

# FULLRIVER<sup>®</sup>

## BATTERY

### SOLAR CONFIGURATION SETTINGS:

# MAGNUM

## E N E R G Y

#### Generic Settings Battery Type: AGM 2

#### Custom Settings (recommended)

Battery Type:	Custom
Absorb Volts:	14.7V/29.4V/58.8V**
Float Volts:	13.7V/27.3V/54.6V**

#### EQ MENU:

EQ Volts	14.7/29.4V/58.8V**
EQ Done Time:	0.1 Hours
EQ Reminder Days:	OFF

Note: We do not recommend equalizing AGM batteries, these settings are set to avoid accidental equalization cycles.

#### ADVANCED MENU:

Absorb Done:	SOC (if BMK present) or Amps (if no BMK present)
Absorb Done SOC (if BMK present):	100%
Absorb Done Amps (if no BMK present):	1.75% of bank AH
Max Charge Rate:	Up to 25% of bank Ah* (note: % in setting = Amps)
Max Charge Time:	12.0 Hrs
Final Charge Stage:	Float

Bulk Start:	Daily/SunUp
BTS:	4mV/°C/Cell
<b>BMK SETTINGS:</b>	
Charge Efficiency:	94%
AmpHour Size:	Set to bank's AH

\* - Exception to current limit for DC400-6 on the external threaded stud, 80A max.

\*\* - 12V/24V/48V systems, respectively

#### Notes:

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# SOLAR CONFIGURATION SETTINGS:

## GENERIC SETTINGS

Bulk Voltage:	14.7V/29.4V/58.8V**
Absorption Voltage:	14.7V/29.4V/58.8V**
Float Voltage :	13.7V/27.3V/54.6V**
Absorption Time :	See Formula for Time Calculation
Float Time:	Unlimited
Current Limit:	Up to 25% of bank Ah*
Tail Current/Absorb End Amps/Ending Amps:	1.75% of bank AH
Temperature Compensation:	-4mV/°C/Cell
Equalization Voltage :	14.7V/29.4V/58.8V**
Equalization Time:	0 Hrs
Equalization :	Disabled
Time Calculation Formula:	$[(AH * DOD) / Charge Amps * 0.85] = \text{Time in Hours, typically 2-3, max 4.}$

Note: We do not recommend equalizing AGM batteries, these settings are set to avoid accidental equalization cycles.

\* - Exception to current limit for DC400-6 on the external threaded stud, 80A max.

\*\* - 12V/24V/48V systems, respectively

### 48V LBCO Guidelines based on ~25% DOD (Voltage vs expected load in kW)

DC400-6 (1 String)	DC1150-2 (1 String)	DC400-6 (2 Strings)	DC1150-2 (2 Strings)
49.6V - 1.0kW	50.4V - 2.9kW	49.6V - 2.0kW	50.4V - 5.8kW
48.8V - 1.9kW	49.6V - 5.2kW	48.8V - 3.8kW	49.6V - 10.4kW
48.0V - 3.3kW	48.8V - 9.3kW	48.0V - 6.6kW	48.0V - 34.2kW
47.2V - 5.5kW	48.0V - 17.1kW	47.2V - 11.0kW	

### Bank AH Examples

2x DC400-6 in 12V = 400Ah  
 4x DC400-6 in 12V = 800Ah  
 4x DC400-6 in 24V = 400Ah  
 8x DC400-6 in 24V = 800Ah  
 8x DC400-6 in 48V = 400Ah  
 16x DC400-6 in 48V = 800Ah  
 24x DC400-6 in 48V = 1200Ah

6x DC1150-2 in 12V = 1150Ah  
 12x DC1250-2 in 12V = 2300Ah  
 12x DC1150-2 in 24V = 1150Ah  
 24x DC1150-2 in 24V = 2300Ah  
 24x DC1150-2 in 48V = 1150Ah  
 48x DC1150-2 in 48V = 2300Ah  
 72x DC1150-2 in 48V = 3450Ah

### AGS Settings

24 Hr - LBCO + 1.0V  
 2 Hr - LBCO + 0.5V  
 2 Min - LBCO + 0.2V  
 30 Sec - LBCO + 0.1V

These guidelines are estimates based off of average voltages observed in our testing and may vary slightly from one production batch to another. The numbers represent discharging at 77F/25C, and can vary greatly with the known impacts of ambient temperature differences. If you are unsure of any settings listed in this sheet, please consult a certified solar installer.