Eco Series Battery Settings for **Outback** Products

OVERVIEW

Settings listed are only applicable to battery charge and discharge. All other settings are the responsibility of the integrator. All settings are accessed and configured using the Outback MATE3 or appropriate method.

It is the responsibility of the integrator to have a full understanding of Outback products prior to programming, and it is preferred that they have attended the manufacturer's training or integration course, should they be available.

Secondary Charge Source

When multiple DC Solar Charge Controllers are used with a Outback Inverter, there can be some conflicts when charging due to cable impedances and charger reaction times.

It is important that the DC Solar Charge Controllers are set at least 0.3V apart, with one set at the charge target.

SoC Drift

State of Charge ("Soc") drift happens when the product that is calculating SoC builds up an accumulative error. This error is generally due to tolerance of components that measure voltage and current, and algorithms used to calculate the SoC. Most products will reset its accumulative error when the system gets to 100% SoC or float.

It is important that a well-designed battery storage system reaches float stage as regularly as possible, preferably every one to two days to reset SoC drift.

SoC drift can be addressed in many ways.

Examples:

1. Sufficient solar sized to charge batteries to float on the winter equinox.
2. Backup source installed (grid or generator) to allow charging of batteries during extended bad weather or high load events

How many batteries do I need?

The first table outlines the performance of the Outback power inverters and the required quantity of batteries to achieve the full performance of the inverters. The battery quantity is not compulsory, however it's highly recommended as a minimum to reduce possible battery trips, due to over current.

Always consult and read the manufactures documentation before designing, installing and programming their devices.

Recommended Minimum Battery Modules for Outback Inverters

	Eco4840P	Eco4847P
ATL5048E	3	2
FXR3048A	3	2
FXR2348E	3	2
VFXR3048A	3	2
VRXR3048E	3	2

Outback Settings for Inverter Chargers, Hybrid Inverter and MPPTS

	Eco4840P	Eco4847P
Inverter / Charger Settings		
Low Battery – Cut Out Voltage	48V 0% SoC 49.50V 10% SoC 50.20V 20% SoC	
Low Battery – Cut In Voltage	52V	52V
Battery Charger – Absorb Voltage	57.6V	55.7V
Float Voltage Standby (Short Term Float) (Example Cyclic Application)	57.6V	55.7V
Float Voltage Standby (Long Term Float) (Example UPS Application)	54.4V to 56V	55.5V
Battery Charger – Re-Float Voltage	56V	54V
Battery Charger – Re-Bulk Voltage	52.9V	52V
Battery Charger – Absorb Time	4 hours	2 hours
Battery Charger – Float Time	1 hour	
Battery Charger – Equalise	Disable by settings EQ time to zero hours	
MPPT Settings		
Charge Controller – Charger – Absorb Voltage	57.6V	55.7V
Float Voltage Cyclic (Short Term Float) (Example Solar Application)	57.6V	55.7V
Float Voltage Standby (Long Term Float) (Example UPS Application)	54.4V to 56V	55.5V
Charge Current	50% or C2 of Total Battery Capacity	
Charge Controller – Charger – Absorb Time	4 hours	2 hours
Charge Controller – Charger – Charger – ReBulk Voltage	52.9V	52V
Charge Controller – Charger – Absorb End Amps	Calculate 4 Amps for Every 200Ahs Installed	
Charge Controller – Charger – Temperature	Leave as Default or Turn Off	
Charge Controller – Battery Equalise – Equalisation Voltage	Disable by settings EQ time to zero hours	
MATE3s Settings		
MATE3 – FLEXnet DC Adv. Control – Low SoC Warning	20% or Higher	
MATE3 – FLEXnet DC Adv. Control – Critical Soc Warning	10% or Higher	
Battery Monitoring Settings		
Battery Monitor – Battery Setup – Battery Amp hours	Total Installed Battery Capacity in Amp Hours	
Battery Monitor – Battery Setup – Charged	57.6V	56.4V
Battery Monitor – Battery Setup – Charged Return Amps	Calculate 4 Amps for every	
Battery Monitor – Battery Setup – Time	2 Hours	
Battery Monitor – Battery Setup – Charge	96%	
Battery Monitor – Battery Setup – Shunt Enable	Y	

Installers should ensure an adequate system design is carried out at all times. PPE accepts no responsibility for underperforming system designs.
As part of our continued improvement process, settings are subject to change without notice and are correct at time of publishing.