



SOLAR STIK™

R.A.L.S. 9470



9470 Remote Area Lighting System Specifications

Light Source

LED Type	LED Life	Tested Lumen Value
High Flux LED	50000 hrs.	4000 (Low) 8000 (High)
Lamp Heads	Number of LEDs	Beam Spread
4	96	90 degrees
LED Brightness Settings	Strobe	
2 On/Off Button- Press Briefly	1 On/Off Button- Press & Hold	

Power Source

Battery Type	Battery Burn Time	Battery Charging Time
12v Rechargeable, Sealed	14 hrs. (Low) 7 hrs. (High)	8 hrs. from full discharge
Battery Life	Low Battery Warning	12VDC Receptacles
2000 cycles	Intermittent Blinking	2
12V Meter	Lo	High
	11.5	13.8
12V Double Ended Plug	Fuse Rating	Spare Fuses
	15 Amp (both ends)	15 Amp / 10 Amp

The R.A.L.S. 9470 has been modified to include twin 12VDC receptacles located on the sides of the Pelican™ 1610 Case. These receptacles can serve as the connection point for 12VDC appliances, small inverters, additional 12VDC battery capacity, charging sources, and more.

The R.A.L.S. 9470 includes a standard AC charger, and a DC charger is available as an accessory (Solar Stik™ Item # 005045).



When charging the R.A.L.S., be sure to open the case.



Use the 12VDC digital meter to determine the RALS battery status.

Use the Double-ended Plug to connect the RALS to a Power Pak (extend the RALS operation time) or as a tool to recharge the light from a charging source.



CONNECTING A R.A.L.S. 9470 TO THE POWER PAK OR OTHER 12VDC BATTERY

When using the RALS light with a Solar Stik™ Power Pak, there are two common methods of connecting them to the Pak, each with a different purpose:

- **DIRECT CONNECTION** – When the RALS is to be operated from a vehicle or Power Pak's 12VDC lead-acid battery
- **INDIRECT CONNECTION** – When the RALS is to be charged from a vehicle or Power Pak's 12VDC lead-acid battery

DIRECT CONNECTION (Equalization) – When a direct connection is made between two 12VDC batteries, “battery equalization” occurs. The battery with the higher state of charge will lose some of its Voltage as it raises the Voltage of the other, until both reflect the same Voltage. **DIRECT CONNECTIONS** are usually made to increase the overall **battery capacity** in a system. Increased capacity provides the operator longer appliance run-time or less depth-of-discharge during charging cycles which will extend battery life.

DIRECT CONNECTION examples:

- Connecting a RALS light to a Power Pak using the Double-ended Plug leash
- Connecting a RALS light to a vehicle's active 12VDC receptacle using the Double-ended Plug assembly

Equalization time is usually slow. The average rate of equalization is about 5 Amps.

INDIRECT CONNECTION (Recharging) – Many rechargeable devices often have a device that allows “battery recharging” from a 12VDC source. For example, cell phones often come with 12VDC chargers that allow charging of the phone from a car battery.

A 12VDC charging device act as a “pump”, in effect, taking Voltage from one battery and pushing it into another. There is no “equalization effect” as discussed in the **DIRECT CONNECTION** section above. A “charger” is actually a converter, which will accept a wide range of input Voltages and ensures a steady charging Voltage to the appliance battery being recharged.

INDIRECT CONNECTION examples:

- Connecting a RALS to a vehicle's 12VDC receptacle using a 12VDC charger
- Connecting a RALS light to a Power Pak using the 12VDC charger

The advantage of using a converter/charger instead of a direct battery-to-battery connection is that the converter will ensure that the appliance battery is fully recharged even if the source battery from which power is being taken is low.

When using a 12VDC charging converter, it is important for the operator to know the range of acceptable Voltage input. For example, if the charger's acceptable input Voltage is between 11.0 and 14.5 Volts, and the Power Pak battery is at 10.7 Volts, then no charging of the appliance battery will occur.

DO NOT SIMULTANEOUSLY USE BOTH DC-to-DC BATTERY CHARGER AND THE DOUBLE ENDED 12VDC PLUG BETWEEN THE RALS LIGHT AND EXTERNAL 12VDC BATTERY

VALVE REGULATED LEAD ACID (VRLA) BATTERY – D.O.T. approved as non-hazardous cargo for ground, sea, and air transport.

DOT 49CFR173.159(d) (i) and (ii) ([U.S.D.O.T. regulations](#))
Battery Type: Absorbed Glass Mat (AGM)



Solar Stik™ Inc. will not be held liable for improper setup/installation or any damage to corresponding equipment as a result of poor methods.

TECHNICAL SUPPORT LINE: 800-793-4364 (available weekdays 7AM to 7PM EST and Sat - Sun 9AM to 4PM EST)

ADDRESS: Solar Stik™ R&D Facility
226 1/2 West King Street
Saint Augustine, Florida 32084

Please Consult the Website for additional education on 12 Volt DC and 120 Volt AC systems.

Available for download from the site are:

Solar School
Battery School
Inverter School
...and more!

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