

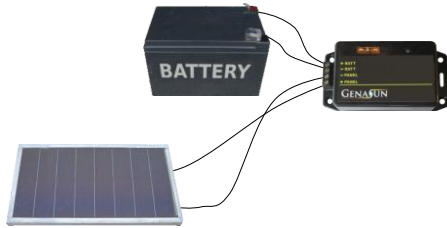
System Connection

1. Connect the Solar Panel.

- Note that if you connect the solar panel to your system ground, your batteries will be damaged
- LED may start blinking. This is OK. Continue to step 2.

2. Connect the Battery.

- A small spark while connecting the battery is ok.



3. Connect the Load.

- Continuous load draw should not exceed 5A.

Mounting

When choosing a location, please observe the following:

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












Warning!















Shorting the panel while the GV-5 is operating will permanently damage the controller.








Run/Charge Indication







The GV-5 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 green blinks]






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









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









  **Current Limit:** The GV-5 is charging the battery with 5A, and the panel could probably produce more power. Might work better with a GV-10.
LED:    
[long green blink, then short green blink]










 **Battery charged.**
LED: 
[solid green]










Error Indication

 **Over-temperature:** The GV-5 internal temperature is too high.
LED:    
[sets of 2 red blinks]

  **Overload:** The GV-5 has been overloaded. This could be caused by changing the solar panel connections while the GV-5 is operating.
LED:      
[sets of 3 red blinks]

  **Battery voltage too low.** The GV-5 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 red 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 red blinks]

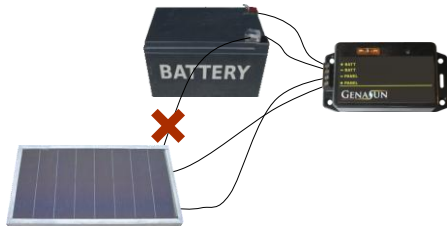
  **Panel voltage too high:** Only 12V nominal solar panels may be used with the GV-5.
LED:       
[sets of 6 red blinks]

Technical Specs

Maximum Output Current5 A
Panel Voc..... 0 – 27 V
Operating Consumption..... 150 μ A (0.150 mA)
Night Consumption 125 μ A (0.125 mA)
Float Voltage 13.8 V
Absorption Voltage..... 14.2 V
Disconnect/Reconnect Voltage..... 11.4/12.5 V
(GV-5-Li: no absorption stage)
GV-5-Li-12.5V, Float Voltage, 12.5 V
Disconnect/Reconnect Voltage..... 9.3/10.5 V
GV-5-Li-14.2V, Float Voltage 14.2 V
Disconnect/Reconnect Voltage..... 12.0/12.4 V
GV-5-Li-16.7V, Float Voltage 16.7 V
Disconnect/Reconnect Voltage..... 12.4/14.0 V

Electrical Efficiency (typical).....94% - 98%
Tracking Efficiency (typical)..... 99%
Continuous LVD Output.....5+A
Operational Temperatures -40°C – 85°C
Weight 2.8 oz., 80 g
Size 4.3 x 2.2 x 0.9", 11 x 5.6 x 2.5 cm

Note: 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!

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-5: Available for 12V Lithium or Lead-Acid Batteries. Output current: up to 5A. Low voltage disconnect for continuous loads up to 5A.

GV-10: Available for 12V Lithium or Lead-Acid Batteries. Output current: up to 10.5A.

GV Boost Controllers for systems with battery voltage **higher** than the panel voltage. GV Boost Controllers are available for systems with 12V, 24V, 36V, and 48V battery voltages.

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GV-5

Genasun Solar Charge Controller with Maximum Power Point Tracking

**User's Manual & Operating Instructions:
Genasun GV-5 and GV-5-Li**