

System Connection

1

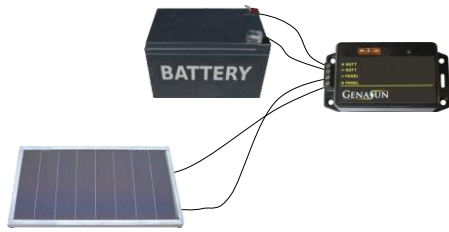
Connect the battery.



- A small spark while connecting the battery is ok.
- The LED should blink once every 8 – 10 seconds once the battery is connected.

2

Connect the Solar Panel.



- If there is enough light on the solar panel to charge the battery, the LED will blink green (see next pane)
- Note that if you connect the solar panel to your system ground, your batteries will be damaged.

Mounting



When choosing a location, please observe the following:

- Do not expose directly to water
- Do not mount near a source of heat.





Run/Charge Indication

The GV-4 has one indicator LED, which can blink either red or green.

 **Standby.** The battery is connected properly, and charging will begin when solar panel power is available.
LED:  [8 – 10s between blinks]

 →  **Charging, with less current than about 1.5 A.**
LED:  [faster blinking]


 ⇨  **Charging, with more current than about 1.5 A.**
LED:  [longer blinks]

 **Current Limit:** The GV-4 is charging the battery with 4A, and the panel could probably produce more power. This system may work better with a GV-9.
LED:  [long blink, then short blink]


 **Battery charged.**
LED:  [on]

Error Indication




Over-temperature: The GV-4 internal temperature is too high.
LED:  [sets of 2 blinks]




Overload: The GV-4 has been overloaded. This could be caused by changing the solar panel connections while the GV-4 is operating.
LED:  [sets of 3 blinks]




Battery voltage too low. The GV-4 cannot begin charging due to low battery voltage. If the nominal battery voltage is correct (12V), charge the battery by some other means before use.
LED:  [sets of 4 blinks]



Battery voltage too high. If the nominal battery voltage is correct (12V), check the functioning of other chargers that may be connected to the system.
LED:  [sets of 5 blinks]

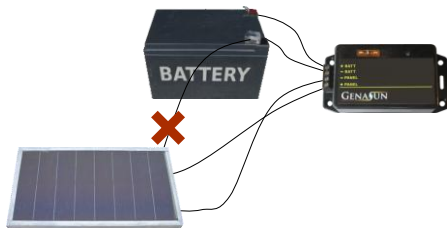


Panel voltage too high: Only 12V nominal solar panels may be used with the GV-4.
LED:  [sets of 6 blinks]

Technical Specs

Maximum Output Current4 A
 Panel Voc..... 0 – 27 V
 Operating Consumption..... 125 µA (0.125 mA)
 Night Consumption 90 µA (0.090 mA)
 Battery Float Voltage 13.8 V
 Absorption Voltage..... 14.4 V
 (GV-4-Li: no absorption stage)
 Battery Float Voltage, GV-4-Li-12.5V 12.5 V
 Battery Float Voltage, GV-4-Li-14.2V 14.2 V
 Battery Float Voltage, GV-4-Li-15.2V 15.2 V
 Battery Float Voltage, GV-4-Li-16.7V 16.7 V
 Electrical Efficiency (typical).....94% - 98%
 Tracking Efficiency (typical)..... 99%
 Operational Temperatures -40°C – 85°C
 Weight2.8 oz., 80 g
 Size 4.3 x 2.2 x 0.9", 11 x 5.6 x 2.5 cm

Note: When the GV-4 it operates, the **positive** side of the battery is connected to the **positive** side of the solar panel.



! Do not connect the solar panel to your system ground!

It is best to connect the solar panel only to the GV-4, and to nothing else.

GENASUN

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The GV line of Solar Charge Controllers with Maximum Power Point Tracking:



GV-4: Available for 12V Lithium or Lead-Acid Batteries. Output current: up to 4A.



GV-9: Available for 12V Lithium or Lead-Acid Batteries. Output current: up to 9A.



GV Boost Controllers for systems with battery voltage **higher** than the panel voltage. “GVB”

GV Boost Controllers are available for systems with 12V, 24V, 36V, and 48V battery voltages.

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GV-4

Genasun Solar Charge Controller with Maximum Power Point Tracking



User's Manual & Operating Instructions: Genasun GV-4 and GV-4-Li