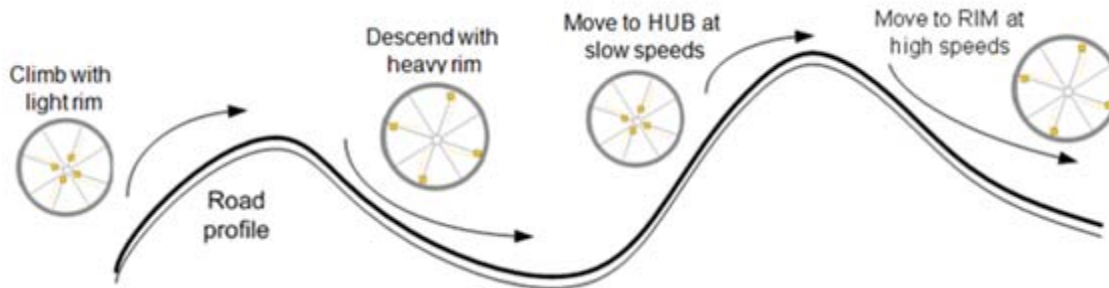


About Active-Spoke Technology

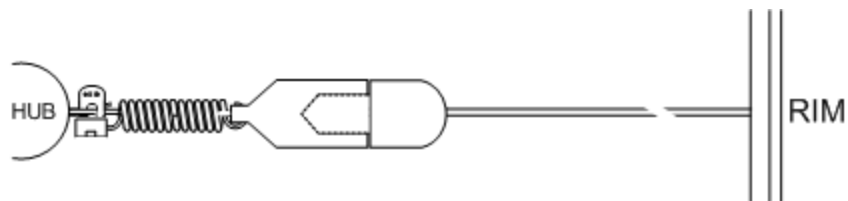
Active-Spoke technology relates to momentum management within a high performance bicycle wheel, and improving the rider's speed and efficiency. By shifting the wheel's weight between the hub and rim at the appropriate time, a rider's performance can be enhanced during periods of deceleration (i.e. out of and into a hill) and essentially sustained during periods of acceleration.



Concept of Active-Spoke

Each Active-Spoke kit features six Active-Spoke weight sets, springs and bolts for attachment to the spokes of the wheel. The movement of the Active-Spoke sets maximizes a rider's efficiency and speed by controlling the moment of inertia and momentum of the rear wheel. As the speed of the rider decreases (going up a hill), centrifugal force moves the Active-Spoke sets close to the hub to decrease the moment of inertia on the wheel and make climbing easier. As the rider accelerates, cresting a hill and beginning descent, the sets move out creating an increased moment of inertia and added momentum. The rate that the sets move from hub to rim (threshold) is determined by the rider's speed, the weight of the sets and spring tension.

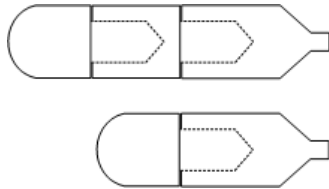
In trials, it was found advantageous to have different combinations of set weights and spring tensions so the outward movement was staggered. Test riders report feeling the surge when exiting a downhill and also the preservation of a light rim response while climbing.



Active-Spoke technology creates a significant effect: angular momentum increases 16 fold as the weight radius increases from 3" to 12".

PRODUCT FEATURES

- Active-Spoke sets come in two configurations: short (1 oz per set) and long (1.5 oz per set) that have different speeds at which they reach the rim. With a total of six sets, overall added weight is between 6 and 9oz (170 and 255g)



	Weight (per set)	Threshold
Long Set	1.5 oz	~ 17 mph
Short Set	1 oz	~ 21 mph

- Multiple set-up combinations (ratio of short to long sets) cause sets to move to the rim in a staggered fashion.
- Given that rider skills vary substantially, Active-Spoke offers three spring tension options to provide a range of average speeds that the rider may require:
 - Novice Spring tension – average speeds of between 14 and 20 mph
 - Standard Spring tension – average speeds of between 17 and 24 mph
 - PRO Spring tension – average speeds of between 20 and 28 mph

Using combinations of short and long sets, a rider can further ‘fine tune’ set movement to match their average speed for a particular course. (Tables are provided in the user manual to aid in this selection.)
- Active-Spoke is applied directly the rear wheel, modifications or removal of the spokes are not required
 - Longitudinal slots in the Active-Spoke sets go over the spoke
 - When tightened the slots are not aligned, creating a secure hold
- Efficacy has been shown when used with radial spoke patterns and any other spoke patterns having 9” of travel capacity and a spoke diameter of less than 3/32” (2.3mm)
 - Sets are designed for use with oval and round spokes – a bladed spoke version will be released in 2nd quarter of ’08.
 - Crow foot spoke patterns have not been tested and are therefore not recommended at this time
- Active-Spoke is fully compatible with existing equipment (no installation, tools, etc.)
- Riders require no new skills or training to operate correctly and effectively

FACTS

- An Active-Spoke wheel has more momentum coming out of a downhill – causing the rider to maintain higher speeds for a longer amount of time
- The added momentum created by Active-Spoke sets will carry a rider further up a hill before submitting to the increased gradient and returning to the hub

- A classic downhill freewheel study showed that wheels with Active-Spoke technology outperformed an equivalent standard wheel and cut approximately 3.6 seconds per mile
 - Accelerated at the same rate as the standard wheel
 - Carried the rider at a higher speed for a longer period of time at the bottom of a hill
 - Maintaining higher speeds as the wheel slowed and the amount of inertia decreased
- Active-Spoke wheels experience a subtle acceleration when sets return to the hub (known as the figure skater effect – as a skater’s arms are drawn in, it causes a faster spin rate)
- Active-Spoke offers equal performance for less effort or in some cases, increased performance for equal effort
- Field trials showed that wheels with Active-Spoke go up to five seconds faster per mile (dependant on course)

“By varying the inertia of the wheel, it provides the dual characteristics (light vs. heavier rims) required for optimum performance.”

- Joe Friel – Author, Coach, Consultant

About Active-Spoke

Developed to achieve optimal wheel performance for both competitive and leisure cyclists at all ability levels, Active-Spoke is a bicycle wheel add-on that can be applied to most rear wheels. Active-Spoke dynamically shifts weights along the spoke of a wheel at specific speeds, and the resulting affect provides a wheel that has weight at the hub during a climb and weight at the rim during a descent. The product features six weights and springs that can be installed and configured by the rider based on their ability level and the contours of the course. Developed by Tarryan Technologies, LLC, classic downhill free wheel tests showed that Active-Spoke outperforms an equivalent standard wheel. Additional information and product sales can be found at www.Active-Spoke.com.

About Tarryan Technologies LLC

Based in Skaneateles, NY, Tarryan Technologies focuses on Intellectual Property (IP) asset development and licensing, including the patent pending technology used for Active-Spoke. Formed in 2007, Tarryan Technologies is composed of a team of professionals focused on the application of IP assets within the cycling market including cyclists, coaches and leading collegiate researchers. More information can be found at www.active-spoke.com.

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