

Application No. 85: Exercise Bike Generator

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Producing electricity with your own muscular strength - very informative!

One of my first self-made generators was an exercise-bike generator. I used an old exercise bike, removed the front wheel, and mounted a generator in its place.



The generator is built on two rotating metal plates, each of which is fitted with 16 block magnets Q-20-20-10-N (www.supermagnete.de/eng/Q-20-20-10-N), for a total of 32 magnets.



The stator is located between the rotors and includes the spools. I constructed the spools by hand using lacquered copper foil.



This generator works very well. To be honest, too well!

I have performed several load tests, e.g. with two 12V/55W-light bulbs for car headlights. Here you have to be careful not to pedal too quickly, otherwise the light bulbs burn out. I had no problem reaching 30 volts. At this voltage, the 12V car headlamps burn out.



First they glow white, then blue, and then suddenly *puffff*.

I also tried producing enough electricity to run a color TV. This worked very well and it seems to me the perfect solution for "couch potatoes": as soon as you stop pedalling, the picture disappears! :-)



Articles used

32 x Q-20-20-10-N: Block magnet 20 x 20 x 10 mm (www.supermagnete.de/eng/Q-20-20-10-N)

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