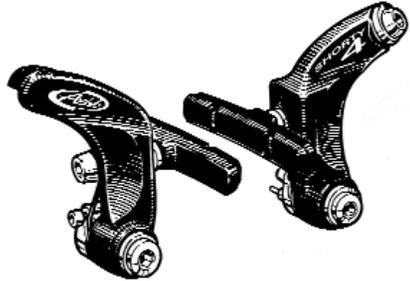




SHORTY™ 4

INSTALLATION AND OPERATION INSTRUCTIONS



IMPORTANT

Brakes are a safety-critical item on a bicycle. Improper set-up or use of brakes can result in loss of control or an accident, which could lead to a severe injury.

It's your responsibility to learn and understand proper braking techniques. Consult the owner's manual for your bicycle and a professional bike dealer. Practice your riding and braking techniques on a flat and level surface prior to aggressive riding.

The effectiveness of braking is dependent on many conditions over which Avid has no control including the speed of the bicycle, type and condition of the riding surface, braking lever force, proper installation and maintenance of brakes, cables, levers, brake pads, the condition of the bike, weight of the rider, proper braking techniques, weather, terrain, and a variety of other factors.

Avid brakes and levers are not intended for use on any motorized bicycle or vehicle. Any such use could result in a serious personal injury.

ALWAYS RIDE UNDER CONTROL.

Remember, it takes longer to stop in wet conditions. To reduce the possibility of an accident and minimize trail erosion, you should avoid locking-up your wheels.

SHORTY4-02/02

BRAKE INSTALLATION

IMPORTANT!

Avid Shorty brakes are not designed to work with linear-pull brake levers. Only levers designed for center-pull brakes can be used with Shorty brakes. If you have any questions concerning compatibility of levers and brakes, contact your professional bike dealer.

Follow these instructions carefully. If you do not understand the instructions, have the installation done by a professional bike mechanic.

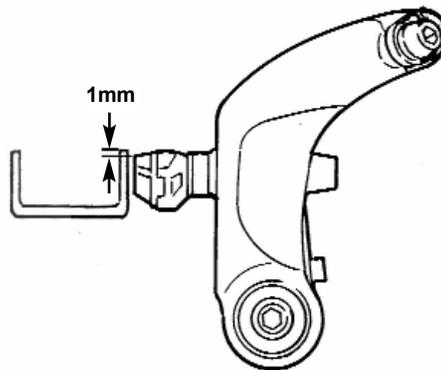


Installation Tools Needed:
3mm and 5mm hex wrenches,
torque wrench and cable cutters.

3

ALIGN THE PADS

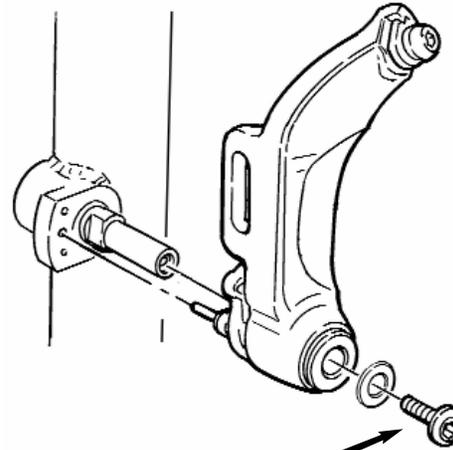
Next, adjust the brake pad to be parallel with the rim. The top of pad should be at 1mm below the top of the rim.



1

MOUNT THE BRAKE

Brake bosses must be clean and free of debris. Grease bosses lightly. Align the brake pin with the center brake boss hole. Tighten the mounting bolt.

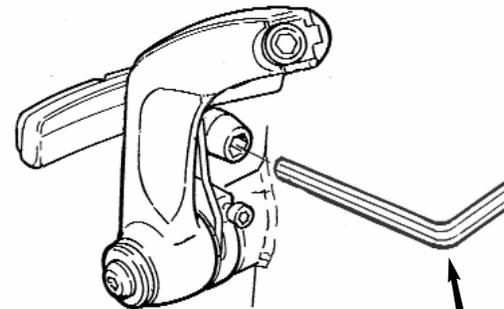


Tighten Mounting Bolt to:
5 - 7 Nm (43 - 61 in lb)

4

TIGHTEN THE PADS

With the pads aligned properly and flat against the rim, tighten the fixing nut to the specified torque.

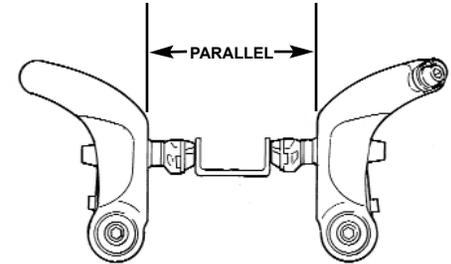


Tighten Pad Fixing Nut to:
6 - 8 Nm (52 - 69 in lb)

2

CHECK THE PAD SPACING

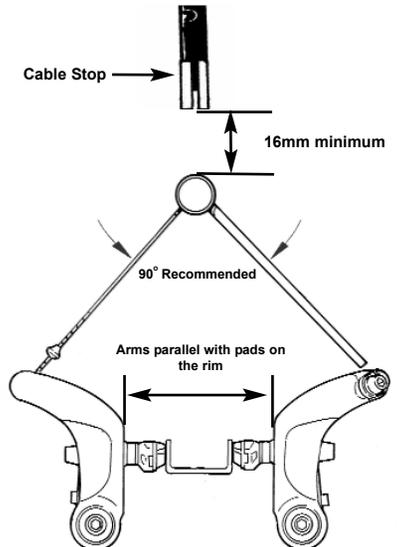
Check that the brake arms are approximately parallel when the brake pads are on the rim. There are 4 spacing options: 3mm, 4mm, 5mm, and 6mm. If the arms aren't parallel, check the chart on the back for corresponding washer configurations.



5

CHOOSE A STRADDLE WIRE

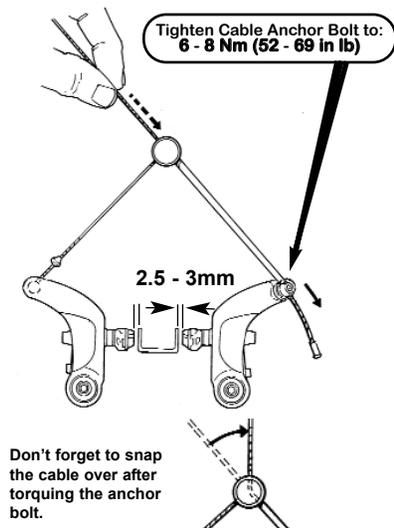
Two straddle wire lengths are provided. Use the longest wire possible that allows at least 16mm of clearance between the cable stop and the straddle cable medallion.



6

ANCHOR THE CABLE

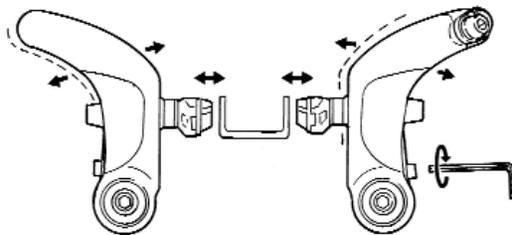
Feed the cable into the straddle wire and attach it to the brake. Pull the cable tight enough to have clearance of 2.5 - 3mm, per side, between the rim and the brake pads. Tighten the cable anchor bolt to the specified torque.



7

CENTER THE BRAKE

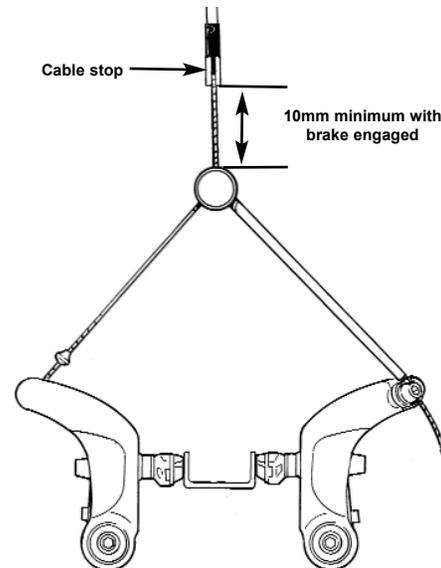
Center the brake by adjusting the spring tension adjusters. Turn each spring adjuster screw with a 3mm hex wrench clockwise to increase spring tension.



8

CHECK THE CLEARANCE

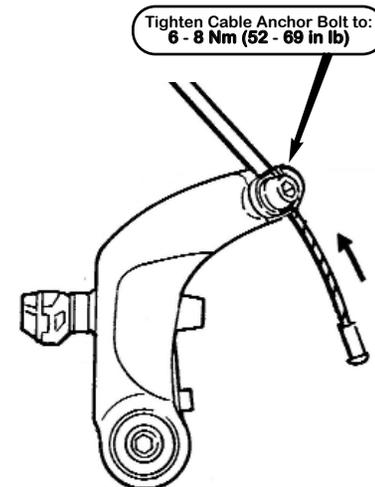
Pull the lever to engage the brake. Check to be sure there is at least 10mm of clearance between the straddle cable medallion and the cable stop with the brake engaged.



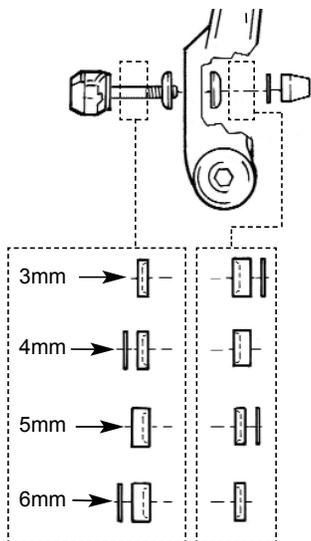
9

TEST THE SYSTEM

With two fingers, squeeze the brake lever firmly about a dozen times to ensure the cables are seated properly and operate smoothly. Make sure the cable has not slipped at the cable anchor bolt. Re-torque if necessary.

**Pad Alignment**

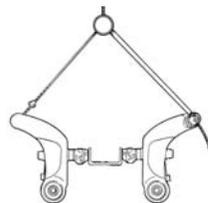
As noted in step 2, there are 4 pad spacing options. Use one of the following configurations to ensure the brake arms are approximately parallel:

**Troubleshooting / Tech Tips**

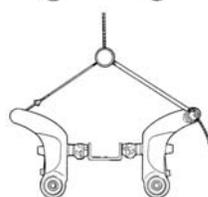
1. If you use lighter spring tension at the brake, you will use less hand energy when operating the brake lever. Lighter spring tension will also keep the brakes better centered.

2. Not getting the feel you want out of your Shortys? Here are some general guidelines about straddle wires:

A longer straddle wire with a steep angle will offer a firm feel, but less leverage.



A shorter straddle wire with a lower angle will feel softer at the lever, but has more leverage.

**20R™ Brake Pads**

Brake pad condition plays an important role in the performance of brakes, check them before every ride. If you have any question about their condition, consult your bicycle dealer or replace them.

Shorty 4 brakes come standard with Avid's 20R™ Brake Pad. This is a one piece pad that works in any orientation, left or right, front or rear.

READY FOR AN UPGRADE?

Try Avid's Rim Wrangler 2™ Cartridge Pads. More stopping power, and the convenience of only having to replace the pad insert. Ask your local bike shop for details.

LIMITED WARRANTY

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