



BigBattery

Own Your Power

24V, 36V & 48V EAGLE 2 USER MANUAL



36V EAGLE 2
(FEAGL-36016-G2)



APPLIES TO:
24V EAGLE 2
(FEAGL-24016-G2)



48V EAGLE 2
(FEAGL-48016-G2)

Version 1.3



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1. Definition of Terms

- AWG – American Wire Gauge
- A – Amp(s)
- Ah – Amp hour(s)
- AC – Alternating Current
- Battery Module – Single battery
- Battery System – Two or more battery modules connected to a controller box
- BMS – Battery Management System
- Capacity – Measure of stored energy, typically in Ah or mAh
- Controller Box – Master BMS Unit
- Cell Balancing – Process of ensuring uniform charge among cells in a battery
- Cycle Life – Total charge-discharge cycles before capacity decline
- C-rating – Charging/discharging rate relative to battery capacity
- DC – Direct Current
- DOD – Depth of Discharge
- ESS – Energy Storage System
- kW – Kilowatt
- kWh – Kilowatt-hour
- LFP – Lithium Iron Phosphate or LiFePO₄
- mm – Millimeter(s)
- mV – Millivolt(s)
- Overcharge – Charging beyond recommended voltage limits
- PPE – Personal Protective Equipment
- PV – Photovoltaic
- Self-Discharge – Natural battery discharge over time
- State of Charge (SOC) – Battery's remaining charge as a percentage
- State of Health (SOH) – Overall battery condition and performance
- Thermal Runaway – Dangerous overheating with potential battery damage
- V – Volt(s)

2. Safety Instructions

Note: Read and follow all safety instructions for handling the battery prior to installation.

Lithium Iron Phosphate (LiFePO₄) batteries are an inherently safe chemistry. However, safety measures should always be taken as consideration before, during, and after installation and during ongoing use and maintenance. The following safety notices are crucial for both the installer and end users when operating this product normally.

Improper installation could result in harm to the installer, the operator, or others, as well as damage to the battery or connected equipment.

WARNING:

-  Do not make any connections or disconnections to the system when the batteries are charging or discharging. Working with active batteries can lead to system component damage or pose a risk of electrical shock.
-  Do not charge with a charge voltage above the specified on section 5.1.
-  Do not charge nor discharge battery when ambient temperature is above **55 °C (131 °F)**.
-  Do not install battery where it may contact conductive materials, water, seawater, strong oxidizers, nor strong acids.
-  Do not install battery in a location exposed to direct sun, hot surfaces, nor hot locations. Do not install batteries in a tight clearance compartment, overheating may result.
-  Keep any flammable/combustible material (e.g. paper, cloth, plastic, etc.) that may be ignited by heat, sparks, flames, or any other heat source at a minimum distance of two feet away from the batteries.
-  Disconnect batteries immediately if, during operation or charging, they emit an unusual smell, develop heat, or behave abnormally.
-  Have a Class ABC or Class BC fire extinguisher on the premises.
-  Never short-circuit DC inputs: may result in a risk of electric shock or fire.
-  Do not disassemble the battery: Contact BigBattery for proper handling instructions. Incorrect servicing or re-assembly may result in a risk of electric shock or fire and voiding the warranty

PRECAUTION:

-  Qualified personnel must handle all product work to reduce the risk of electric shock.
-  Follow local and national electrical standards for installation and confirm utility provider and local authorities requirements before grid connection.
-  Maintain visibility of warning labels and nameplates.
-  Choose battery placement with future user safety in mind.
-  Keep children away from the battery and systems.
-  Use team lift technique due to battery weight.
-  Use batteries as directed; do not open or modify.
-  Avoid inserting foreign objects into battery terminals.
-  Handle batteries and/or battery-powered devices cautiously when using metal tools or when around the system. Risk of electrical arcs or short-circuits can cause serious harm, death, and equipment damage.
-  Do not charge or discharge the battery if ambient temperature is below **-20 °C (-4 °F)**.
-  Beware of the battery current: Please ensure that the battery is “off” before installing or working on the battery. Use a voltmeter to confirm there is no voltage present.
-  Always wear protective gear when handling batteries (PPE).
-  Handle batteries carefully to prevent damage; avoid pulling, dragging, or mishandling.
-  Inspect batteries before use; don't use damaged or swollen ones; contact BigBattery immediately.
-  Don't paint any part of the batteries, inside or out.
-  Make sure all cable connections are properly tightened and secured, and to prevent any accident caused by improper installation.
-  Install and remove batteries using the handles provided.
-  Do not place any objects on top of batteries.
-  Before storing battery for more than 6 months, fully charge the battery and disconnect batteries from your system.

Disclaimer:

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3. Introduction

Introducing BigBattery's EAGLE 2! These revolutionary lithium battery systems designed to push the boundaries of efficiency, flexibility, and reliability in energy management are the BEST batteries money can buy. The EAGLE 2 represents a leap forward in energy storage technology, offering a compact and scalable solution for mobile, industrial and off-grid applications. With its cutting-edge features and intelligent design, this advanced lithium battery system promises to empower individuals and organizations to take control of their energy usage like never before. Equipped with one of our EAGLE 2 battery systems from BigBattery, you'll stay powered and prepared!

This User Manual is designed to provide you with an understanding of the specs, features, capabilities, and installation of these batteries. Read and take note of all safety information prior to installing or operating your battery. This document applies to the 24V (FEAGL-24016-G2-00H and FEAGL-24016-G2-0CH) and 48V (FEAGL-48016-G2-0CH) EAGLE battery systems.

3.1 Product Description

The 24V and 48V 1.63 kWh EAGLE 2 battery systems are ideal for low-voltage applications and for your golf carts, RV's, industrial equipment, off-grid power systems, emergency power supplies, and more. The EAGLE 2 is designed to be a drop-in replacement for traditional lead-acid or lithium batteries. Each single battery module is 1.63 kWh and it can be expanded to 16.3 kWh when connecting up to 10 in parallel. These batteries utilize lithium iron phosphate (LiFePO₄ or LFP) cells, renowned for their top-notch safety.

They are waterproof and equipped with an intelligent Battery Management System (BMS) that continuously monitors cell voltage, along with real-time data on current, voltage, and temperature for the module. The BMS features a passive balance function and an advanced battery control method, which collectively enhance battery pack performance. It has built-in heating elements so the battery can be charged in freezing environments temperatures. Furthermore, you can always monitor the batteries' remaining capacity with the led meter. The battery utilizes a standard M8 bolt connection, which easily and safely secures power to your battery unit. Designed to endure, the EAGLE 2 has a lifespan of over 10 years and is engineered to withstand more than 4000 - 6000 cycles at 80% Depth of Discharge (DOD) at a rate of 0.5C.

3.2 Features & Applications

Applications:

- Golf carts
- Electric-Powered Vehicles
- Electric Industrial Equipment
- RVs
- Boats
- Backup Power
- Home
- Off-Grid Cabin

Features:

- Advanced BMS (Battery Management System)
- Lithium-Ion LiFePO4/LFP Chemistry
- Easy connection to a larger power system
- Expandable system with easy parallel connections
- Multiple layers of safety and battery protection
- Built-in heating system
- Impact Resistant
- Waterproof
- Good insulation performance
- High quality & durable ABS construction
- Utilizes standardized M8-bolt connector for battery power source.
- CAN bus Parallel Communication (FEAGL-24016-G2-0CH and FEAGL-48016-G2-0CH only)
- LED SOC Meter

4. Packed Components

4.1 24V EAGLE 2 - No Comms



(X1) 24V 1.63 kWh EAGLE 2
(FEAGL-24016-G2-00H)



(X1) Battery Handle



(X2) M8 Nuts
& Screws

ADD ONS



(X1) Capacity Battery
Meter (MTR105)



(X1) 4AWG Parallel Ring
Terminal Cable Pair [10"]



(X1) 4AWG Ring Terminal
Cable Pair [3 ft] (CBL015)

4.2 24V EAGLE 2 - Comms



(X1) 24V 1.63 kWh EAGLE 2
(FEAGL-24016-G2-0CH)



(X1) Battery Handle



(X2) M8 Nuts
& Screws



(X2) CAN
Comm Cables

ADD ONS



(X1) EAGLE2 SOC Battery
Meter (MTR107)



(X1) 4AWG Parallel Ring
Terminal Cable Pair [10"]



(X1) 4AWG Ring Terminal
Cable Pair [3 ft] (CBL015)

4.3 36V EAGLE 2



(X1) 36V 1.63kWh EAGLE 2
(FEAGL-36016-G2)



(X1) Battery Handle



(X2) M8 Nuts
& Screws



(X2) CAN
Comm Cables

ADD ONS



(X1) EAGLE2 SOC Battery
Meter (MTR107)



(X1) 4AWG Parallel Ring
Terminal Cable Pair [10"]



(X1) 4AWG Ring Terminal
Cable Pair [3 ft] (CBL015)

4.4 48V EAGLE 2



(X1) 48V 1.63 kWh EAGLE 2
(FEAGL-48016-G2-0CH)



(X1) Battery Handle



(X2) M8 Nuts
& Screws



(X2) CAN
Comm Cables

ADD ONS



(X1) EAGLE2 SOC Battery
Meter (MTR107)



(X1) 4AWG Parallel Ring
Terminal Cable Pair [10"]

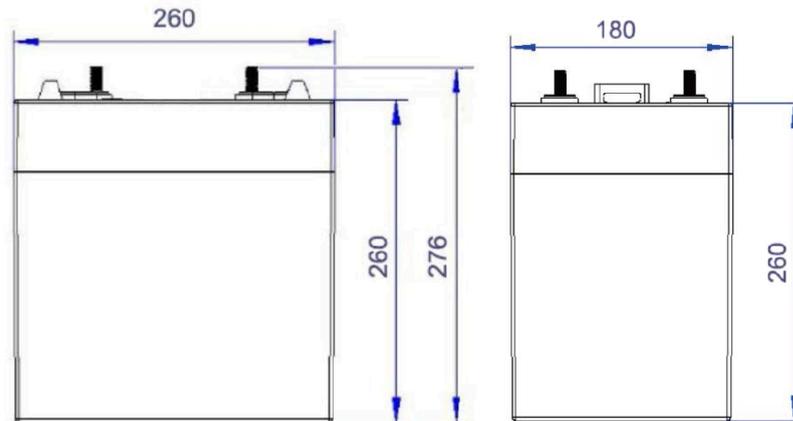


(X1) 4AWG Ring Terminal
Cable Pair [3 ft] (CBL015)

5. Product Specifications

5.1 Battery Overview

Figure 1: EAGLE 2 Battery Overview



Before handling the battery, always switch it off and verify there is no voltage with a voltmeter to prevent accidental contact with live terminals. Failure to do so could lead to severe injury or fatality.

5.2 Battery Specs

BATTERY SPECIFICATIONS



24V



36V



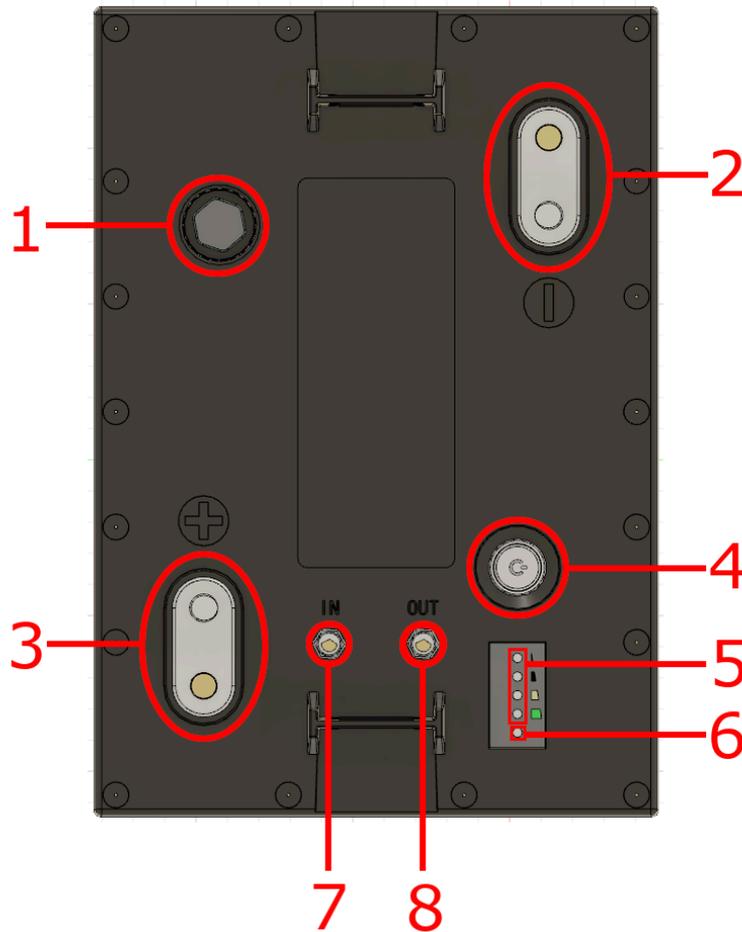
48V

SKU	FEAGL-24016-G2	FEAGL-36016-G2	FEAGL-48016-G2
System Voltage	24V	36V	48V
Nominal Voltage	25.6V	38.4V	51.2V
Chemistry	LiFePO4	LiFePO4	LiFePO4
kWh Capacity	1.63 kWh	1.54 kWh	1.63 kWh
Ah Capacity	64	40	32
Charging Voltage Range	27.8V - 29V	41.7V - 43.2V	55.6V - 58V
Max Charge Voltage	29.2V	43.8V	58.4V
Operating Voltage Range	24V - 28.8V	36V - 43.2V	48V - 58.8V
Suggested Low Voltage Cutoff	24V - 25.4V	36V - 38.1V	48V - 50.8V
BMS Cutoff Range	21V - 23.5V	31.5V - 35.3V	42V - 47V
Cell Configuration	8S	12S	16S
Max Cont. Discharge Current	100A	80A	60A
Max Continuous Power	2560W	3072W	3072W
Max Discharge Peak Current	200A (Max 5 seconds)	200A (Max 5 seconds)	200A (Max 3 seconds)
Max Charge Current	64A	40A	30A
Charge Temperature Range	-4°F - 131°F (-20°C - 55°C)	-4°F - 131°F (-20°C - 55°C)	-4°F - 131°F (-20°C - 55°C)
Discharge Temperature Range	-4°F - 140°F (-20°C - 60°C)	-4°F - 140°F (-20°C - 60°C)	-4°F - 140°F (-20°C - 60°C)
Optimal Discharge Temp. Range	59°F - 95°F (15°C - 35°C)	59°F - 95°F (15°C - 35°C)	59°F - 95°F (15°C - 35°C)
Storage Temp. Range (SoC >50%)	23°F - 95°F (-5°C - 35°C) (Max 3 months) 32°F - 77°F (0°C - 25°C) (Max 12 months)	23°F - 95°F (-5°C - 35°C) (Max 3 months) 32°F - 77°F (0°C - 25°C) (Max 12 months)	23°F - 95°F (-5°C - 35°C) (Max 3 months) 32°F - 77°F (0°C - 25°C) (Max 12 months)
Dimensions (DxWxH)	7.1 x 10.24 x 9.8 in (180 x 260 x 249 mm)	7.1 x 10.24 x 9.8 in (180 x 260 x 249 mm)	7.1 x 10.24 x 9.8 in (180 x 260 x 249 mm)
Weight	33 lbs (15 kg)	36 lbs (16.3 kg)	33 lbs (15 kg)
Max Connections	Up to (10) Parallel	Up to (10) Parallel	Up to (10) Parallel
Protection Rating	IP67	IP67	IP67
Communications	No	No	CANBus
Heating Function	Yes	Yes	Yes

Last Revision Date: 10/10/2025

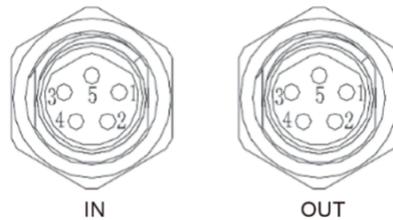
5.3 Battery Diagram

Figure 2: EAGLE 2 Battery Diagram



Item	Name	Description	Details
1	Vent		
2	BAT-	Negative Battery Terminal	M8 Screw
3	BAT+	Positive Battery Terminal	M8 Screw
4	On/Off Button	Button Switch On/Off the BMS	
5	SOC	Battery State of Charge LED Indicators	4 LEDs On = 75-100% 3 LEDs On = 50-75% 2 LEDs On = 25-50% 1 LED On = 0-25%
6	Alarm	Alarm LED Indicator	
7	CAN bus in	Input communication port	M6-5P
8	CAN bus out	Output communication port	M6-5P

5.4 Battery Communication Ports



Pin	CAN INPUT	CAN OUTPUT
1	CAN_L	CAN_L
2	ACC	ACC
3	CH	CH
4	IN	OUT
5	CAN_H	CAN_H

5.5 Battery LED Indicators

5.5.1 Display During Discharging or Idle

SOC	LED 1	LED 2	LED 3	LED 4	LED 5
90~100%	On	On	On	On	Off
70~89%	On	On	On	Off	Off
25~69%	On	On	Off	Off	Off
0~24%	On	Off	Off	Off	Off

5.5.2 Display During Charging

SOC	LED 1	LED 2	LED 3	LED 4	LED 5
90~100%	On	On	On	Flashing 2	Off
70~89%	On	On	Flashing 2	Off	Off
25~69%	On	Flashing 2	Off	Off	Off
0~24%	Flashing 2	Off	Off	Off	Off

5.5.3 Display During Error or Protection State

Error or Protection	LED 1	LED 2	LED 3	LED 4	LED 5
Address Error in Parallel	/	/	/	/	Red On and Orange On
Short Circuit Protection	/	/	/	/	Red On
Over Current (discharge) Protection	/	/	/	/	Red Flashing 1
Over Current (charge) Protection	/	/	/	/	Red Flashing 3
Temperature Protection	/	/	/	/	Orange On
Under Voltage Protection	Flashing 4	Off	Off	Off	Off
Failure Protection	/	/	/	/	Orange Flashing 3

5.5.4 LED Flashing Mode

Item	On	Off
Flashing 1	0.25S	3.75S
Flashing 2	0.5S	0.5S
Flashing 3	0.5S	1.5S
Flashing 4	0.25S	0.25S

5.6 Battery Functions & Modes of Operation

5.6.1 FEAGL-24016-G2-0CH & FEAGL-48016-G2-0CH

Functions	Description
Power on *1	Hold the power button for 1 second until the LEDs start to light up sequentially (from LED1 - LED5). Then the battery LEDs will display the current SOC (battery is on)
Power off *2	Hold the button for 3 seconds until the LEDs start to turn off sequentially (from LED5 - LED1) (battery is off)
Reset	Press and hold the button for 8 seconds until all LEDs flash 5 times and then they turn off (battery is off)
Modes of Operation	Description
Standby mode	The battery is on and LEDs display the current SOC. There is voltage in the terminals. The battery is waiting to be discharged or charged. If the battery discharge current is greater than 0.8A or the charge current is greater than 0.5, then it will enter Operation mode. If the current it's less than these values for 120 hours, then the battery will enter Sleep mode.
Operation mode	Normal operation while the battery is discharging or charging. The discharge current is greater than 0.8A or the charge current is greater than 0.5A. The LEDs display the current SOC.
Sleep mode	All LEDs will be off. The battery will allow voltage to the terminals for 1 minute every 10 minutes, or when the power button is tapped. If a discharge current greater than 0.8A or a charge current greater than 0.5A is detected in the turn-on time period then it will enter Operation mode. Turning the battery off then on will put it into Standby mode and start the 120 hour count over.
Protection mode	See section 5.5.3 for details on the LEDs. If the battery is in an under voltage protection mode then the battery will allow voltage to the terminals for one minute every ten minutes or when the power button is tapped twice. If a charge current greater than 0.5A is detected in the turn-on time period then it will enter Operation mode.

Note *1: Turning on a first gen Eagle 2 - hold the power button for 5 seconds.

Note *2: Turning off a first gen Eagle 2 - tap the power button and then instantaneously (<0.2s) hold it for 5 seconds.

5.6.2 FEAGL-24016-G2-00H

Functions	Description
Power on	Hold the power button for 1 second until the LEDs start to light up sequentially (from LED1 - LED5). Then the battery LEDs will display the current SOC (battery is on)
Power off	Hold the button for 3 seconds until the LEDs start to turn off sequentially (from LED5 - LED1) (battery is off)
Reset	To reset the battery, press and hold the button for 8 seconds until LED1/LED4 is on for two seconds and then they turn off (battery is off).
SOC display	Battery must be on. Press the button once. The LEDs will display the SOC for 6 seconds and then the LEDs will turn off.
Mode of operation	Description
Standby mode	Battery is waiting to be charged or discharged and there is voltage in the terminals. If the battery does not detect a discharge current greater than 0.8A or a charge current greater than 0.5A, then the SOC LEDs will be off. If the current is above these values, then the battery enters Operation mode and the SOC LEDs will be on.
Operation mode	Normal operation while the battery is discharging or charging. The discharge current is greater than 0.8A or the charge current is greater than 0.5A. The LEDs display the current SOC.
Protection mode	See section 5.5.3 for details on the LEDs. If the battery is in an under voltage protection mode then the battery will allow voltage to the terminals for one minute every ten minutes or when the power button is tapped twice. If a charge current greater than 0.5A is detected in the turn-on time period then it will enter Operation mode.

6. Installation



WARNING: Before installing, make sure to review all warnings and precautions in Section 2, as well as the installation safety guidelines in Section 6.1 below.

6.1 Installation Safety Guidelines

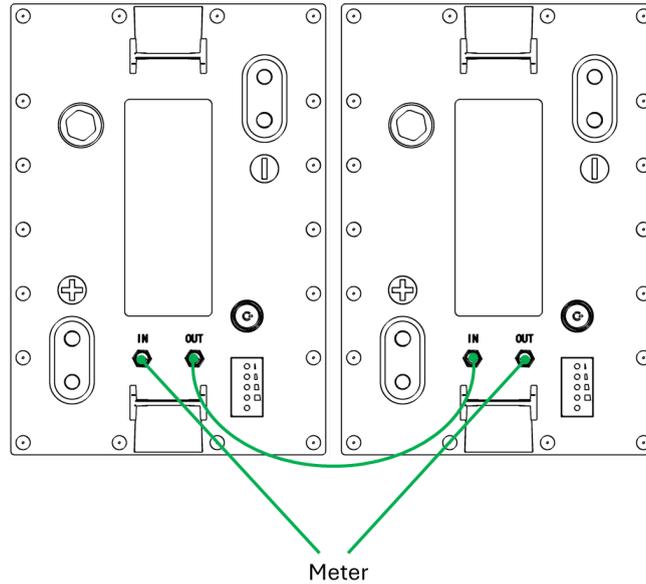
- Inspect batteries upon receipt for any signs of damage before use. In case of battery damage, reach out to BigBattery for repair or replacement. Avoid using a defective battery as it may result in incorrect battery voltage that could potentially ruin your appliances. Damaged batteries have the potential to cause fire hazards.
- Check to ensure that all cables are in good condition.
- Be sure your battery packs are powered **"OFF"** before making/removing any connections.
- It is crucial to never create a short circuit on the external battery terminals. When attaching the battery, ensure that each cable is properly connected to the correct terminal. There should be no conductive material between the terminals that could cause a short circuit.
- Use a screwdriver with a rubber coated handle.
- **Do not put the EAGLE 2 batteries in series.** The BMS and internal components are not designed to handle this setup, which could cause the modules to fail. Always choose the battery voltage to match the voltage range of your system.
- Always mount the battery in an upright position.

6.2 Battery Installation

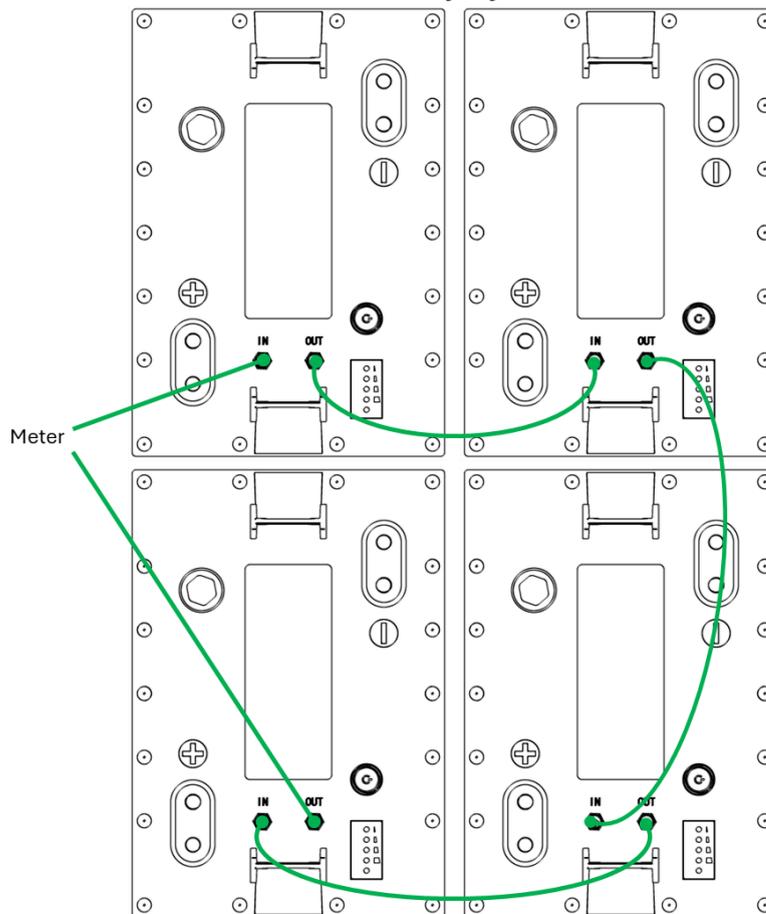
- ① Place the battery on a flat floor or shelf. Make sure all the batteries are off by holding the on/off button for 3 seconds until all the Leds are off.
- ② Using the communication cables provided, connect the first battery "OUT" comm to the "IN" comm of the second battery and secure the connections. Keep connecting each battery's "OUT" to the next one's "IN" in a chain, like in Figure 3. The first or final battery in the daisy chain will be connected to the meter.

Figure 3: EAGLE 2 Comm Cable Connection Diagram

2 Battery System



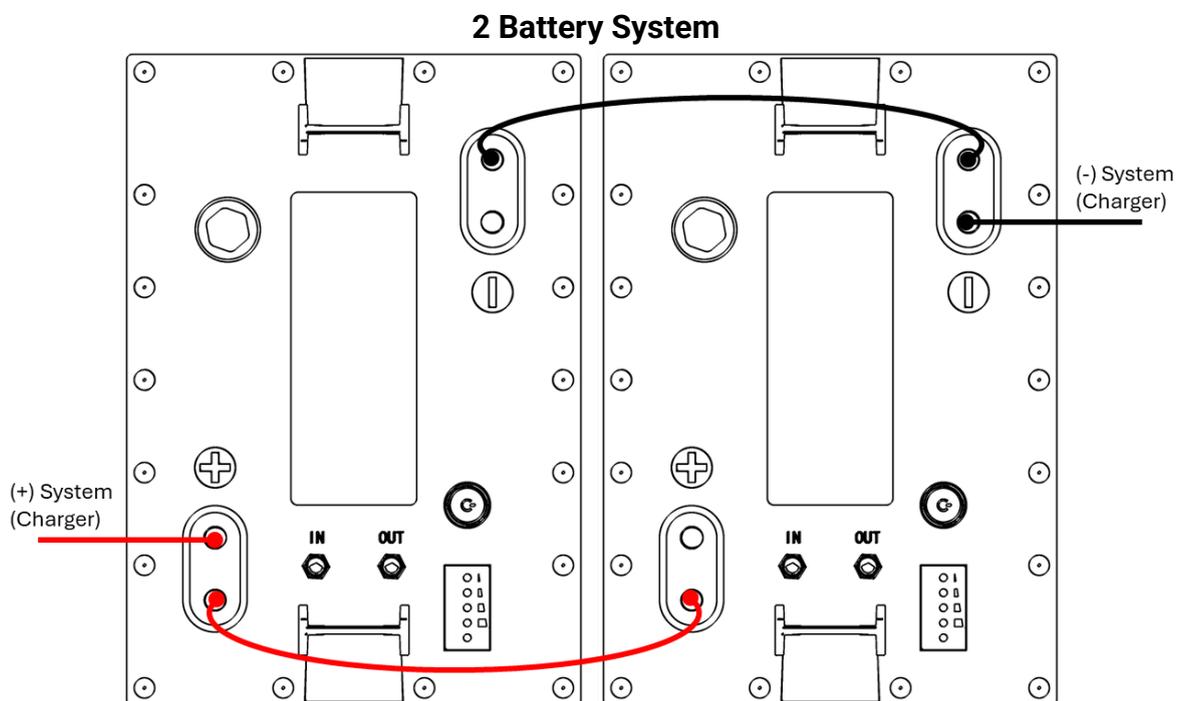
4 Battery System



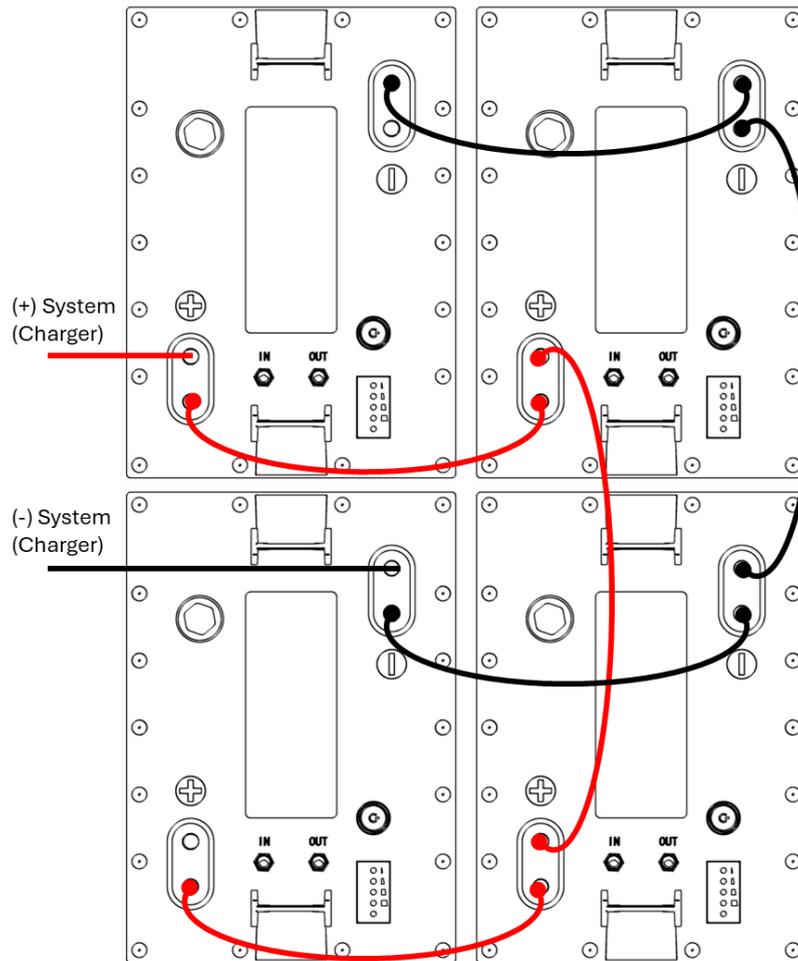
- ③ Using the parallel cable, connect the positive parallel ring terminal cable to the first battery positive m8 terminal (male or female) and to the second battery m8 terminal (male or female) and so on until the last battery. Repeat the process using the negative parallel ring terminal cable. In other words, connect all the positive terminals to each other and all the negative terminals to each other.

Then, connect the first battery positive and last battery negative terminal to your system. (Golf cart, EV, inverter, etc). When charging the battery system use these same terminals for the positive and negative leads on the charger as shown in figure 4.

Figure 4: EAGLE 2 Power Cable Connection Diagram



4 Battery System



- ④ Connect the positive and negative ring terminals of the battery capacity meter to any battery. Turn on the battery by holding the power button on the first or last battery of the chain for 1 second until all the LEDs of all the batteries turn on.

7. Battery Operation Guide

 **WARNING:** Before installing, make sure to review all the parameters listed on chapter 5.2.

7.1 Charging

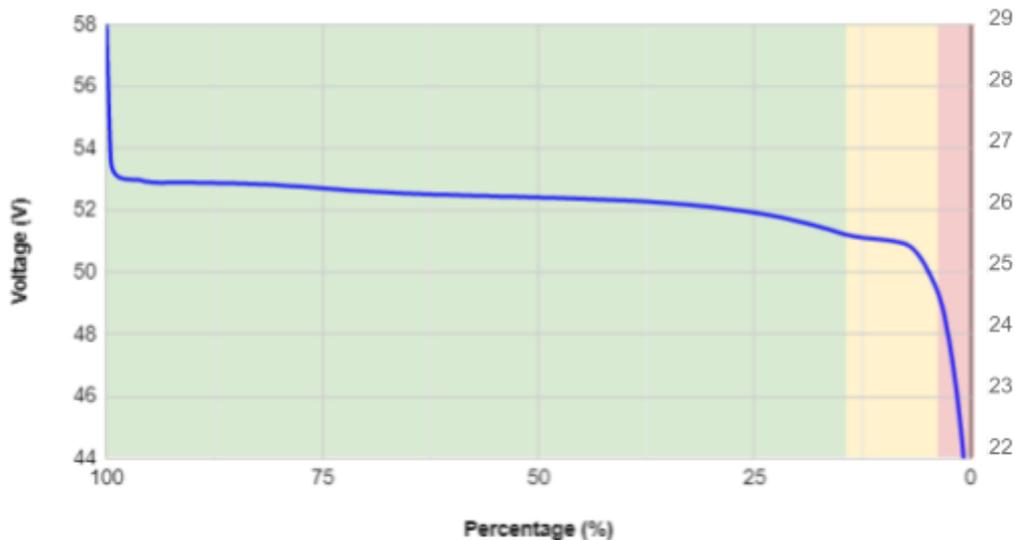
- Only use the battery charger provided by BigBattery, or the inverter charging settings listed on section 5.2. Using non-recommended chargers may cause improper charging and damage the battery's capacity.
- The battery can be charged in freezing temperatures (-20 °C / -4 °F) thanks to a heating element. When charging is detected, the heating will start until the battery temperature is above 0°C / 32°F and then the charging will start.
- Use LiFePO4 batteries for "opportunity charging." Charge them whenever you can but do it with BigBattery provided chargers. It's better to do this than using fast chargers. Fast charging can make the battery's life shorter.
- It is suggested to charge the battery when it has a minimum of 10-20% SOC. Deep discharge won't harm the battery's health, but the BMS requires some voltage to function properly.
- The Bulk/Absorb Voltage of an LFP battery is the same as the charging voltage. BigBattery products do not need Float Voltage, Equalize voltage or absorption time.

7.2 Discharging

- The battery can be fully discharged. Unlike lead-acid batteries, the Voltage of a lithium battery stays very constant during discharge, delivering the same amount of power and energy from 100% to 0% SOC.
- LFP batteries handle discharging to 0% safely, but shallower cycles offer benefits. Opting for 20% SOC, instead of 0%, extends the battery's lifespan to more than 6000 cycles.
- Do not discharge if the temperature is above 55 °C / 131 °F.
- You will see an apparent loss of capacity when discharging at below-freezing temperatures that reverses when the battery gets above freezing.
- The BMS will automatically shut down when the battery reaches a low voltage, so there's no need for manual intervention. Avoid over discharging by removing the load when the battery's discharge is done.

7.3 State of Charge

This is the Depth of Discharge of the EAGLE 2 family batteries:



	Cycling in this zone will ensure a reasonable life expectancy
	Occasionally this zone is OK
	Dropping into this zone can reduce lifespan.

7.3 Storage

- LFP batteries have an extremely low self-discharge rate, which makes long-term storage convenient. Storing a lithium battery for up to a year is not an issue, as long as it has some charge remaining before being placed in storage.
- Before storing lithium-ion batteries, charge them to at least 50% charging level. Do not store batteries that are fully discharged. In the case of a fully charged battery, it should be discharged to 80% before it is stored.
- If you need to store batteries for longer periods, be sure to simply disconnect all wires from them. That way there can not be any stray loads that slowly discharge the batteries.
- Make sure that you store the battery within the temperatures listed on section 5.2. Storing them at low temperatures is certainly much better than storage at high temperatures. The electrolyte in LiFePO₄ cells does not contain any water, so even when it freezes it does not expand, and

does not damage the cells. Just let the battery warm up a bit before you start discharging it again, which is OK at -4 °F (-20 °C).

This is the storage temperature that the batteries should be stored, and the charging intervals and methods to do so.

Storage Temperature	Charging Interval	Charging Method	Model
≤20°C	Once / 9M	28V 50A CC/CV Charging to 28V, cut-off current: 5A	24V EAGLE 2
20°C~30°C	Once / 6M		
30°C~40°C	Once / 3M		
≤20°C	Once / 9M	56V 30A CC/CV Charging to 56V, cut-off current: 5A	48V EAGLE 2
20°C~30°C	Once / 6M		
30°C~40°C	Once / 3M		

7.4 Extend the Life of Your Battery

The EAGLE 2 Battery is designed for a lifespan of 10 years or more when used correctly. To ensure a proper battery operation, you must follow the previous listed instructions and battery parameters. In order to extend the lifespan of your battery, follow these recommendations.

- Avoid discharging the battery more than 80% Depth of Discharge (DOD) unless it is truly necessary.
- Keep the battery temperature under 95 °F (35 °C) and above 59 °F (15 °C)
- Keep battery charge and discharge current under 0.5 of the Capacity (C-rating)
- Never disassemble the battery, unless our tech support guides you. If the battery has any problems, contact us for assistance.
- Keep the battery away from excessive physical shocks or vibration. These can damage the battery’s internal structure and hamper its operation.
- Dirty battery terminals can lead to improper flow of current during operation. Therefore, it is recommended that you clean the terminals while installing the battery pack.

8. Service

8.1 Troubleshooting

No.	Error	Description	Solution
1	No DC output	Battery is off or low voltage	Turn ON or charge the battery
2	Power supply time is too short	Battery capacity lack or not fully charged	Fully Charge the battery. Maintenance or replacement
3	Battery can't be charged fully	Power system DC output voltage falls below the minimum charge voltage	Regulating DC output voltage of power supply to battery suitable charging voltage
4	ALM LED always lights	Power line connection short circuit	Disconnect the power cable and check all cables
5	The battery output voltage is unstable	Battery management system do not operate normally	Press the switch to restart the battery
6	The charge and discharge capacity is insufficient	Unbalance voltage with cell	Examine/balance the cell
7	Unable to charge and discharge	BMS or cell/temperature sensor damaged	Maintenance or replacement
8	Different SOC value of batteries in parallel	Normal phenomenon	No operation
9	Alarm is ON	Current Protection	Charging or Discharging Current is too high and needs to be reduced.
10	Alarm is ON	Over Temperature	Turn off the battery and cool down the location however possible.
11	Alarm is ON	End-Off Voltage	Double tap power button to charge the battery

8.2 Maintenance

Item	Maintenance	Maintenance Intervals
Power Cables	Check whether there is mechanical damage to the power cable and whether the terminal insulation sleeve has fallen off; if there is such a phenomenon, please turn off the machine and carry out maintenance or replacement	Once every 6 months
	check whether the power cable is loose; if there is any sign of looseness, please use a standard torque wrench to tighten it	
	check the system for loose screws or discoloration of the copper bus bar; if the screws are loose, please tighten them with a standard torque wrench; if the copper bus bar is discolored, please contact the manufacturer for after-sales replacement	
Comm Cables	check whether the parallel communication cable terminal is loose, if it is loose, re-tighten it	Once a year
	check whether the color of the communication cable has obvious discoloration, if discoloration, please shut down the machine to replace the communication cable	
Cabinet	Check the cleanliness of the front door, back door and battery module inside the cabinet, if there is obvious dusty, please clean up in time.	Once 6-12 months
System Running Status	check if all parameters are normal when the system is running (voltage, current, temperature, etc.)	Once every 6 months
	check whether the main core components of the system are normal, including system switches, contactors, etc. are normal	
	check whether the system air inlet and outlet, air ducts are normal, if there is blockage and congestion, need to clean up in time	
Charge and Discharge Maintenance	Use light load and shallow charge/discharge to check whether the SOC, SOH status of the battery is normal (using the upper computer software to read); it is recommended that the depth of discharge and charge/discharge power should not exceed 20% of the rated value	Once every 6 months

9. Recycling

Lithium iron phosphate batteries are potentially dangerous and shouldn't be tossed in the trash. Many websites and organizations can recycle them for free. If you're in the U.S. or anywhere globally, search for "Lithium Battery Disposal Near Me" online. Numerous places can safely dispose of these batteries. Make sure to call first to confirm they're open.

If you can't find a safe disposal option, contact our customer service team instead of improperly disposing of the battery. We can take care of recycling your batteries for you.

10. Warranty & Returns

In the unlikely event you are having an issue with one of our batteries we have developed a straightforward warranty & return policy which is detailed in the following link:

<https://bigbattery.com/policies/>

For more information and support please visit our website and reach us at:

BigBattery Inc.
Technical Support Team
support@bigbattery.com
(818) 280-3091, ext. 1005
9667 Owensmouth Ave., Suite 105
Chatsworth, California 91311



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