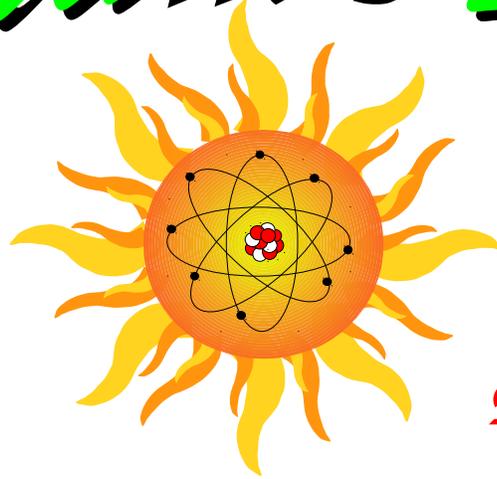


# Quantum Harvest<sup>®</sup>

*Faraday  
Enclosures*



*Portable Solar  
Power Stations*

## Owner's Manual

**Quantum Harvest Model 3000-60 TSW**



*quantumharvest.net*



## Introduction

Congratulations on your purchase of a Quantum Harvest EMP protected\* portable solar power station! These units have been carefully designed and hand-crafted to provide many years of trouble-free operation. In the unlikely event of malfunction, we offer a 1 year warranty on the batteries (if provided by us.); 3 years on the inverter and charge controllers; 5 years on everything else. For warranty details, see page 34.

To obtain maximum performance and long life from your new power station, it is important to gain a basic understanding of how such units operate and their limitations. The heart of the unit, and it's main component, is the battery bank. This is where the energy from the solar panels or the included 120 volt AC battery charger is stored for later use. The particular batteries I have selected are state of the art deep-cycle Absorbed Glass Mat (AGM) medical-grade batteries. These batteries are maintenance free and can be stored and used in any position. Since they do not give off gases as they charge, there is no danger of fire and they never need to have water added.

To obtain maximum life from these, or any other batteries, it is important to try to avoid deep cycling, that is, drawing them down flat before allowing them to recharge. Sometimes this cannot be avoided, but if at all possible, strive to avoid doing so.

Another important component is the inverter. This is the device that converts the low voltage DC current from the batteries into the high voltage AC current that we are familiar with. (All Quantum Harvest power stations also have 12 volt DC receptacles and USB charging sockets for the appropriate devices, in addition to standard 120 volt AC house current.) The inverter is protected internally from overheating and low battery voltage, and externally from over-current draw by a 400 ampere ANL type fuse. The Model 3000 will sustain a continuous 3000 watts of current, and will briefly provide up to 9000 surge watts, to start motors and other inductive loads. The inverter relies on air flow around and through the unit to cool it, therefore it is imperative that the inverter not be used with the enclosure door closed.

Another important part is the solar panels. We currently offer a choice of a 100 watt single-panel mobile assembly, as well as a 200 watt dual-panel mobile assembly, and a 300 watt, three panel assembly. All our models of power stations can also be purchased without solar panels, allowing the client to supply their own panels, if they so desire. We recommend an absolute minimum of 100 watts rated panel capacity, and 200 or even 300 watts would be better. If unsure, email us at [support@quantumharvest.net](mailto:support@quantumharvest.net) with the specifications of the proposed panels and we can quickly look them up and confirm whether or not they will work.

## *\*A quick note on EMP*

*An EMP, or **E**lectro-**M**agnetic **P**ulse is a devastating phenomenon that, while harmless to living things, absolutely destroys anything electronic. It consists of extremely powerful electromagnetic fields building and collapsing hundreds of thousands of times per second. This induces potentially huge electric currents in anything that conducts electricity, causing components connected to said conductor to burn out. An EMP can be caused by either a deliberate, high-altitude nuclear warhead detonation, or can be caused naturally by a solar event called a Coronal Mass Ejection, or CME.*

*All Quantum Harvest power units are built into a specially designed enclosure, more properly called a Faraday Cage, named after Michael Faraday, an early pioneer in electromagnetic research. The purpose of a Faraday cage is to intercept and divert electromagnetic energy away from the box's interior, thus protecting the contents.*

*The principles involved are fairly simple, but the proper execution is critical. In order for the enclosure to be useful, it must have a door, but any opening larger than a square centimeter or so allows too much energy to penetrate the interior, thus defeating the purpose of the Faraday cage.*

*The solution to this conundrum is to gasket the door with a special type of conductive gasket, mated to a copper or silver strip that is electrically bonded to the main box. The key is to have very low electrical resistance between the door and the enclosure, with no gaps. This is not as easy as it sounds, and requires special materials designed specifically for this application.*

*My experience with Faraday apparatus comes from 8 years experience with very powerful industrial machines called RF welders. These machines use extremely powerful and focused bursts of electromagnetic energy to weld and form plastic parts. These machines basically create a local EMP every time they fire, and it is critical that stray energy be confined and dissipated safely to avoid damage to other sensitive electrical machinery.*

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# Base Unit Specifications

<b>Assembled Dimensions:</b>	30.5”H x 47.5”O.A.L x 19.5”W
<b>Assembled Weight:</b>	430 lbs.
<b>Inverter:</b>	AIMS Marine-grade 3000 watt true sine-wave
<b>Battery Bank:</b>	4 AGM Deep-Cycle Batteries, 110 amp/hrs each.
<b>Battery Bank Capacity:</b>	440 Amp/hours, 5,280 Watt/hours
<b>AC Charger:</b>	35 Amp Smart Battery Charger
<b>Solar Charger/Controller:</b>	Instapark 60 amp PWM-type

## In this manual, the following symbols are used to highlight important facts:



Denotes circumstances where failure to follow the procedures outlined in the manual may result in property damage.



Denotes circumstances where failure to follow the procedures outlined in the manual may result in personal injury or death.

Always remember that electricity is utterly devoid of mercy and never grants second chances!

### Note on Batteries

This Quantum Harvest power station is designed to use AGM batteries that measure 12.91” Long, by 6.77” Wide by 9.29” High. The particular battery model we use is the UB121100 110AH model. Other models of similar dimensions and specifications will also work.



**\*Caution\*** Although the low voltage at the battery terminals means that electrical shock or electrocution is impossible, nonetheless, batteries store an enormous amount of potential energy, that if accidentally released by a short-circuit, can melt metal tools, start fires and cause personal injury. Eye protection **MUST BE WORN** whenever working with batteries of this size, and extreme care must be exercised at all times. Anything electrical is unforgiving of mistakes.



**!Warning!** Note that although the voltage at the battery terminals is insufficient to shock a person, the current coming from the inverter receptacles is 120 volt house current, and that is indeed capable of inflicting a severe, potentially fatal shock. Always be sure that extension cords are not frayed or worn, and that all equipment plugged into the inverter is in a safe condition.

# Section 1: Capacities and recommended usages

This 3,000 watt model is the next-to-largest true sine-wave unit we currently produce, and with its premium, marine-grade AIMS inverter with proven soft-start technology, will reliably start and power anything within its capability, even fussy items that will not run with cheaper, modified sine-wave inverters. It will run full-size refrigerators and freezers, table saws and chop saws, as well as any hand-held tools, such as drills, grinders and circular saws, etc. It will also, of course, power smaller items such as TVs, cell phones, laptops, tablets, etc.

This Model is available with an optional transformer and proprietary soft-start mechanism to augment the built-in system in the inverter, which allows it to reliably start and power up to to a 3/4 hp submersible well pump. It is NOT recommended to power large resistive loads like central air-conditioners, water heaters and electric space heaters, as well as large electric motors, such as industrial air compressors, etc.

Used within its limits, this unit will provide many years of trouble-free service, and be a joy to own and use. But like most things, if you push it beyond its limits, you will be plagued by expensive repairs and poor performance.

This machine contains a battery bank of four, 110 amp/hour batteries, for a total capacity of 440 amp/hrs. How much real power is that? If we multiply the 440 amp/hours by the nominal voltage (12 volts), we get a capacity of 5,280 watt/hours (watts = volts times amps). This machine will run a full-sized refrigerator or freezer for several days, even without the solar panels hooked up.

On the next page is a partial list of common electrical appliances and their approximate loads, provided in part by the good folks at: <http://www.energy.gov>

Appliance	Watts used	Load type R= Resistive I= Inductive	Notes	Quantum Harvest Model		
				1500	2500/2505	3000
Aquarium	50-1210	R	1	X	X	X
Clock radio	10	R	2	X	X	X
Coffee maker	900-1200	R	2	X	X	X
Clothes washer	350-500	I		X	X	X
Clothes dryer	1800-5000	R				
Dishwasher	1200-2400	R				X
Dehumidifier	785	I		X	X	X
Electric blanket (Single/Double)	60-100	R		X	X	X
Fans:						
Ceiling	65-175	R		X	X	X
Window	55-250	R		X	X	X
Furnace	750	R		X	X	X
Hair dryer	1200-1875	R	3		X	X
Heater (portable)	750-1500	R	3		X	X
Clothes iron	1000-1800	R	3		X	X
Microwave oven	750-1100	R	2	X	X	X
Personal computer (desktop w/LCD monitor)	150	R		X	X	X
Radio (stereo)	70-400	R		X	X	X
Refrigerator (frost-free, 16 cubic feet)	725	I		X	X	X
Televisions-CRT (color)						
19"	65-110	R		X	X	X
27"	113	R		X	X	X
36"	133	R		X	X	X
53" - 61" Projection	170	R		X	X	X
Flat screen	120	R		X	X	X
Toaster	800-1400	R		X	X	X
Toaster oven	1225	R	3	X	X	X
VCR/DVD	17-21 / 20-25	R		X	X	X
Vacuum cleaner	1000-1440	R	3	X	X	X
Water heater (40 gallon)	4500-5500	R		NR	NR	NR
Water pump, 1/3 to 1/2 hp (120 volt)	500-1100	I	4			
Water pump 1/2 to 1 hp (220 volt)	1000-3000	I	4			
Water bed (with heater, no cover)	120-380	R		X	X	X

Notes: 1=Higher wattage indicates use of an aquarium heater. 2= May have difficulty with Modified sine-wave inverters  
3= High power usage, but usually short duration. 4= High surge requirement for starting.

## Section 2: Controls/Circuit Protection Devices

There is one main fuse, a 400 ampere ANL type fuse, shown to the right, located beside the inverter. There is one spare fuse included in the spare parts kit. To replace the fuse, first, be sure the main switch is turned off, then, using a 9/16" wrench, remove the two nuts. Lift the fuse out and place the new one over the studs; reapply the nuts, being careful to not over-tighten.



### Detail of Main Control Panel

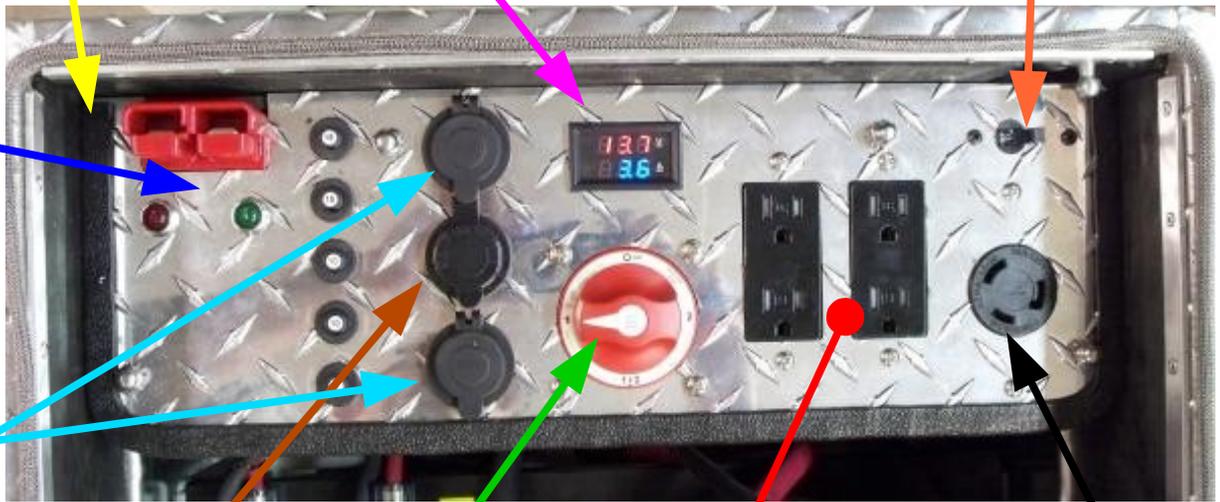
Anderson connector for booster cables

Voltage/Charging amps meter

Main AC breaker

Polarity indicator LEDs for use with the booster cables (see section 5)

12 Volt DC cigarette lighter-style outlets



USB charger ports (2)

120 volt AC outlets

30 amp twist-lock receptacle

### Main Switch; 4 positions available.

Off position isolates the inverter and control panel from the batteries.

**Position #1** is the normal use position in which the unit draws from the internal battery bank.

**Position #1&2** is the position used when using the booster cables, and allows the unit to run from both the internal battery bank and the vehicle's charging system.

**Position #2** is not normally used, and allows the load to be run directly from an automobile's charging system, bypassing the internal battery bank.

## Detail of Main Panel Circuit Breakers

- 15 amp for right-most 120volt outlet
- 15 amp for left-most 120volt outlet
- 10 amp for 12 volt DC outlets
- 5 amp for USB charger,



30 amp, main AC breaker

## Detail of AC Charger



## Detail of Solar Charger/Controller and related circuit-breakers



**Right;** The solar charge controller is protected by 2, 60-amp circuit-breakers. It is recommended that they be kept in the disconnected position (shown) until the solar panels are plugged in; then push the red levers down to latch, turning the breakers on. To shut off, depress the red button to the left of the levers. These breakers both must be engaged to charge the batteries from the solar panels.



 **!IMPORTANT! Before connecting solar panels, be sure the solar charge controller is powered on by switching on the right breaker and be sure the lights on the controller are lit, and only then switch on the left, array breaker!**

## Section 3: External Ports and Connectors

The external ports/connectors for attaching the power cord for the AC charger and the solar panels are located on the latch side of the unit.



**External Connectors**

**AC Charger port**



Insert the plug into the socket with the silver tab on top, and turned slightly to the left. Push it in fully and gently twist it clockwise until it latches. To remove, use your thumb to pull the silver tab toward you, then twist the plug counter-clockwise and pull it out of the socket.

## Solar Panel Connector Port

To connect, lift the cover, and oriented as shown with the boss on top, slide the connector into the socket. Please note that the cover has a latch-pawl to prevent the jack from creeping out. To remove, lift the cover slightly to disengage the latch, and remove the jack.



*(Although both connectors are shown connected in the upper photo for illustration purposes, it is not recommended that both the AC charger and the solar charger operate at the same time.)*



## Section 4A: General Operation and Maintenance

**WARNING! The base unit is NOT water-proof, and must be stored and used in a dry location. Wind-driven rain will ruin the inverter, and worse, set up conditions where people or pets may be electrocuted.**



**Also, be aware that in addition to the above very real danger, the warranty does not cover water or other weather-related damage to any of the components!**

To use the unit, unplug the AC charger cord if it is connected, then wheel the unit to a convenient location. Open the cabinet door and turn the main switch clockwise to position #1 and then press the inverter start button to initialize the inverter. Connect any loads to the appropriate receptacles. Be sure to keep the door open so as to allow adequate airflow for inverter cooling.

### Inverter start switch



*(note that this is a two-position switch; it is recommended to use the power-saving mode whenever possible, as the power saver off position keeps the inverter fully powered, using about 60-70 watts of power even if there is no load on the inverter. Also note that it takes 50 watts of load to switch the inverter on, so some loads will not activate the inverter. In this case, either switch on an additional device to bring total draw over 50 watts, or switch the inverter to Power Saver Off position.)*

It is not necessary to have the solar panels connected in order to use the power station, but if they are not connected (and in direct sunlight), you will only have what power is in the batteries. There is no easy way to tell exactly how much charge remains in the batteries, so the best measure we have is to watch the battery bank voltage, which is shown on the control panel's digital display.

Battery voltage gradients change over time as the batteries age, but a good rule of thumb is that 12.8 to 14 volts is a reading for a battery pretty much fully charged. When the voltage drops to 12.1 to 12.3 volts, the batteries are usually about one half to two-thirds discharged. Voltage of 11.0 to 11.9 mean that the battery is pretty much exhausted, and voltages below about 10.5 will cause the inverter to shut off. These numbers are only approximate, experience is still the best teacher!

**Please note that the voltage readings, to be accurate, must be read under a no-load condition. The voltage will be much lower when the batteries are under load.**

## Section 4B: Charging System

### AC Charger

When you are finished with the unit, unplug the solar panel assembly(s), coil the cable on the brackets and stow the assembly in a safe place. Switch off the inverter, then turn the main switch to the off position. Wheel the unit to a safe, indoor location, and plug the AC charger cord into a wall socket and plug the other end into the appropriate socket on the side of the base unit. Close and latch the cabinet door. Note that the main switch should be OFF. The AC charger will automatically maintain the batteries at the optimum voltage as long as it is plugged in. There is no need for further intervention.

**Please note that the AC charger will charge the batteries even if the main switch is off, but in order to use the inverter or other power outlets, the main switch MUST be switched to position #1!**

The only other maintenance needed besides keeping the batteries charged is to keep the faces of the solar panels clean to improve their efficiency.

### Solar Charger

The solar charger functions are automatic; once the panels are deployed, and the breakers switched on, no further user action is needed. To use, deploy the panels, and, with the main switch on, switch on the breaker marked “to batteries”, energizing the solar controller. Once the solar charger's LEDs are lit, plug the panels into the base unit, and last, switch on the breaker marked “from solar panels”.



**!IMPORTANT! Before connecting solar panels, be sure the solar charge controller is powered on by switching on the lower breaker and be sure the lights on the controller are lit, and only then switch on the upper array breaker!**

## Section 5 : Using the Included Booster Cables

*Imagine: It's dark, the power has been out for 2 days and the meat in the freezer is thawing fast....the wife is freaking out, the sun hasn't been seen in 3 days, and the power station has been running the fridge and furnace, and is at less than 25% charge. What do you do now.....?*

All of the Quantum Harvest solar power stations greater than 800 watts allow the user to use an automobile's electrical system to recharge the power station's batteries in an emergency. I realize that idling a 100+ horsepower engine solely to run the alternator is not very fuel efficient, but compared to losing the contents of a full freezer, or having the pipes freeze for lack of heat, a few gallons of gasoline seems a pretty small price!

Models 1500, 2500, 2505, and 3000, due to the size of the battery bank, and the fact that the batteries are behind a panel, are furnished with a set of cables that conveniently mate with a corresponding terminal on the control panel. These models also have a unique system to help prevent crossed polarity, which, again, due to the size of the battery bank, may result in damage to the vehicle's charging system. Below, you will see the steps necessary to use these features.



**Failure to strictly adhere to the following steps may result in the vehicle's battery exploding, potentially causing severe injuries to the skin and eyes, and could also result in very costly damage to your vehicle's electrical system. Eye and hand protection is mandatory. As I have stated before, batteries, even relatively flat ones, store enormous amounts of energy that can melt tools, cause fires, and cause grave personal injuries. Don't be a statistic!**



*This is why I designed a polarity check system! A classic example of the "mystery battery syndrome"! Which is positive? Which is negative? Not to worry; see below.....*



**Step1: Be sure the main switch is either in the off or #1 position! The Polarity Check system is defeated if the main switch is in either the 1&2 or the #2 position!!**





**!WARNING! Every year, people die needlessly from carbon monoxide poisoning by running engines or heaters or such inside their homes.**



**Don't be a statistic! DO NOT run the vehicle's engine inside a garage with the doors closed!**



**Step 2:** Position the power station a comfortable distance from the vehicle, then, first, plug the cables into the power station, then affix the clamps to the vehicles battery.

**Step 3:** Check for correct cable to battery polarity by looking at the LEDs on the control panel; See below.



**Green LED lit indicates polarity is correct. Turn main switch to position "1 & 2" and charge batteries. (Note that the vehicle's engine must be running to actually charge batteries!)**



**Red LED lit indicates polarity is INCORRECT! DO NOT MOVE THE MAIN SWITCH! Reverse the clamps positions on the battery.**

**Step 4:** After confirming the green LED is illuminated, thus ensuring the correct cable to battery polarity, turn the main switch to position “1 & 2”, and allow the batteries to charge. It is very important to be sure the vehicle's engine remains running, otherwise you will just end up with a flat battery in your car, and very, very, slightly charged batteries in the power station!



**Be absolutely sure that the green LED is lit before moving the main switch to the top #1&2 position! If the switch is moved to this or the #2 position when the red LED is lit, there will be a dead short between the power station and the car's electrical system. This will almost certainly do a great deal of very dramatic and costly damage to both the car and the power station!**



It is perfectly OK to run the inverter to power other loads while the car is charging the batteries, although it will slow the charging process. It will probably be necessary to use an extension cord from the power station, so be sure the cord is of heavy enough construction to carry the load, is not frayed, and is placed to minimize the tripping hazard.

## Section 6A: Power Board Assembly Removal and Re-installation

All Quantum Harvest power stations feature a modular construction that allows faulty components to be easily removed and returned to us for repair, without the necessity of having to crate up the entire heavy unit and paying the costly shipping charges for a 400+ lb. machine.

This model power station consists of, in addition to the casing and batteries, two such removable modules; the power assembly, which contains the the inverter, chargers and related components, and the control panel.

### Removal of the power assembly.

**Tools Required: 9/16" socket or wrench**

*Main fuse*

**Step 1:** Remove the main fuse, and lay the cable up out of the way, and then remove these two knobs.



**Step 2:** Unplug the yellow and black connectors at the front, then slide the entire assembly forward to expose the connectors at the rear.



**Step 3:** There are 3 connectors at the rear; The one at right is the AC output from the inverter. There is also a connector for the AC charger output; *Below Left*, and the AC charger power supply *Below Right*



**Step 4:** *Right;* Remove the nuts securing the inverter cables, and remove the cables.



**Step 5:** *Right;* Using the handle on the front, and the cutout at the rear of the inverter as a handle, remove the power assembly by rotating the inverter side up, and lift the assembly from the case. Be careful to prevent damage to the EM gasket, and also note that the assembly is heavy, weighing approximately 70 lbs.



**Reverse the above steps to re-install.**

## Section 6B: Battery Removal/Reinstallation

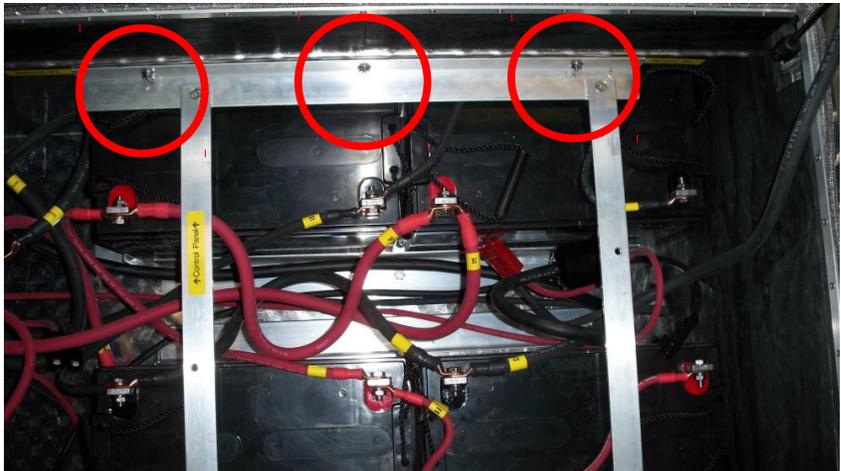
**Tools Required:** 1/2" wrench, 7/16" socket or wrench, #3 Phillips screwdriver



**\*Caution\*** Although the low voltage at the battery terminals means that electrical shock or electrocution is impossible, nonetheless, batteries store an enormous amount of potential energy, that if accidentally released by a short-circuit, can melt metal tools, start fires and cause personal injury. Eye protection **MUST BE WORN** whenever working with batteries of this size, and extreme care must be exercised at all times. Anything electrical is unforgiving of mistakes.

**Step 1:** Remove power assembly.  
(Pages 18-20)

**Step 2:** *Right;* Remove the 6 bolts, (3 to a side) from the shelf support assembly.



**Step 3:** *Right;* Fold the shelf support as shown and remove. Be careful that it does not touch the battery terminals and cause a short-circuit.

**(NOTE: When reinstalling. The shelf support, note that the slat with the yellow label goes toward the front.**

**Step 5:** Remove the battery terminal bolts and cables, and set them aside. The batteries may now be removed.



**\*Caution\*** Take extra care when removing or installing the cables to prevent the ends from touching adjacent terminals, as it may cause a short-circuit.

# Battery Installation Instructions

**\*Caution\*** Although the low voltage at the battery terminals means that electrical shock or electrocution is impossible, nonetheless, batteries store an enormous amount of potential energy, that if accidentally released by a short-circuit, can melt metal tools, start fires and cause personal injury. Eye protection **MUST BE WORN** whenever working with batteries of this size, and extreme care must be exercised at all times. Anything electrical is unforgiving of mistakes.

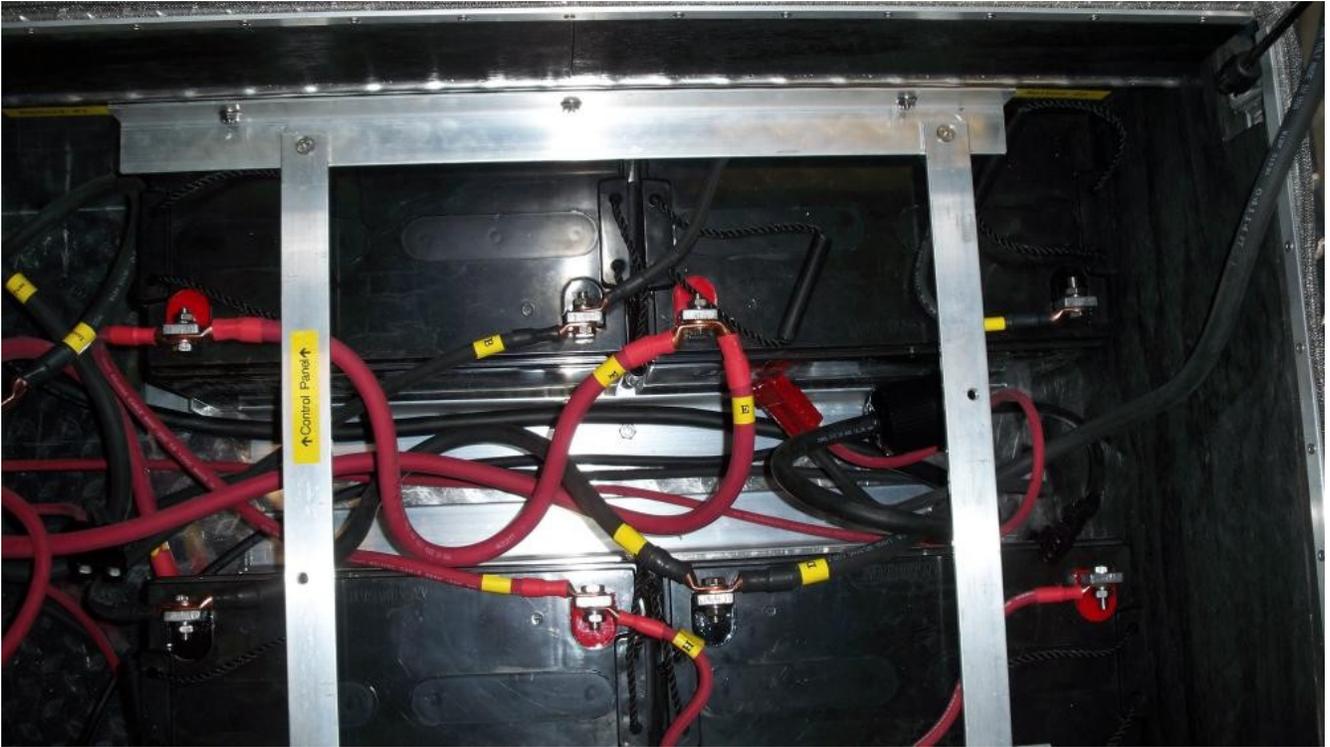
## Things to note before starting:

Be careful with any metal tools that you do not inadvertently short between terminals. Remove any metal jewelry from your hands and avoid loose metal necklaces or such that may droop down and short between adjacent terminals. Work slowly and carefully, and wear eye protection at all times.

**Be wary of applying excessive force; things should slide in and together smoothly. If something seems to go hard, it is most likely caught up on something or started crooked.**

Battery re-installation is basically the reverse of removal. Be sure to replace the batteries with the terminals facing the center. Below is a chart showing the placement of the battery cables. Note that above each battery is a label identifying it's number.

<b>Cable</b>	<b>Color</b>	<b>Placement</b>
A	Black	Battery 1 negative (black) to Battery 2 negative (black)
B	Black	Battery 2 negative (black) to Battery 3 negative (black)
C	Black	Battery 3 negative (black) to Battery 4 negative (black)
D	Black	Battery 4 negative (black) to Main fuse.
E	Red	Battery 4 positive (red) to Battery 3 positive (red)
F	Red	Battery 3 positive (red) to Battery 2 positive (red)
G	Red	Battery 2 positive (red) to Battery 1 positive (red)
H	Red	Battery 1 positive (red) to Main switch terminal 1



*Detail, Above:*

*Battery cables and power board support bracket installed.*



***Make careful note of the placement and position of each connection; some of the cable ends are offset to prevent negative and positive cables from touching terminals of opposite polarity.***

## Section 6D: Control Panel Removal/Replacement

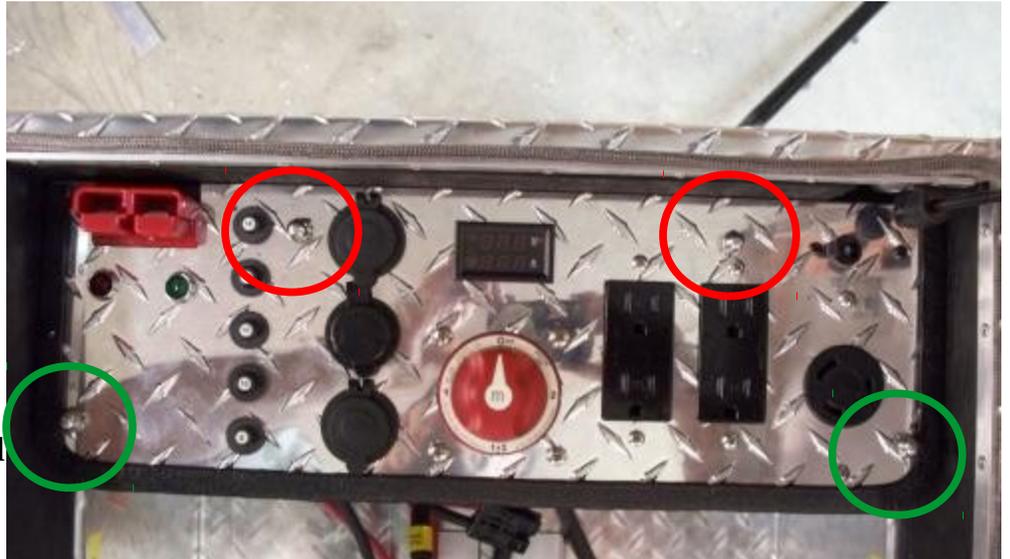
*The only reason this assembly would have to be removed is for repair.*

**Tools needed: 7/16" socket or wrench; 9/16" socket or wrench; #3 Phillips screwdriver**

**Step 1:** Remove the power board. (Pages 21-22)

**Step 2:** Remove the batteries. (Pages 23-24)

**Step 3:** Remove the two nuts circled in green. DO NOT remove the nuts circled in r



**Step 4:** *Right;* Remove the screws indicated.



**Step 5:** The control panel is a snug fit in the case; once the 2 nuts and 2 screws have been removed, lift the panel up off the 2 studs, and rotate the side closest to you up, and remove the control panel.

**Reverse the above steps to re-install.**

# Troubleshooting

## Problem

## Possible Solution

Inverter will not start, main switch is on and meter indicates 10.5 volts or less.

Batteries are flat and must be recharged.

Main switch is on, but nothing works; meter has no reading.

Main fuse blown. (Page 7)

Solar panels are connected, in sunlight, but meter indicates 0 charging amps. No LEDs lit on solar charge controller.

Are both circuit-breakers for the solar charge controller in the “on” position?  
(Page 9)

## Contact Information

**Quantum Harvest, LLC**  
**89 Chapman Ridge Rd.**  
**Athens, ME 04912**

**Email: [support@quantumharvest.net](mailto:support@quantumharvest.net)**

# Warranty Information

All Quantum Harvest power station base units and mobile solar panel units are warranted to be free of defects in materials and workmanship for:

- Batteries, if provided by us.....1 year**
- Inverters, AC chargers and solar charger/controllers.....3 years**
- Everything else, including solar panels.....5 years**

To obtain warranty service, contact us at: [support@quantumharvest.net](mailto:support@quantumharvest.net) for instructions. We will assist in diagnosing the affected component(s), and furnish an RMA. Shipping both ways is on us. You won't pay a cent for warranty service.

**In addition to the above warranty, we are so confident of our products, we will never, as long as you own it, charge you labor for repairs. Even after the warranty period, if a component fails or gets damaged, just contact us at the above email address, and we will assist in diagnosing the problem and either arrange to send you the part at cost, or have you ship us the affected module, where we will diagnose the problem and contact you with the cost of the replacement part(s). You will pay what we pay, no more.**

## **What is NOT COVERED under the warranty:**

Physical damage to the solar panels, including, but not limited to; broken glass or broken or bent parts.

Physical damage to the power station itself.

Water damage to the internal components of the power station.

Damage caused by improper use of the booster cables.