



Samlexamerica®

APPLICATION NOTE

Lithium-Ion Battery Setup for EVO™ Inverter / Chargers

AN#: 011-0222

Parameters for Programming the EVO™ Inverter / Charger for Lithium-Ion Batteries

The EVO™ Inverter/Charger series is able to support charging LiFePO4 batteries. The following items are a quick setup list of parameters that need to be changed from defaults on your EVO-RC or EVO-RC-PLUS remote to get your system up and running with the correct charge profile for Lithium-Ion (LiFePO4) batteries.

The following settings are provided assuming the following:

- LiFePO4 Battery includes an internal Battery Management System (BMS)
- Has a nominal voltage of 12.8 VDC
- EVO™ Inverter Charger default settings are assumed to be programmed

The charge voltage settings are recommended based on typical manufacturer specifications. Reference your battery manufacturer's settings where indicated and adjust accordingly.

The charge profile, low voltage alarm, and shutdown settings are user preference. Recommendations are provided based on typical operation and can be changed to suit your specific use as you become familiar with your system's limits.

EVO™ Parameter	Setting	Notes
Charging Profile	1 = 3 Stage Type 1	Samlex recommendation
Absorption Voltage	14.4 V	Set this based on your battery manufacturer's recommendation."
Float Voltage	13.5 V	Set based on manufacturer's recommendation. If there isn't a recommended setting, contact your manufacturer.
Reset To Bulk	13.0 V	Samlex recommendation
Absorb Time	60 mins	Set this based on your battery manufacturer's recommendation.
Battery Type	Lithium	Samlex recommendation
Low Voltage Alarm	12.0 V	Buzzer will sound at this voltage. This is a user preference setting and a warning that the batteries are discharged.
Battery Low Voltage	11.0 V	EVO™ inverter will shutdown below 11.0v – user preference
LV cut off time	300 seconds	Battery low voltage shutdown occurs 300 seconds after voltage detected – user preference
Reset Voltage	13.2 V	After Battery Low Voltage has been initiated, the battery will need to be charged to this voltage before the inverter will restart.

For specific instructions on how to program the units and other details for your EVO™ system, please refer to the applicable instruction manual:

- EVO-RC-Plus Manual **Section 4**
- EVO-RC Manual **Section 4**

If you have further questions regarding these settings or other elements within your system, please feel free to contact us at Samlex America.

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