

MODEL: PPG-R500-SS



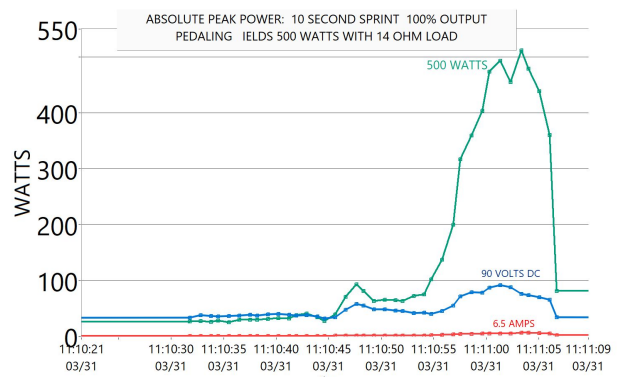
The PPG-R500-SS dual DC generator dynamo is a robust ball bearing double generator connected by a rock solid 2" x 3" roller. This design is made to mount against the rear tire of a bicycle. The two generators can be configured end to end (series) to generate over 80VDC. The two generators can also be wired in parallel to supply twice the current as a single generator. This dual generator unit can reach an absolute maximum power of over 500 Watts (See data below)

It can be mounted on a bike stand plate that adjusts the height of the roller to have good contact to the wheel as shown in the photo.

The first graph shown indicates the absolute max peak power that can be reached during a 10 second burst of speed also known as a "sprint" hitting over 500 Watts. The PPG-R500-SS was wired in series mode for this experiment and connected to a 14 Ohm load.

The second graph shows 1 Amp Hour of battery charging which took about 10 minutes of pedaling. In this case the PPG-500R-SS was wired in parallel configuration to allow more current to be delivered to the 12V deep cycle marine battery.

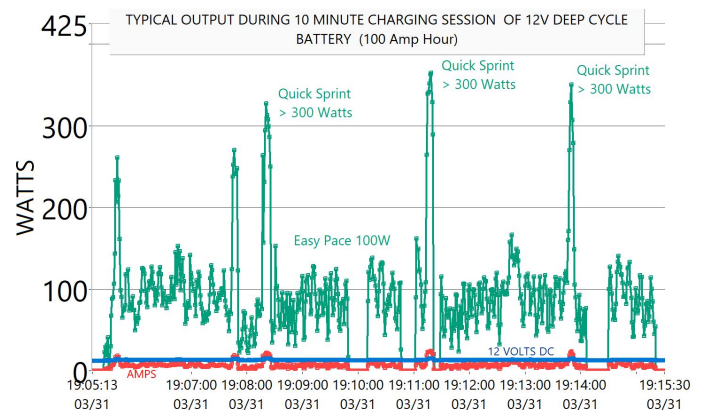
Absolute Peak Power 500W (Measured during a 10 second sprint)



SPECIFICATIONS

Number of generators	2
Output Voltage Range	0 to 92V DC
Absolute Peak Wattage Output	500W (14 Ohm Load)
Roller diameter	2"
Shaft bearing type	Sealed ball bearing
Armature style	4 Pole Brushed
Mounting holes	Qty 8
Mounting hole thread size	6mm thread
Weight	15 Lbs
Internal resistance	0.35 Ω
Cable length	12 Inches
Generator wire size	12 AWG

1 Amp Hour of 12V Battery Charging (10 Minutes of Pedaling)



WIRING CONFIGURATIONS

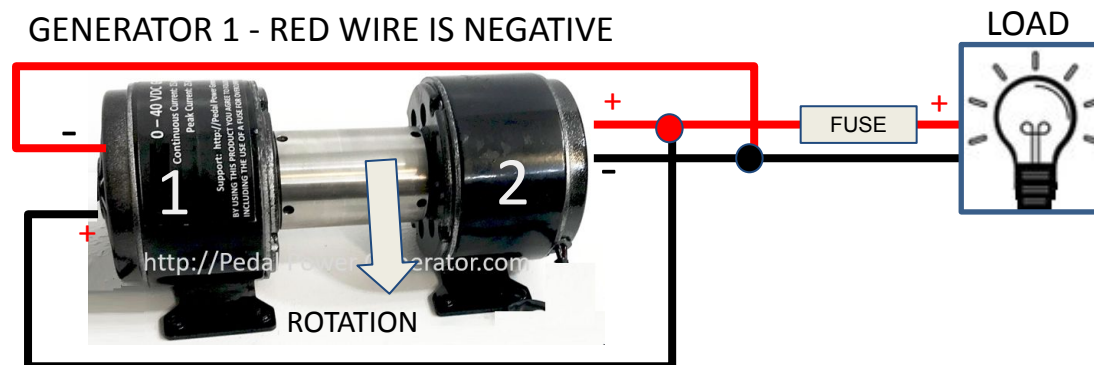
There are three ways to wire the PPG-R500-SS dual generator unit:

1. Independently - each generator is wired to different electrical loads
2. Parallel - the two generators are combined together to give the ability to supply more current to a single electrical load.
3. Series - the two generators are connected in an end to end configuration.

OPTION 1: INDEPENDENT ELECTRICAL LOADS



OPTION 2: PARALLEL CONFIGURATION (Delivers high current)



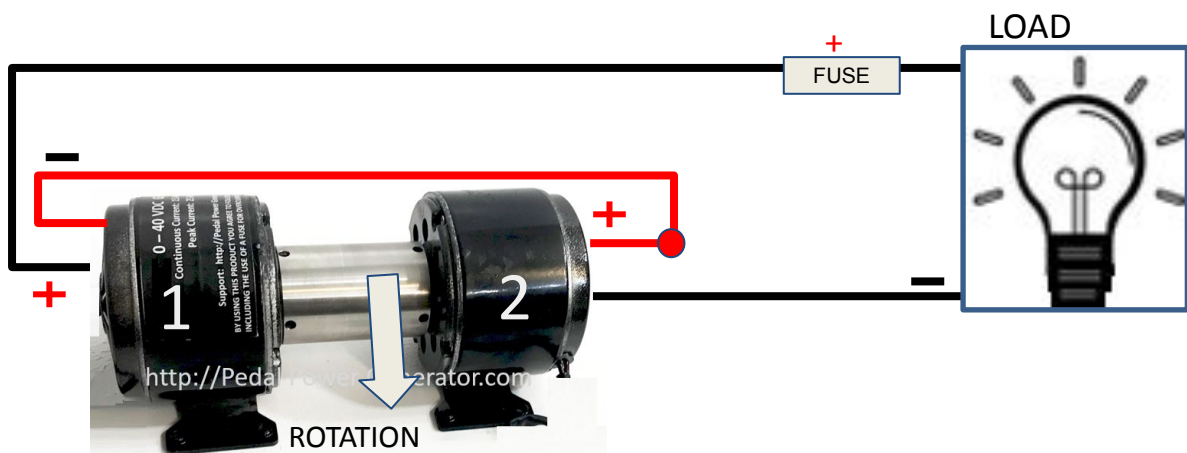
GENERATOR 1 - BLACK WIRE IS POSITIVE
BECAUSE IT IS SPINNING COUNTER CLOCKWISE

WIRING CONFIGURATIONS - CONT'D

OPTION 3: SERIES CONFIGURATION

Note: This configuration will generate high Voltage and this product shall not be used without following proper wiring guidelines and safety rules for high Voltage DC power systems.

To put things in perspective it will be less Voltage then you would see in a 110V AC wall outlet but still will give a shock when touched while the bicycle is being pedaled fast.



Battery Charging

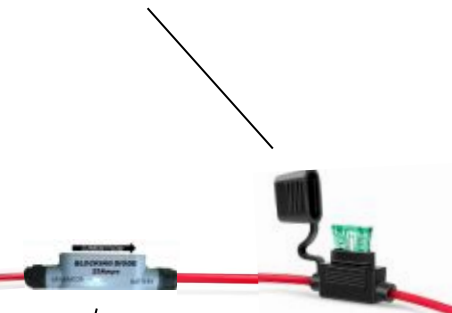
Below is the recommended configuration used for charging 12V or 24V lead acid batteries. Note - lithium batteries must be charged carefully with a temperature monitor to make sure they do not over heat and explode. That is why lead acid batteries are the preferred type of batteries to use with this generator.

12V BATTERY CHARGING

Bike Generator



15 Amp Fuse
<https://amzn.to/2mUtvbR>



Blocking
Diode
<https://amzn.to/2lsvWly>

12V Battery
<https://amzn.to/2lnDeH4>



OR

12V Power Pack



<https://amzn.to/2mUhmDM>