OWNER'S MANUAL

PC Series

2 or 3 battery system with 1800/2000 watt inverter

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NEWCASTLE SYSTEMS

SAVE STEPS.
INCREASE PRODUCTIVITY.™

Standard Contents:

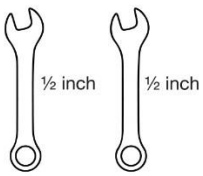
- Cart (Assembled)
- Battery & Hardware
- Wastebasket and Bracket & Hardware

Optional Accessories:
Will either be installed on cart or shipped separately in box with cart.

**Some accessories may be placed in power cabinet or trash can for shipping purposes.

Tools Supplied:
(1) 5/32 Allen wrench to remove power box.

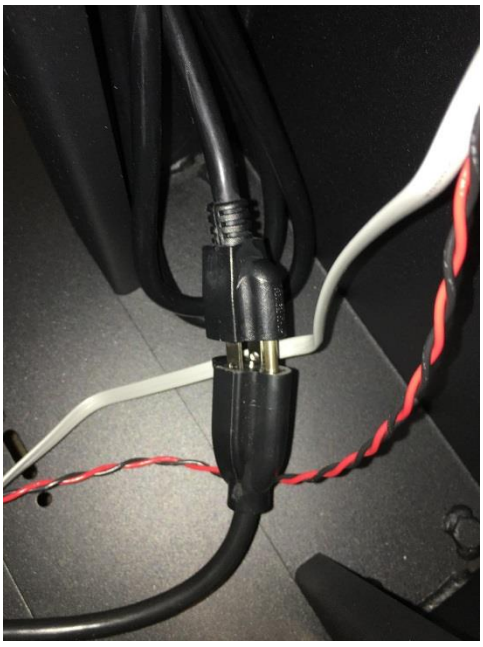
Additional Tools Required:
(2) ½" insulated wrenches (open end or socket) to tighten battery terminals.



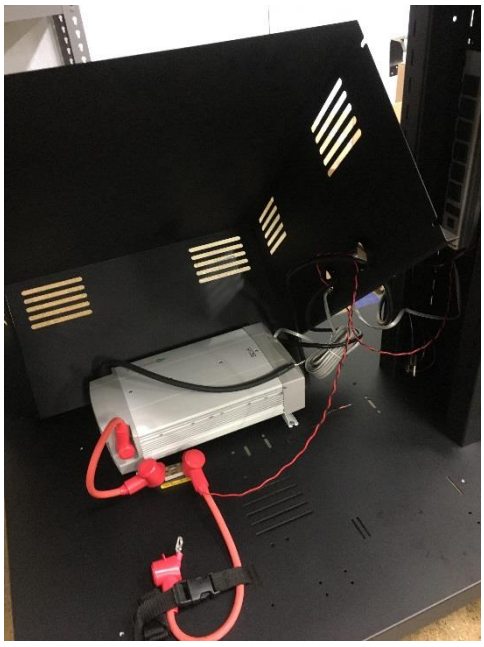
1. If second shelf was purchased, remove it to gain access to battery box (Allen wrench required).

2. Remove (4) screws from the sides of the battery box (as shown above) with supplied Allen wrench.

3. Remove front battery panel by loosening the thumb screws.

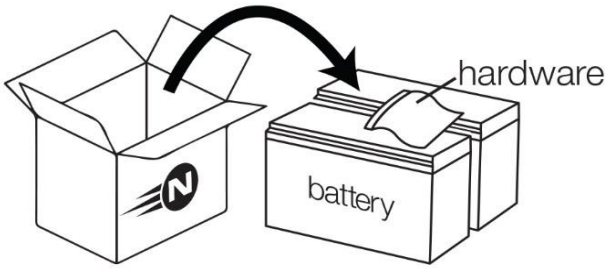


4. Unplug the power strip.

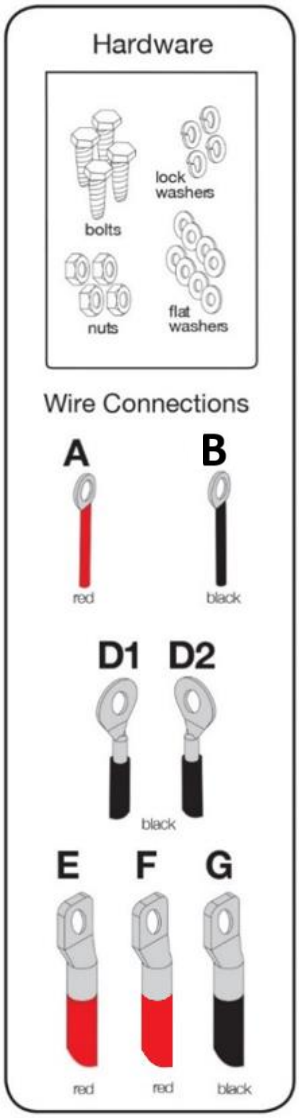


5. Carefully remove the battery box and make sure cables stay positioned through the plastic wire grommet.

Place battery box on its side as shown below.



1. Remove batteries and hardware from packaging.



Wire A (red) comes pre-connected from remote battery meter to fuse block.

Wire B (black) connects remote battery meter to black negative (-) terminal of Battery #1.

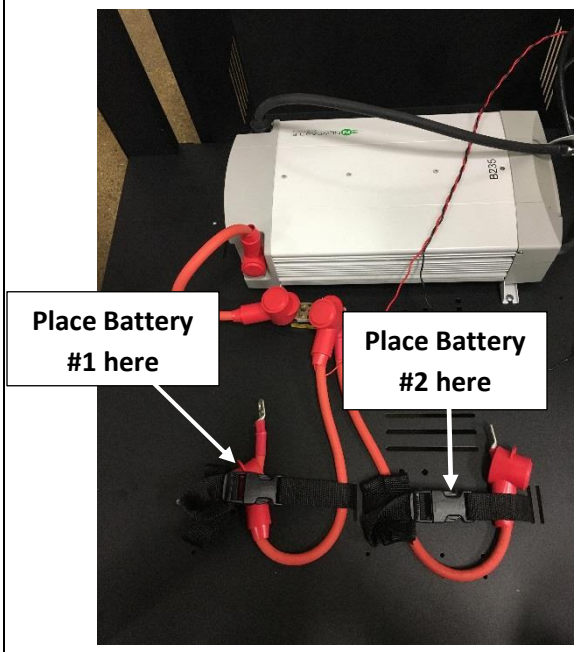
(C has been omitted)

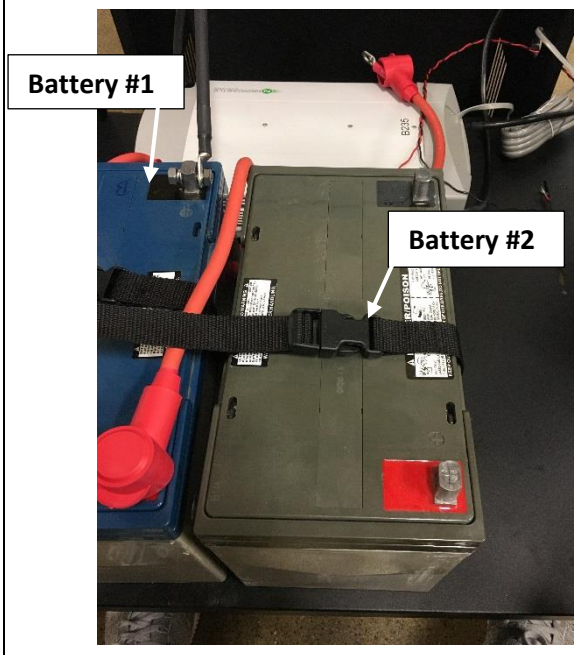
Wire D1/D2 (black) connects negative (-) terminal of Battery #1 to negative (-) terminal of Battery #2. **(This wire can be found in clear plastic bag along w/ manual.)**

Wire E (red) connects to red positive (+) terminal of Battery #1.

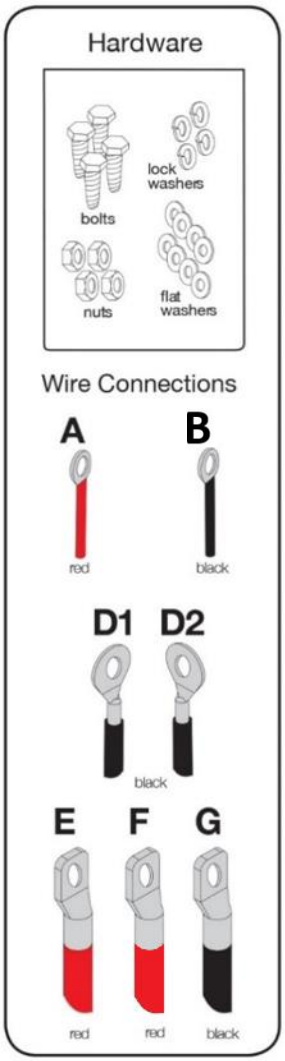
Wire F (red) connects to red positive (+) terminal of Battery #2. (Two will be included for 3-Battery Systems)

Wire G (black) connects to black negative (-) terminal of Battery #1.





2. Carefully place batteries on base (as shown above) and securely tighten straps.



Wire A (red) comes pre-connected from remote battery meter to fuse block.

Wire B (black) connects remote battery meter to black negative (-) terminal of Battery #1.

(C has been omitted)

Wire D1/D2 (black) connects negative (-) terminal of Battery #1 to negative (-) terminal of Battery #2. **(This wire can be found in clear plastic bag along w/ manual.)**

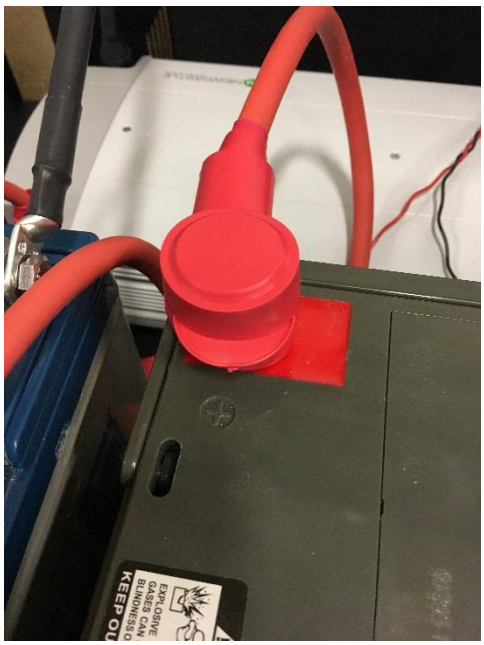
Wire E (red) connects to red positive (+) terminal of Battery #1.

Wire F (red) connects to red positive (+) terminal of Battery #2. (Two will be included for 3-Battery Systems)

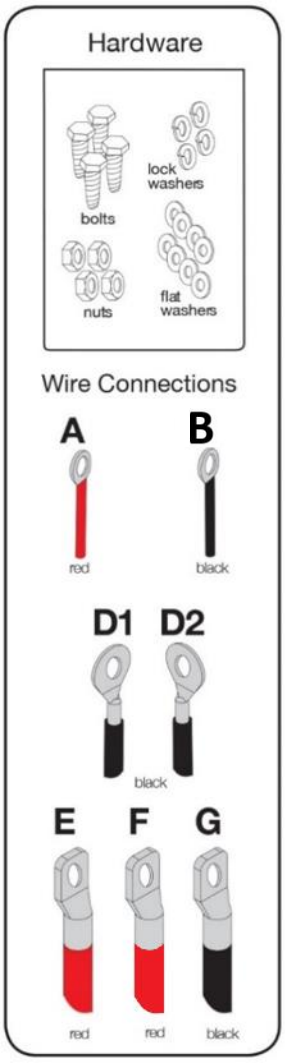
Wire G (black) connects to black negative (-) terminal of Battery #1.

3. Positive Connection, Battery #1: Take bolt and place flat washer and large red wire (E) onto bolt (as shown above); insert bolt through positive (+) terminal of Battery #1, place flat washer, lock washer, then nut onto bolt and hand-tighten.

4. Securely tighten terminal bolts on Battery #1 with (2) ½" wrenches.



5. Pull rubber boot over tightened terminal.



Wire A (red) comes pre-connected from remote battery meter to fuse block.

Wire B (black) connects remote battery meter to black negative (-) terminal of Battery #1.

(C has been omitted)

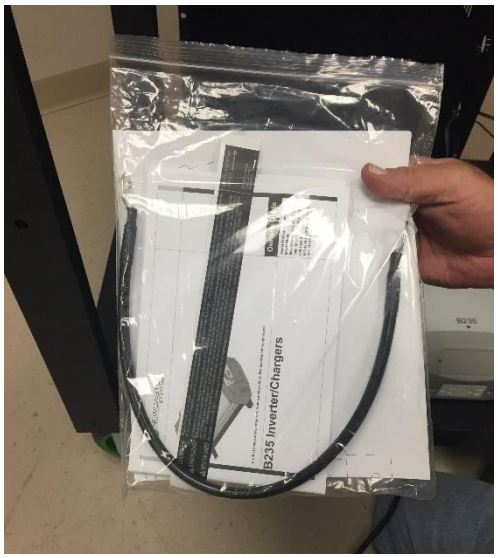
Wire D1/D2 (black) connects negative (-) terminal of Battery #1 to negative (-) terminal of Battery #2. **(This wire can be found in clear plastic bag along w/ manual.)**

Wire E (red) connects to red positive (+) terminal of Battery #1.

Wire F (red) connects to red positive (+) terminal of Battery #2. (Two will be included for 3-Battery Systems)

Wire G (black) connects to black negative (-) terminal of Battery #1.

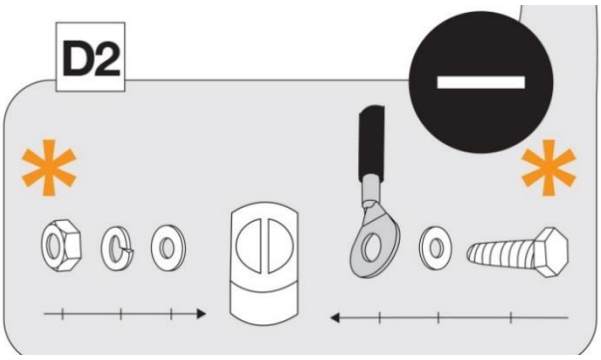
6. Negative Connection, Battery #1: Take bolt and place flat washer, small black wire (B), black connector wire (D1), and large black wire (G) onto bolt (as shown above), insert bolt through negative (-) terminal of Battery #1, place flat washer, lock washer, then nut onto bolt and hand-tighten.



D1 / D2 battery connector cable can be found in clear plastic bag w/ manual
(Two will be included for 3-Battery Systems)

7. Securely tighten terminal bolts with (2) ½" wrenches.

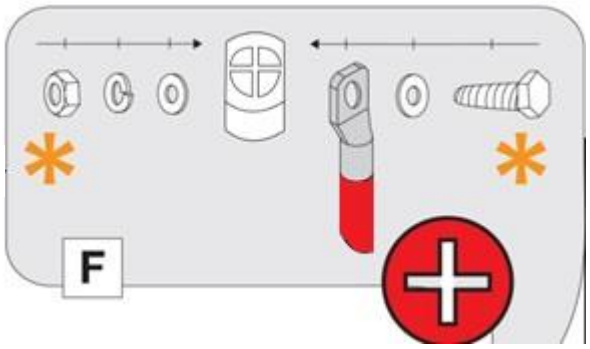
Sparking is normal during initial connection.



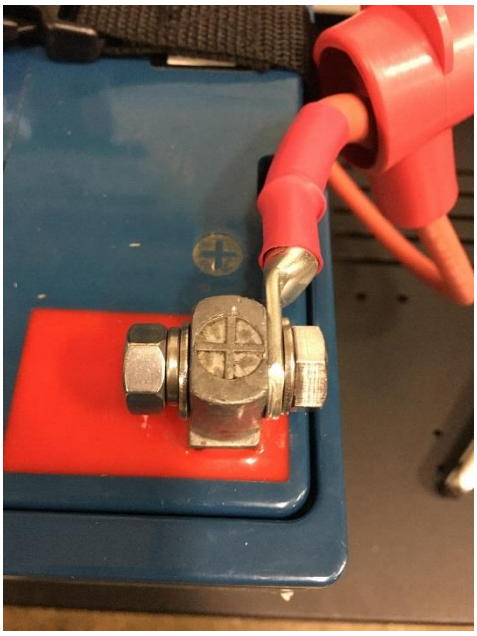
8. Negative Connection, Battery #2: Take bolt and place flat washer and black connector wire (D2) onto bolt (as shown above), insert bolt through negative (-) terminal of Battery #2, place flat washer, lock washer, then nut onto bolt and hand-tighten.
(For 3-Battery Systems, D1 of the second wire should also be attached to this terminal.)

9. Securely tighten terminal bolts with (2) ½" wrenches.

Sparking is normal during initial connection.



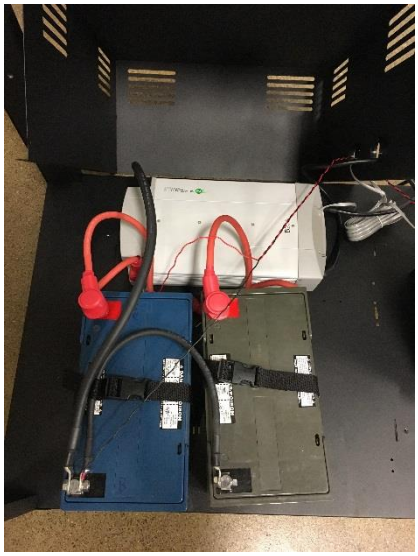
10. Positive Connection, Battery #2: Take bolt and place flat washer, large red wire (F) onto bolt (as shown above), insert bolt through positive (+) terminal of Battery #2, place flat washer, lock washer, then nut onto bolt and hand-tighten.

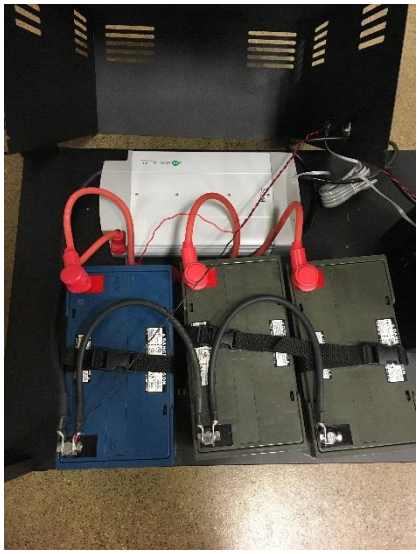


11. Securely tighten terminal bolts with (2) ½" wrenches.

Pull rubber boot over tightened terminal.

****Repeat Steps 8-10 for 3rd battery if applicable (See 3-Battery photo below).**

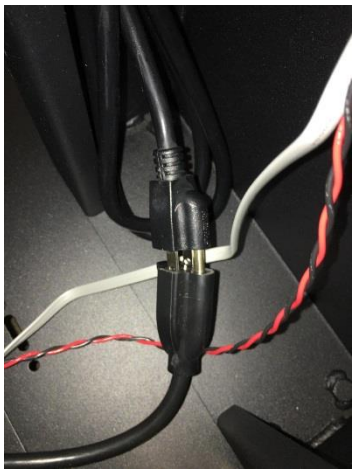




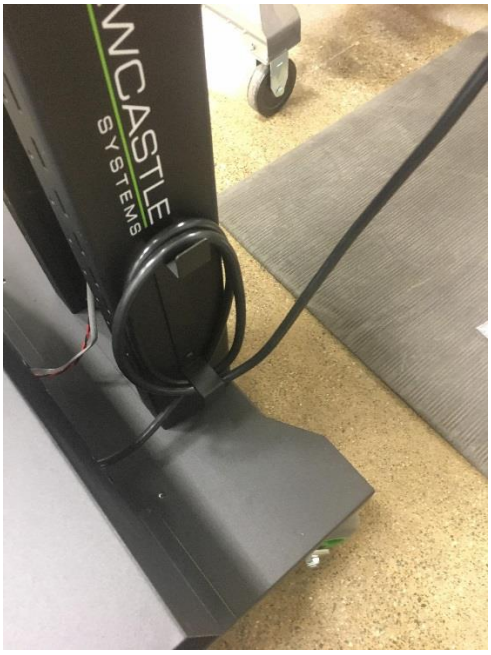
2-Battery Configuration	3-Battery Configuration
Fully Connected	Fully Connected

1. Make sure all connections are tight and that the batteries are strapped down securely.

Carefully place the battery box cover on base.



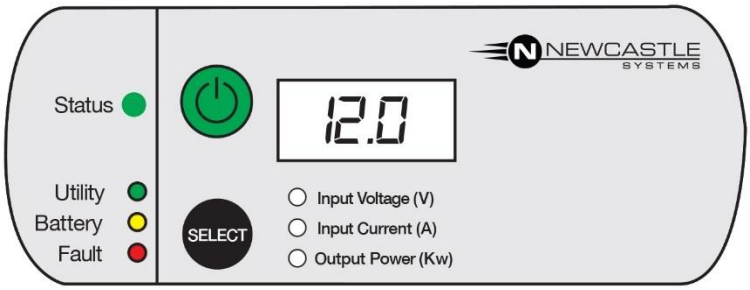
2. Plug the power strip into the inverter/charger.

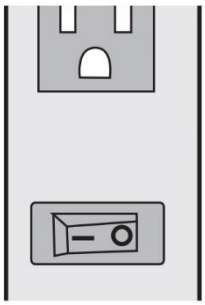


3. Route charger cord through plastic wire grommet and securely wrap around cord reel holder.

Testing the Battery Function

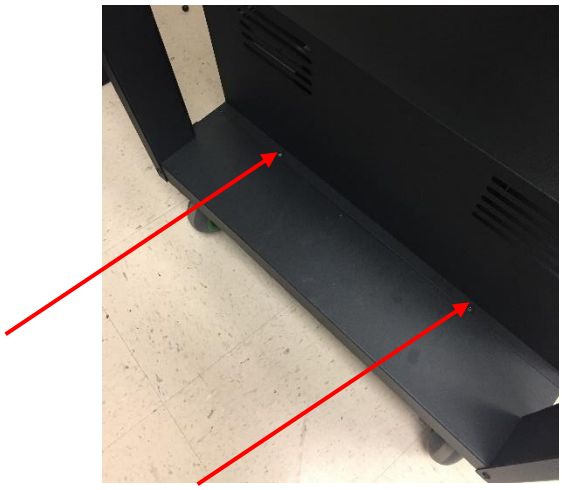
1. Turn the unit on by pressing the green power button.





2. Turn the power strip on.

The switch should light red.



3. Reapply the (4) screws to sides of the battery box with supplied Allen wrench.

4. Place the front battery panel as shown above.

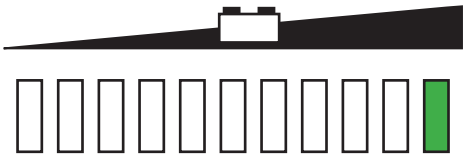
5. Tighten (4) battery panel thumbscrews.

Accessory assembly manual can be downloaded at:

www.newcastlesys.com/accessory-assembly

Tips for Proper Cart Operation

- Charge your battery before using it to ensure it is fully charged. Simply plug the charger cord (located on the side of the unit) into a standard wall outlet.
- Monitor the battery status meter on the cart.



Battery Light Meter Indicators

Voltage	11.2	11.4	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6
Light #	1	2	3	4	5	6	7	8	9	10
Color	Red Blinks	Red Blinks	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green

- Batteries should not be discharged below 11.5 volts because this will shorten the life of the battery.
- Batteries *should not* be stored in a discharged state. They should be charged as soon as possible after each use (otherwise it can void the warranty). If a battery is left in a discharged state for a period of time, it may no longer take a charge.
- Avoid exposing battery to heat, service life is shortened at ambient temperatures above 85F.
- When powering equipment on the cart, it's okay to have the charger plugged in if necessary. In this case, the AC power will pass through the charger and power your equipment directly.
- When the cart is not in use, the system charger can be plugged into a wall outlet to ensure the battery remains in its optimal state. Turn the unit to the OFF position.

Troubleshooting Tips

Is your cart displaying an error code? Here's what those mean:

ERROR	CONDITION	MODE	SUGGESTED ACTION
E01	Low battery voltage shutdown, depends on settings	Inverting	• Check battery status meter and recharge if necessary • Check that cables are connected properly • Make sure that cables are secured tightly
E02	High battery voltage shutdown, greater than 15.5v	Inverting	• Check for external charging sources, such as an over voltage alternator - disconnect if necessary
E03	AC output overload shutdown	Inverting	• Reduce the amount of loads connected • Check the appliances for high-surge ratings and disconnect if necessary
E04	Over temperature shutdown	Inverting	• Reduce the amount of loads connected • Check for proper ventilation • Check for ambient temperature and move to a cooler location when possible

Frequently Asked Questions

QUESTION	ANSWER
What does ABS/BUL or FUL mean?	• These are normal codes you should see every charging cycle **BUL** = Bulk mode **ABS** = Absorption mode **FUL** = Full
What are my 1000w or 1800w inverter/charger settings?	• While plugged in and charging, press the "select" button to view your current settings • **Recommended settings:** **1000w system:** 20A, 1NI, AL1, SDL
Why is my unit not charging?	• Loose connections. Ensure that all wiring is correct and tight • Check that charger is not set to a low setting • Batteries may be old and depleted
Where do the LED battery meters plug in?	**Red #1 -** fuse to slot 1 (top right) **Black -** battery to slot 2 (top left) **Red #2 -** slot 1 to slot 4 (bottom right)
How old are my batteries?	• Located on the top center of your battery there is a date code • It is a five digit code followed by one or two letters • The first two digits are the month and the last digit is the year (ex: **11**24**3** would indicate the batteries are from November 2013)

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