



PROFESSIONAL SOUND CORPORATION

## PSC POWER STAR SMART TRAVELER™



- *Rack Mount Power System based on 4x Removable Smart Batteries*
- *Single Rack Space Design*
- *25 Amps of Use/Charge Power Available*
- *All Outputs are Fully Voltage Regulated*
- *9x 3A Power Outputs on XLR FE, 2x 5A power Outputs on XLR FE*
- *1x 16A Power Out on SpeakOn for use with Invertor*
- *8x USB power outputs, 8 Amps total current available*
- *Remote Control Box w/ Full Battery Monitoring, Output Voltage and Current Meters*
- *Smart Batteries Easily Removed for Transport via "Carry On" on all Airlines*
- *Compatible with all brands of Smart Batteries*
- *Made in the U.S.A.*

### Operation Manual Version 2.0

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28085 Smyth Drive, Valencia, CA 91355 USA

CE RoHS Printed in the U.S.A.

Thank you for purchasing your new PSC Power Star Smart Traveler re-chargeable power distribution system. This new PSC "PowerStar Smart Traveler" builds on the success of our PowerStar LiFE product. This completely new design offers ease of travel in today's "Lithium" battery powered world. This new product design uses 4x 99-Watt hour "Smart" batteries which are easily removable for traveling. Because the individual batteries are less than 100-Watt hours each, they can be hand carried on airplanes and stowed in the overhead bins. No more worrying about hazardous shipping regulations and all of the hassle and expense involved in shipping large lithium batteries.

This product offers several new features such as 4x removable "Smart" batteries, fully regulated output voltage at all times. Yes, we have designed a "mega" DC to DC convertor that can output a regulated voltage at up to 25 Amps continuous. Output voltage will be factory set to 15Vdc, but is easily adjustable if needed. This new power system provides 9 XLR outputs each rated at 3 Amps, 2 XLR outputs each rated at 5 Amps and 1 SpeakOn output that is rated at 16 Amps for powering an inverter if needed. There are also 4 USB power outputs on the main unit and 4 more USB power outputs on the remote control. The unit offers battery level monitoring of all four batteries on both the main unit and also on the remote control. The remote control adds output voltage monitoring and output current monitoring. This is simply the finest power system we have ever offered.

**PLEASE BE SURE THAT YOU HAVE READ AND UNDERSTOOD THIS ENTIRE OPERATIONAL MANUAL BEFORE OPERATING THE PSC POWER STAR SMART TRAVELER! CAUTION, THE CASE OF THE POWER STAR SMART TRAVELER MAY GET WARM DURING USE. DO NOT ALLOW ANYTHING TO BLOCK THE VENT OPENINGS. ALWAYS ALLOW AT LEAST A ONE RACK SPACE AIR GAP ABOVE THE POWER STAR SMART TRAVELER. ALL AUXILIARY EQUIPMENT SHOULD BE REVERSE POLARITY PROTECTED AND PROPERLY FUSED AT ALL TIMES. THE POWER STAR SMART TRAVELER IS DESIGNED FOR USE ONLY WITH "SMART" BATTERY TYPES OF 98 OR 99 WATT HOUR RATING.**

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# VERY IMPORTANT INFORMATION – PLEASE READ THIS SECTION:

This device is designed for use with four (4) 98 or 99 watt hour Smart batteries. It is NOT designed to operate with three (3) batteries or two (2) batteries or even one (1) battery. The overall design can output significant power to operate very large sound cart setups with ease, but this relies on the proper use of good condition batteries. You have made a significant investment in this device and we want you to have many years of trouble-free use. For that reason, we highly recommend that you use four (4) new Smart batteries in this device. Using four old or previously worn out or miss matched batteries will result in poor performance. Please note that the operation of this unit is dependent on all four batteries and thus the weakest battery is the weakest link!

## OVERALL SAFE OPERATION:

All AC powered devices should be treated with proper caution and respect. AC power on film sets and on locations may not always be properly grounded and/or distributed. PSC highly recommends that you purchase and use an AC power tester prior to plugging in your PSC Power Star LiFE or any other AC powered device while on location. You can purchase simple to use, inexpensive AC testers for less than \$20. They are a simple plug that has 3 or 4 lights on the rear of the plug. These lights indicate good AC, proper grounding, etc. They can also indicate dangerous AC conditions such as Hot and Neutral reversed or missing grounds. These AC testers can be purchased at most hardware and electronics stores. Here is an example of a typical AC Tester. PSC does not recommend any specific brand or take responsibility for its use or performance.



**Typical AC Tester of the type you should use before plugging into AC on a film set or location.**

## FRONT PANEL:

The front panel of the PSC Power Star Smart Traveler contains eleven (11) DC power output connections on 4 pin female XLR's. A SpeakOn output connector is provided to power high current devices such as DC to AC invertors. A 10-pin female XLR is used to connect the Power Star LiFE Remote Control. Four (4) USB power output ports for powering/charging your phone or other various USB powered devices. An AC Receptacle with built in fuse holder.



**9x 3A XLR, 2x 5A XLR, 1x 16A SpeakOn, 10P XLR Remote, 4x USB, AC Input**

## REAR PANEL:

On the rear panel of the Power Star Smart Traveler, you will find four (4) Smart Battery ports and four (4) multi-color LED battery level meters.



**Battery Meters x4, Power "ON" & "OFF", AC Indicating Blue LED, Smart Battery Ports x4**

## RACK MOUNTING:

Your new Power Star Smart Traveler is designed to be rack mounted. It comes with a pair of heavy duty rack mount brackets. These brackets can be used from the front of the unit or the rear of the unit. Screws for installing these brackets are included. Please only use 6-32 x 0.375" screws with this Power Star LiFE. The use of longer screws may cause internal damage to the unit. These rack mount brackets can be adjusted to allow the unit to be flush mounted the edge of the rack or recessed mounted to the rack for connector clearance.



**Rack Bracket Flush Mounted on Front**



**Rack Bracket Recessed Mounted on Front**

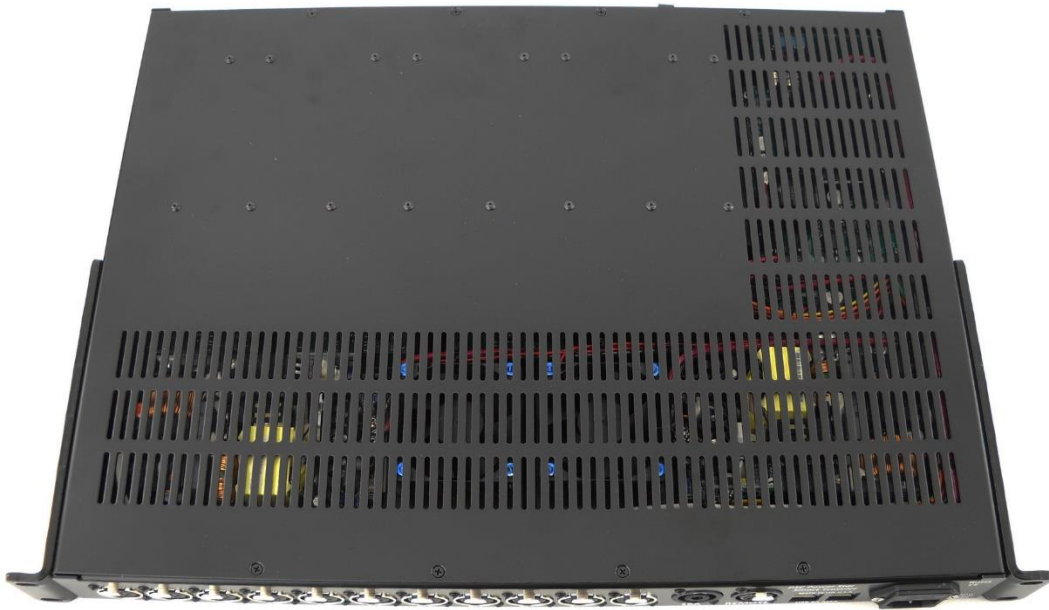


**Rack Bracket Recessed Mounted on Rear**



**Rack Bracket Flush Mounted on Rear**

**COOLING:** The PSC Power Star Start Traveler contains high powered charger circuits to provide quick and reliable charging of the four smart batteries. This charging function generates heat that must be removed from the unit in order that the unit stay within proper operating conditions. The Power Star Smart Traveler uses two, redundant AC power supplies and is equipped with very low noise fans that are operated at a slow speed to further reduce the noise level. You must leave open space above and to the sides of the PSC Power Star LiFE for proper cooling to take place. **A minimum of 1 rack space (1.75") must be left open above the unit for cooling purposes.** Likewise, this product should not be used in fully enclosed rack case or other enclosures that limit air flow (enclosed rack cases are fine, but do not install blank rack plates in the immediate opening above the Power Star Smart Traveler in both the front and back sides of the rack.) Failure to provide proper ventilation can and will damage the unit and will void your warranty.



**Top Cover Showing Cooling Slots. Do Not Block Air Flow to these Slots**

## PERIODIC CLEANING:

Once a year it is recommended that you remove the Power Star Smart Traveler from your equipment rack and blow all of the loose dust from all of the vent slots using compressed air. This will help keep the unit cleaner and in turn will keep all of the interior electronic parts operating at a lower temperature which will extend the life of the unit.

## AC POWER:

The Power Star Smart Traveler will operate world-wide without adjustment as it has an AC input range of 90 to 264 Vac at 47 to 63Hz. Simply plug it into a properly wired outlet and it will begin to charge the batteries (if needed). An “AC” power indicating BLUE LED is located on both the main unit and on the remote-control box for your convenience.



**AC Receptacle.**

**DC CONNECTIONS:** There are eleven (11) XLR female DC output connectors located on the front panel of the PSC Power Star Smart Traveler. The first nine (9) XLRs located to left hand side of the unit are rated for up to 3 Amps of output current each. The remaining two (2) output connectors are all rated for up to 5 Amps of output current each.



**9 x XLR With 3 Amp Output**

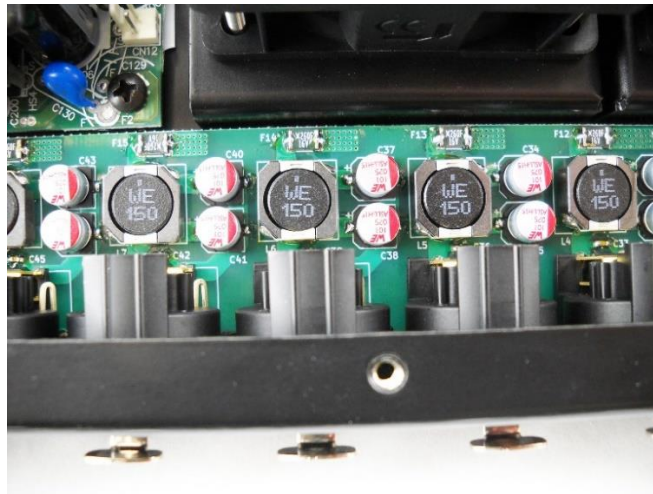


**2 x XLR With 5 Amp Output, SpeakOn  
w/ 16 Amp Output**



### **PSC “QUIET POWER TECHNOLOGY”:**

Each connector is individually Polyfuse protected and is fed power via its own PSC “Quiet Power Technology” power filter circuit. These PSC power filter circuits are exclusive to PSC power products and are one of the reasons we are the leading portable power supplier world-wide. These circuits help eliminate inter-equipment conducted RF and conducted DC power intermodulation noise. We go to greater lengths than our competitors to supply you with clean, reliable, noise free power for all of your equipment.



**Each Output Connector has Dedicated PSC “Quiet Power” filtering**

### **POWER SWITCHES:**

The PSC Power Star Smart Traveler can be operated (turned “ON” and “OFF”) directly from the main unit or from the remote-control box. There are two round, RED momentary push button switches used to turn the unit on and off. These RED push button switches are clearly marked “ON” and “OFF”. Please note that the “OFF” push button switch is equipped with a time delay circuit. You must press and hold this push button switch for 4-5 seconds before the unit will shut off. This time delay function serves to keep you from accidentally shutting down the PSC Power Star Smart Traveler unexpectedly while working.



**RED Power on and OFF switches**

### SMART BATTERY “FUEL” GAUGES:

The PSC Power Star Smart Traveler is equipped with four (4) easy to read and easy to understand multi-colored battery “Fuel Gauges”. There are individual “Fuel Gauges” for each of the four Smart batteries. In normal use, all four (4) batteries will be charged and dis-charged in unison. Because of this, normally you will see the four (4) “Fuel Gauges” closely tracking each other. With just a quick glance you will immediately know the charge condition of your battery. A full row of RED, YELLOW and two GREEN LEDs indicated a fully charged battery. As the battery is discharged, the LEDs slowly go out. It is similar to reading the fuel gauge in your car. When the last (bottom most) RED LED goes out, the unit will shut down to protect the Smart Batteries from deep discharge. The unit must then be plugged into AC power to re-charge the Smart batteries and/or power up your equipment. Both functions can be done simultaneously.

PLEASE NOTE THAT THE PSC POWER STAR SMART TRAVELER WILL ONLY PROPERLY OPERATE WITH FOUR (4) SMART BATTERIES INSTALLED! YOU MUST USE FOUR (4) SMART BATTERIES AT ALL TIMES. THIS REQUIREMENT IS NEEDED TO PROVIDE PROPER POWERING TO YOUR EQUIPMENT AND TO PROVIDE THE HIGHEST RELIABILITY. THIS DEVICE WILL SENSE WHEN LESS THAN ALL FOUR BATTERIES ARE INSTALLED AND WILL SHUT DOWN AUTOMATICALLY APPROXIMATELY 35 SECONDS AFTER ANY ONE OR MORE BATTERIES ARE REMOVED!



**Volt and Current Meters, 4x USB Power Ports, 4x Battery “Fuel Gauges” Power “On” and “OFF” Buttons**

### VOLT METER:

The remote control is equipped with a LED volt meter. This meter reads the output voltage going to the output XLR connectors and to the output SpeakOn connector. The Power Star Smart Traveler offers fully regulated output voltage that is factory set to 15Vdc. This regulated output voltage is internally adjustable for 9 to 24 Vdc. Because the output voltage is regulated, it will remain steady over the entire charge range of the battery. While a fully charged Smart Battery might read 17 volts and a nearly discharged one might read 13.5 volts, the outputs the PSC Power Star Smart Traveler will remain at a fixed 15Vdc output level throughout its operation.

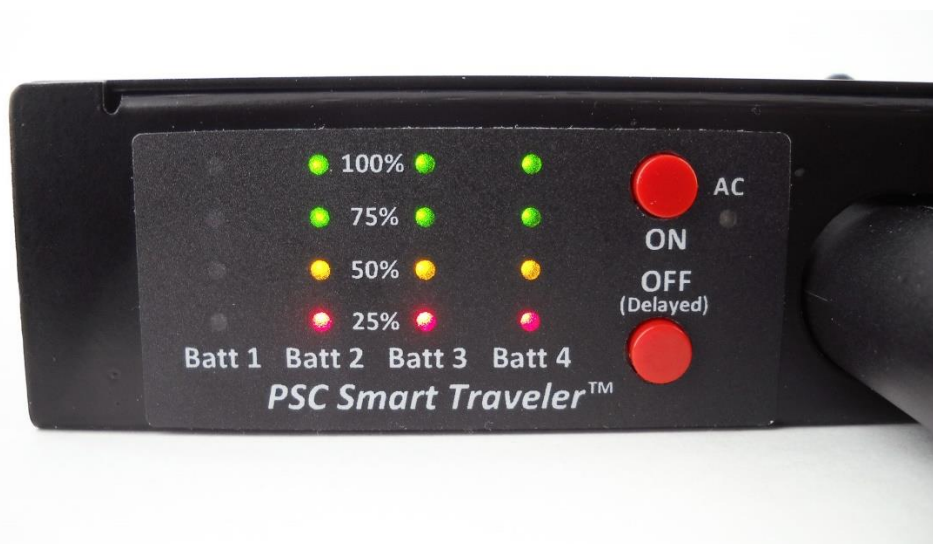


## CURRENT METER:

The current meter displays the amount of current being drawn from the outputs of the Power Star Smart Traveler and also includes the small amount of current being used by various circuits within the Smart Traveler. This meter is designed to be very accurate in the upper ranges of current (6-25 amps). It is slightly less accurate in the lowest current range. **PLEASE NOTE THAT THE DC TO DC CONVERTOR INSIDE THE UNIT IS FACTORY SET TO PROVIDE UP TO 25 AMPS OF OUTPUT CURRENT. IF YOU EXCEED 25 AMPS OF CURRENT DRAW, THE OUTPUT VOLTAGE WILL BEGIN TO FOLD BACK (LOWER ITSELF) AS A PRECAUTIONARY MEASURE. EXCEEDING 25 AMPS OF CURRENT DRAW WILL CAUSE THE OUTPUT VOLTAGE TO SHUT OFF UNTIL THE OVERLOAD IS CORRECTED.**

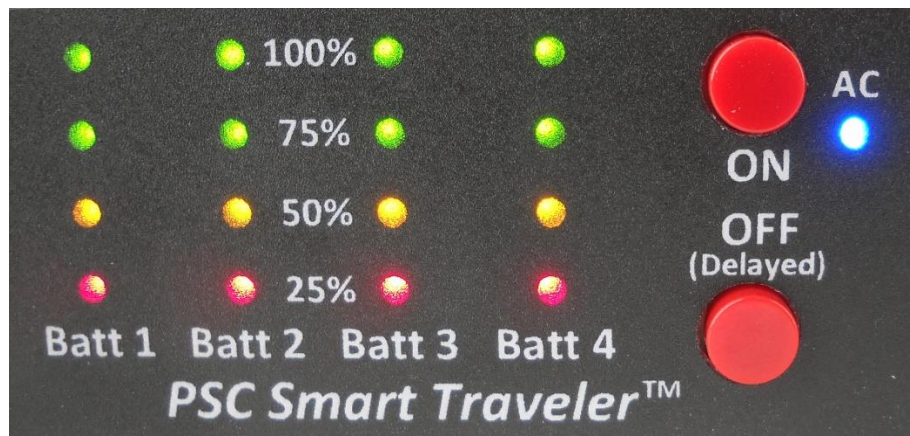
## HOT SWAPPING BATTERIES:

It is possible to Hot Swap batteries with the unit turned on and operating your equipment. Please note that any time the unit is turned on and operating the unit is monitoring to make sure it is equipped with all four batteries. If you pull out a battery, you start a 35 second timer circuit that will shut down the unit after 35 seconds if the battery is not replaced. We incorporated this 35 second timer function to allow you enough time to easily pull out one battery at a time and replace that one battery. Only pull out and replace **ONE BATTERY** at a time when the unit is operating! Failure to do so may cause the unit to shut down without warning.



**Note Battery #1 Meter is not reading because Battery 1 has been pulled out of the Battery Port. If you pull out a battery to HOT SWAP it, you have 35 seconds to reinstall the new battery or the unit will turn itself off. Whenever any of the four RED LEDs goes out, the 35 second timer is started and the unit will shut down if four good batteries are not installed within those 35 seconds.**

**AC INDICATOR:** Whenever the unit is plugged into AC power, the BLUE “AC” LED will light indicating AC power is connected. Whenever the AC indicator is lit, the batteries will be charged (if needed). In addition, you can power your equipment anytime the unit is connected to AC power whether or not the battery is fully charged.



**BLUE LED indicating AC power is connected**

**REMOTE CONTROL:** The remote-control box that is included with your PSC Power Star Smart Traveler serves several functions. It can be used to remotely turn the unit on and off. This will allow you to mount the main Power Star LiFE housing in a convenient place on your sound cart. The remote control also has a four independent battery charge level indicating “Fuel Gauges” that duplicates the meters on the main unit. Additionally, the remote control features four USB charging ports for your convenience. These four USB charging ports output 5Vdc up to a total of 4 Amps of output current. The remote-control box also features an output monitoring DC volt meter and DC current meter for your use. Lastly, the remote-control box features a bright BLUE LED indicating AC power is connected to the Power Star Smart Traveler.



**Power Star LiFE Remote Control Box**

### **SPEAKON CONNECTOR FOR HIGH POWER LOADS:**

The PSC Power Star Smart Traveler is equipped with one 4 pole SpeakOn connector. This connector is used for the connection of high current loads such as Inverters. The maximum rating on this output is 16 Amps. The polarity of this connector is conventional 4 pin SpeakOn. The mating inline SpeakOn connector is Neutrik Part Number NL4FX or NL4FC. Please note that these inline SpeakOn connectors have internal polarity markings for your convenience.



**SpeakOn Connector used to supply heavy current devices**

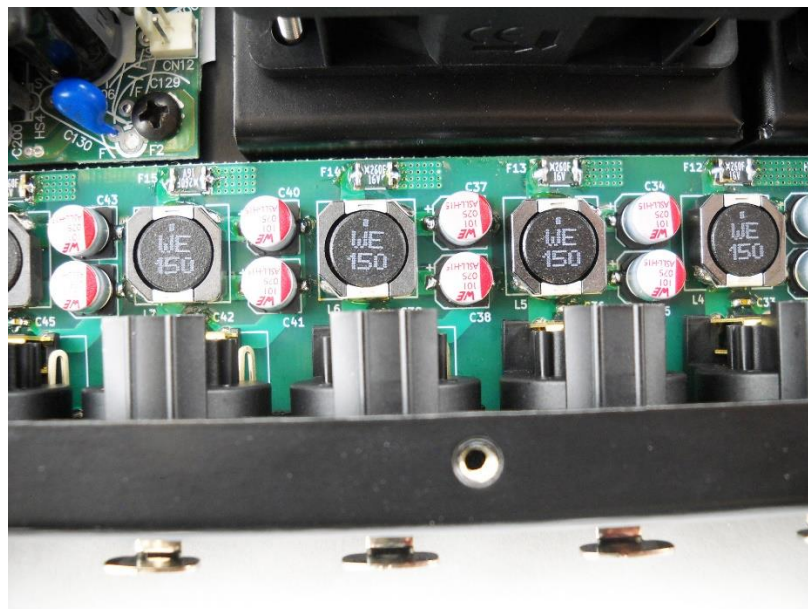
**CHARGING:** Power Star Smart Traveler contains four (4) built in battery management/charger circuits designed to charge the four (4) Smart batteries. The PSC Power Star LiFE will operate from a wide range of AC power so you can plug it in anywhere in the world without having to worry about making adjustments. The charger circuit used in the Power Star Smart Traveler has been specifically designed for charging Smart Batteries while the batteries are in use powering low noise audio equipment. Unlike most battery chargers, ours have a very low noise floor. Typical recharge time ranges from 1 to 2 hours. The charging function is automatic and thus, it does not require your assistance in any way. Simply plug the PSC Power Star Smart Traveler into an AC outlet and the charging begins (if the batteries need charging). Beware that the Power Star Smart Traveler may get warm during use. Be sure to allow ventilation air gaps around the top panel and sides of the Power Star LiFE for proper heat dissipation.

**PLEASE NOTE THAT THE POWER STAR SMART TRAVELER IS ONLY DESIGNED TO BE USED WITH THE LARGE SIZE 98 AND 99 WATT HOUR SMART BATTERIES. IT IS NOT DESIGNED FOR USE WITH THE HALF LENGTH LOWER WATT HOUR RATING BATTERIES.**

**EQUIPMENT POWER CABLES:** PSC recommends that you use only two conductor, unshielded 16AWG power cable for power distribution. Shielded cable is not recommended as the shield may cause short circuits between adjacent pins on the connectors. Please keep all cables as short as possible as this will minimize DC voltage drop across the cable.

**WARNING:** It is highly recommended that you have your cables built by qualified personnel and tested prior to use with your Power Star Smart Traveler. All power cables should be clearly labeled on both ends as to what they are to be connected to. For example, label one end “Power Star Smart Traveler” and the other end “Aaton Cantar”. This will help prevent inadvertently connecting the cables to the wrong piece of equipment. We cannot stress enough the importance of good quality power cables and careful connections. Poorly constructed and/or labeled cables can result in equipment damage!

**POWER FILTERING:** All PSC power products contain PSC Quiet Power Technology tm. This power filter technology allows the PSC Power Star Smart Traveler to deliver clean, quiet DC power for all of your sound equipment powering needs. These filters include both audio and RF frequency filters to ensure trouble free DC power distribution in the field. Nearly all of today’s audio equipment contains DC to DC convertors within their power supplies. These convertors can and will cause inter-modulation noise when connected to common DC power sources such as a battery. Here at PSC we firmly believe that proper DC filtering can and will eliminate most noise issues in the field. Our competitors do not understand inter-modulation noise and thus do not take the additional steps to prevent it like we do at PSC. Though not every piece of equipment will suffer from inter-modulation noise issues. Here at PSC believe that the extra parts cost and design time are worth it if it solves even one issue in the field. Why do we go to the extra cost to include these parts? Because we think you deserve the best quality DC power available.



**PSC Quiet Power tm Filters partially shown behind output XLRs.**

**FUSING:** Internally, the battery management circuits contain fusing to protect protected against catastrophic faults. These fuses will not normally ever be activated as they are in the design only for extreme, fault protection. In addition, there is a 40 Amp Slow Blow automotive blade style fuse for ultimate safety. This fuse should never blow in normal use. If you ever experience a blown fuse, something is wrong with your setup. Please call PSC for technical assistance.

**STORAGE:** Please note that all rechargeable batteries slowly self discharge while in storage. If you store this device with the Smart Batteries installed, it must be fully recharged prior to storing it. It should also be charged every month while in storage. Failure to follow these instructions could cause the batteries to become deep discharged and possibly damaged. Please read all of the instructions that come with your batteries from the various battery manufacturers. Their recommendations should be followed at all times. PSC is not a Smart battery manufacturer or supplier and cannot be held liable for the improper use, storage, charging, discharging. etc. of Smart batteries not made by PSC.

## **TERMS OF USE:**

THE IMPROPER CONNECTION OF THIS POWER SUPPLY TO AC MAINS OR AUXILIARY EQUIPMENT MAY RESULT IN DAMAGE TO SAID EQUIPMENT AND/OR PERSONAL INJURY. THIS PRODUCT IS DESIGNED TO BE OPERATED BY PROFESSIONALS IN THE FILM AND TELEVISION INDUSTRIES. THE PSC POWER STAR SMART TRAVELER SHOULD ONLY BE OPERATED AFTER READING AND UNDERSTANDING THIS ENTIRE INSTRUCTION MANUAL. THE OPERATOR OF THIS POWER SUPPLY ASSUMES ALL RESPONSIBILITY AND LIABILITY FOR PROPER USE AND OPERATION OF THIS EQUIPMENT! PROFESSIONAL SOUND CORPORATION AND/OR ITS EMPLOYEES AND OFFICERS AND/OR SHARE HOLDERS ASSUME NO RESPONSIBILITY OR LIABILITY FOR PERSONAL AND PROPERTY DAMAGE INCURRED DUE TO ACCIDENT, CARELESS HANDLING, ABUSE OR MISSUSE, IMPROPER CONNECTION, AND/OR INSTALLATION, IMPROPER ELECTRICAL CONTACT, IMPROPER BATTERY TYPE USED AND/OR BATTERY CONDITION AND/OR MAIN UNIT OR AUXILIARY EQUIPMENT GROUNDING. OWNERSHIP AND/OR USE OF THE PSC POWER STAR LIFE CONSTITUTES AGREEMENT WITH THESE TERMS.



## **Limited Warranty Certificate**

Professional Sound Corporation warrants the Power Star Smart Traveler to be free from defective material and workmanship for a period of one year from the original date of purchase and agrees to repair or replace such defective parts or the whole product at its option, provided that the equipment is returned to Professional Sound Corporation. Shipping and insurance costs to and from Professional Sound Corporation must be prepaid by the owner. This warranty does not cover damage due to accident, careless handling, abuse or misuse, improper connection and/or installation, improper battery selection and use, poor condition, worn or damaged batteries, improper electrical contact, charging or grounding. This warranty will be null and void in the event of removal, alteration or tampering with the serial number, or by service or repair work not performed by Professional Sound Corporation. Proof of purchase date (copy of invoice or Warranty Certificate) must be furnished before warranty service will be performed. This warranty is in lieu of any other warranty, expressed or implied, including warranties without limitation, products being merchantable at the time of purchase or suitable for a particular purpose. This warranty does not extend to, or include consequential damage.

## **SPECIFICATIONS:**

<b>SIZE:</b>	<b>17.50" wide, 13.00" deep, 1.75" high (44.5cm x 33cm x 3.8cm)</b>
<b>WEIGHT:</b>	<b>9.2Lbs (4.2Kg) less batteries</b>
<b>TEMPURATURE RANGE:</b>	<b>Use: -4F to +124F (-20C to +50C) less effects on batteries **</b>
<b>AC INPUT:</b>	<b>100 – 240Vac, 47Hz -63Hz</b>
<b>OUTPUTS, XLRs:</b>	<b>11 x 3 Amp, 2 x 5 Amp</b>
<b>OUTPUT, SPEAKON:</b>	<b>16 Amps Maximum, SpeakOn 4 Pole (Mating connector Neutrik NL4FC)</b>
<b>OUTPUT VOLTAGE:</b>	<b>15 Vdc Regulated +/- 0.2 volts, internally adjustable from 9 to 24Vdc.</b>
<b>OUTPUT CURRENT:</b>	<b>25 Amps, Maximum</b>
<b>CHARGING TIME:</b>	<b>Typical Cart 2 hours, No Load (all equipment off) 1.5 hours</b>
<b>USB CHARGING PORT:</b>	<b>4 Ports, Total Output 5Vdc at 4 Amps available on both main unit and remote control</b>
<b>SMART BATTERY:</b>	<b>98- or 99-watt Hour Smart batteries, various Manufacturers.</b>
<b>Warranty:</b>	<b>Parts and Labor, 1 year, Limited</b>

**\*\*Less the effects on the batteries used. Please consult with your battery company to determine the temperature limits of the batteries being used.**

# CE DECLARATION OF CONFORMITY

**EMC:** This product is in compliance with the Electromagnetic Compatibility Directive, 89/336/EEC as defined in EN 50081-1, EN55022 and EN 50082-1. IEC801-2, IEC801-3 and IEC801-4.

**LVD:** This product is in compliance with the requirements of the Low Voltage Directive, 73/23/EEC. 93/68/EEC as defined in EN60065, 1993 and/or EN60950/A1/A2/A3: 1995

**TRADE NAME:** PSC

**MODEL:** Power Star Smart Traveler Power Distribution System

**RESPONSIBLE PARTY:** Professional Sound Corp.  
28085 Smyth Drive  
Valencia, CA 91355 USA

**CONTACT PERSON:** Ronald Meyer  
(661) 295-9395

**TYPE OF PRODUCT:** Rechargeable Battery, Power Distribution

**MANUFACTURER:** Professional Sound Corp.  
28085 Smyth Drive  
Valencia, CA 91355 USA

We hereby declare that the equipment bearing the trade name and model number listed above has been tested in accordance with the requirements contained in the above listed directives. All necessary steps have been taken and are in force to assure that production units manufactured will conform to Directive guidelines.

**February 2021**

**Professional Sound Corporation.**