

# Deployable Power Battery Boxes

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# Overview

- *The Prime Question: What do YOU need to power YOUR deployable and emergency systems for YOUR missions and activities?*
- Focus on “12VDC” Systems, with Bonus Items...
- Modern Small Battery Systems & Options
- Popular Battery with PowerPoles
- Example Commercial Battery Boxes
- Example “Go Box” with Radio
- Pragmatic Bioenno & PowerWerx Battery Box
- Upgraded Versatile Battery Box System
- References
- Questions & Discussions
- .....

# Modern Small Batteries

**HIGH CAPACITY,  
20 YEAR STORAGE,  
NO LEAKS (!!)**

**1 “AA” >> “C”**

**1-3 “AA” >> “D”**

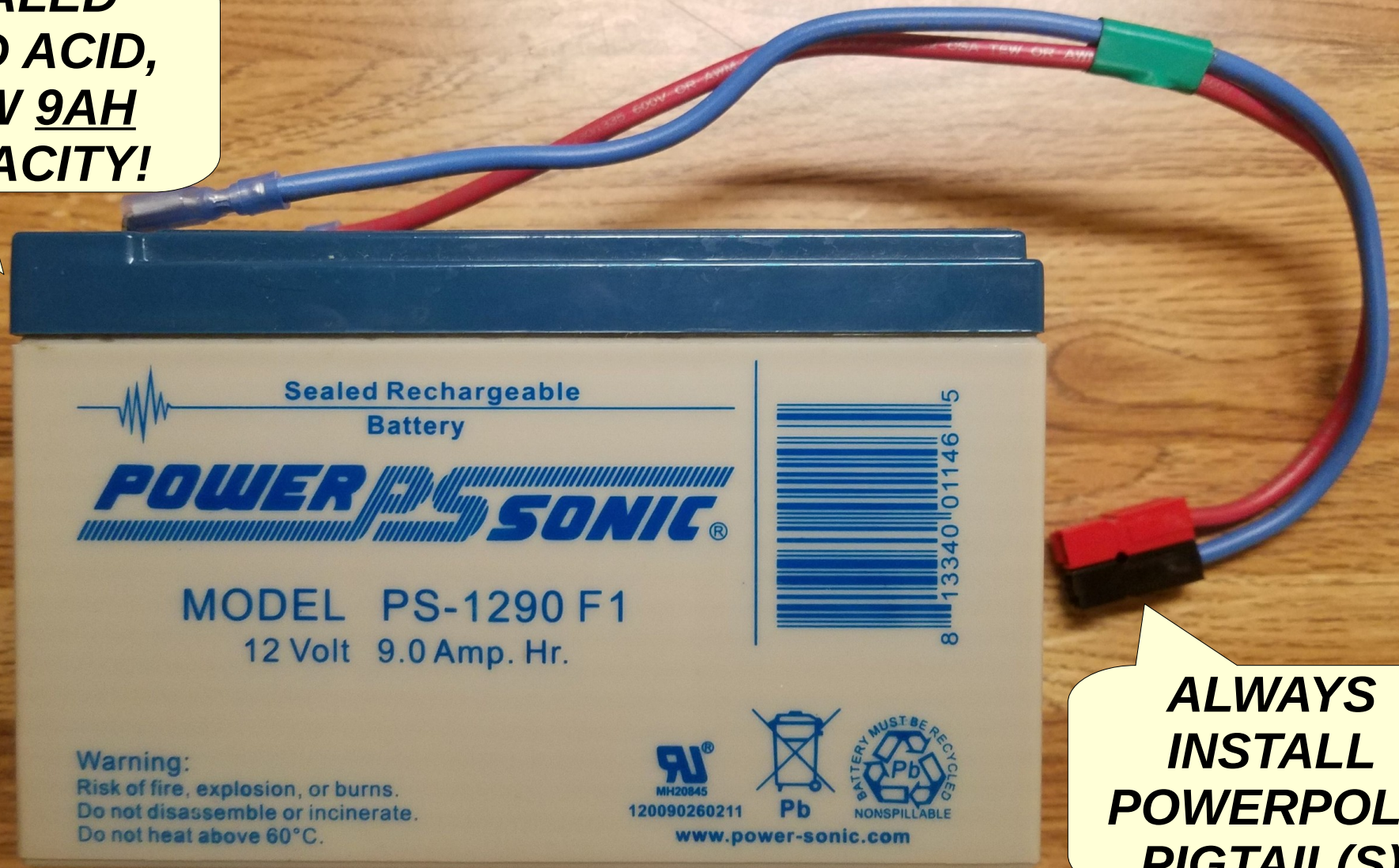


**“UNIVERSAL COMMON BATTERY”  
ENERGIZER 20 YEAR LITHIUM “AA”**



# Popular Battery & PowerPoles

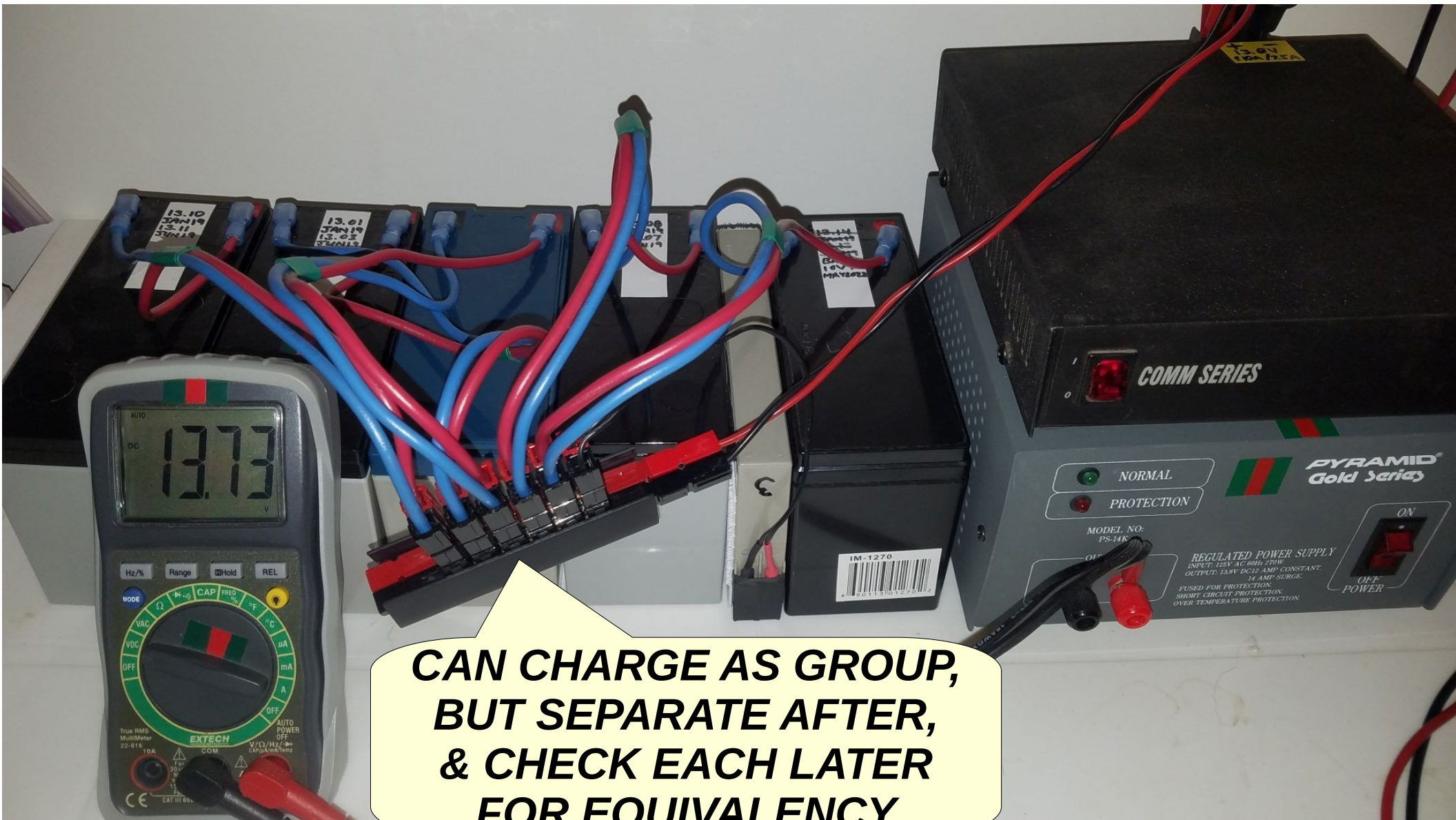
**SEALED  
LEAD ACID,  
NOW 9AH  
CAPACITY!**



**ALWAYS  
INSTALL  
POWERPOLE  
PIGTAIL(S)**



# Battery Group Charging & Use



# Example Battery Box

**KEY FEATURES:  
POWERPOLES,  
BIG TERMINALS,  
ON/OFF SWITCH,  
VOLT METER,  
USB OUTPUTS,  
CIGAR SOCKETS,  
FUZES OR  
CIRCUIT  
BREAKERS...**





# Example Battery Box





# Example Battery Box





# “Go Box” with Radio



# BIG Marine Deep Cycle Battery

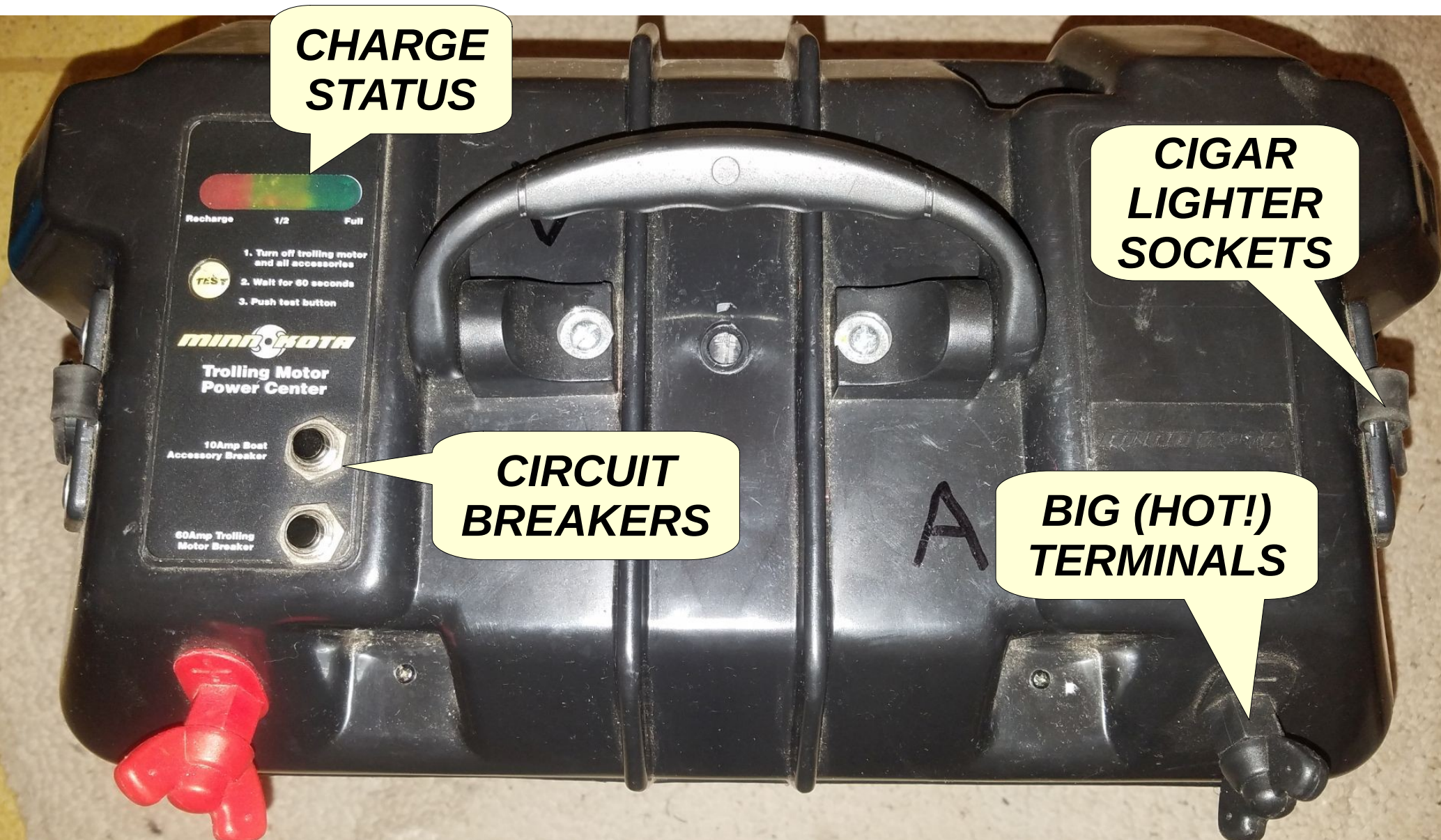


**SEALED LEAD ACID,  
SPIRAL, OR AGM,  
HIGH CAPACITIES,  
LESS COST  
THAN LITHIUM,  
BUT HEAVY!!**

**Key Parameters:  
Reserve Capacity  
(~50-140 minutes), or  
Amp Hours (10hr rate)  
(~60-140 AH), but  
not Cranking Amps!  
Other Issues:  
~40-75 pounds,  
\$100-\$400 (!!)**

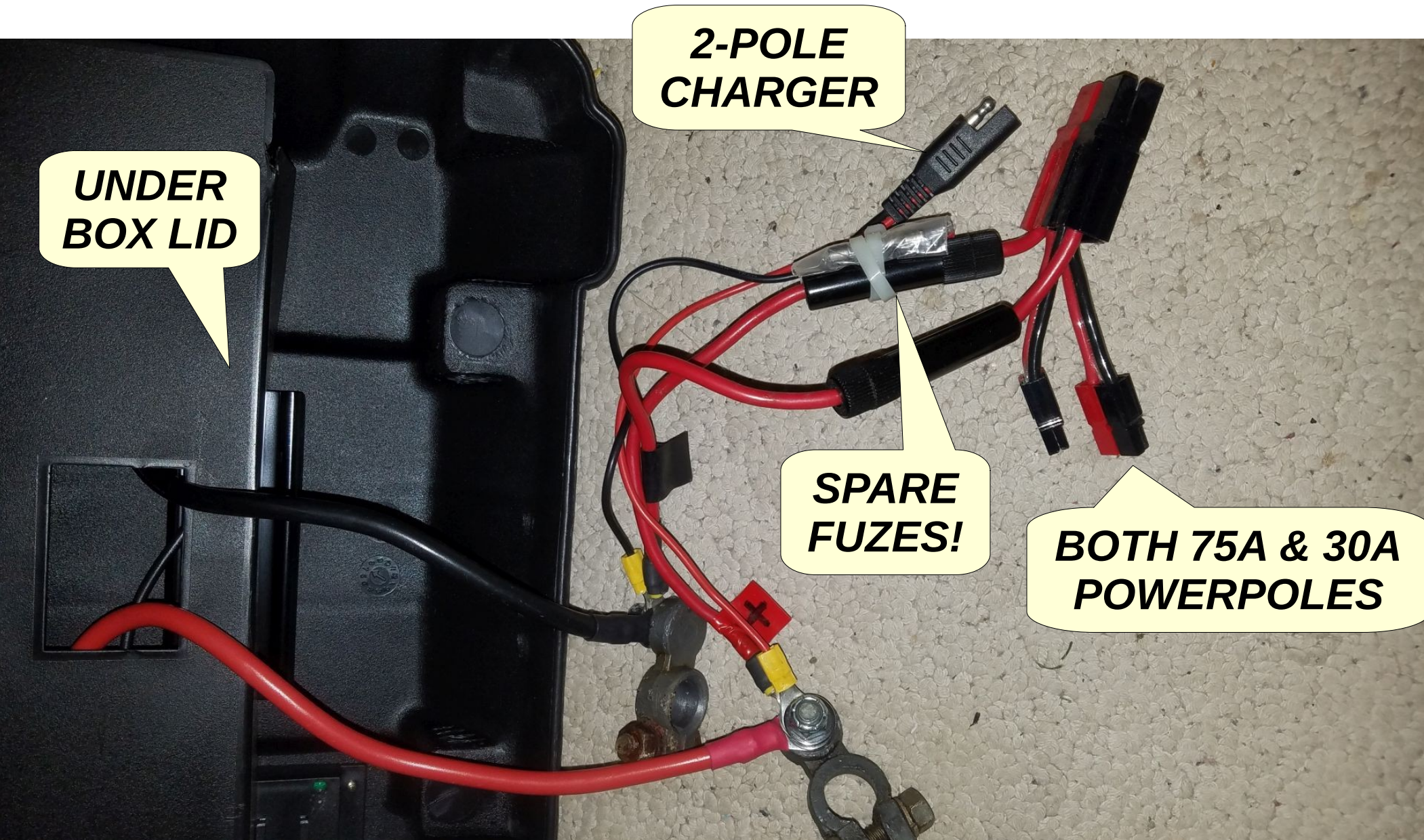


# BIG Battery Box >> 60-140 AH!





# BIG Battery Box Wiring

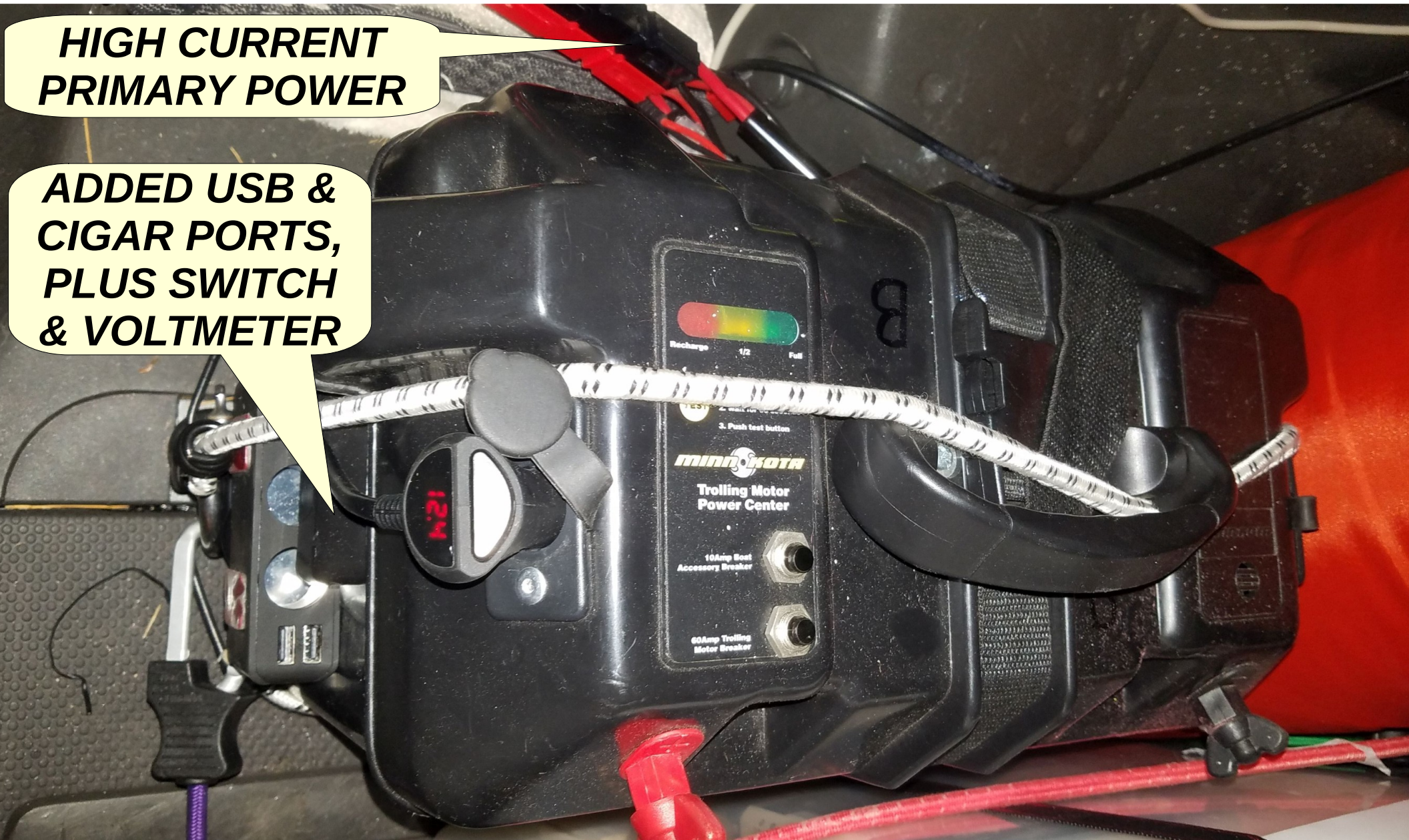




# BIG Battery Box on Wheels

**HIGH CURRENT  
PRIMARY POWER**

**ADDED USB &  
CIGAR PORTS,  
PLUS SWITCH  
& VOLTMETER**



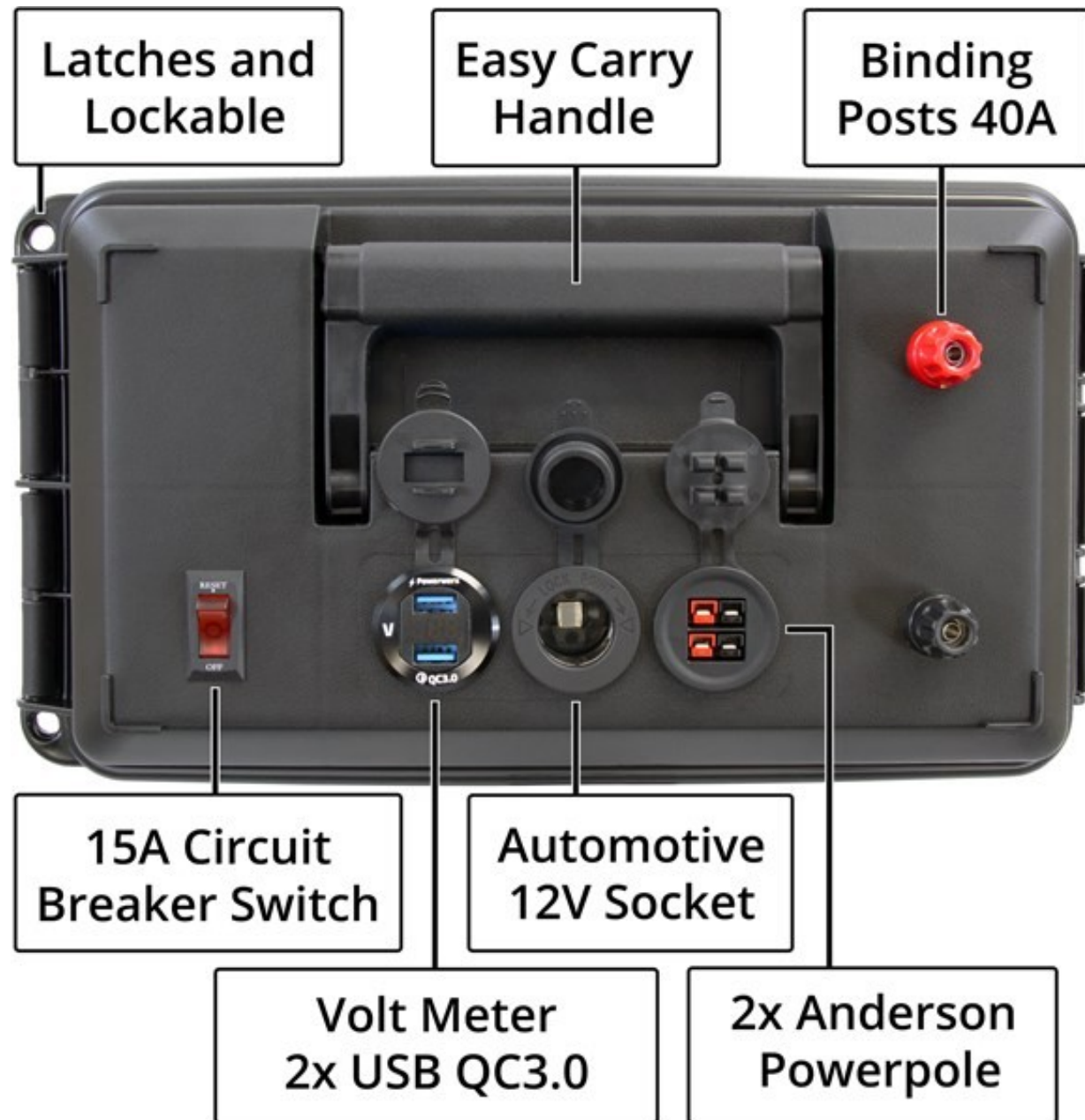
# PowerWerx Battery Box



**GOOD START,  
BUT NEEDS  
UPGRADES!**



# PowerWerx Box Key Features



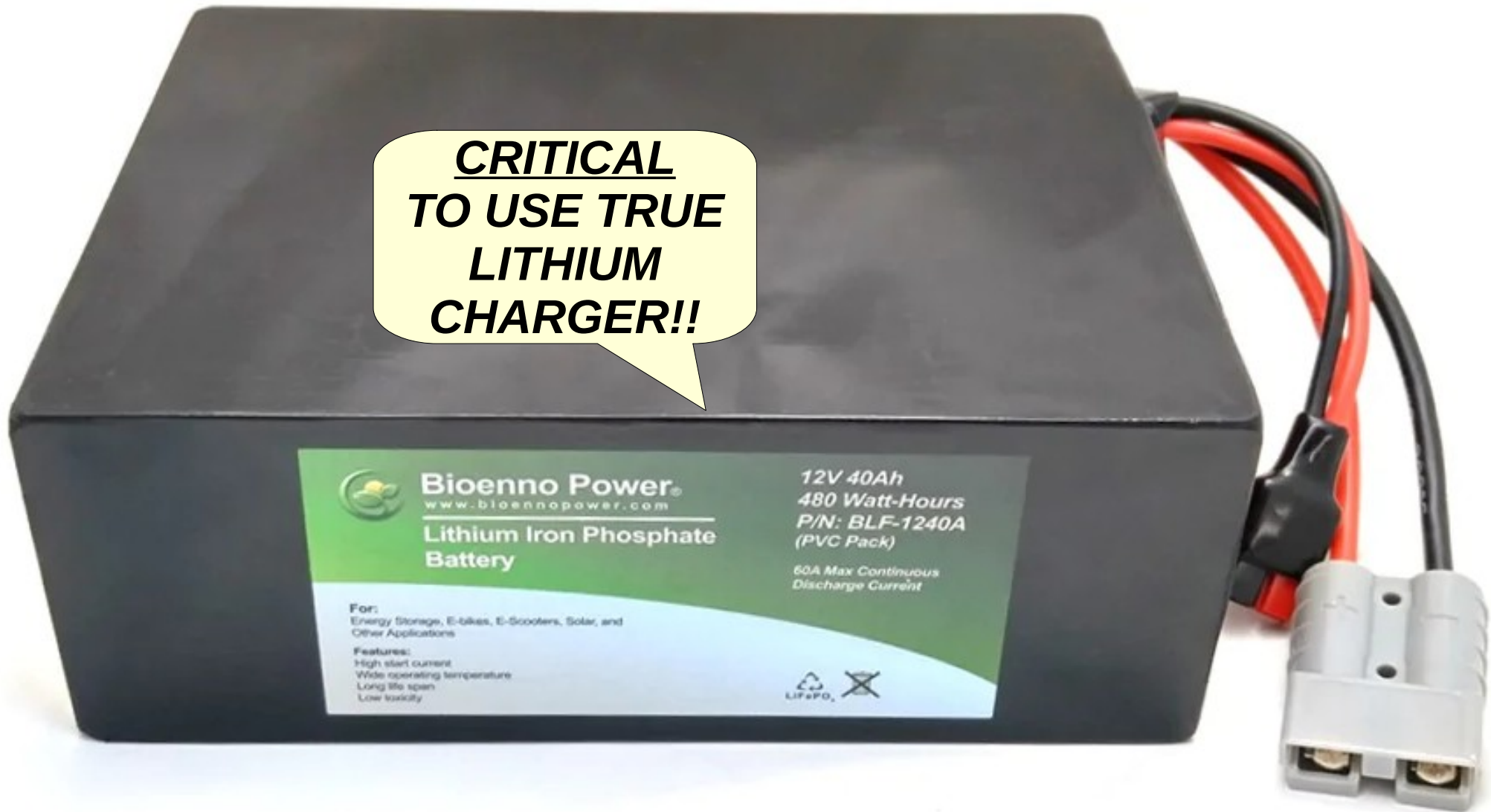
# Under the Lid...





# Bioenno LiPo Battery 40 AH

**CRITICAL  
TO USE TRUE  
LITHIUM  
CHARGER!!**

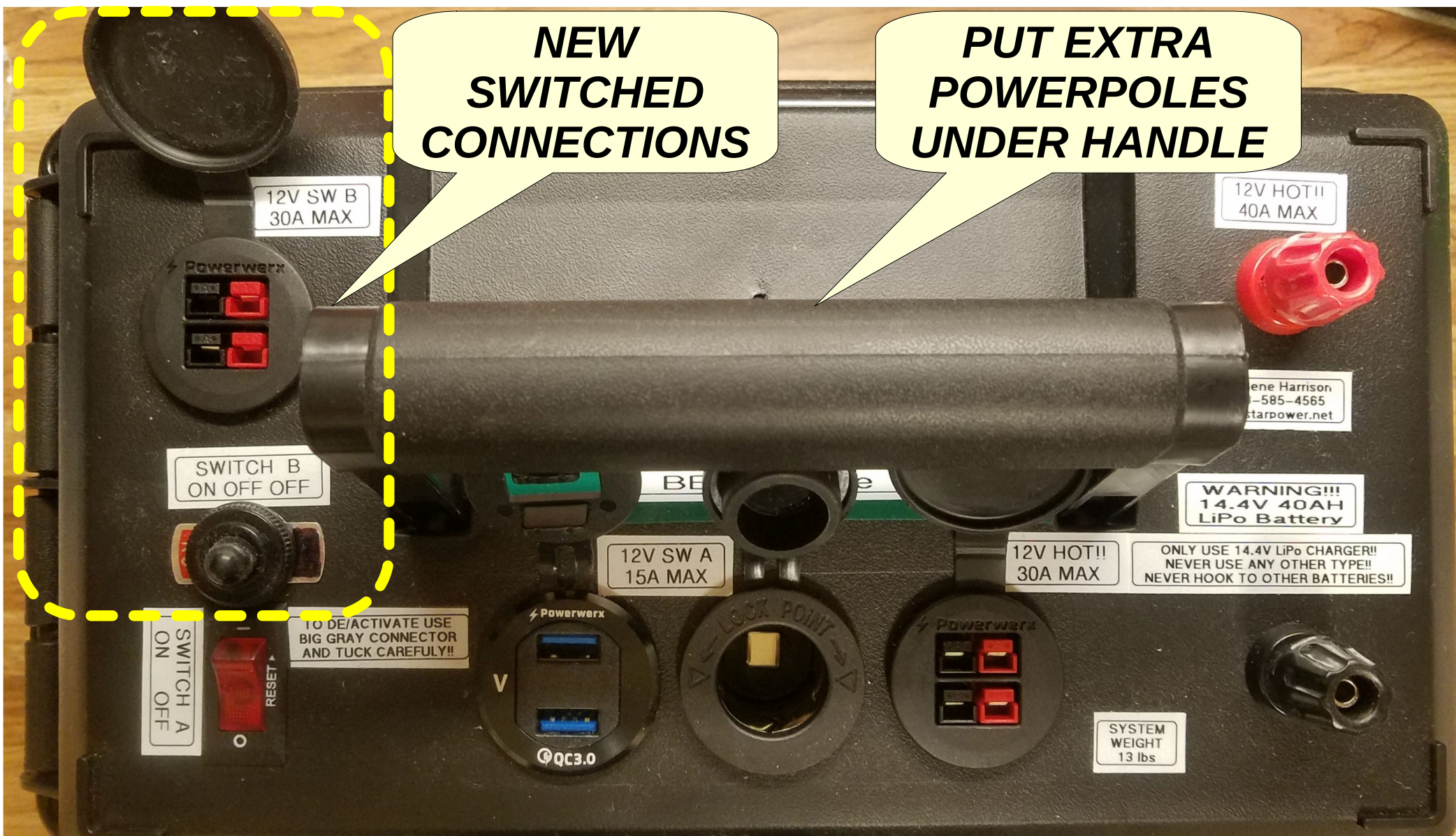


# Bioenno LiPo Charger 10 A



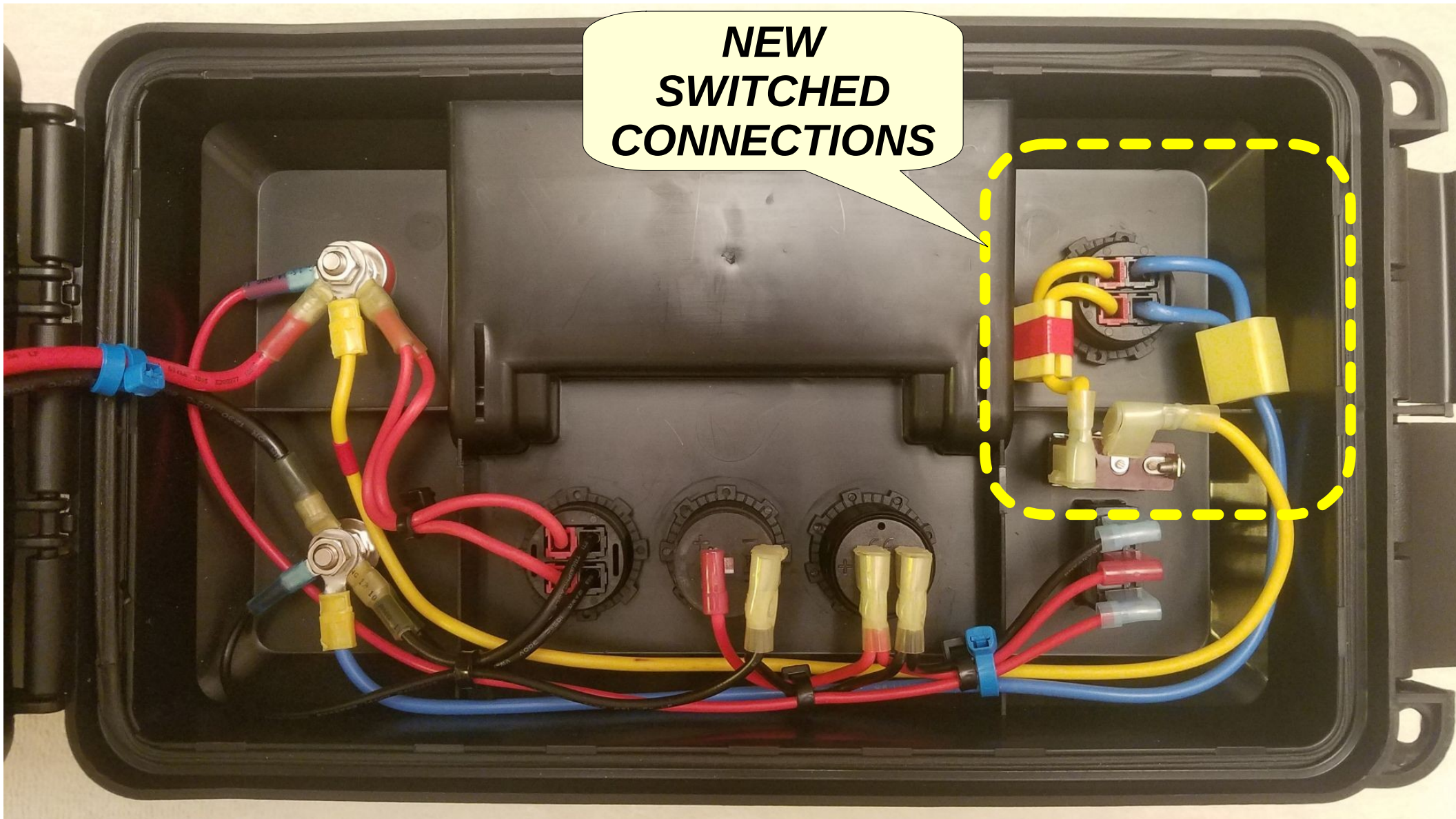


# Upgraded Battery System





# Under the Lid, Upgraded...





# Under the Hood...





# Under the Hood...

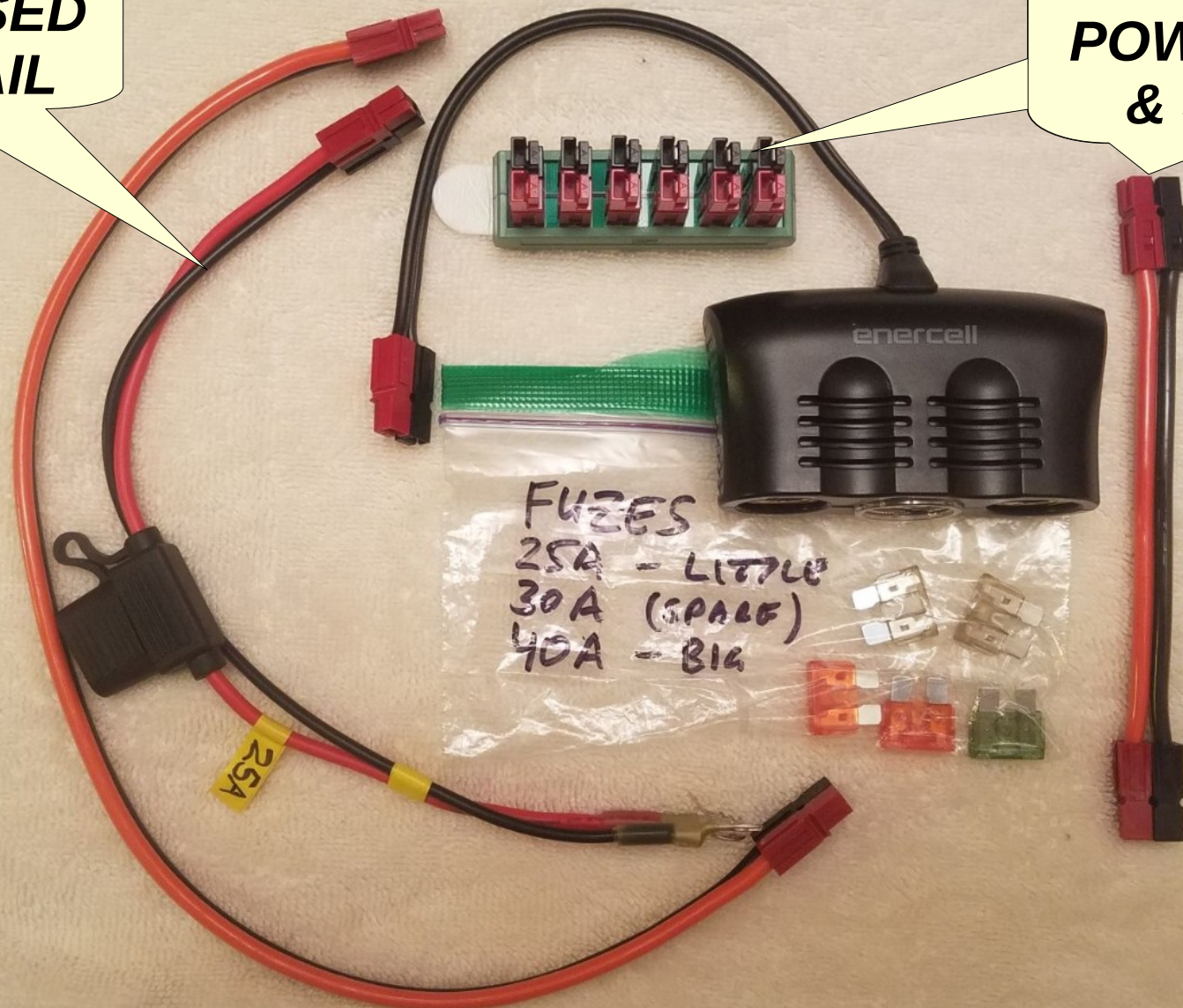




# Included Accessories

**REPURPOSED  
25A PIGTAIL**

**EXTRA TOP  
POWERPOLES  
& JUMPER**



# References

- Energizer Ultimate Lithium Batteries
  - [www.energizer.com/batteries/energizer-ultimate-lithium-batteries](http://www.energizer.com/batteries/energizer-ultimate-lithium-batteries)
- PowerWerx PowerPoles, Batteries, Cases & Chargers
  - [powerwerx.com/batteries-chargers](http://powerwerx.com/batteries-chargers)
  - [powerwerx.com/anderson-power-powerpole-sb-connectors](http://powerwerx.com/anderson-power-powerpole-sb-connectors)
- Bioenno Batteries & Chargers
  - [www.bioennopower.com/collections/12v-series-lifepo4-batteries](http://www.bioennopower.com/collections/12v-series-lifepo4-batteries)
- Examples - BIG Marine Deep Cycle Batteries
  - Key parameters:
  - Reserve Capacity (minutes) (~50-140 minutes), or
  - Amp Hours (10 hr rate) (~60-140 AH),
  - But not Cranking Amps!
  - Other Issues: ~40-75 pounds, \$100-\$400 (!!)
  - [shop.advanceautoparts.com/r/advice/cars-101/best-deep-cycle-marine-battery](http://shop.advanceautoparts.com/r/advice/cars-101/best-deep-cycle-marine-battery)
  - [cleanenergysummit.org/best-deep-cycle-batteries/](http://cleanenergysummit.org/best-deep-cycle-batteries/)
  - [www.autozone.com/diy/battery/are-optima-batteries-worth-it](http://www.autozone.com/diy/battery/are-optima-batteries-worth-it)
- Steve Green – KS1G
  - LARG Bike, SATCOM & Deployable Lithium Battery Guru!!
- Keith Conover – WD4PSY
  - WEMS & SAR Guru, & Wilderness Lithium Battery Advocate!!



***Questions?***

***Discussions?***