

feather brakes

Proper installation

Mount the caliper to the fork and make sure it is a sound mount, with at least 6-10 threads of overlap on the nut that is going to hold it to the frame. Pinch the brake calipers together and look at the alignment with the pad(s) as you want the same type of gap along the top or bottom edge, whatever you are using as a reference point. You want to make sure the pads touch exactly front and back and have the same arch. You want full contact on the rim and you want to match it on both sides. It may take 2 to 3 times to get it exactly right but it's worth your time because once they are set you never have to touch them again. This is where Barnett would usually get his magnifying goggles out to get things super exact. In this case we installed 4, 50 compound pads, but they also have cork pads for carbon wheels like the Edge wheels I have been running. The other set is the Flashpoint 60's, which have a aluminum "strip". Installing Feather Brakes is simple if you just follow the instructions. If you have never installed brakes before then it could be a bit tough, but really what it takes in that situation is just some patience. Part of the installation is truing the brakes up with some sand paper to the rim. The paper is included in the box as is the necessary tools to attach the brakes.

The importance of pad compound

With Barnett's testing of all the various rim textures and materials and brake compounds he found that you can get good results from a 30 durometer pad because it's soft and will wear-in faster, and accommodate a lot of different variations in the rim texture. Or if you have a bike that you've been riding for 3 years and your rims have become a war zone where there may be gashes of aluminum, rubber, etc. When a rim is "seasoned" to that level, you can put on soft pads and you will have good braking right away because you don't have to seat-in because there is so much "trash" that it's like sand paper grabbing your pads. However, it's not longevity braking because you are going to wear your pads out faster. The best that Barnett has found is a rim that has been scuffed with 60 grit sand paper coupled with a 50-55 compound pad. At first it will squeak a bit because it's going to want to really grab, but usually after 2-3 bouts of pressure from the brake it will come in to its own and you will have power nearly on par with a mountain bike disc brake.

In Barnett's quest to find harder compounds he came across an unlikely source. On his frequent visits to bike shops across Southern California, he often asks the mechanics to allow him to rummage through boxes of components that are discarded after a customer either upgrades parts for his bike or simply swaps out an old piece with a new one. He's always searching for both edges of what's nearly too hard and what may be too soft. He couldn't find any name brand compounds that suited his needs, though the frequent search through long-forgotten cardboard boxes has proved to be fruitful.



On one occasion he found a set of no-name pads that were 55 durometer and he tried them, and instantly had about 15-20% more braking power with the harder pads because they didn't flex out of the way when you really leaned on them. The soft pads will give you decent power, but the harder you lean into them and the faster you go, the progression will be less. The harder pads give you a tick less at initial contact but the more you pull, the more brake you along with excellent progression.

For the person who spends \$2000 on his set of rims, they shouldn't worry because the rims these days are all machined and they pretty much have the texture that you are after and you can bolt the brakes on and they will work fine, but if you want to achieve maximum braking power it will take a little bit of effort to get another 10-15% in performance gain.

Basic, real world testing

Barnett's brake testing is real world in its nature. A lot of companies will have a suspension or destruction dyno where they bolt some cranks on and beat them to death for 300,000 cycles. Some have the brake machine where it has a big drum and a load-testing machine, but his method of testing involves a five-story parking garage. Barnett takes the elevator to the top and rides his bike down. Up and down, all the while changing and adjusting elements of the calipers, whether it be position or brake pads. He believes it's true real world testing because it's a human riding the bike and feeling what each thing is doing and not basing it off some number that a machine spills out. Barnett's so dialed-in on his personal bike that he's often afraid that he's going to snap the front fork. Likely not to happen of course, but you get the idea as to how obsessed he is with stopping power.

How they ride

I must confess that my brake adjustment skills teeter on the edge of lame and lazy. "As long as I stop" is my motto. I have, however, been transformed by the Feather's. They

are slick and solid and light, a combination of traits that sometimes leaves me wondering "Is there something missing that I don't see or know about?" In this case, they have everything. They are strong so you don't feel any quiver when you apply deep pressure. It does help when your calipers are adjusted perfectly and after watching Barnett install mine, I am convinced that it's easy. The lightweight factor is a big deal too. These brakes are about 100g lighter overall than the 7800 Dura-Ace calipers! That's a pretty significant savings and all without sacrificing any strength. In all situations, the Feather's worked efficiently, whether on the all-carbon Edge wheels or aluminum-carbon Flashpoint set. At \$400 the brakes, for what you get, are reasonable and comparative to other sets on the market. Lightweight, strong, powerful, durable and certainly sexy, the Feather set seems to be an upgrade that is worth the cash.

Brake side notes

All the hardware on the brakes are titanium, while the main construction is 6006 aluminum, which is the equivalent to the Alcoa 6013. It's a good balance between rigidity and flexibility and about as strong as you can get while still having very minimal flex. You can get a spring upgrade that is titanium and made by Renton Spring in Washington state. They make springs for NASCAR and the aerospace industry. Accent colors include red (shown) and blue with pink coming soon.

The next generation will be carbon fiber. The arms and actuating cam will be 174 stainless or titanium and estimated to weigh 1/3 less than the Feather brake, and be stronger. It will be completely of US origin with aerospace-type traceability on the resin, the carbon, the mold temperatures when it was cooked, who assembled it and on what day. It's not necessary, but it's a cool feature for a high-end product.

CHECK OUT: featherbrakes.com. Feather Brakes are 199g per pair w/pads and the price is \$400 (pair). *OR*