



FAQs / Ordering
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V1.2

POWER-PUC™ WHEEL LIGHTING SYSTEMS™

If you are reading this, you've probably already seen our FireBall™ Lighted Wheels and POWER-PUC™ Wheel Lighting Kits. The effects you've seen to date are only the tip of the iceberg and the possibilities are almost limitless. We believe this is a revolutionary product that will add entirely new dimensions to Custom motorcycle designs in general, and wheels in particular.

We've written this document to answer many of the questions you may have, but of course we can't anticipate everything. We encourage you to contact us at info@metricfats.com with comments or questions.

Brief History

For several years now, RAW Design has been manufacturing custom FireBall™ Lighted Wheels™. These are complete wheels with LED's, wiring, etc. all contained within the hub and body of the wheel. They are very impressive, but also very expensive (5K+). What makes the entire system possible though is our **POWER-PUC™** technology

Since the inception of the FireBall™ wheels, we've been researching and developing a POWER-PUC™ that can be inexpensively fitted to stock or aftermarket wheels. After 3 years of R&D and many prototypes, the POWER-PUC™ resulted. It has proven to be a very simple yet robust design.

WHAT THE PUC?

The heart of the system and what makes it all possible is what we call the POWER-PUC™. In the simplest terms, it is a rotary, electrical connection. This means you can take electrical power from a stationary object (the bike) and transfer it to a rotating object (Your wheel). Let's take care of some Frequently Asked Questions.

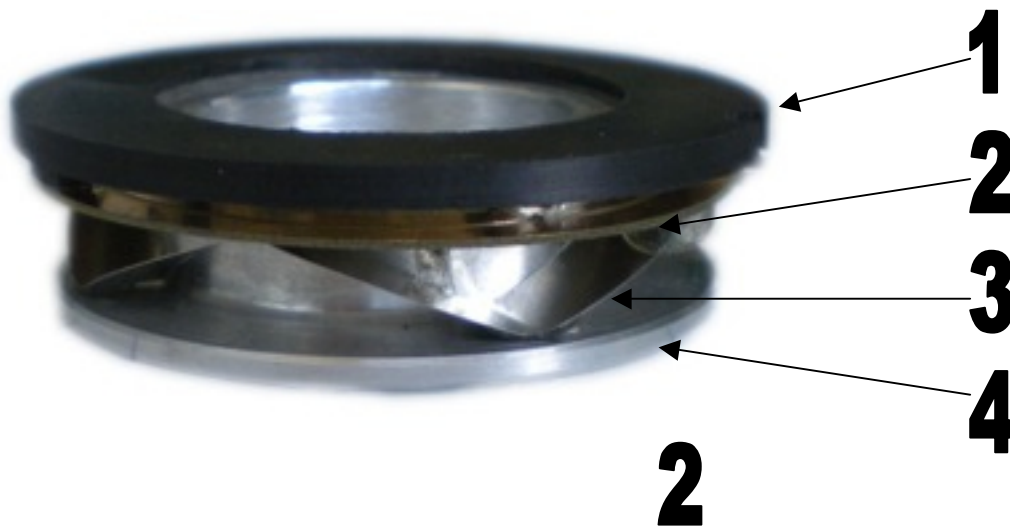
FAQ's

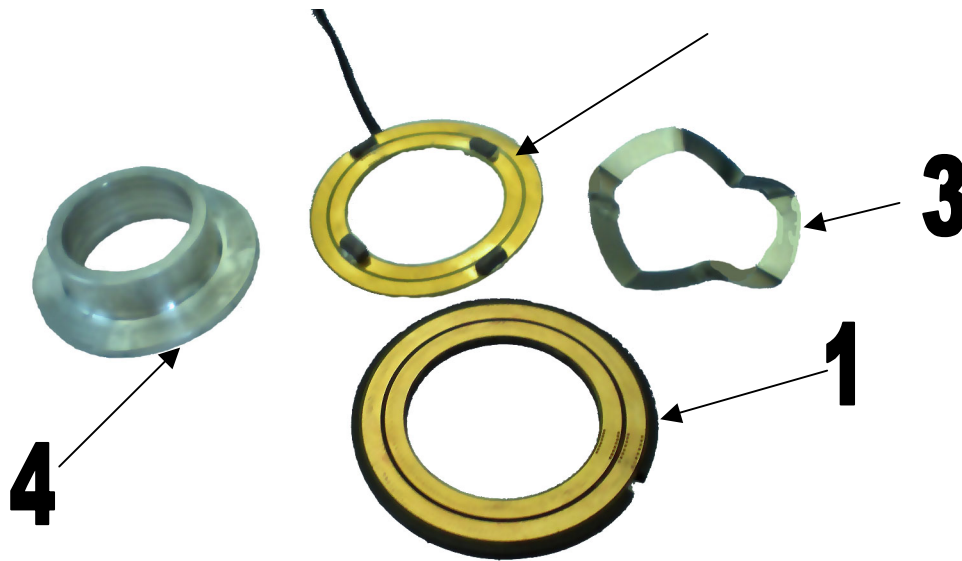
How does it work?

The systems' technology is quite simple, robust and is used in virtually every electric motor. Getting it applied to motorcycle wheels in an economical and bulletproof fashion was the hard part. But that's another story.

There are basically 4 important components to the system. A description of each follows, and references the photo below. #2, 3 & 4 come as an assembly. DO NOT disassemble.

- 1) Slip Ring: Is mounted to the wheel hub and rotates with the wheel. Power is conducted through the stationary contactors of the Brush Ring to the two gold colored rings. Each of these rings is connected to a wire. The 2 wire leads will be connected to the LED's on your wheel.
- 2) Brush Ring: Holds the 4 composite contacts attached to wires and will transfer power from the bikes electrical system to the slip ring (Item #3). The Brush Ring will remain stationary and is a tight fit over the wheel spacer (Item #2). It's 2 wire leads will be connected to a power source on the bike.
- 3) Wave Spring: Is mounted between the Brush Ring and Wheel Spacer. It maintains the correct pressure between the Brush Ring and Slip Ring .
- 4) Wheel Spacer: This will replace your stock spacer. It is compressed between the inner race of the wheel bearing and the forks or swing arm. It keeps the Brush Ring stationary.





How long will the PUC last?

Under normal conditions, much longer than you will own your bike. Tests of the Power-Puc indicate a lifespan of over 100,000 miles. How long will the LEDs last? Most manufactures guarantee them for life.

Will Rain or water cause damage?

Not if you take a few precautions. These will eliminate or minimize any risks.

- 1) A “hard” switch (push button) and fuse are supplied with your kit to interrupt the positive side of the electrical circuit.. This will be your main power switch. If you add an optional remote, you should still put the switch in the circuit.
- 2) Turn the lights off if you run into heavy rain or are washing the bike. **Do not spray pressurized water directly at the unit. EVER!**
- 3) If the PUC does get wet, ride for 20-30 minutes to let it dry before turning it on. On occasion you may notice the LEDs being dimly lit after you shut off the remote. This is usually caused by some moisture remaining in the PUC. Having the switch (mentioned above) in the circuit will assure that you can interrupt the power. It’s not a bad idea to turn off the “hard” switch when you are done for the day anyway.

Are these Legal?

While you are parked, absolutely. While riding? We can’t give a definitive answer. This can change by State, County, Town, City, mood of the cop, etc. Check with your local police. Our experience is this; if you are acting or riding like a jerk, you’re going to get stopped. Be courteous, safe and respectful, and most Law Enforcement we have encountered think they are pretty cool and substantially aid in visibility of your bike to

other motorists. Flashing blue or red anywhere on your bike while riding is a definite no-no. Lastly, there's always the "off" button.

Will the LED's affect my wheel balance?

The amount and placement of LED's on your wheel is important. Spreading them equally is the best solution. We've tested dozens of bikes to Highway speeds (and maybe a little more) without any problems, so it's unlikely you will have an issue. If you do have a balancing issue, we recommend using Dyna Beads. www.innovativebalancing.com They are very simple, effective and need no special equipment to install or balance.

What type of maintenance does it require?

Unless you make it a habit of riding in sand, salt, snow or ice...just keep it clean.

How difficult is it to install?

(RAW Installation Scale: 1-10. 1= You can put the key in the ignition. 10 = A complete tear down and rebuild of your bike.)

This install = 4-5.

Will it fit my Bike?

Most likely yes. If you see it as an option on the pull down menu for the POWER-PUC™ System on our site, then the answer is yes. We will be adding to this list quite frequently, so if you don't see your bike this week, you may see it next week. It also would not hurt to call or email us about your particular bike. Obviously, we are going to approach the more popular bikes first. So let us know. Your input counts.

"I see you use double-stick tape to hold the lights. Is this strong enough?"

Absolutely! IF IT IS APPLIED AND USED PROPERLY. We supply only 3M tape with our kits. This is the same tape that is used for attaching body side-moulding on cars. There are other tapes available, but we have found 3M to be the best. Our RAW-POWER™ Wheel LEDs are specifically manufactured for our applications, come with the 3M tape pre-applied, are super flexible and weather proof. We strongly recommend their use. Pricing is competitive with other LEDs, so it just makes sense to use the same ones we do for our own installations.

How Do I order?

It's a simple, 3 step process.

- 1) **GET PUC'ed:** Go to the "Wheel Lighting Kits" section of our site and make the choice of your bike. Choose the POWER-PUC™ for the model and year of your bike from the pull-down menus. NOTE: If you have aftermarket wheels, you will need to call us with your order. 203-425-3214
- 2) **Get Lit:** Go to the "Wheel Kit LEDs" section and pick the length, color and quantity of LED's you would like. If you are mounting the LEDs on your spokes,

the 6 LED strips (4" long) or 9 LED strips (6" long) are the most common sizes, so measure your spokes before ordering.

- 3) **Options:** You can add a simple on/off remote controller, or a multifunction remote that adds several levels of strobe, dimming and "breathing" functions.

How Do I install?

Download our Installation instructions for details, but to summarize, you'll need to remove your wheels and set aside the better part of a day from start to finish. It takes more patience than skill. But as soon as you ride at night, you'll know it was well worth it. Guaranteed you will be the center of attention.

Ride Safe.

