuse 2	40A

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>