



Bigfoot

500 Watt Dual Generator Roller System (PPG-R500-AC200)



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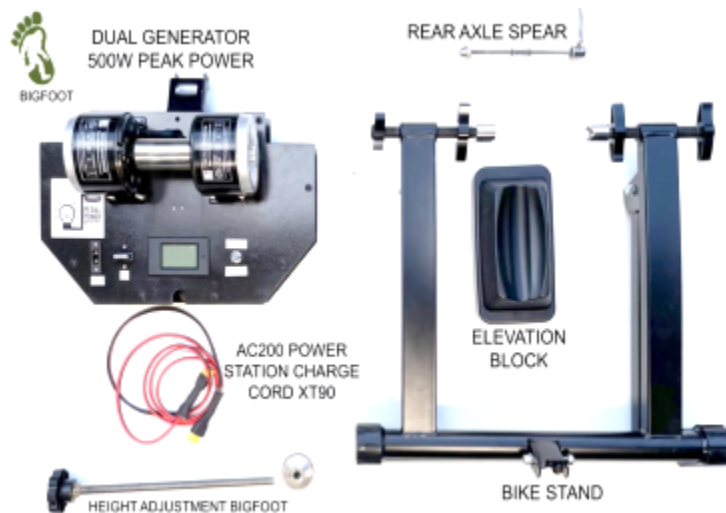
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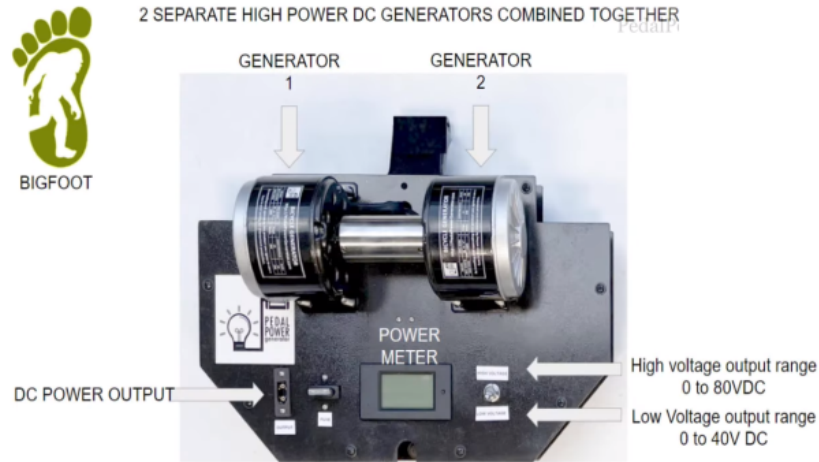
INTRODUCTION

This Bigfoot charging system is brought to you by <http://PedalPowerGenerator.com>. It provides electrical energy on demand. It includes two independent generators connected to a roller which provide twice the capacity of a normal bike generator system. The peak power output capacity is 500 Watts but typical output of an adult non athlete is around 100 to 200 Watts. An athlete can put out 200 to 400 Watts continuous power. The key features of this system are:

- Two generators for twice the capacity modified with air cooled ventilation holes
- Easy setup in 5 minutes
- Able to charge lead acid 12V battery or 24V battery using a blocking diode (diode sold separately on Amazon under ASIN B0025XI9MQ not included)
- Built in power meter that shows Volts, Wats, Amps
- Power adapter cord with XT90 plug that connects into Bluetti AC200 portable power station.
- If you want help adapting this generator to a different connector we will help you with an adapter cable to work with your battery power station solar generator system
- Extra sturdy industrial strength steel roller
- Lifetime warranty for parts (Shipping cost not covered under warranty)
- Excellent for teaching kids about alternative energy electricity for S.T.E.M. in the classroom.
- Great for providing emergency backup power for prepper use

COMPONENT OVERVIEW





CABLE ADAPTERS

PedalPowerGenerator

BLOCKING DIODE CABLE ADAPTER

REQUIRED FOR CHARGING BATTERIES
(Not required for charging power stations)



RING TERMINAL CABLE ADAPTER

USED FOR CHARGING MARINE DEEP
CYCLE 12V BATTERY



BARE LEADS CABLE ADAPTER

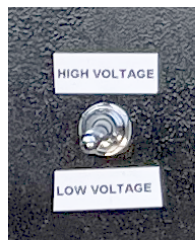
XT90 TO BARE WIRE LEADS FOR
MISCELLANEOUS PROJECTS



The two independent DC generators can be combined in two different configurations.

(1) End to end in high Voltage mode (Also known as “series mode”) . This mode tends to be 10 to 20% more efficient than low Voltage mode but is harder to find compatible DC charging devices. One compatible charging device is the Bluetti AC200 which has a max Voltage of 145V DC.

(2) Parallel mode delivers more current but less Voltage which is useful when trying to charge a 12V battery A switch allows you to switch back and forth between the two modes.



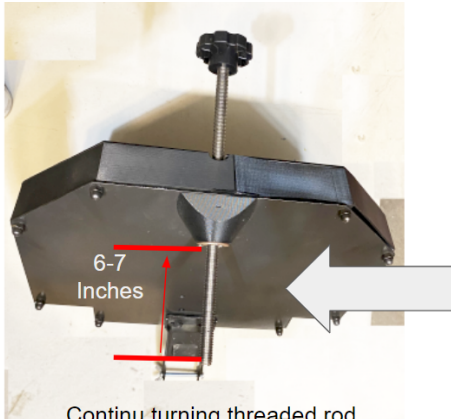
SETUP INSTRUCTIONS

An instructional video is available for you to watch this URL:

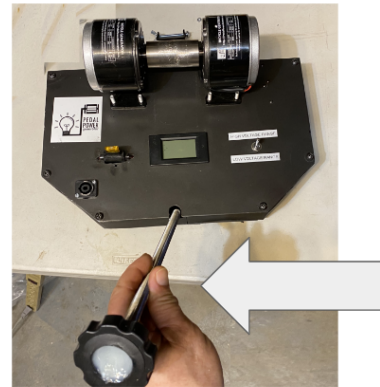
<https://youtu.be/93iTq--9t14>

Install bigfoot support threaded rod

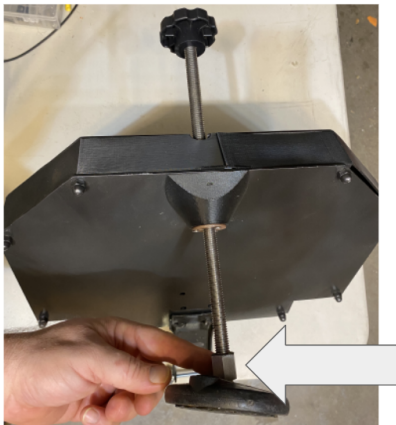
Be patient as it takes a while for the threaded rod to get through the hole.



Continu turning threaded rod until about 6 to 7 inches is protruding as shown.



Install big foot support threaded rod at an angle into the hole as shown



Install big foot pad with a few twists of the hand. Turn until it will not turn any more.



Open stand up to its widest position as shown above.

Insert bolt through main bracket

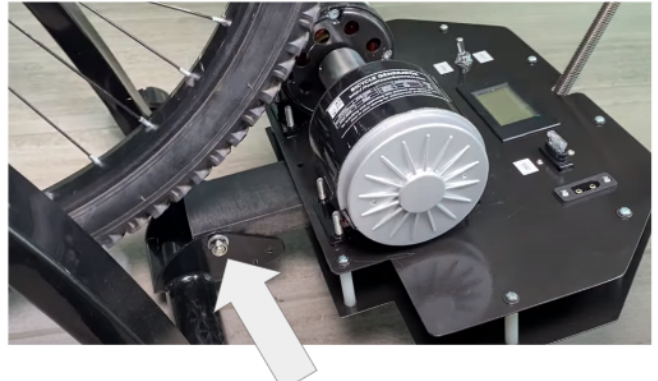
You will have either style “A” or “B” which are both very similar in the way they use a bolt through a bracket.

STYLE A



This step requires two people. One person holds the generator platform so the holes line up as shown. The 2nd person slides the bolt in and tightens the nut.

STYLE B



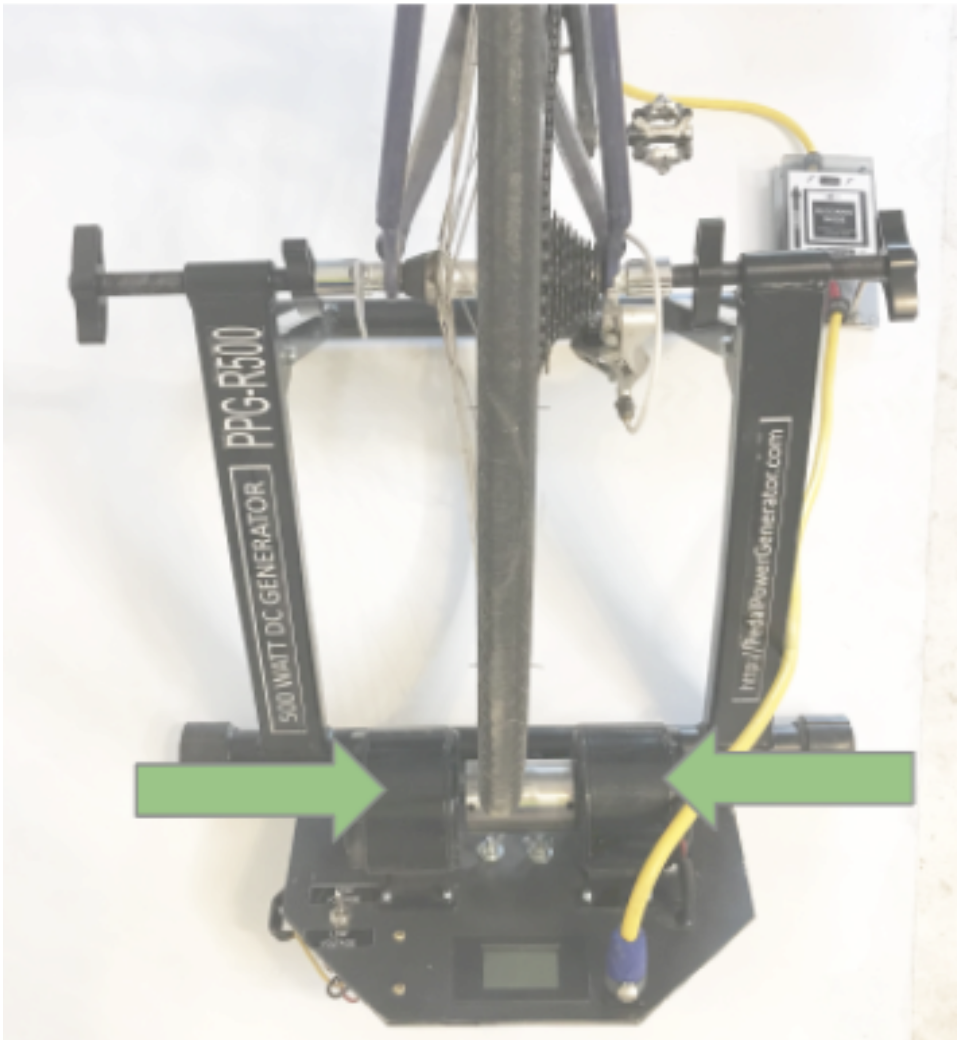
Loosen Bike Stand Handles

Next loosen the handles shown below . This will open up the stand to allow you to install your bicycle.



Install bike onto stand

First make sure your stand is completely opened. If it is not opened all the way the bike will not fit correctly. Make sure the rear tire is centered over the silver roller as shown below



Adjust generator platform upward



Adjust bigfoot support downward to move the generator platform upward. Make sure that the silver roller is firm against the rear tire.

Verify the generator power meter



BUILT IN POWER METER



In this step you will need a 2nd person to watch the power meter and verify that Voltage is generated when a person starts pedaling the bike. . The power reading will tell you how many electrical Watts are being generated. Note that due to the inefficiency of this mechanical generator system, there is about a 25% efficiency. This is to say that if the power meter shows an output of 100 Watts, your body is really putting out 400 Watts of total Power.

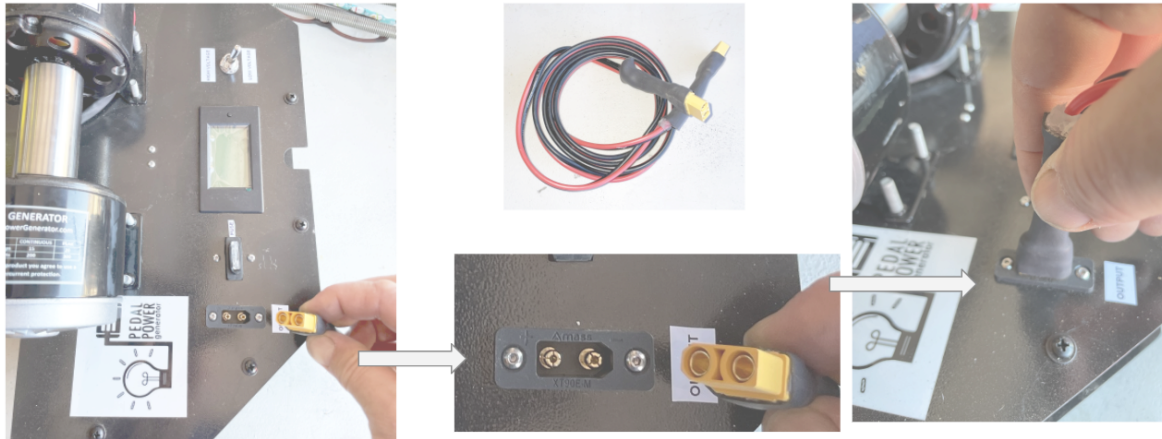
Connecting to AC200 Portable Power Station

Install power cord for AC200 power station

This power cord is using the XT90 connector which is compatible with the Bluetti AC200 . The end of the cable can be cut off of to be connected to a different type of battery power pack if desired.

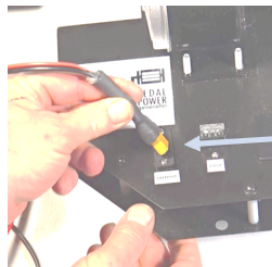


INSTALLATION OF POWER CORD



Note below how the power cable plugs into the Bluetti AC200 power cable in step 2. Then in step 3 insert the blue connector as shown . Not that no blocking diode is needed here because the BLUETTI AC200 has a built in blocking diode as do most portable power stations / solar generators .

STEP 1



XT90
CONNECTOR

STEP 2



STEP 3

PLUG INTO
LITHIUM
PORTABLE
POWER STATION
(145VDC MAX INPUT)
AC200

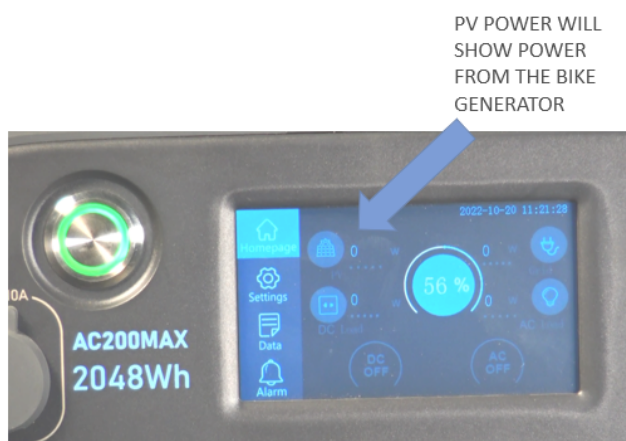


Turn on Bluetti

Turn on the Bluetti AC200 by pressing the main power button



Note that the screen will turn on as shown below and that the PV power indicator is what will show the power coming from the bike generator.



Get on the bike generator and ride

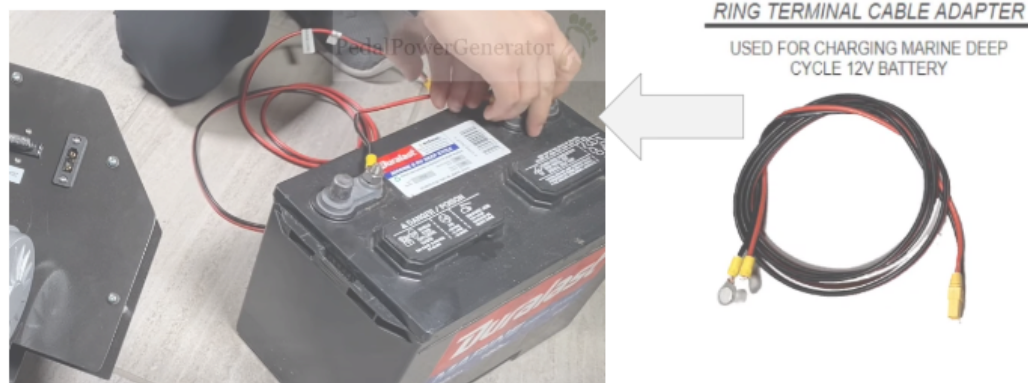
At this point it is very important to start riding at a fast pace that you can maintain for an hour. This will allow the maximum power point tracking system built into the power station to best deliver charge into the lithium battery inside your power station .

NOTE: It will take 20 to 60 seconds to see power on this screen because it takes the MPPT charge controller while to monitor your output and start working. At the first moment you start to pedal you will not feel any resistance. It will be very easy to pedal. But then as you go on it will get harder and harder to pedal. Keep at a steady pace and allow the MPPT charge controller to do its job.

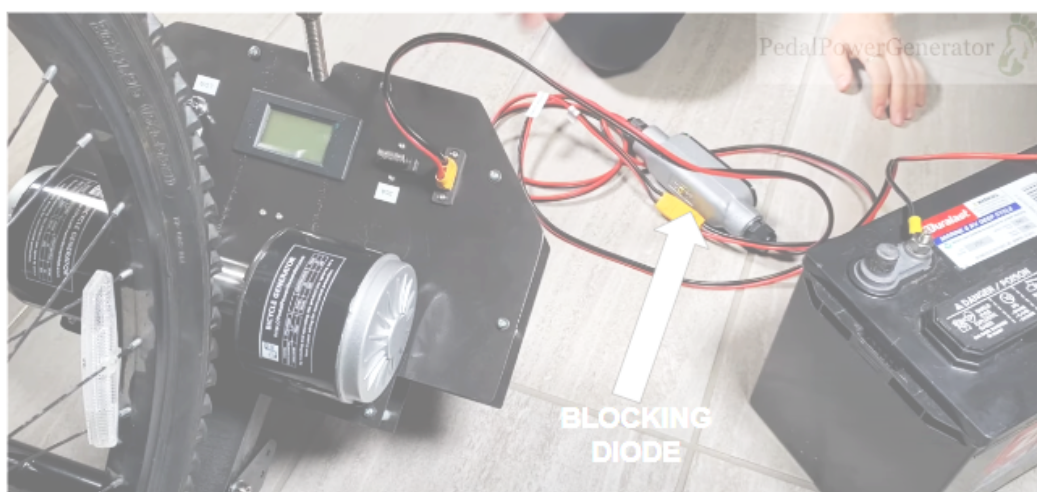


Connecting to 12V deep cycle marine battery

Purchase a deep cycle marine battery made for a trolling motor. The deep cycle battery should have an Amp rating of at least 30 AH. If it is less than you may need to buy a charge controller. If this is the case then order the NC25A 12V charge controller. This will have the ¼" posts to attach to. Attach the ring terminal cable adapter as shown below:



Next install the blocking diode as shown below. If you don't use this diode the bike generator system will start spinning on its own without a rider on it.

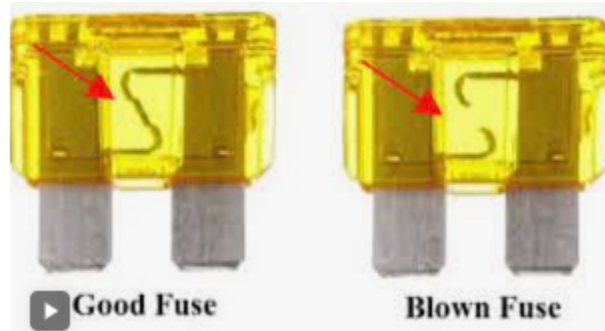


Note: Put the switch into the "Low Voltage" position. The power meter will not come on until the generator starts spinning. Before starting use a Volt meter to measure the battery. The lead acid battery should be between 12.0 and 12.8 Volts after it has sat for 10 minutes. 12.8 means it is fully charged. When you start pedaling the bike, have a friend look at the power meter to see how many Watts and Amps are coming out of the generator system. To use this battery with regular items that have an AC 110V Plug you will need to attach an AC inverter to the posts of the battery. Note if the system stops working check the fuse by pulling it out and holding it up to the light.

TROUBLESHOOTING

PROBLEM 1:

No power is coming out . Solution: check the fuse to make sure it is good.



PROBLEM 2:

No power is being generated - the built in power meter is not lighting up. Solution: WHEN this happens it may be that the tire is not touching the silver roller. Turn the bigfoot knob under the platform such that it raises upward and presses against the metal roller with the rear tire. .

PROBLEM 3: Very lower power is being generated on the power station

This can happen when you have the Bigfoot bike generator in low Voltage mode. Make sure the Voltage is getting up above 60V when you pedal by looking at the power meter built into the bigfoot system.

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