

# PODtronics®

## Power Module

### ECONOMICAL REPLACEMENT FOR LUCAS RECTIFIER AND ZENER DIODE

- **Water proof and vibration resistant.**
- **Attractive die cast finned aluminum heat sink.**
- **Available in both single phase and three phase.**
- **Suitable for use with high output single phase stator.**
- **Will work with either 2-wire or 3-wire AC alternator.**
- **Can be used to convert older 6 volt alternators to 12 volts.**
- **Can be used with either negative ground or positive ground.**
- **Single phase Hi-Power regulator designed for up to 200 watt stators.**
- **Single phase Hi-Power regulator with Battery Eliminator - designed for up to 200 watt stators.**

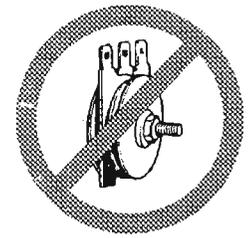
MODEL	DESCRIPTION	NOMINAL RATING	MAX. RATING*	HEAT SINK SIZE
POD-1P	SINGLE PHASE	120 WATTS	12 AMPS	62mm x 67mm x 26mm
POD-1P-HP	SINGLE PHASE "HI-POWER"	200 WATTS	20 AMPS	64mm x 77mm x 29mm
POD-3P	THREE PHASE	240 WATTS	16 AMPS	64mm x 77mm x 29mm
POD-4-1-MAX	SINGLE PHASE - Battery Eliminator	200 WATTS	20 AMPS	64mm x 77mm x 29mm

POD-4-1-MAX designed to be used with, or without, a battery installed in the bike. The design includes an internal storage capacitor allowing starting when operating without a battery.

\*Note- Because of uncertainty over where the units are mounted, or in what temperature environment they will be operated, Podtronic regulators have what is called a "nominal rating". The design rating includes a certain margin of safety, or "safety factor". The "max." rating is the absolute maximum the internal components can handle with no safety factor. The regulator box needs a cooling flow of air, or a large heat sink if tucked away out of a flow of air.



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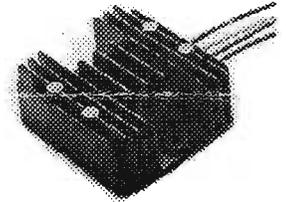


<http://members.aol.com/PODtronics/powermod.htm>

## SINGLE PHASE 12V RECTIFIER-REGULATOR FOR BRITISH MOTORCYCLES

- \*Economical replacement for Lucas rectifier and zener diode
- \*Will work with either negative earth or positive earth.
- \*Can be used to convert older 6v alternators to 12 volts.

POD-1P-160W.



### Instruction for installing the PODtronics power module

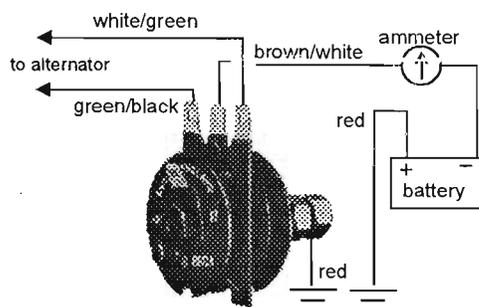
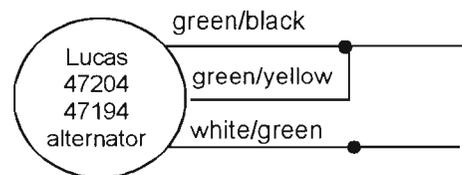
1. Disconnect the ground wire from your battery. Observe if your system is positive or negative earth.
2. Locate and remove the zener diode. You will no longer need it. (Hint: it's gold colored)
3. Locate and remove the selenium rectifier. You will no longer need it either.
4. There should be three wires connected to the rectifier. The Green/White and Green/Yellow go to the alternator stator. The "hot" wire is usually Brown/White. This goes to the hot side of the battery.
5. Connect these two wires to the two yellow wires on the PODtronics power module.
6. Mount the **power module** in an area with free air circulation (i.e, do not mount inside enclosed area).  
Note- The heat sink is electrically isolated and does not have to be grounded.
7. If your system is positive earth, connect the red wire to ground and the black wire to output.
8. If your system is negative earth, connect the black wire to ground and the red wire to output.  
**(Note- Be sure you have the polarity correct, otherwise you will damage the regulator)**
9. Now that you are sure everything is connected correctly, re-connect the ground wire to battery.

### 6 volt to 12 volt conversion

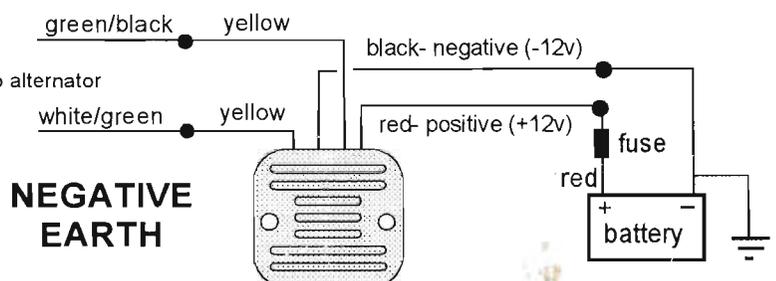
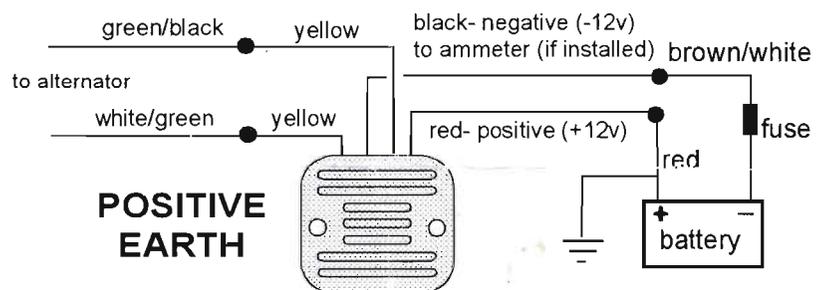
If you have an early bike with 6 volt, three wire alternator, 47204 or 47194, this can be converted to 12 volts.

1. Connect the Green/Yellow and Green/Black wires together. They now become one leg of your system
2. The White/Green is the other leg of your system.
3. Connect each leg to the yellow wires on the PODtronics.

(note- be sure to change the battery and all light bulbs to 12 volts)

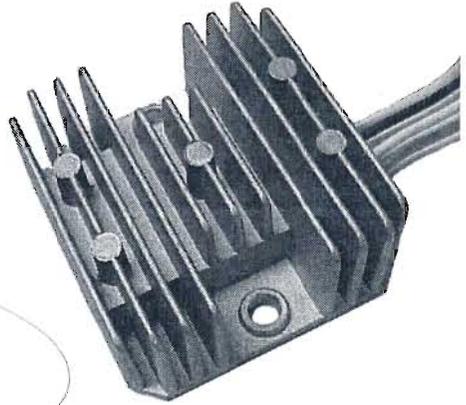


**OLD RECTIFIER TO BE REMOVED**  
(positive earth shown)





**PODtronics®**



**Instructions for installing the POD-1P-HP 200 watt  
and POD-1P-MAX 200 watt Podtronics® Power modules.**

(The POD-1P-MAX is specifically designed to allow operation without a battery).

*w/ capacitor*  
**POD-HP and POD-MAX are specifically designed for 180 watt Lucas stators  
Economical replacement for Lucas rectifier and Zener diode.  
Will work either negative or positive earth.  
Can also be used on European bikes with 200 watt alternators.**

**Standard 2 wire single phase alternator:**

1. Mount the Podtronic® Power Module near the battery and in an area that gets free flow of air for cooling. (Note) the aluminum body, that acts as a heat sink, is electricity isolated and doesn't need to be grounded.
2. Disconnect your ground wire from your battery.
3. Observe if your system is Positive or Negative earth (ground).
4. Locate and remove the Zener diode and selenium rectifier. You will no longer need them.
5. There were three wires connected to the selenium rectifier you just removed.
  - a. The Green/White and Green/Yellow which come up from the alternator
  - b. The "hot" wire is usually Brown/White. This goes to the "hot" side of the battery.
6. Connect the Green/White coming up from the alternator to one of the Podtronic® Power Module's yellow wires and the Green/Yellow wire to the other yellow wire.
7. **If your system is POSITIVE earth connect the Podtronic® Power module's red wire to earth (ground) and black wire output to battery negative terminal.**
8. **If you system is NEGATIVE earth connect the Podtronic® Power module's black wire to earth and the red wire output to battery positive terminal.**

**(Note) Be sure you have the battery polarity correct, otherwise you will damage the regulator.**

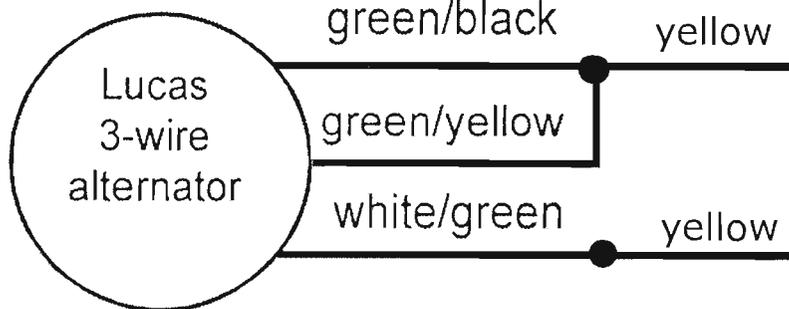
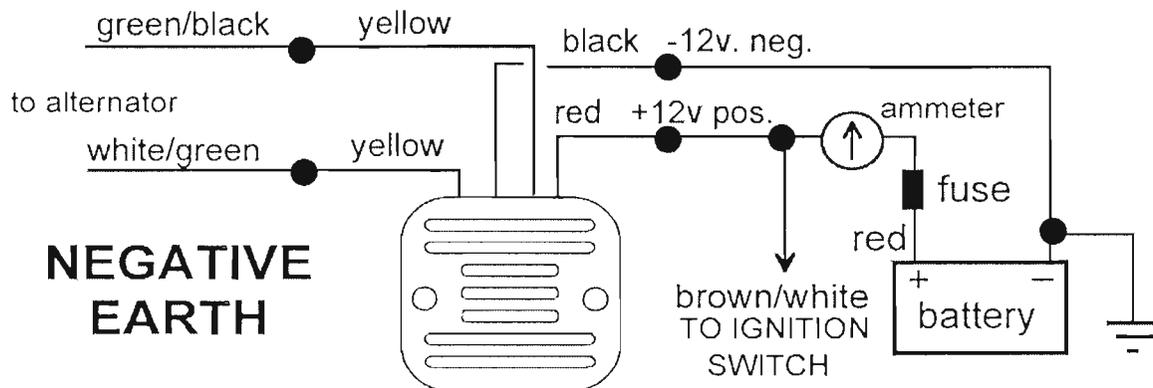
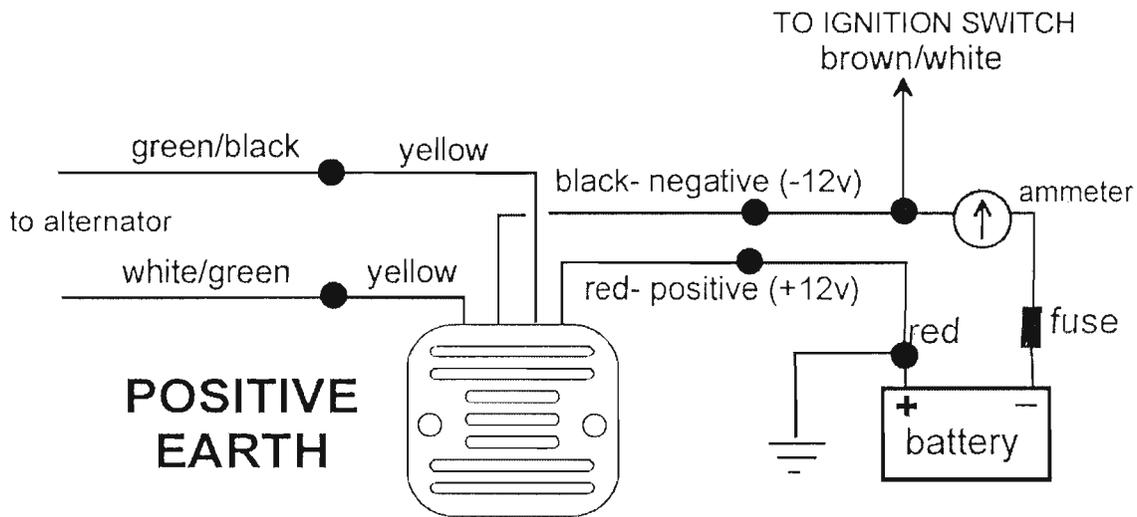
9. Now that you have verified you have every thing connected correctly, re-connect the battery ground wire.
10. If the Podtronic® Power module gets warn, you have connected it up backwards.  
**DISCONNECT GROUND WIRE IMMEDIATELY AND CORRECT WIRING.**

**Instructions for installing the Podtronics® Hi-Power and MAX modules with early 3 wire single phase alternator( 47204 etc.) for 12 volt operation:**

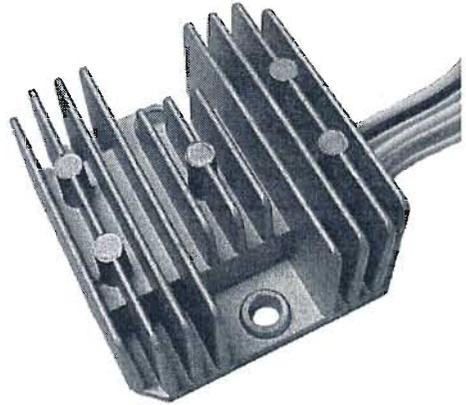
If you have an early bike with a 6 volt three wire single phase alternator it can be converted to 12 volts:

1. Connect the alternator stator's Green/Yellow and Green/Black wires together to become one leg of the system.
2. The White/Green wire becomes the other leg of your system.
3. Connect each leg to on of the Podtronic® Power module's yellow wires as above.
4. Finish installation as described above.

(Note ) Be sure to change the battery, coils and light bulbs to 12 volt.



To convert a 3 wire single phase 6 volt system to two wire 12 volt Podtronics® Power module follow diagram above. (Note) This unit will not work with a 3 phase alternator that can be identified by its 9 coil stator.



**Instructions for installing the POD-3-P 240 watt Podtronics® Power module.**

**POD-3Phase. Specifically designed for up to 240 watt Three Phase Systems.**

**Economical replacement for Lucas rectifier and Zener diode.**

**Will work either negative or positive earth.**

**Can also be used on European bikes with 240 watt 3 phase alternators.**

**Three Phase 3 wire alternator:**

1. Mount the Podtronic® Power Module near the battery and in an area that gets free flow of air for cooling. (Note) the aluminum body acts as a heat sink and is electricity isolated and doesn't need to be grounded.
2. Disconnect your ground wire from your battery.
3. Observe if your system is Positive or Negative earth (ground).
4. Locate and remove the Zener diode and selenium rectifier. You will no longer need them.
5. There were three alternator wires connected to the selenium rectifier you just removed.

(Triumph Lucas colors are Green/Black, Green/Yellow and White/Green, yours may vary.)

Connect the Green/Yellow to one of the Podtronic's yellow wires.

Connect the Green/Black to one of the other Podtronics yellow wires.

Connect the White/Green to the Podtronics last yellow wire.

6. If your system is **POSITIVE** earth connect the Podtronic® Power module's red wire to earth (ground) and black wire output to battery negative terminal.
7. If you system is **NEGATIVE** earth connect the Podtronic® Power module's black wire to earth and the red wire output to battery positive terminal.

**(Note) Be sure you have the battery polarity correct, otherwise you will damage the regulator.**

8. Now that you have verified you have every thing connected correctly, re-connect the battery ground wire.

9. If the Podtronic® Power module gets warn, you have connected it up backwards.

**DISCONNECT GROUND WIRE IMMEDIATELY AND CORRECT WIRING.**

(Note) Wire colors might be different for Norton models.

