

## Introduction

Solar Energy Australia’s Guardian system should only be installed by a suitably qualified person. Solar Energy Australia holds no responsibility for systems that are under sized or perform below customer expectations.

It is the responsibility of the installer and/or integrator to have a comprehensive understanding of the Victron products be installed and application before installing the battery system.

The below recommended settings apply only to battery charge and discharge. All other settings should be reviewed and updated by the system installer.

## SOC Deviation

State of Charge (SOC) can become inaccurate in some cases where the system does not get a full charge over a period of days and / or weeks.

SOC is calculated from coulombs in and out of the battery, where battery capacity is measured as a ‘C rate’. As the rate of charge and discharge change constantly, it is recommended that the battery system be fully charged once a week to recalibrate the SOC.

The below table includes recommended systems for Selectronic Products

Inverter Charger / Battery System	Guardian 26	Guardian 38	Guardian 50
SPMC480-AU	No	YES	YES
SPMC481-AU	No	YES	YES
SPMC482-AU	No	YES	YES

		Guardian 26	Guardian 38	Guardian 50
Quick Start	Battery Type	NMC		
	Battery Capacity	500Ah	750Ah	1000Ah

Inverter Settings	Econo Power Save Mode	
	Econo Mode	DISABLED
	Econo Transition Level	10 W
	Econo Pulse Period	0.5 Sec
	Inverter OutPut	
	Nominal AC Voltage	240 VAC
	Nominal AC Frequency	50 Hz
	DC Shutdown	
	Battery 0% Load	43.4VDC
	Battery 100% Load	43.4VDC
	Recovery Voltage	48VDC
	SOC Shut Down	DISABLED
	Shut Down SOC	0%

# Selectronic Integration Settings

Battery Settings	<b>Limits</b>	
	Max Charge Voltage	58.8VDC
	High Battery Alert Voltage	60VDC
	High Battery Alert Clear Voltage	59VDC
	<b>AC Coupled Trip</b>	
	AC Coupled Trip	60 VDC
	Over Target Charge Voltage Trip	2.0
	Over Target Charge Current Trip	3.0
	Trip Delay	4.0
	<b>BMS Charger Adjustment</b>	
	Float Voltage Adjust	0.0%
	Current Target Scale	100%
	<b>Battery</b>	
	Periodic Equalise	DISABLED
	Equalise Period	28 Days
	Periodic Recharge	DISABLED
	Recharge Period	28 Days
	Soft Battery	DISABLED
	<b>Mid Point</b>	
	Monitoring	DISABLED
	Mid Point Range	5%
	Equalise Request	DISABLED
	<b>SOC Setting</b>	
Peukert's Exponent	1.00	
<b>Over Temp Protection</b>		
Limit Charge above °C	35°C	
Limit Rate %	7%	

Charger Settings	<b>Charge Settings</b>			
	Max Charge Current % or Amps	20% / 100 A	20% / 150 A	20% / 200 A
	Initial Return Voltage	54.2 VDC		
	Initial Return SOC	95%		
	<b>Initial Stage</b>			
	Voltage	57.4 VDC		
	Current	100 A	150 A	200 A
	Time	1 min		
	<b>Bulk Stage</b>			
	Voltage	57.4 VDC		
	Current	100 A	150 A	200 A
	Time	1 min		
	<b>Absorb Stage</b>			
	Voltage	57.4 VDC		
	Current	100 A	150 A	200 A
	<b>Absorb-Float Transition</b>			
	Net Charge	1.0		
	Change Time	30 min		
	Max Time	60 min		
	<b>Float Stage</b>			
	Voltage	56 VDC		
	Current	100 A	150 A	200 A
	Long Term Voltage	56VDC		
	<b>Equalise Stage</b>			
	Voltage	57.4 VDC		
	Current	100 A	150 A	200 A
	Time	1 min		