

Godman GRID™

Care and Maintenance

- A Godman GRID™ is virtually maintenance-free as there are no moving parts. However, using the unit and charging the battery whenever convenient/possible will give the battery its longest life.
- Dirt, dust, haze, or shadow will degrade solar charging considerably. Wipe panels when necessary using soft cloth (water and mild detergent may be used). The entire panel must be exposed at the same time for maximum energy conversion – even 5% shadow coverage will drastically reduce charge.
- ALWAYS turn master switch at DC end to OFF when not in use. The parasitic load if left ON will deplete a fully charged battery by about 1-2 amp/hr (~10 days).

Trouble Shooting

Inverter Problems (Inverter ON)

- No output/Volt bar graph lower red: Battery <10 VDC (recharge)
- No AC output/Over-temp indicator lit: Thermal shutdown (turn off, reduce load, allow cool down, restart).
- Motorized power tool will not start: Excessive start-up load or tool requires full sine – tool incompatible with inverter.
- Power tool operating speed not correct: Purely inductive load - add resistive load by operating incandescent lamp concurrently.

Charging Problems (Battery not recharging): Check fuse for charging portal in use (switch upper and lower to verify). Replace with similar specification, 30-amp fuse if necessary.

Refer to the following chart for nominal voltage information and troubleshooting. The battery voltage LCD readout provides insight into charge status when taken into account with battery equalization (or “resting”) information as in the chart.

Battery Condition at 77°F	Nominal Battery Voltage 12V
Battery during equalization charge	Over 15
Battery near full charge while charging	14.4 to 15
Battery near full discharge while charging	12.3 to 13.2
Battery fully charged with light load	12.4 to 12.7
Battery fully charged with heavy load	11.5 to 12.5
No charge or discharge for 6 hours – 100% charged	12.7
No charge or discharge for 6 hours – 80% charged	12.5
No charge or discharge for 6 hours – 60% charged	12.2
No charge or discharge for 6 hours – 40% charged	11.9
No charge or discharge for 6 hours – 20% charged	11.6
No charge or discharge for 6 hours – Fully discharged	11.4
Battery near full discharge while discharging	10.2 to 11.2

Common Audio/Visual Problems

- Television interference: Although inverter is shielded, some interference may be visible, especially with weak TV signals. Try distancing inverter from TV equipment, using shielded antenna cable, adjusting orientations, attaching “ferrite data line filter” to TV power cord, and do not operate high-power devices concurrently. Interference is atypical with pure sine, and all Godman GRIDs are pure sine.