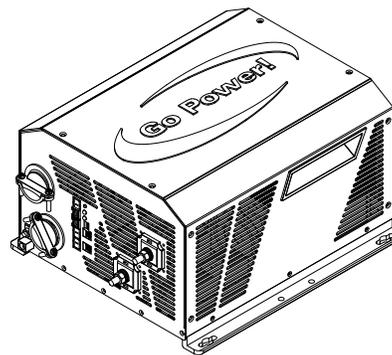
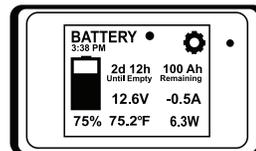
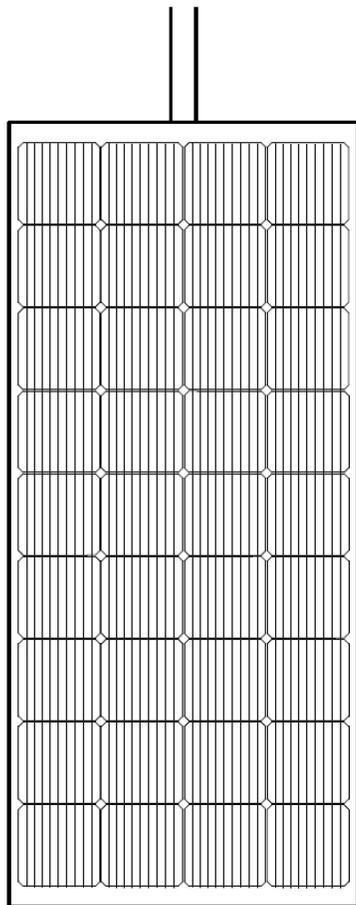


# POWERTRAK™ SYSTEMS

## User Manual

POWERTRAK - 400  
POWERTRAK - 800  
POWERTRAK - 1200

SCAN FOR THE  
LATEST MANUAL



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Congratulations on purchasing your Go Power! PowerTrak™ System. The PowerTrak™ Systems are a complete power system ideal for robust off-grid power. This system includes all solar, inverter, installation hardware and smart battery components required to have the charging capability from both solar and shore power. Understand your power system easier with integrated smart technology. This system features mobile app support.

The PowerTrak™ Systems can be expanded to accommodate up to 3000 watts of solar with stackable MPPT controllers. As with any off-grid power systems, the user is required to manage electrical loads to ensure continual power availability for essential services. Your location and season (hours of sunlight available) play a role in how much energy can be harnessed from this kit.



Register your warranty here: <https://gopowersolar.com/warranty-registration/>

**Note**

This manual will aid in the process of installing the Go Power! PowerTrak™ System. Please read and understand this manual and all included manuals before installing the Go Power! PowerTrak™ System. Review all diagrams included in this guide for the easiest and safest installation. Please retain this manual for future reference.

### 2.1 HOW DOES A GO POWER! POWERTRAK™ KIT WORK?

The solar panels convert the sun's energy into DC electricity and this electricity charges the battery. The battery stores the electricity, similar to a water tank storing water. This battery power may be used at any time to operate DC powered devices connected to the battery. To increase the battery service life, a solar controller is used to prevent the solar panels from overcharging the batteries. This process is managed by the 30A MPPT Solar Charge Controller included in this kit. See Figure 2-A an example of a PowerTrak™ System.

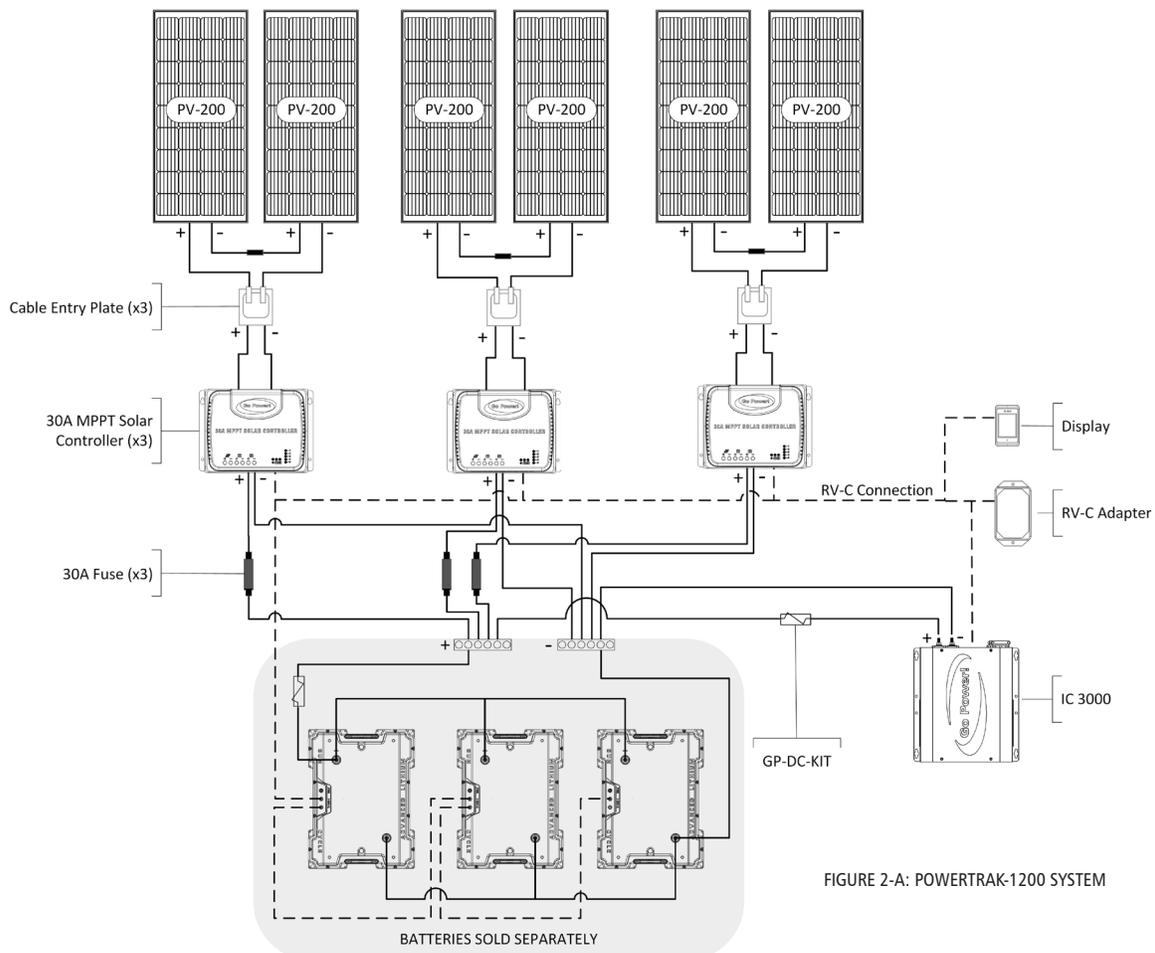


FIGURE 2-A: POWERTRAK-1200 SYSTEM

2.2 CAUTIONS

	<b>Disconnect all power sources before attempting installation</b>	Electricity can be very dangerous. Installation should be performed only by a licensed electrician or qualified personnel.
 	<b>Solar panel safety</b>	Photovoltaic panels generate DC electricity when exposed to sunlight or other light sources. Contact with the electrically active parts of the panel, such as terminals, can result in burns, sparks and lethal shock whether the panel is connected or disconnected.  When panels are connected in parallel, amperages are additive. Consequently, a system assembled from photovoltaic panels can produce high amperages, which constitute an increased hazard. Do not touch terminals while panel is exposed to light. Cover the panel face completely with opaque material to halt the production of electricity when installing or working with panels or wiring.
	<b>Battery and wiring safety</b>	Observe all safety precautions of the battery manufacturer when handling or working around batteries. When charging, flooded batteries produce hydrogen gas, which is highly explosive. Work in a well ventilated area and use caution when making or removing electrical connections. Ensure wires are disconnected from their power sources when wiring. Do not expose battery to open flame, cigarettes or sparks. Shield skin and eyes from battery acid.  Ensure all connections are tight and secure. Loose connections may generate sparks, heat and in extreme cases may catch fire. Be sure to check connections one week after installation to ensure they are still tight.
	<b>Work safely</b>	Wear protective eye wear and appropriate clothing during installation. Use extreme caution when working with electricity and when handling and working around batteries. Use properly insulated tools only.
	<b>Observe correct polarity at all times</b>	Reverse polarity of the battery terminals will cause the controller to give a warning tone. Reverse connection of the array will not cause an alarm but the controller will not function. Failure to correct this fault could damage the controller.
	<b>Do not exceed the voltage and current ratings of the Solar Controller</b>	The total current of the solar system is the sum of the short circuit current of the solar panels in parallel, multiplied by a safety factor of 1.25. The resulting system current is not to exceed the amperage rating of the controller. The voltage of the array is the rated open circuit voltage of the solar panels and is not to exceed 28volts.  The current rating of the solar system is the sum of the Maximum Power Current (Imp) of the solar PV strings in parallel. The resulting system Imp current is not to exceed 30A. If your solar system exceeds these ratings, contact your dealer for a suitable controller alternative.



## 2.3 DISCLAIMERS

**IMPORTANT:** Please follow installation and wiring instructions exactly as outlined to ensure safety. We recommend installation by an RV technician or professional electrician to ensure adherence to relevant electrical codes. We have made every reasonable effort to ensure the accuracy of the instructions in this manual, but Go Power! does not guarantee that the information is error free, nor do we make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. The specifications in this manual are for reference purposes only and are subject to change without notice. For additional information please see [www.gopowersolar.com](http://www.gopowersolar.com).

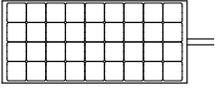
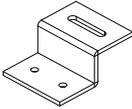
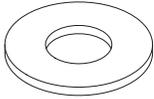
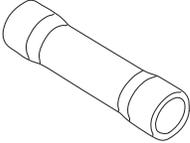
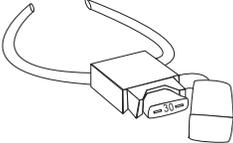
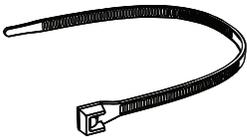
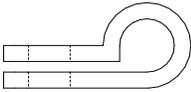
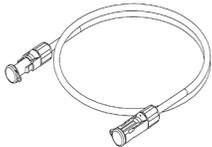
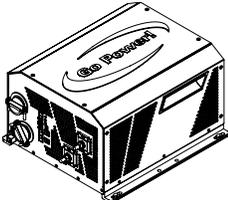
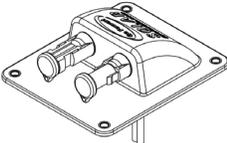
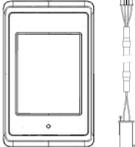
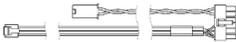
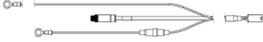
**DISCLAIMER:** Go Power! disclaims liability for any direct, indirect or incidental damages caused by, or in case of, installation not performed following the instructions and cautions in this manual. Go Power! will refuse requests for exchanges or returns, resulting from the purchase and installation of items which do not comply with local codes. To avoid such concerns Go Power! recommends installation by a professional electrician or RV technician. Examples that are shown within this manual are for illustrative purposes only.

## 2.4 KIT PARTS

**Note** Please unpack and make sure all parts shown in the list below are included in the kit. If any parts are missing please contact the Go Power! customer service team at [customersupport@gopowersolar.com](mailto:customersupport@gopowersolar.com) or 1.866.247.6527.

## 2.5 PARTS CHECKLIST

		POWERTRAK 400	POWERTRAK 800	POWERTRAK 1200
ITEM #	DESCRIPTION			
01	Solar panel	2	4	6
02	Solar panel mounting feet	8	16	24
03	1/4" bolt	8	16	24
04	1/4" lock nut	8	16	24
05	1/4" washer	16	32	48
06	#10-16 x 1" screw	16	32	48
07	#6 x 3/4" screw	6	6	6
08	Butt Splice, 12-10 AWG	2	4	6
09	Fuse Holder	1	2	3
10	30A Fuse	1	2	3
11	Heat Shrink	2	4	6
12	Tie Wrap	6	6	6
13	Cable Clamp	6	6	6
14	Ring Terminal	2	2	2
15	Solar Extension Wire, 3ft (1 Male, 1 Female)	2	2	
16	Solar Extension Wire, 6ft (1 Male, 1 Female)			2
17	Solar Extension Wire, 10ft (1 Male, 1 Female)		1	2
18	3000 Watt Pure Sine Inverter Charger (with built-in 125 Amp Battery Charger and 50 Amp Transfer Switch)	1	1	1
19	GP-DC-Kit	1	1	1
20	30A MPPT Solar Controller	1	2	3
21	Cable Entry Plate (25 ft)	1	2	3
22	PowerTrak™ Display Remote, 3.2" Touchscreen, Harness Included	1	1	1
23	RV-C Extension Harness, 25ft	1	1	1
24	RV-C Adapter Harness	1	1	1
25	RV-C Branch Connection Harness	2	3	4
26	RV-C Terminating Resistor Harness	1	1	1
27	ADV LFP RV-C System Harness	1	1	1
28	RV-C Adapter	1	1	1

 <p>1</p>	 <p>2</p>	 <p>3</p>	 <p>4</p>	 <p>5</p>
 <p>6, 7</p>	 <p>8</p>	 <p>9, 10</p>	 <p>11</p>	 <p>12</p>
 <p>13</p>	 <p>14</p>	 <p>15</p>	 <p>16</p>	 <p>17</p>
 <p>18</p>	 <p>19</p>	 <p>20</p>	 <p>21</p>	 <p>22</p>
 <p>23</p>	 <p>24</p>	 <p>25</p>	 <p>26</p>	 <p>27</p>
 <p>28</p>				

**Note** A combination of Solar Extension Wires (Items 15, 16, 17) are included with all PowerTrak™ Systems. These extension wires are intended to be placed as required during assembly. Exact location of the Solar Extension Wires depend on the Solar Panel/Cable Entry Plate placement. Please contact your dealer to purchase additional Solar Extension Wires.

## 2.6 REQUIRED TOOLS

<ul style="list-style-type: none"><li>a. Screwdriver (Phillips)</li><li>b. Keyhole Saw</li><li>c. Pencil or Marker</li><li>d. Pliers</li><li>e. Wire Strippers and Cutters</li><li>f. Butt Splice Crimping Tool</li><li>g. Electric Hand Drill</li><li>h. 1/16" and 3/8" Drill Bits</li></ul>	<ul style="list-style-type: none"><li>i. 2" Hole Saw Bit</li><li>j. 5/16" &amp; 7/16" Wrench</li><li>k. Heat Gun</li><li>l. Caulking Gun</li><li>m. Sealant</li><li>n. Butyl Tape (optional)</li><li>o. Digital Multimeter (troubleshooting only)</li><li>p. Torque Driver (optional)</li></ul>
---	---

Design your solar panel layout for your roof here:



### 3.1 PLAN YOUR POWERTRAK™ SETUP

1. Take a few minutes before starting any installation work to plan the locations of your PowerTrak™ System components on paper first.
2. For detailed installation of individual system components see the specific manuals included with each item.
3. Identify and prepare easy/safe access to possible installation locations in the 3 key installation areas within your RV;
  - Roof Solar Panels, Cable Entry Plate(s)
  - Instrument/Controls PowerTrak™ Display
  - Storage Compartments IC Series Inverter/Charger, RV-C Adapter, Solar Controller(s)

### 3.2 PLACING THE SOLAR PANELS

1. Remove all solar panels from their boxes. Set aside the boxes as they will be used in the instructions to follow.
2. Using the solar panel boxes, plan the layout of the panels on your RV rooftop. Once you have positioned the boxes correctly, leave the boxes on the RV roof as place holders until the panels are installed.
  - Placement of the panel(s) should be as close together as possible. Each panel has 3.3' of cable coming from the junction box. It may be necessary to use solar panel extension cables. Some cables are provided with the system, however if required, longer extension cables can be purchased. Please contact your dealer to purchase.
  - Select a location where the mounting surface is at least 1/2" thick and strong enough to support the solar panel mounting hardware.
  - Solar panels should be located a minimum of 3' from the front of the RV to reduce wind load on the panels.
  - Avoid internal wiring when selecting the solar panel mounting locations for drilling the mounting holes.
  - Ensure fixed obstacles, such as air conditioners, will not shade the solar panels. (Shading can greatly reduce the performance of the solar system).
  - Ensure there is enough room to access the panels and other fixed obstacles for future inspection and maintenance.

### 3.3 PLACING THE CABLE ENTRY PLATE(S)

The Cable Entry Plate(s) (CEP) is included in all Go Power! PowerTrak™ Systems. Considerations for mounting locations are listed below.

1. The following things should be considered when choosing an installation location for the CEP(s).
  - Ensure the location is accessible to allow the cables from the solar panels to reach the controller location.
  - The distance between the solar panels and battery compartment should be no more than 25-30' (a shorter wire run will lower the voltage drop, which increases the system efficiency).
  - It is not recommended to mount the CEP(s) underneath a solar panel as this will make the solar connections on the CEP(s) inaccessible.

### 3.4 PLACING THE 30A MPPT SOLAR CONTROLLER(S)

The 30A MPPT Solar Controller(s) is included in all Go Power! PowerTrak™ Systems. A condensed version of the installation instructions appear in this manual. However, please read the full installation manual included with the 30A MPPT Solar Controller(s).

1. The following things should be considered when choosing an installation location for the 30A MPPT Solar Controller(s).
  - Locate the controller(s) as close to the battery as possible (do not mount the controller(s) directly above the battery, unless you are using a lithium battery. Other battery types can potentially damage components due to gassing of the battery), this will keep the battery wires short and prevent voltage drop.
  - Mount the controller(s) to a non-flammable surface.
  - The controller(s) is designed to be mounted vertically in an indoor location where it is protected from water or condensation.
  - Ensure the location is accessible to allow the cables from the CEP(s) to reach the controller(s).
  - Avoid installing the controller(s) in direct sunlight.
  - For best thermal performance, mount the controller(s) vertically with power terminals facing downward, and ensure an air gap of at least 6 inches above and below the controller.
  - Ensure any enclosed space where the controller(s) is mounted is well ventilated. This will prevent heat buildup that could lead to derating of the controller.

## 3.5 PLACING THE IC SERIES INVERTER/CHARGER

The IC Series Inverter/Charger is included in all Go Power! PowerTrak™ Systems. A condensed version of the installation instructions appear in this manual. However, please read the full installation manual included with the IC Series Inverter/Charger.

1. The following things should be considered when choosing an installation location for the IC Series Inverter/Charger.
  - The inverter/charger should be installed in a location where the nominal air temperature is between 0 °C and 50 °C. The cooler the better within this range. Note the maximum output wattage will derate in temperatures above 45 °C.
  - Install the inverter/charger in an indoor location where it is protected from water or other fluids.
  - For optimum performance the inverter/charger must be installed so the front, side and rear air vents are not blocked or obstructed in any way. Do not install the inverter/charger in an area with limited air flow. Allow as much space around the inverter/charger as possible, leaving at least 6" of airspace clearance around all ventilation areas.
  - Ensure the inverter/charger is installed away from battery banks of any type other than lithium, away from any flammable or combustible material (paper, flammable liquids, gasoline, cloths) that may be ignited by heat, sparks, or flames. Only place the inverter/charger directly above a battery if it is a lithium battery. Gases from other battery types will corrode and damage the inverter/charger. Never allow battery acid to drip onto the unit.
  - Do not block access to the IC Series remote control and battery temperature access ports, status LEDs and the On/Off switch. Allow enough room to access the AC and DC wiring terminals and connections as they will need to be checked and tightened periodically. The inverter/charger must be installed in one of the approved mounting orientations detailed in the IC Series Inverter/Charger manual.
  - Choose a clean location that limits the introduction of dust, fumes, insects, or rodents that could enter and block the ventilation openings.
  - Ensure the inverter/charger is located as close to the batteries as possible but not within the same compartment. The length and size of the DC Cables will affect performance. Long DC wires tend to lose efficiency and reduce the overall performance. Use the DC cables recommended in the IC Series Inverter/Charger manual.

## 3.6 PLACING THE RV-C ADAPTER

The RV-C Adapter is included in all Go Power! PowerTrak™ Systems.

1. The following things should be considered when choosing an installation location for the RV-C Adapter.
  - The RV-C Adapter should be installed in an indoor location where it is protected from water or condensation.
  - Locate the RV-C Adapter next to the IC Series Inverter/Charger such that the RV-C Adapter Harness can be connected without creating any strain or tension on the cable.

## 3.7 PLACING THE POWERTRAK™ DISPLAY

The PowerTrak™ Display is included in all Go Power! PowerTrak™ Systems. A condensed version of the installation instructions appear in this manual. However, please read the full installation manual included with the PowerTrak™ Display.

1. The following things should be considered when choosing an installation location for the PowerTrak™ Display.
  - The PowerTrak™ displays' default orientation is inverted portrait, but can be changed to portrait, landscape or inverted landscape orientation.
  - The display must be mounted in an indoor location where it is protected from water and condensation.
  - Mount the display in an accessible place and ensure the 25' RV-C cable can reach the display from the Inverter/Charger and RV-C Adapter location.
  - Ensure the display is installed in a well ventilated area away from batteries of any type other than lithium, and places with free acid gases.

### 4.1 INSTALLING THE MOUNTING FEET

- Assemble 4 mounting feet onto each of the solar panels frame using the 1/4" bolts and nuts. This assembly is easily completed on the ground before the panels are brought up to the RV roof. (See Figure 4-A)



**WARNING:**

- The mounting feet must be installed on the 4 outer holes in the panel frame.
- All 4 mounting feet must be used on a solar panel.
- The mounting surface must be at least 1/2" thick and strong enough to support the solar panel mounting hardware.

- Tighten the nuts securely using a 7/16" wrench.

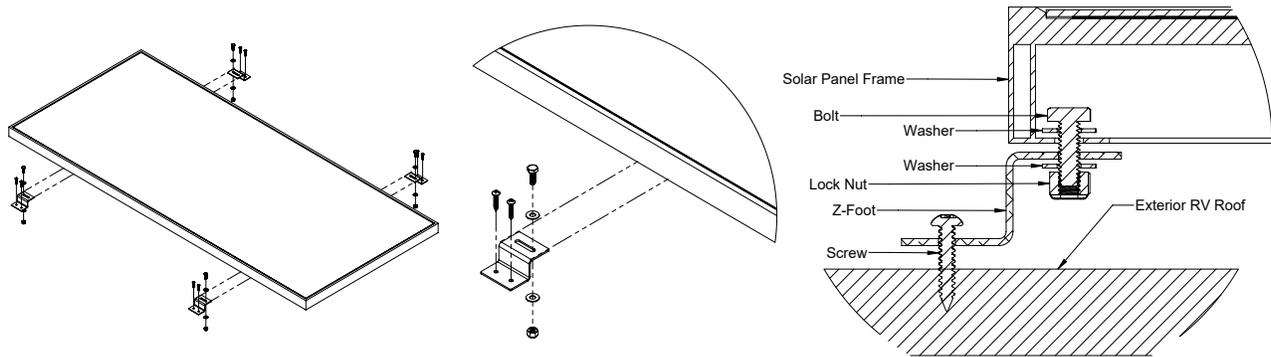


FIGURE 4-A: SOLAR PANEL INSTALLATION DETAILS

### 4.2 INSTALLING THE CABLE ENTRY PLATE(S)

- Mark the location of the CEP cable hole to be drilled for feeding the cables through the RV roof. (See Figure 4-B)
- Drill a small pilot hole in the chosen spot. Using the hole saw enlarge the hole to be 1.5" to 2" in diameter.
- Remove any sharp edges from the hole.
- Thoroughly clean the RV roof around the hole in the area the CEP will be mounted. A clean surface is critical to ensuring a watertight seal.

**Note**

Ensure any cleaning, priming, or sealing products used are compatible with CEP material. CEP material may be either polycarbonate (PC) or polypropylene (PP). Incompatible products could result in damage to CEP material and water ingress. Contact technical support if assistance is needed in identifying CEP material.

- Apply butyl tape or sealant to the mounting surface on the underside of the CEP, covering all mounting holes as well.
- Feed wires down through the hole while lowering the CEP onto the RV roof. Ensure strain relief feature is centered with the wire hole.
- Use #12 or #10 stainless steel pan-head screws to secure the CEP to the RV roof, through the butyl tape/sealant and into the roof. (See Figure 2-B). Do not over-tighten screws as this could lead to cracking of the CEP.
- Once screwed down to the RV roof, apply a generous bead of sealant around the outside of the CEP on the mounting flange and over the screws.

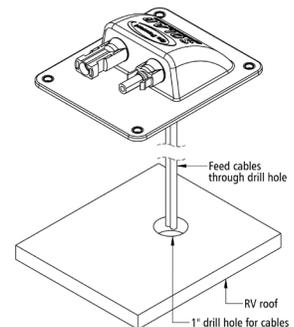


FIGURE 4-B

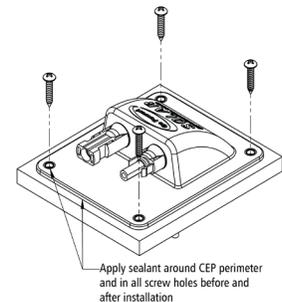


FIGURE 4-C

## 4.3 INSTALLING THE SOLAR PANELS



**WARNING:** Photovoltaic panels generate DC electricity when exposed to sunlight or other light sources. When exposed to light, contact with the electricity active parts of the panel, such as terminals, can result in burns, sparks and lethal shock whether the panel is connected or disconnected.

**Cover the panel faces completely with an opaque material to stop the production of electricity when working with panels or wiring – the cardboard shipping boxes are the perfect option to cover glass surface of the panels. Do not touch the terminals while the panel is exposed to light.**

### Site Considerations — Excluded Operating Environments

Certain extreme operating environments are not recommended for Go Power! products and are excluded from the Go Power! limited warranty. These include (but are not limited to): winds exceeding 45 MPH, flooding or immersion in water or other fluids, contact with liquids or substances with a pH less than 6.5 or greater than 8.5, and contact with fire, projectiles, lava flow, volcanic eruptions, or meteors.

### Mounting Configurations

Modules installed over a roofing system must be mounted over a flat, fire-resistant roof covering with the appropriate safety rating for the application. While modules can be mounted at any vertical or horizontal angle, it is recommended that they are installed at a minimum 10-degree angle to reduce dirt accumulation and soiling.



**WARNING:** Do not install panels on a surface that is not fire resistant or that can be damaged by high temperatures. These panels are designed to not catch fire themselves but can get hot during normal operation and excessively hot in some failure conditions such as cracked cells or failed protection diodes. Go Power! is not responsible for heat damage such as discoloration, holes or fire due to improper installation.

Water entering the junction box could present a safety hazard, and junction boxes should be oriented on the uppermost position of the panel. The junction box should never be mounted in a depression. Note the junction box manufacturer rates this product with an ingress protection rating of IP67 for the box.

### Module Handling

Always use gloves when handling modules. Modules are sensitive to oils and abrasive surfaces — not doing so may lead to scratching and soiling. Minimize module contact as much as possible, especially with any abrasive surfaces. Do not place anything on the modules. Do not lift modules by the cables or the junction box under any circumstances. Remove fingerprints from the panels by washing the panel as described in section 5.2.

Do not use blunt or sharp force with other hardware (junction boxes, cables and connectors). The resulting damage could render the module unusable.

1. REMOVE shipping plastic from panel (if applicable).
2. Expose the panel(s) to sunlight. Use a voltmeter to test for DC voltage, and current output.
3. Locate the solar panels on the RV roof replacing each of the boxes used in the planning step.
4. Test that the end solar panel cables can reach the CEP.
5. Apply butyl tape or sealant under each of the 4 mounting feet.
6. Use the screws provided in the kit to secure the 4 solar panel mounting feet to the RV.
7. Apply a generous bead of sealant around each of the 4 mounting feet to ensure a watertight installation. The feet and screws should be completely covered in sealant.
8. Following the power diagrams in this manual (Pages 20-25), connect the pair(s) of two solar panels together in series.
9. Remove the sealing caps from the ends of the solar connectors on the CEP(s).
10. Plug the positive and negative Solar connectors from the solar panels directly into the CEP connectors.
11. Run the 25' cables from the under side of the CEP(s) to the location where the 30A MPPT Solar Controller(s) will be installed.



**WARNING:** All 4 mounting feet must be securely fastened to the RV roof. Failure to do so could cause the panels to lift and separate from the RV while in transit which could cause significant damage and/or injury.

**Note**

Use appropriate sealant as recommended by your RV Dealer for your RV roof.

**Note**

If necessary, use Solar Extension Wires when connecting solar panels to each other, and to the CEP.

#### 4.4 INSTALLING THE 30A MPPT SOLAR CONTROLLER(S)



Ensure the Solar Panels are covered. Cover the panel faces completely with an opaque material to stop the production of electricity when working with panels or wiring – the cardboard shipping boxes are the perfect option to cover glass surface of the panels.



Scan here for tips on how to install the 30A MPPT Solar Controller(s) in your system.

1. First, place the controller at the desired position and use a marking pen to mark the mounting points. Drill 4 pilot holes of the appropriate size (0.136" recommended) at the 4 marks.
2. Fix screws into the upper two mounting holes.
3. Align fixed holes of the controller with the two pre-fixed screws and hang the controller up. Then fix the lower two screws.
4. Repeat steps 1-3 for any remaining controller(s).
5. Cut the CEP cables to length, allow some excess for strain relief/flexibility.
6. Use the leftover cable to connect the controller(s) to the batteries ensuring the 30A Fuse(s) are installed as per 4.5. If extra battery cable is required to connect to the battery bank, Go Power! recommends using an equivalent cable to that supplied with the kits: 10 Gauge Wire rated to – UL/CUL/USE2.

#### 4.5 INSTALLING THE 30A FUSE(S) AND FUSE HOLDER(S)

1. Locate the positive battery cable from the 30A MPPT Solar Controller.
2. Plan where you can safely and easily access the fuse holder & fuse, as close to the battery as possible.
3. Cut the battery positive cable from the controller to the planned lengths.
4. Strip the fuse holder cable and positive cable from the controller as shown in Fig 4-F.
5. Thread the red heat-shrink onto the fuse holder cable
6. Insert the fuse holder and controller stripped cable ends into the butt splice as shown in Fig 4-G.
7. Crimp the butt splice fully - test the connection by gently pulling on both cables.
8. Thread the heat-shrink over the butt splice as shown in Fig 4-H.
9. Use the heat gun to shrink the heat shrink over the butt splice as shown in Fig 4-I.
10. Repeat the process for the other fuse holder cable & battery bank connection.
11. Do not install the 30A Fuse(s) at this stage.

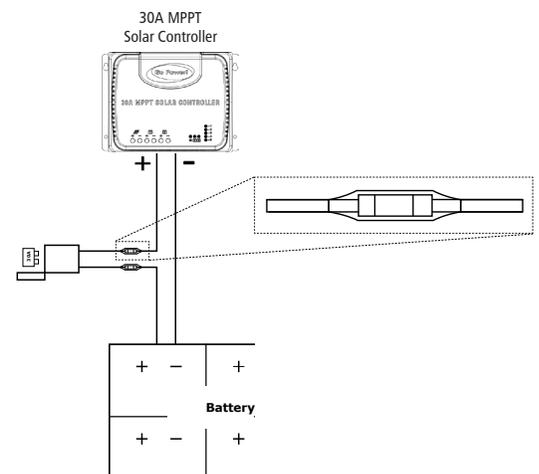


FIGURE 4-D

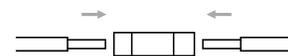


FIGURE 4-E

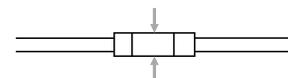


FIGURE 4-F

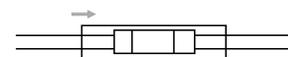


FIGURE 4-G

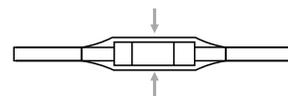


FIGURE 4-H

## 4.6 CONNECTING THE 30A MPPT SOLAR CONTROLLER(S) TO THE BATTERY BANK

1. Clean all corrosion from the battery terminals before proceeding.
2. Crimp ring terminals onto the positive and negative cables to be attached to the battery.
3. Check the ring terminal crimp connection by gently pulling on the cable and ring terminal.
4. Attach the Negative (Black) ring terminals from the controller(s) and loosely tighten. The battery connections will be tightened according to the battery manufacturers specification once all components are connected.
5. Attach the Positive (Red) ring terminals from the controller(s) and loosely tighten. The battery connections will be tightened according to the battery manufacturers specification once all components are connected.

## 4.7 INSTALLING THE IC SERIES INVERTER/CHARGER

Refer to the IC Series Inverter/Charger User Manual for detailed installation instructions. Be sure to use the DC Fuse Kit to fuse the Inverter/Charger.



Scan here for tips to install the IC Series Inverter/Charger AC Wires.



Scan here for tips to install the IC Series Inverter/Charger DC Wires.

## 4.8 INSTALLING THE RV-C ADAPTER

Use screws to mount the RV-C adapter near the IC Series Inverter/Charger.

## 4.9 CONNECTING THE RV-C SYSTEM



Scan here for tips to install the PowerTrak wiring in your system.

1. Use the communication connection diagrams (Pages 20-25) to connect the RV-C harnesses to the 30A MPPT Solar Controller(s), IC Series Inverter/Charger and RV-C Adapter.
2. Route the 25' RV-C Extension Harness to the location where the PowerTrak™ Display will be mounted.

## 4.10 INSTALLING THE POWERTRAK™ DISPLAY

1. First, place the display at the desired position and orientation to roughly mark out the center of the display. See Figure 4-I.
2. Use a hole saw bit to drill a 2" hole for the display.
3. Remove the front cover from the display and hold it in position. Mark out the four mounting holes.
4. Use an appropriately sized drill bit (0.086" recommended) to drill the four pilot holes.
5. Feed the end of the 25' RV-C Extension Harness through the 2" hole, and connect it to the display cable. Feed the cables back through the hole and into the wall before using the provided screws to mount the display. See Figure 4-J.
6. Place the front cover back on the display.

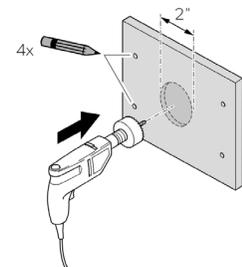


FIGURE 4-I

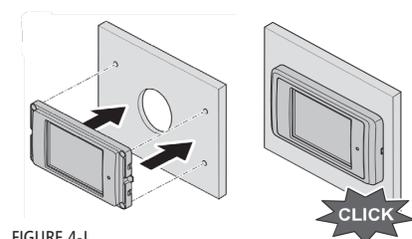


FIGURE 4-J

## 4.11 BATTERY BANK SUGGESTIONS

The Go Power! PowerTrak™ Systems are best paired with Go Power! Advanced Lithium Batteries. If using third-party batteries, we recommend using our Go Power! Shunt to get the most out of your system. We also recommend using a main DC disconnect switch on all systems.

Suggested battery bank configurations for Go Power! PowerTrak™ Systems are shown in the table below. The mounting orientation of the batteries MUST follow the guidelines in the Advanced Lithium Battery Manual. Please contact customer support with any questions regarding battery bank layout and mounting orientation.

	100Ah Advanced Lithium Battery Configurations	300Ah Advanced Lithium Battery Configurations
POWERTRAK-400 200Ah-300Ah		
POWERTRAK-800 400Ah-600Ah		
POWERTRAK-1200 900Ah+		

## 5.1 INITIAL CONNECTION AND START-UP PROCEDURE

### 5.1.1 GO POWER! ADVANCED LITHIUM BATTERIES

1. Check all electrical connections and ensure all cables are securely fastened.
2. Ensure the fuse holder(s) is securely fastened and install the 30A Fuse(s) into the fuse holder(s).
3. If using more than one battery, ensure the battery interconnect cables and terminating resistors are connected securely.
4. Ensure the batteries are off. If they are on, press and hold the power button on one of the batteries for 10 seconds, and ensure all the battery LEDs are off.
5. If you are using a DC disconnect switch, turn the switch to the OFF position (all loads disconnected) and ignore Step 6.
6. If you are NOT using a DC disconnect switch, unplug the RV-C Adapter cable from the Inverter/Charger. See Figure 5-A. If there are any other DC loads, turn them off.
7. Turn on the batteries by pressing and holding one of the battery power buttons until all battery LEDs are on.
8. If you are using a DC disconnect switch, turn the switch to the ON position (all loads connected) and ignore Step 10.
9. Confirm that the battery LED(s) on the Solar Controller(s) is illuminated.
10. If you are NOT using a DC disconnect switch, plug the RV-C Adapter cable back into the "REMOTE" port on the Inverter/Charger.
11. Select whether your batteries are set up in series or parallel on the "Setup Batteries" screen, and click "Start". See Figure 5-B.
12. Confirm on the PowerTrak™ Display that Advanced Lithium Batteries, Solar Controller(s) and Inverter/Charger are listed on the "Initial Setup" screen. See Figure 5-C.
13. Press the "LOAD" button on the bottom right of the PowerTrak™ Display screen.
14. Refer to the PowerTrak™ Display manual for configuring the Advanced Lithium Batteries, Solar Controller(s) and Inverter/Charger.
15. Remove the opaque material from the solar panels once everything is connected.

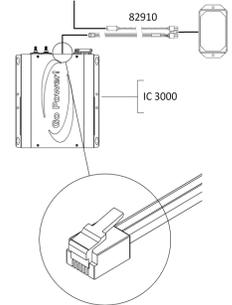


FIGURE 5-A



FIGURE 5-B

### 5.1.2 OTHER BATTERIES

1. Check all electrical connections and ensure all cables are securely fastened.
2. Ensure the fuse holder(s) is securely fastened and install the 30A Fuse(s) into the fuse holder(s).
3. Confirm that the battery LED(s) on the Solar Controller(s) is illuminated.
4. Confirm on the PowerTrak™ Display that the Go Power! Shunt, Solar Controller(s) and Inverter/Charger are listed on the screen. See Figure 5-C.
5. Press the "LOAD" button on the bottom right of the PowerTrak™ Display screen.
6. Refer to the PowerTrak™ Display manual for configuring the Go Power! Shunt, Solar Controller(s) and Inverter/Charger.
7. Remove the opaque material from the solar panels once everything is connected.



FIGURE 5-C

### 6.1 INSPECTION

After installing any Go Power! PowerTrak™ System or any other Go Power! products, all modules, electrical and mechanical components and connections should be inspected annually by a trained Go Power! or dealer representative or other qualified personnel for safe electrical and mechanical connections and to ensure modules are corrosion-free and vehicle mounting has not affected connections.

### 6.2 CLEANING

Although Go Power! PowerTrak™ Systems are generally maintenance free, significant performance gains can be made with clean solar panels.

1. Clean the solar panels monthly. Use water and a soft sponge or cloth. A mild non-abrasive cleanser can be used for more stubborn residue. Rinse well.
2. Clean solar panels more frequently during drier months, as they may become covered in dust more quickly. A pressure washer is not recommended.
3. Visual inspection – check the exterior for cracks, missing or broken hardware or other potential problems. Check all roof penetrations and replace sealant areas as required

### 6.3 LONG TERM STORAGE

#### 6.3.1 SOLAR

##### **In Cold Climates (temps below 32F)**

- Cover your solar panels with a protective material that does not allow light to pass through. We recommend using a dark-coloured tarp or plywood, with plywood being the best option.
- Label your solar panel wires 'positive' and 'negative'
- Unhook your solar panels from your solar controller
- Fix wire nuts on the positive and negative leads from the solar panels

##### **In Warm Climates**

There is no need to 'store' your RV solar system in warm climates unless your RV is parked indoors or in very low sunlight. If that's the case, simply follow the cold climate storage directions above.

However, do make sure that all parasitic draws are removed from the batteries i.e. Propane detector, clock radio, etc to make sure the solar panel(s) can keep the batteries topped up even with reduced sun exposure.

#### 6.3.2 ADVANCED LITHIUM BATTERIES

##### **In Cold Climates (temps below 32F)**

We recommend taking the lithium batteries inside, like any deep cycle battery. Lithium batteries don't like cold temperatures. They will not take a charge below 0 degrees, and they can freeze. There is no "kill switch" required for winter storage. Check the batteries monthly and charge them if necessary.

##### **In Warm Climates**

Storing lithium batteries at partial charge will not damage the battery like it will with a lead acid battery. Charge the battery to at least 50-60% and disconnect any loads that could discharge the battery. Check the batteries monthly and charge them if necessary.

## 7. WARRANTY



The Go Power! warranty is valid against defects in materials and workmanship for the specific product warranty period. It is not valid against defects resulting from, but not limited to:

- Misuse and/or abuse, neglect or accident
- Exceeding the unit's design limits
- Improper installation, including, but not limited to, improper environmental protection and improper hook-up
- Acts of God, including lightning, floods, earthquakes, fire, and high winds
- Damage in handling, including damage encountered during shipment

A warranty shall be considered void if the warranted product is in any way opened or altered. The warranty will be void if any eyelet, rivets, or other fasteners used to seal the unit are removed or altered, or if the unit's serial number is in any way removed, altered, replaced, defaced, or rendered illegible.

### 7.1 WARRANTY RETURN PROCEDURE

Before contacting Go Power!'s customer service department, please read the "frequently asked questions" section of our website to troubleshoot the problem. If trouble persists:

1. Call your Go Power!™ Technical Support team (1-866-247-6527) or
2. Return defective product to place of purchase

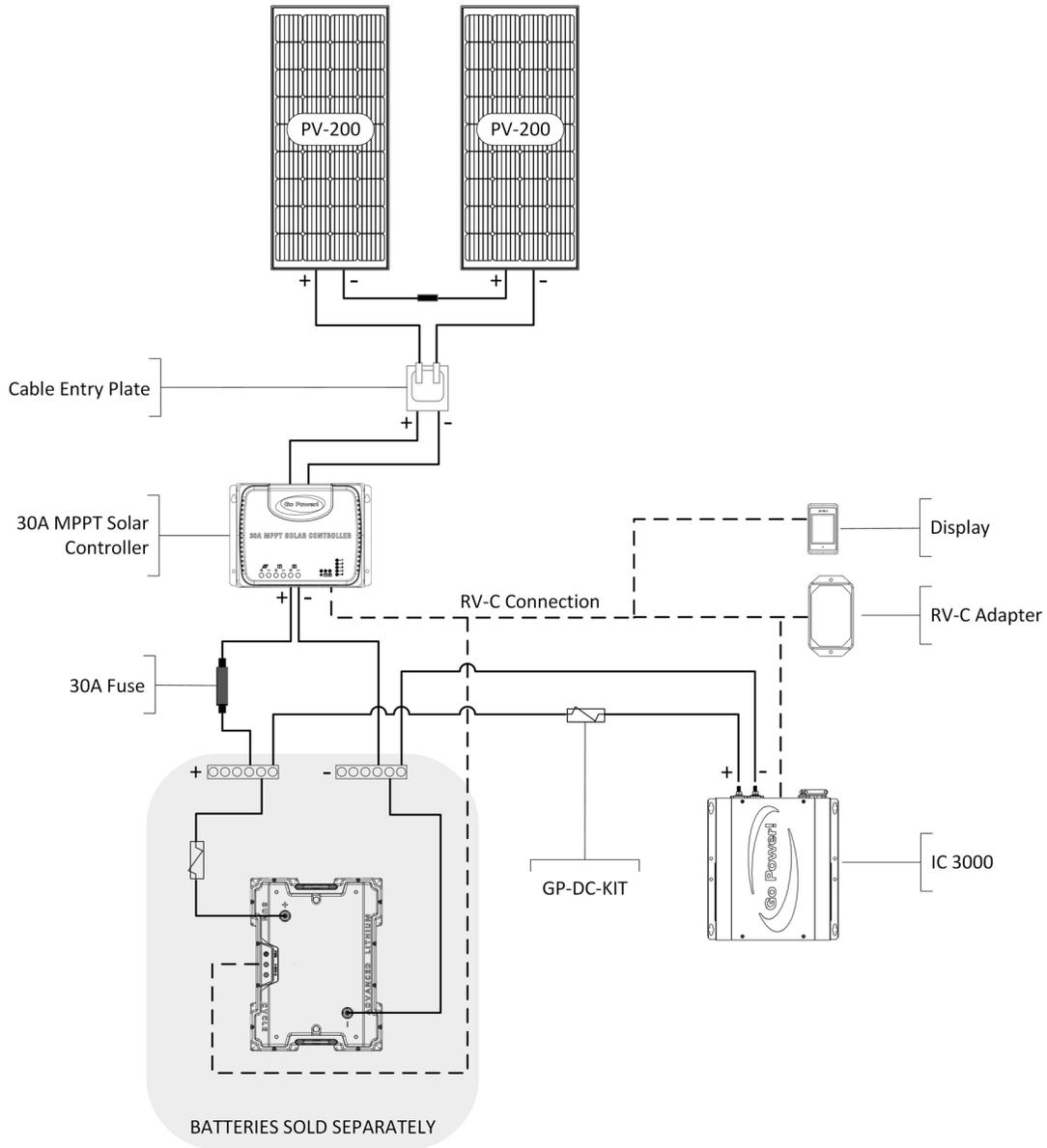
Unless approved by Go Power! Management, all product shipped collect to Go Power! will be refused. Test items or items that are not under warranty, or units that are not defective, will be charged a minimum bench charge of (\$50.00 US) plus taxes and shipping. A 15% restocking charge will be applied on goods returned and accepted as "new" stock.

An RMA number (Return Materials Authorization number) from Go Power! Customer Service is required prior to returning any Go Power! Products. Go Power! reserves the right to refuse any items sent to Go Power! without an associated RMA number. To obtain an RMA number, please contact [customersupport@gopowersolar.com](mailto:customersupport@gopowersolar.com) or [techsupport@gopowersolar.com](mailto:techsupport@gopowersolar.com). Toll Free for US & Canada 1-866-247-6527.

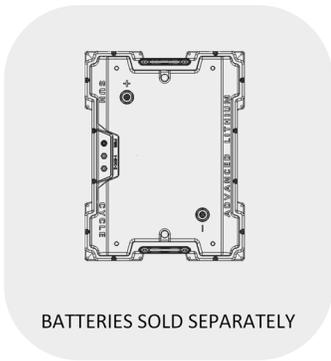
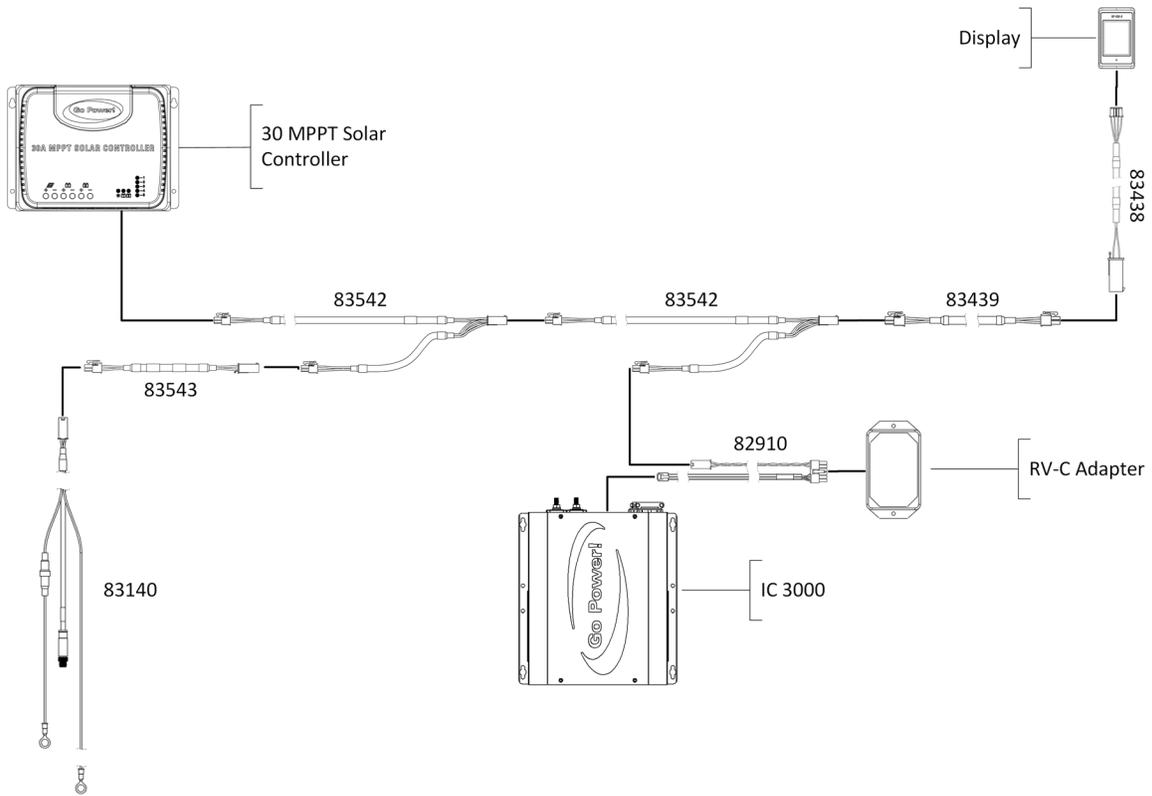
#### **Out of Warranty**

Go Power! electronic products are non-repairable, Go Power! does not perform repairs on its products nor does it contract out those repairs to a third party. Go Power! does not supply schematics or replacement parts for any of its electronic products.

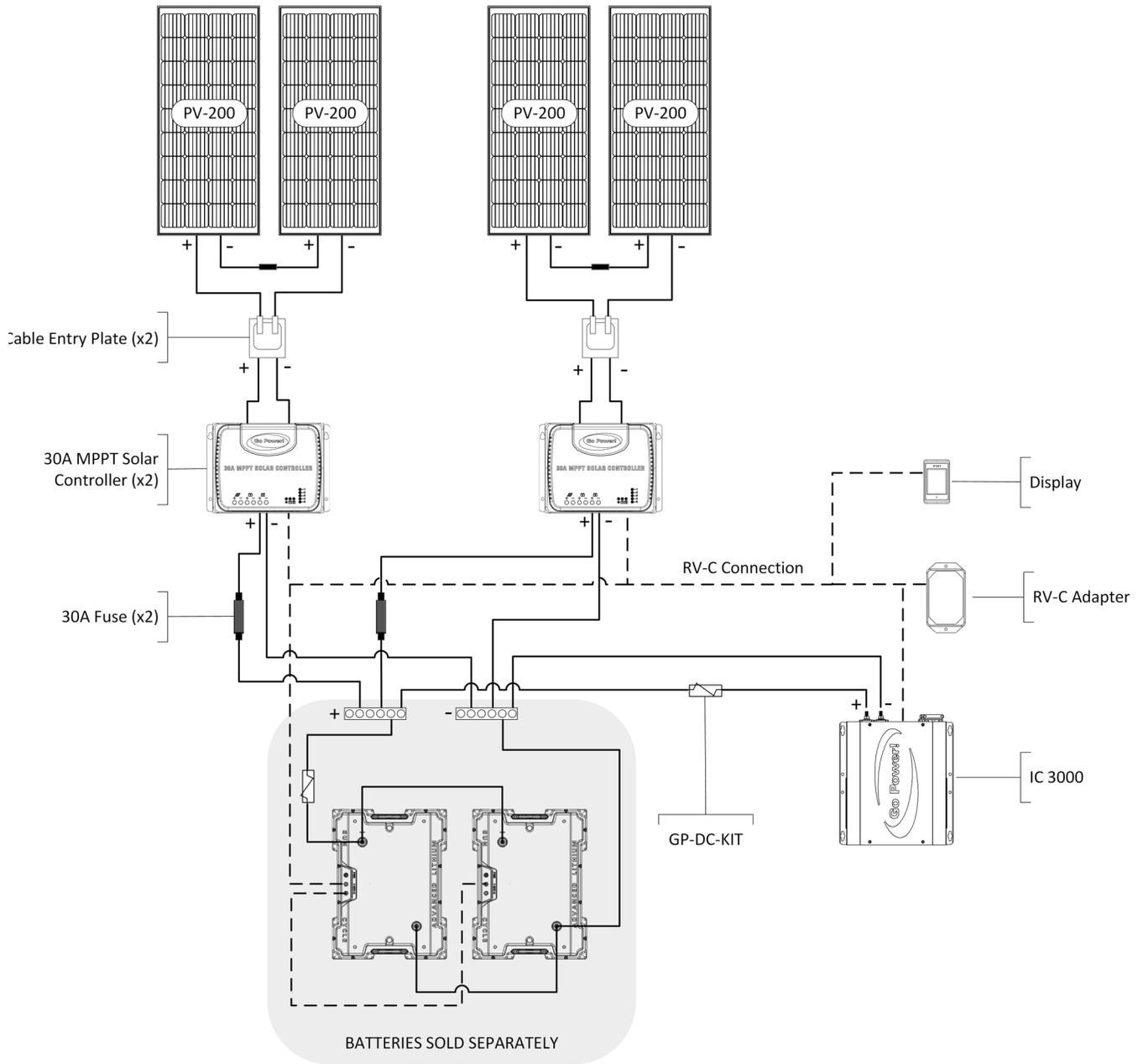
## POWERTRAK 400 SYSTEM DIAGRAM



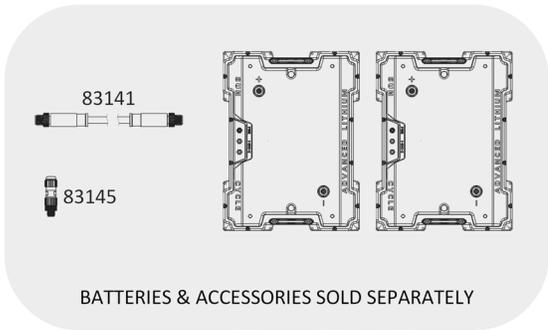
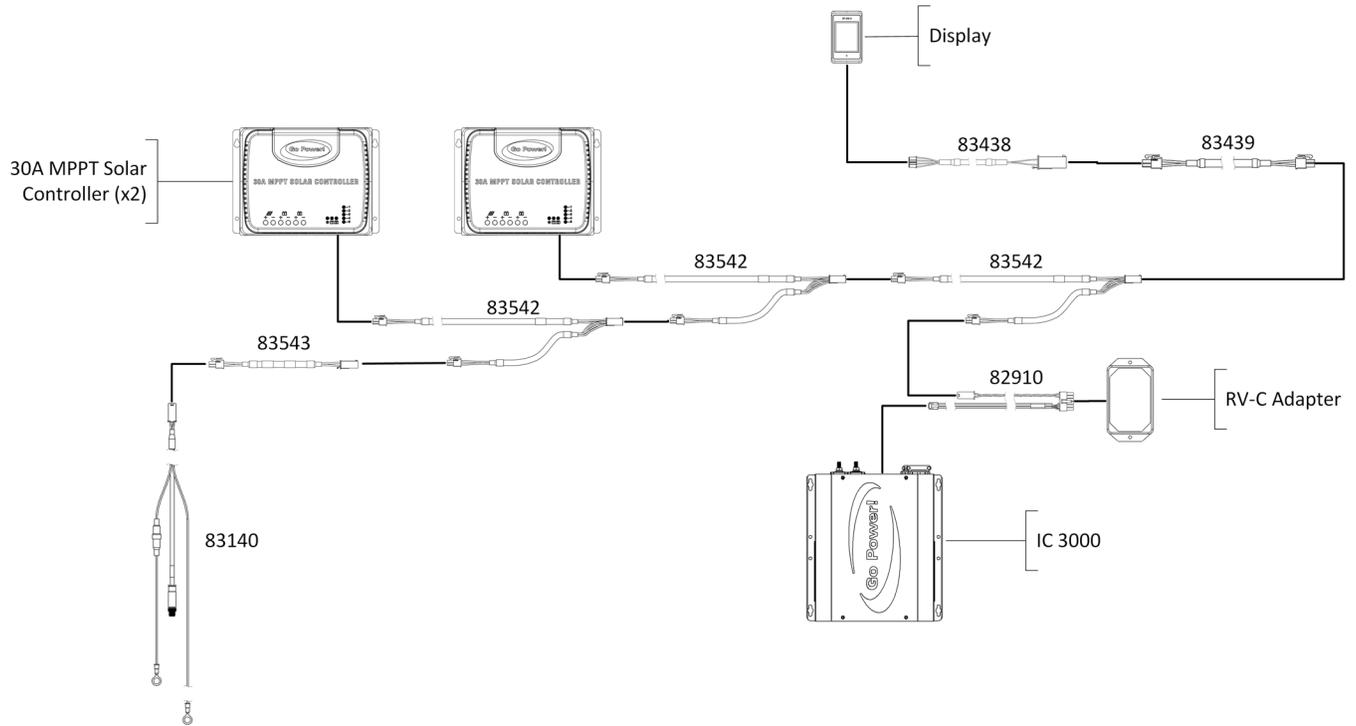
## POWERTRAK 400 COMMUNICATIONS CONNECTIONS



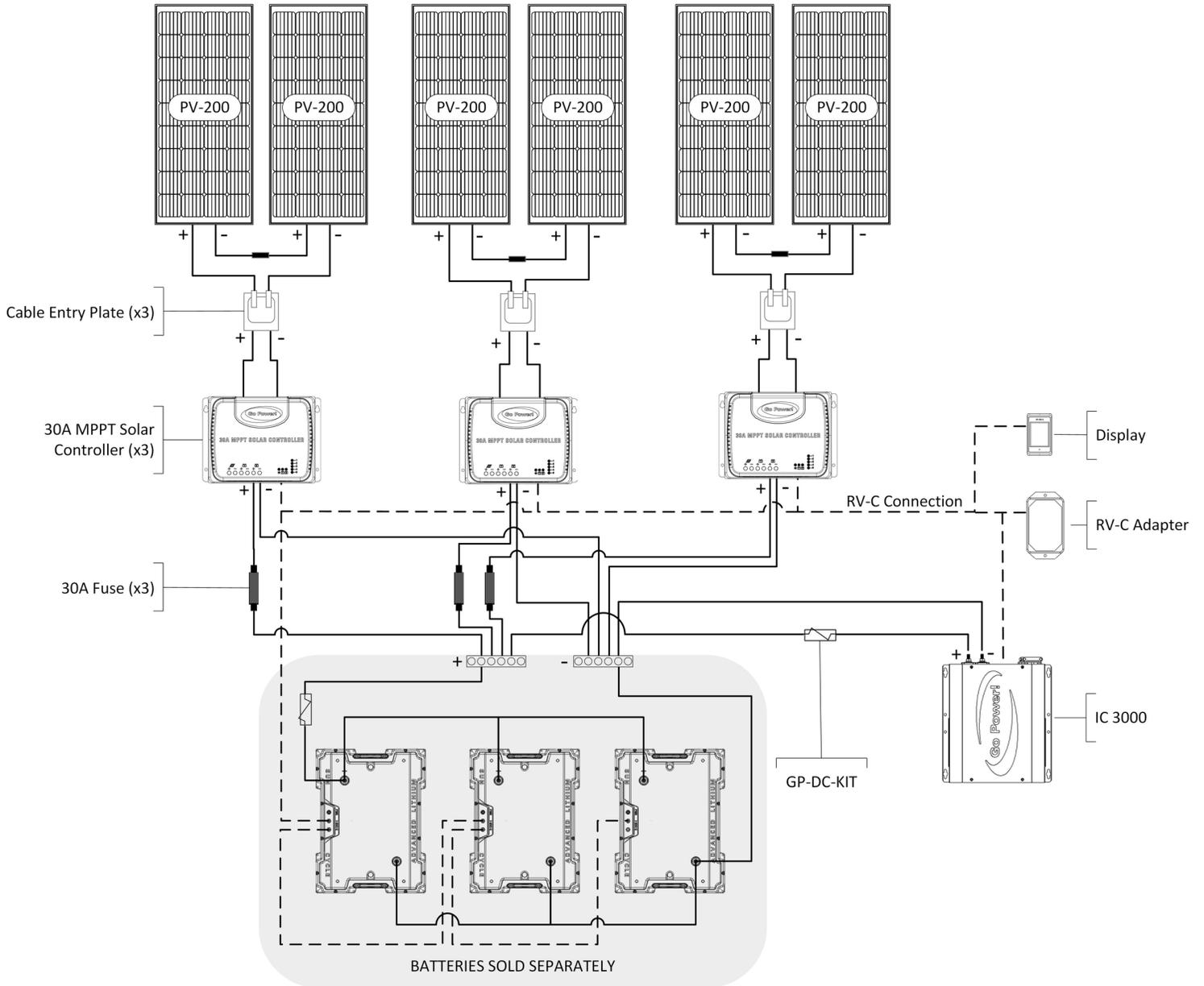
POWERTRAK 800 SYSTEM DIAGRAM



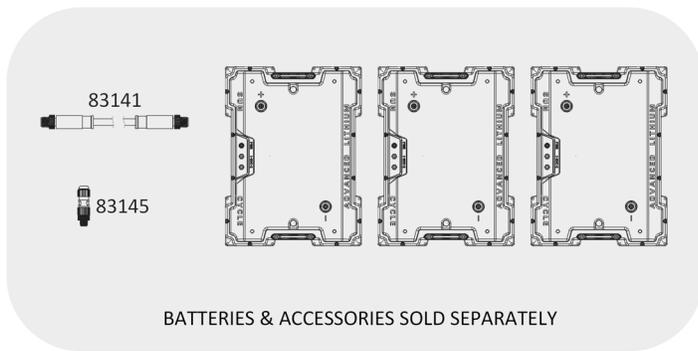
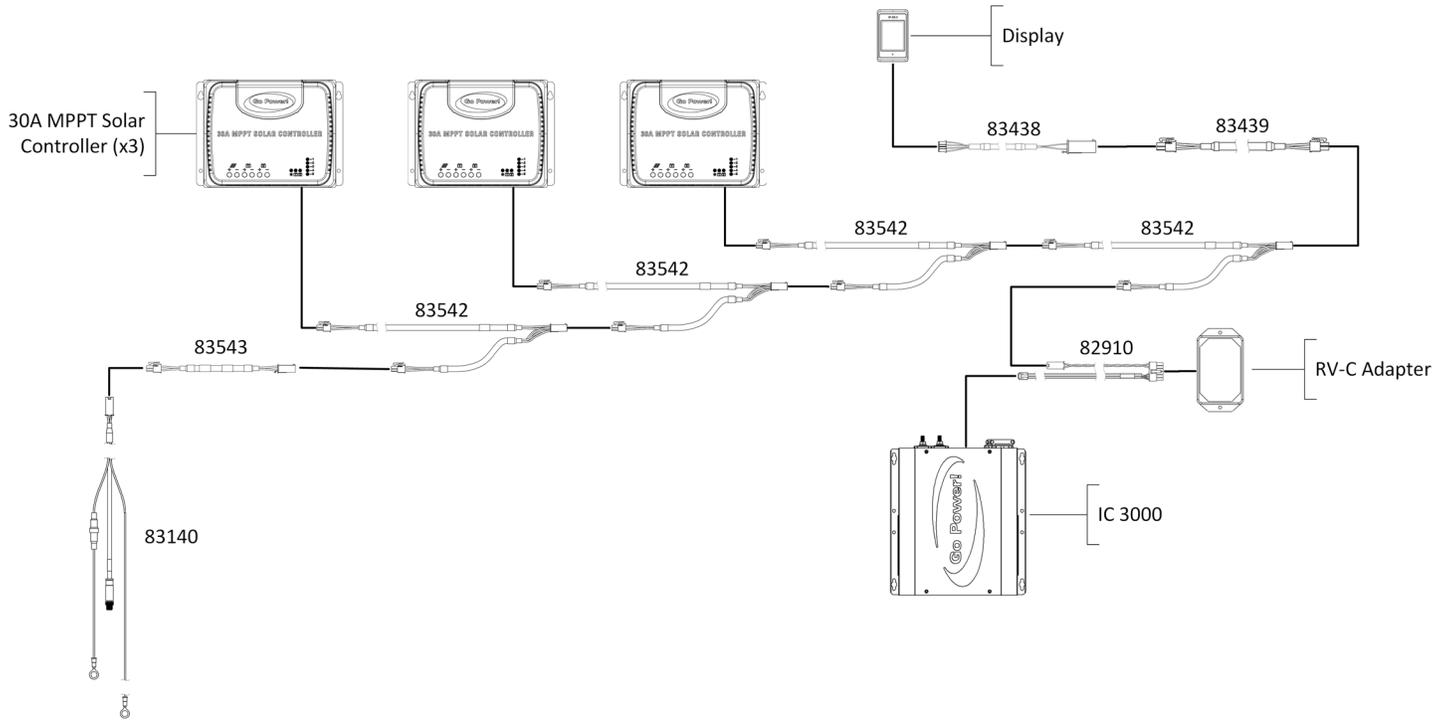
## POWERTRAK 800 COMMUNICATIONS CONNECTIONS



POWERTRAK 1200 SYSTEM DIAGRAM



## POWERTRAK 1200 COMMUNICATIONS CONNECTIONS



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Worldwide Technical Support and Product Information [gopowersolar.com](http://gopowersolar.com)

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