

KICKASS[®]

150Ah LITHIUM POWER STATION USER MANUAL



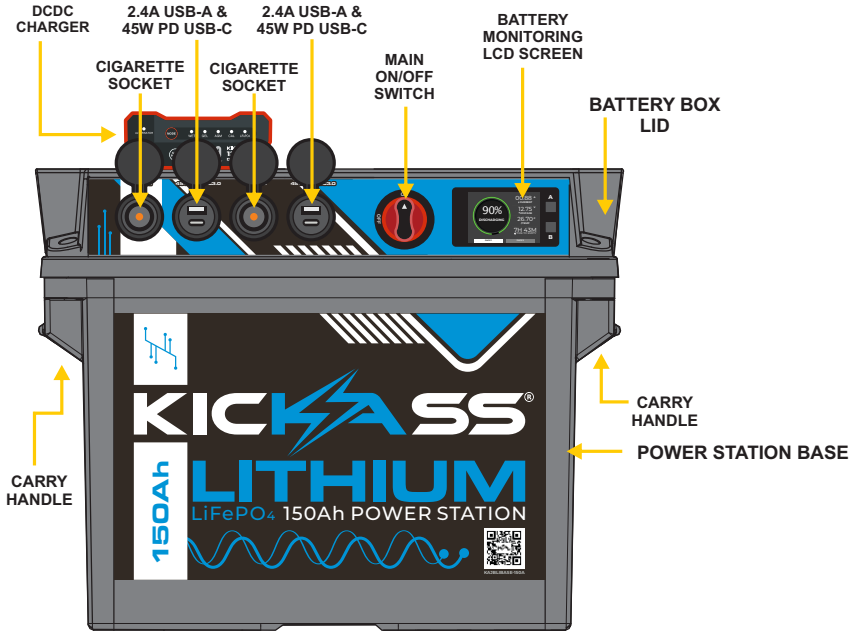
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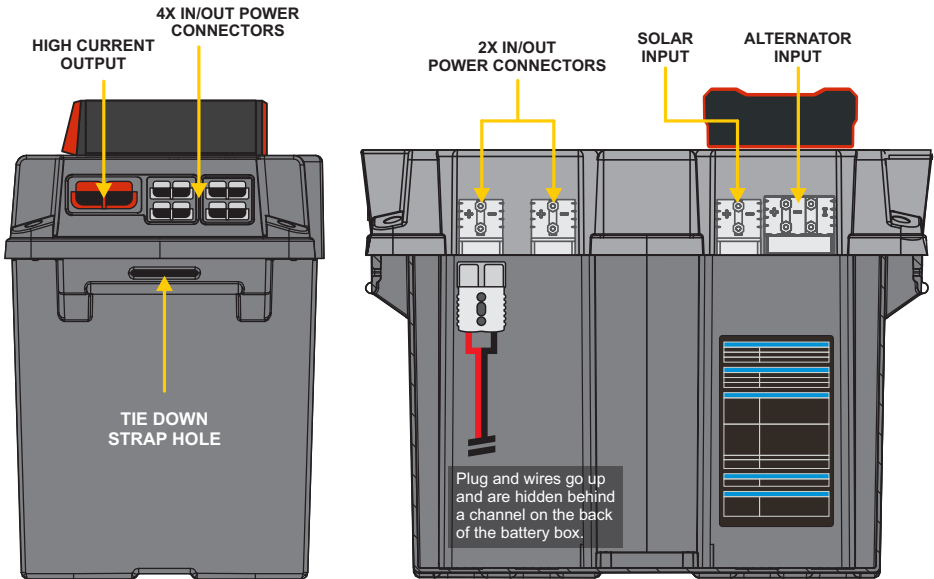
IMPORTANT SAFETY INSTRUCTIONS

- The total current draw from the battery must not exceed the maximum discharge rating of the battery. Should the maximum current draw be exceeded, the battery management system will trigger the over current protection mode.
- The lid of the Power Station must remain shut at all times whilst charging.
- Do not allow any conductive objects to fall into the battery box or enter any of the input / output ports.
- Never insert anything other than a compatible electrical plug into any of the ports on the Power Station
- Ensure that the Power Station has been correctly assembled and the screws are tight before powering any devices.
- This Power Station is not suitable for jump starting vehicle batteries.
- Ensure that the charger used is compatible with lithium batteries.
- Do not use the battery for cranking/starting applications.
- Do not allow the battery to sit in a discharged state ≤ 10.0 V.
- Ensure the Power Station is installed away from major heat sources, high voltage, and avoid exposure to sunlight for long periods of time.

OVERVIEW



FRONT



SIDE

BACK

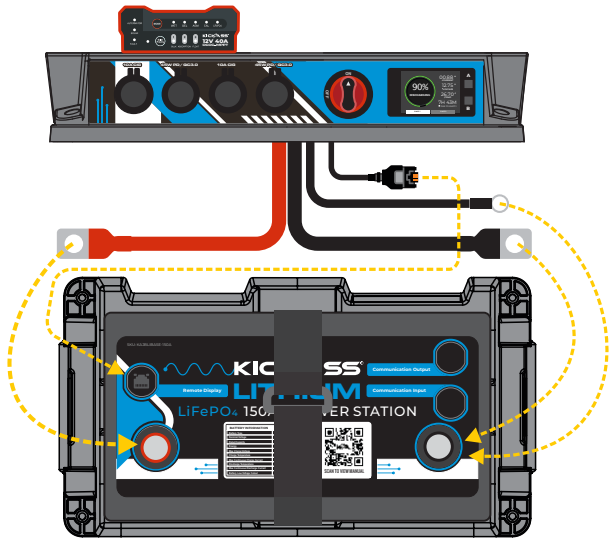
GETTING STARTED

Step 1: Install the battery cables onto the terminal posts of the battery.

Ensure the red cable is connected to the positive (+) terminal, the black cable connected to the negative (-) terminal.

Tighten firmly but be sure not to over tighten the battery terminals.

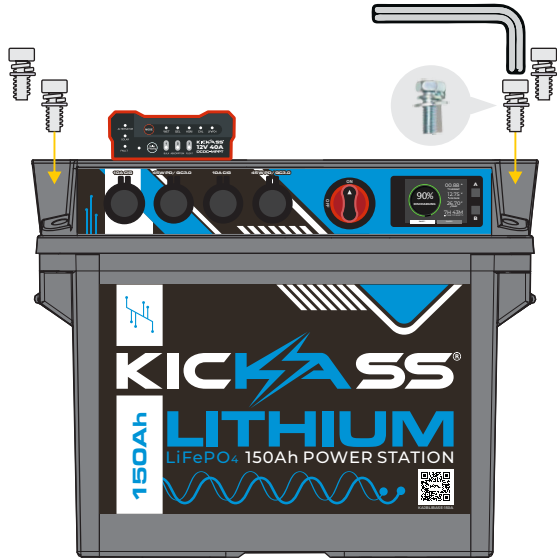
Connect the RJ45 data cable from the Power Station Lid to the Remote Display data port in the Power Station Base.



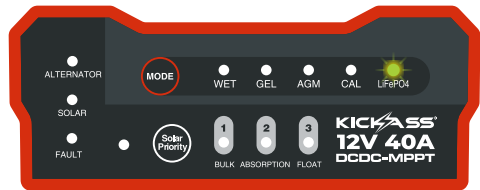
Step 2: Tuck cables in under the Power Station lid, lowering the lid carefully onto the box - ensuring the lid is correctly oriented.



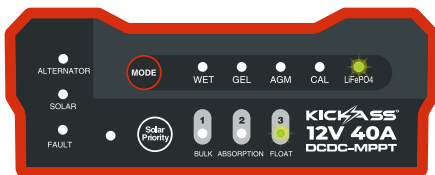
Step 3: Install the 4 x bolts to fasten the lid to the base. Ensure that a spring, then a flat washer (provided) are used in the installation.



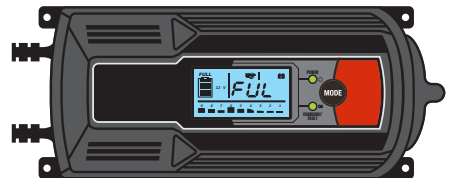
Step 4: Ensure Lithium is selected as the battery type. If it is not, select Lithium as the battery type on the DCDC charger by holding the MODE button for 5 seconds or until the battery type LED changes. Continue to change the battery type until Lithium is selected.



Step 5: Once the Power Station is assembled, ensure the unit is completely charged prior to use. This can be achieved through the integrated DCDC charger, or an external ACDC charger. The Power Station should be charged until the battery charger reaches the FLOAT charging stage.



OR



BATTERY

Features

- 150Ah Lithium Ion Phosphate (LiFePO₄) battery.
- 150A Internal Battery Management System (BMS).
- BMS supervised Lithium Battery Protection and alarms.
- Bluetooth compatibility with KickAss app (Android and iOS).
- LCD screen unit connection to BMS.
- Approximately 2000 cycles at 80% DOD, and up to 4000 cycles at lower discharge rates.
- Low self-discharge and long shelf life.
- The total current draw from the battery must not exceed 150 Amps. Exceeding 150A continuously will trigger the BMS over current protection feature.

BMS Protection Features

- Battery over and under voltage protection.
- Cell over and under voltage protection.
- Battery over and under temperature protection.
- Battery over charge and discharge current protection.
- Battery pulse over discharge protection.
- Battery short circuit protection.



Battery Weight	17.65kg
Battery Chemistry	LiFePO ₄
Nominal Voltage	12.8V
Battery Capacity	150Ah
Max Charge Current	150A
Max Discharge Current	150A
Operating Temperature	Charge 0°C ~ 55°C Discharge -20°C ~ 60°C
Self Discharge	<3% per month @ 25°C

OPTIONAL ACCESSORIES

MOUNTING TRAY (OPTIONAL)

Step 1:

Confirm install location of tray, drilling any required holes.

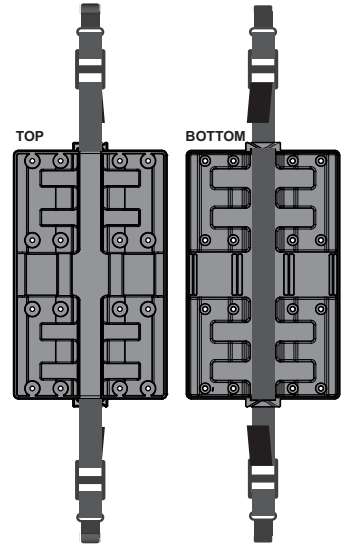
Install the strap under the tray, sliding the strap into the slots on either side.

Ensure strap is oriented correctly so that the hooks face toward the Power Station when installed.

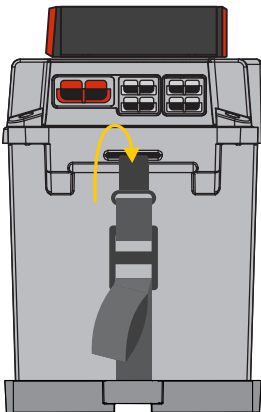
Securely affix the tray in position using bolts or screws, whichever is applicable.

Ensure that washers are used when installing the tray, to avoid damage.

Note: KickAss do not provide the screws or bolts for this installation.

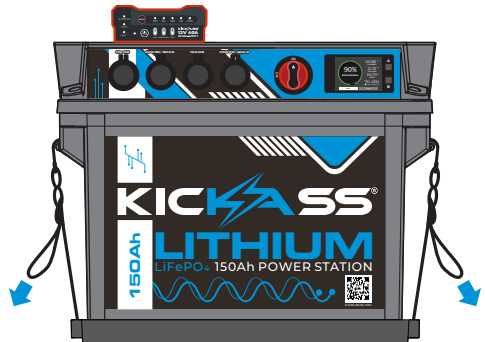


Step 2: Ensure straps are laying outside the tray before lowering the battery box carefully onto the tray. Attach each strap hook to the corresponding slot in the Power Station.



Step 3: For ease of tightening, place thumbs in each strap loop, pushing firmly downwards. The strap should tighten and hold the Power Station firmly in place.

To release, depress the buckle and pull the strap to loosen.



Inverter Cables (Optional)

KickAss Inverter cables have been designed to allow you to easily connect a high powered inverter to the Power Station. When it comes to Inverter cables, there is no substitute for quality and these KickAss Inverter cables have been designed to work flawlessly and to provide a high current flow to your inverter.



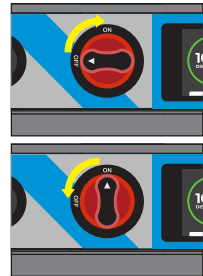
SWITCH

The Master Switch

The Master Switch disconnects everything (except for the large 175 Amp Anderson style plug and the LCD screen) from the battery, including the DCDC Charger. Turning it off is a quick way to disconnect all devices to ensure your battery is not being drained.

Note: The DCDC Charger + Solar Regulator cannot charge the internal battery while the Master Switch is in the OFF position, neither can an externally connected charger.

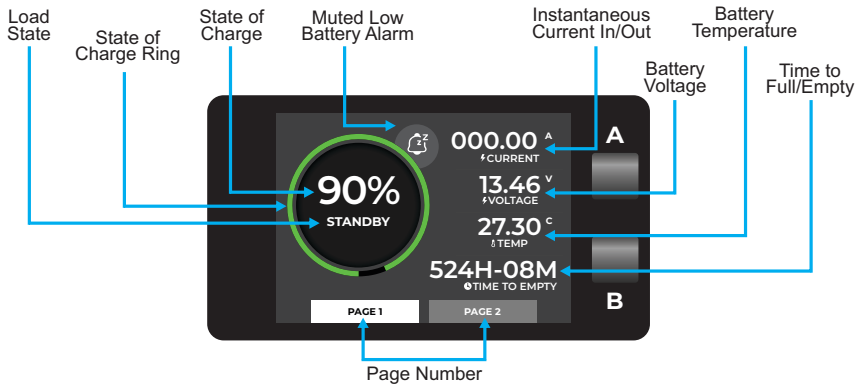
Note: Only use this switch when placing the battery in storage and not attempting to charge.



LCD SCREEN

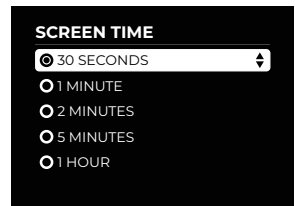
The KickAss Lithium Battery Box Monitor has a display and two buttons. The screen is used to monitor the state and condition of the battery. The display features the following:

- Battery state of charge (SOC).
- Instantaneous current flow, positive when charging, negative when discharging.
- Battery pack voltage.
- Battery temperature.
- Remaining time to full/empty at the current rate of charge/discharge.
- Total capacity of battery .
- Mutable low battery alarm.
- Battery capacity condition state (excellent, good, fair, bad).
- Battery protection alarms.



Turning the screen on/off

The screen can be turned on/off by clicking Button B. To save power, the screen will turn off automatically after prolonged inactivity. To set the duration of the screen "On" time before turning off, hold Button B for five seconds until the SCREEN TIME menu appears. Navigate through the menu using the buttons. To confirm selection, wait 5 seconds for the home screen to return.

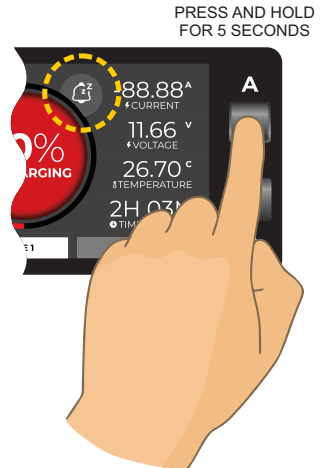


Switching between displays

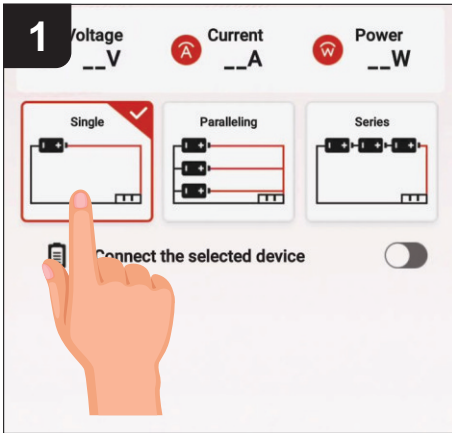
The display can be switched between Page 1 and Page 2 by clicking Button A.

Low battery alarm & muting feature

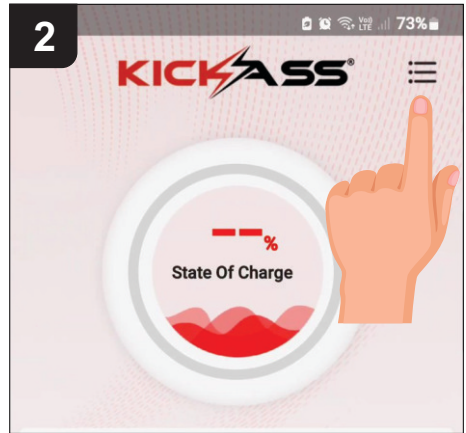
A low battery alarm will sound when the battery's state of charge falls below 10%. To mute the alarm, press and hold button A for 5 seconds or until the muted symbol displays on page 1 of the display. The alarm will stay muted for 8hrs or until the battery is charged sufficiently.



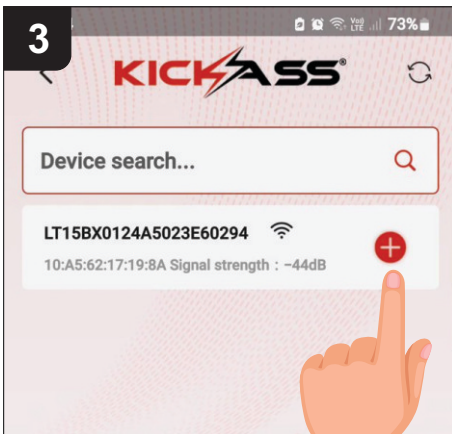
BLUETOOTH APP CONNECTION AND OPERATION



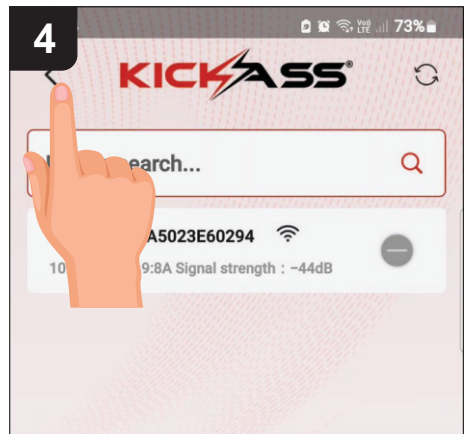
When the app is first launched, select “Single” battery configuration. The parallel and series configuration are not applicable when the battery is configured as a Power Station.



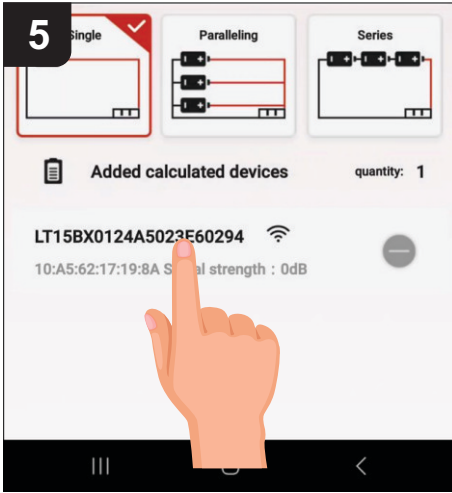
To scan for a new battery, select the scan option at the top of the page.



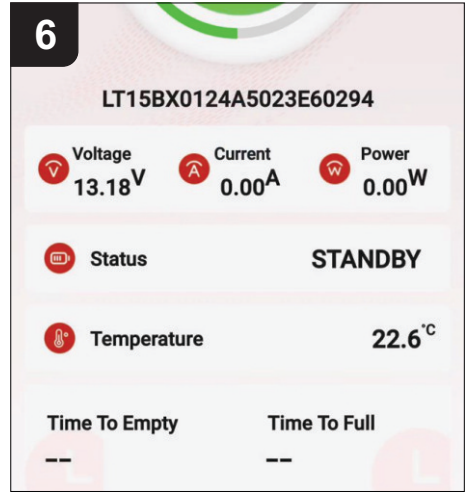
To select your battery, click the red icon next to the battery serial number. You can find the serial number printed on the back of your battery.



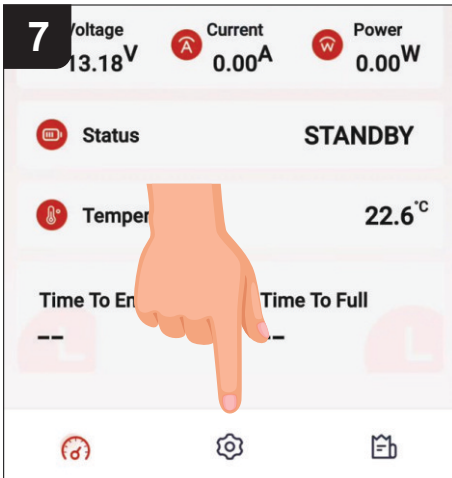
Once the battery has been selected, the red icon will turn grey. Select the back ◀ button at the top of the page to return to the main battery summary page.



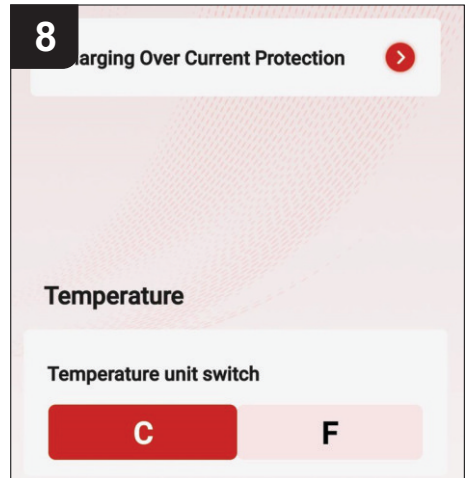
The state of charge (SOC), battery voltage, current and average power are shown on the main battery summary page. For detailed information about the battery, click on the battery serial number.



The detailed battery information page shows state of charge (SOC), battery voltage, current, average power, status (standby, discharging, charging), battery temperature, time to full and time to empty

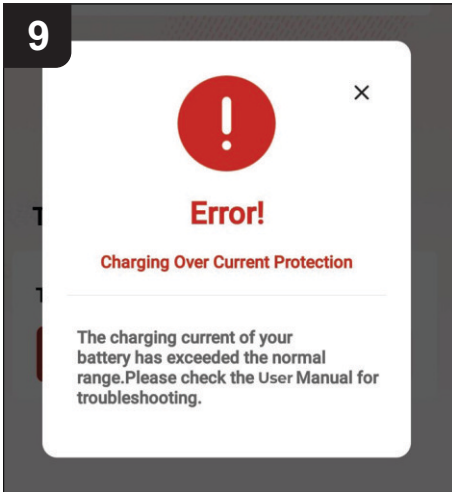


For system warning information and to change the temperature units, press the settings icon.

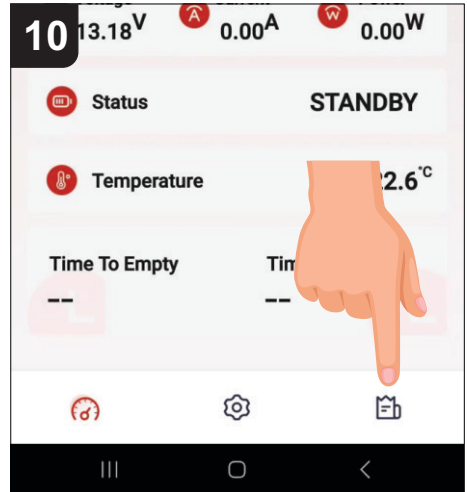


Active system warnings will be shown on this page. Select the red arrow for further information.

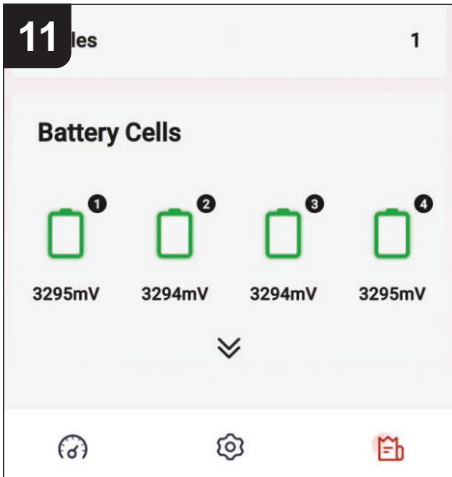
Select the preferred temperature units for display.



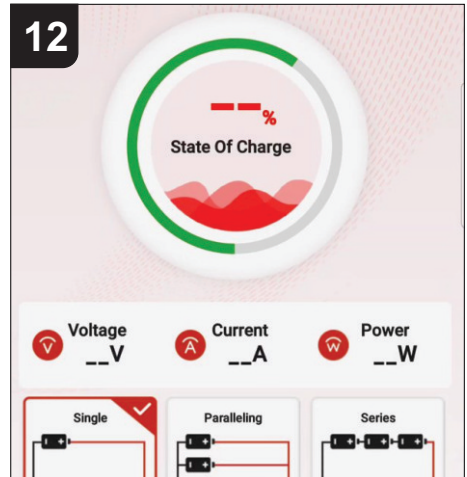
Example of further information of a system warning.



Select the configuration button battery performance information.












The battery performance page shows the battery health, the serial number / name, rated capacity, cycle count and cell voltage information.



After disconnecting from the battery, the battery can be reselected from the quick start list on the main page of the app. To reconnect to the battery, press the red plus symbol.

KICKASS LITHIUM BMS ALARM MODES

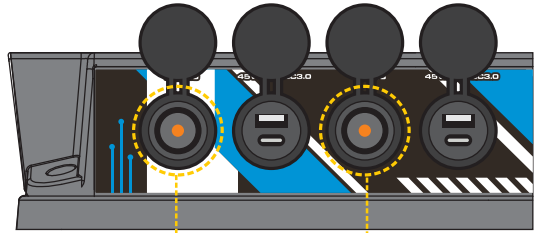
ALARM MODE	APP SYSTEM WARNING	LCD SCREEN SYSTEM WARNING
<p>Over Voltage Protection: The voltage of your battery has exceeded the normal range. Remove charger from battery.</p>	<p>Charging Over Voltage Error</p> <p>View Error</p>	 <p>CHARGING OVER VOLTAGE (Check Manual)</p>
<p>Under Voltage Protection: The voltage of your battery is below the normal range. Connect charger to battery.</p>	<p>Under Voltage Error</p> <p>View Error</p>	 <p>UNDER VOLTAGE (Please Recharge)</p>
<p>Charging High Temperature Protection: The temperature of your battery has exceeded the normal range. Disconnect all loads/chargers and place your battery in a cooler location.</p>	<p>Charging High Temperature Error</p> <p>View Error</p>	 <p>CHARGING HIGH TEMPERATURE (Check Manual)</p>
<p>Charging Low Temperature Protection: The temperature of your battery is below the normal range. Disconnect all loads/chargers and place your battery in a warmer location.</p>	<p>Charging Low Temperature Error</p> <p>View Error</p>	 <p>CHARGING LOW TEMPERATURE (Check Manual)</p>
<p>Discharging High Temperature Protection: The temperature of your battery has exceeded the normal range. Disconnect all loads/chargers and place your battery in a cooler location.</p>	<p>Discharging High Temperature Error</p> <p>View Error</p>	 <p>DISCHARGING HIGH TEMPERATURE (Check Manual)</p>
<p>Discharging Low Temperature Protection: The temperature of your battery is below the normal range. Disconnect all loads/chargers and place your battery in a warmer location.</p>	<p>Discharging Low Temperature Error</p> <p>View Error</p>	 <p>DISCHARGING LOW TEMPERATURE (Check Manual)</p>
<p>Charging Over Current Protection: The charging current of your battery has exceeded the normal range. Disconnect all chargers from the battery.</p>	<p>Charging Over Current Error</p> <p>View Error</p>	 <p>CHARGING OVERCURRENT (Check Manual)</p>
<p>Discharging Over Current Protection: The discharging current of your battery has exceeded the normal range. Disconnect all load from the battery.</p>	<p>Discharging Over Current Error</p> <p>View Error</p>	 <p>DISCHARGING OVERCURRENT (Check Manual)</p>
<p>Short Circuit Protection: The battery has short-circuited. Check all wiring and connections for short circuits.</p>	<p>Short Circuit Protection Error</p> <p>View Error</p>	 <p>Short Circuit Protection (Check Manual)</p>

CONNECTIONS

► **OUTPUTS**

2 X CIGARETTE SOCKET OUTPUTS

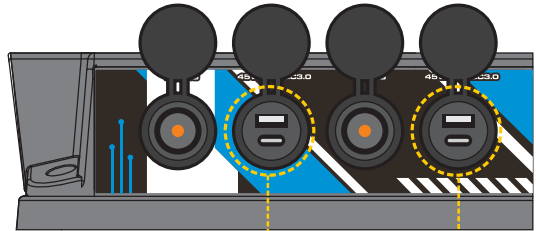
- Maximum 10A output per socket.



2 x Cigarette Socket Outputs

2 X 45W PD / 2.4A USB

- 2 x 45W PD USB-C
- 2 x 5V/2.4A USB-A



2 X 45W PD / 2.4A USB

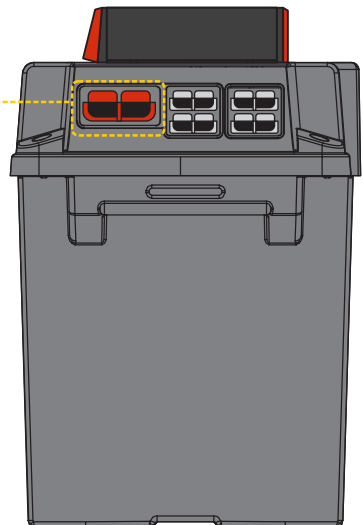
► **INPUTS/OUTPUTS**

1 X (175A) ANDERSON STYLE PLUG

- **WARNING:**

1. Master Switch does not disconnect the battery from this connector.
2. This output is NOT fused or short circuit protected.

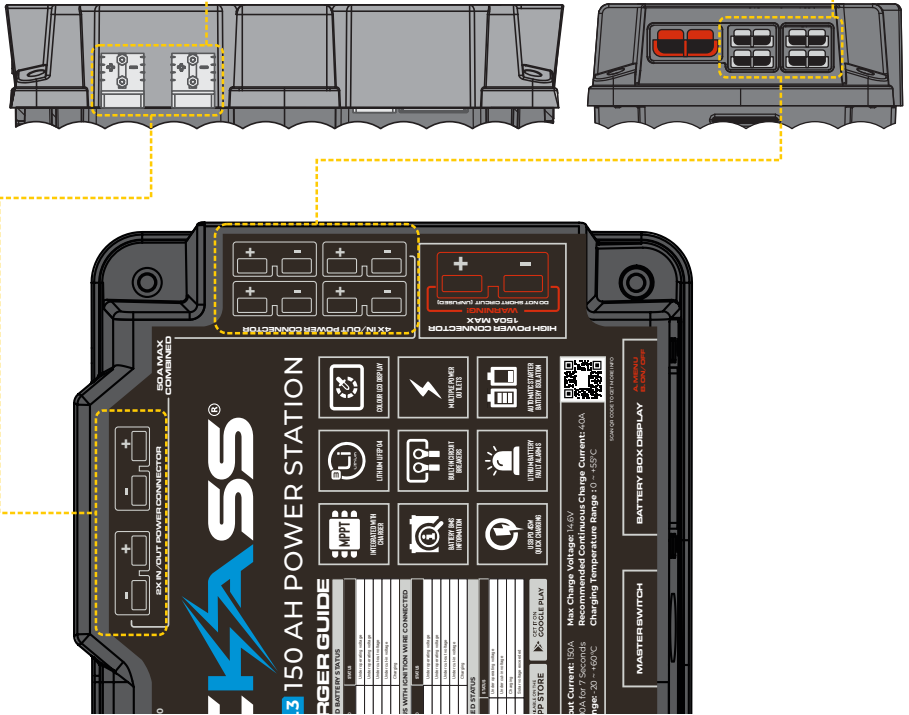
1 x (175A) Anderson Style Plug
on the left side



6 X (50A) ANDERSON STYLE PLUGS

2 x (50A) Anderson Style Plugs
on the back

4 x (50A) Anderson Style Plugs
on the side



- Input / output capable.
- All Anderson plugs combined must not exceed 50A total current.

WARNING:

1. Do not plug in multiple chargers as inputs.
2. Do not use an external charger while the DCDC Charger is operating.
3. Exceeding 50A combined current rating will trigger the safety breaker. Safety breaker will auto-reset in time.

NOTE: THE 6 ANDERSON PLUGS INDICATED CANNOT EXCEED A TOTAL OF 50 AMPS COMBINED.

► INPUTS

ALTERNATOR

1 X TRIPLE ANDERSON STYLE PLUG

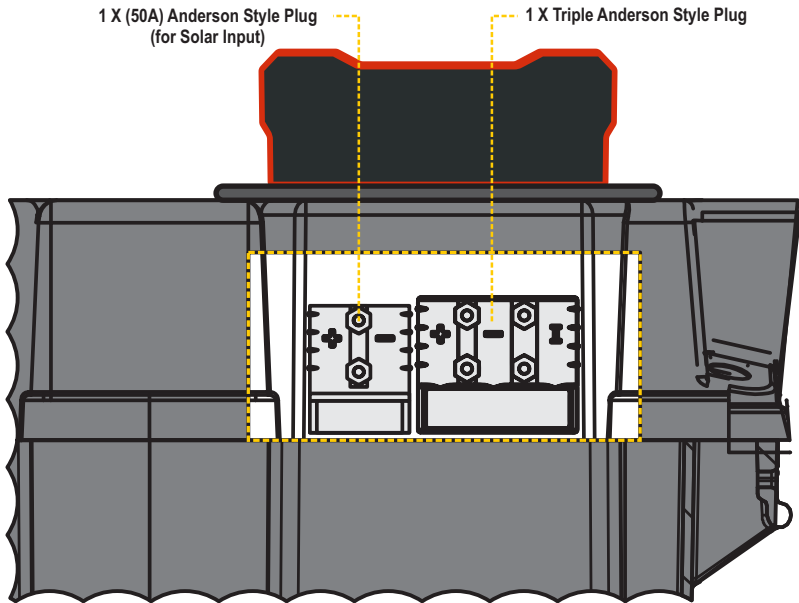
- 9-32V DC Starter Battery Input (+/-)
- Ignition source connection

MPPT SOLAR

1 X (50A) ANDERSON STYLE PLUG

- Minimum Solar Input Voltage: 9V DC
- Maximum Solar Input Voltage: 32V DC

Unregulated Solar Input - utilises in built DCDC MPPT regulator.
Not suitable for regulated solar input, connect to a standard in/out connector when using an external or panel-mounted solar controller/regulator.



CONNECTING TO EXTERNAL CHARGERS

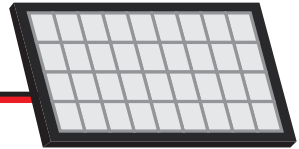
The KickAss Power Station may be charged in a number of ways:

- Connecting an AC charger to any of the in/out Anderson style connectors.
- Connecting a solar panel with regulator/controller to any of the in/out Anderson style connectors.
- Connecting alternator power to optional DCDC Charger in a vehicle.
- Connecting an unregulated solar panel input to optional DCDC Charger.

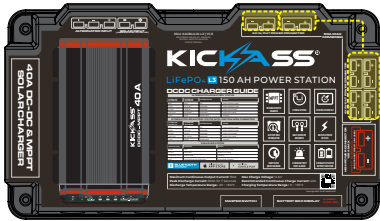
Warning:

- Connecting multiple chargers to the battery at any one time is not recommended.
- Do not connect an unregulated solar panel directly to the battery via any of the in/out connectors.

CHARGING THE POWER STATION

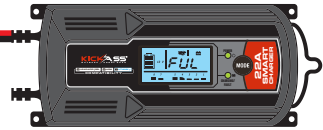


UNREGULATED SOLAR PANEL 32V MAX

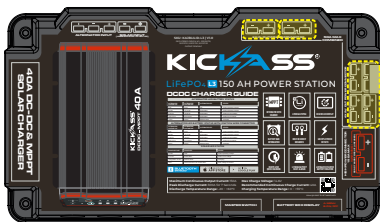


Plug-in to any of these sockets

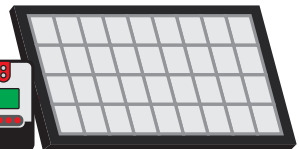
AC CHARGER



VEHICLE IGNITION



Plug-in to any of these sockets



REGULATED SOLAR PANEL

TECHNICAL SPECIFICATIONS

BATTERY INFORMATION

Battery Type	LiFePO4
Nominal Voltage	12.8V
Rated Capacity	150Ah
Energy	1920Wh
Max Charge Voltage	14.6V
Charge Temperature	0 ~ +55°C
Max Continuous Charge Current	150A
Discharge Temperature	-20 ~ +60°C
Max Continuous Discharge Current	150A
Battery Low Voltage Cutout	10V

WARNINGS

- Do NOT short circuit the battery terminals.
- Do NOT incinerate, crush, puncture or disassemble.
- Do NOT discard in fire or expose to excessive heat.
- Do NOT over-charge or over-discharge.
- Do NOT immerse in liquid.
- Store at a minimum capacity of 30%. Recharge every 3 months.
- Only use with an approved battery charger.
- Recharge every 3 months.

INPUT / OUTPUT SPECIFICATIONS

6 x (50A) Anderson Style Plugs	<ul style="list-style-type: none"> • Input / Output Capable • Maximum Combined 50A Current Rating <p>WARNING:</p> <ol style="list-style-type: none"> 1. Do not plug in multiple chargers as inputs simultaneously. 2. Do not use with an external charger while the integrated DCDC is charging. 3. Exceeding the 50A combined rating will trigger the auto-resettable circuit breaker.
1 x (175A) Anderson Style Plug	<ul style="list-style-type: none"> • High Current Inverter Output <ol style="list-style-type: none"> 1. The main battery isolator does not disconnect the battery from this terminal.
2 x Cigarette Socket Outputs	<ul style="list-style-type: none"> • Maximum 10A output per socket
2 x Dual USB-C / QC3.0 Outputs	<ul style="list-style-type: none"> • 2 x PD 45W USB-C Output • 2 x QC3.0 Output (5V/3.1A, 9V/2A, 12V1.5A)

THANK YOU FOR CHOOSING

KICKASS[®]
OUTBACK PROOF GEAR

LITHIUM

LiFePO₄ POWER STATION



YOUR COMPLETE
12V POWER
SOLUTION