LiFe and 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

	LiFe2433P	LiFe4833P	LiFe4838P	Eco4840P
ATL3024E	4			
ATL5048E		2	2	3
FXR2524A	4			
FXR2024E	4			
FXR3048A		2	2	3
FXR2348E		2	2	3
VFXR2524A	4			
VFXR3024E	4			
VFXR3048A		2	2	3
VRXR3048E		2	2	3

Outback Settings for Inverter Chargers, Hybrid Inverter and MPPTS

	LiFe2433P	LiFe4833P	LiFe4838P	Eco4840P
Inverter / Charger Settings				
Low Battery – Cut Out Voltage	24V 0% SoC 24.75V 10% SoC 25.10 20% SoC	48V 0% SoC 49.50V 10% SoC 50.20V 20% SoC	48V 0% SoC 49.50V 10% SoC 50.20V 20% SoC	48V 0% SoC 49.50V 10% SoC 50.20V 20% SoC
Low Battery – Cut In Voltage	26V	52V	52V	52V
Battery Charger – Absorb Voltage	28.8V	57.6V	56.4V	57.6V
Float Voltage Standby (Short Term Float) (Example Cyclic Application)	28.8V	57.6V	56.4V	57.6V
Float Voltage Standby (Long Term Float) (Example UPS Application)	27.2V to 28V	54.4V to 56V	56.4V	54.4V to 56V
Battery Charger – Re-Float Voltage	28V	56V	55.8V	56V
Battery Charger – Re-Bulk Voltage	26.5V	52.9V	52V	52.9V
Battery Charger – Absorb Time	4 hours		2 hours	4 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	28.8V	57.6V	56.4V	57.6V
Float Voltage Cyclic (Short Term Float) (Example Solar Application)	28.8V	57.6V	56.4V	57.6V
Float Voltage Standby (Long Term Float) (Example UPS Application)	27.2V to 28V	54.4V to 56V	56.4V	54.4V to 56V
Charge Current	50% or C2 of Total Battery Capacity			
Charge Controller – Charger – Absorb Time	4 hours		2 hours	4 hours
Charge Controller – Charger – Charger – ReBulk Voltage	26.5V	52.9V	52V	52.9V
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	28.8V	57.6V	56.4V	57.6V
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.