

## **Robobike Travel Trailer ; Creating New Industries Touring without the need to Plug in, Ever**

### Description:

The trailer is a mobile generating station sized to meet the requirements of an electric assist bicycle on tour. State laws generally limit the power of these bikes. Our generator will supply that much for cruising plus an extra margin that can be used to charge an auxiliary battery.

Using only generator output, a 130 kg (286 lb.) bike and rider can maintain a 12 mph pace up a 7 per cent grade indefinitely. Since this is not the preferred method of use, the rider's contribution allows for a comfortable margin in the power profile.

### Features:

The single wheel design pulls easier than any other design due to reduced rolling resistance

The high attachment point maintains stability through its pendulous effect

Tuned Magnetic Damper smooths the perturbations and periodic oscillations found in other single wheel designs

Gyroscopic stabilization (optional) allows for carriage of loads above the line of action.

Anti-lock electric trailer brake with resistance wire load coils for mountain grades

Four cycle 25cc engine is quiet, reliable and easy to control. Flex fuel is optional.

Axial Flux PM generator is maintenance free and has no brushes or slip rings

Generator output is switch mode regulated between 24vdc to 60 vdc. Select for your application.

Two USB charging ports

One 125 volt AC outlet

LiFePo4 auxiliary battery with plug in charger allows for quiet operations in sensitive areas.

Reserve load carrying capacity allows for carriage of camping gear, personal items and tools.

Refer to [Robobike.com/trailer/trailer.html](http://Robobike.com/trailer/trailer.html) for dimensions and further details

### **Basic Generator**

**The** layout was derived by building a number of prototypes and testing them on a powered treadmill at speeds up to 50 kph. It was found that the placement of the center of gravity was the key to stability.

[Kickstarter Mobile Generator video](#)

[Download a Photo of the Mobile Generator](#)

This is also how the self damping hitch was developed.