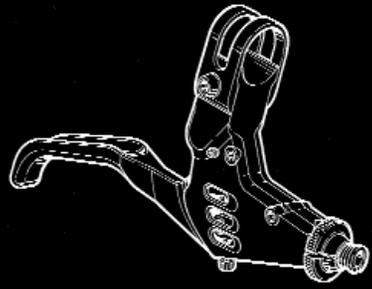




# Black Ops™ Research SPEED DIAL® ULTIMATE

## Installation Instructions



### FRONT BRAKE INSTALLATION

#### IMPORTANT!

Only brakes designated for direct-pull levers such as the Single Digit Ultimate, Single Digit Ti, 7, 5 and 3 brakes can be used with Avid levers. 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.

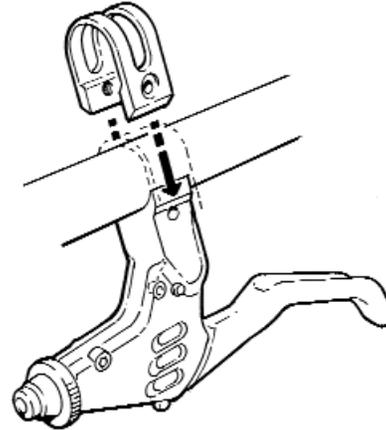


**Installation Tools Needed:**  
2mm, 4mm and 5mm hex wrenches, torque wrench and cable cutters.

1

#### INSTALL THE LEVER

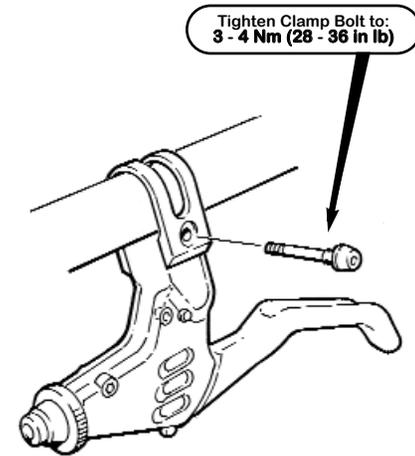
Hold the lever firmly against the handlebar in the approximate location you want, and snap the Cam Split Clamp™ over the bar and lever.



2

#### INSTALL THE BOLT

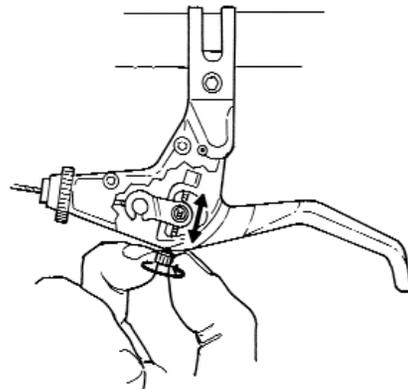
Insert the clamp bolt and washer from the front side. Support the back side of the clamp with your finger while tightening the bolt.



3

#### SET THE KNOB

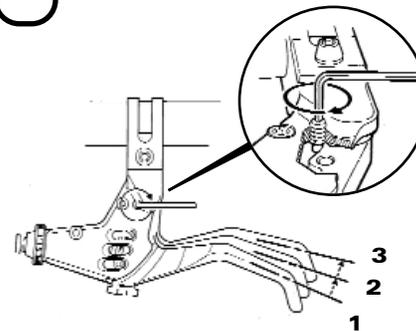
Before setting the brake cable length, turn the Speed Dial adjusting thumb-screw so it is in the **middle of the range**. After installation, adjust the knob for the exact brake feel that you want.



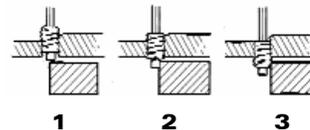
4

#### SET THE REACH

If you have smaller hands, you can adjust the reach of the lever by adjusting the reach hex bolt.



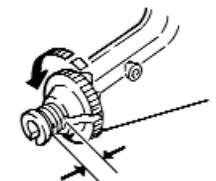
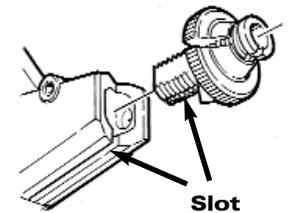
**IMPORTANT!** - Squeeze the lever... THEN turn the screw.



5

#### SET ADJUSTING BARREL

Before installing the cable, adjust the barrel adjuster about half way out. Make sure the barrel slot lines up with the slot in the body. You may now install the brake cable.



5mm ~ 6mm

#### 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 in a controlled environment 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.

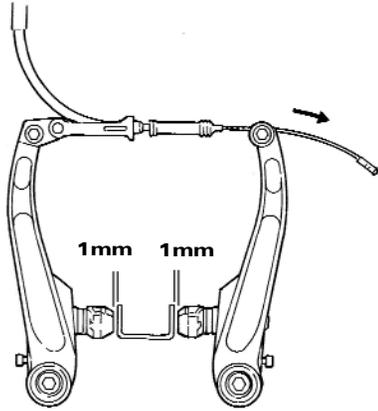
#### ALWAYS RIDE UNDER CONTROL.

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.

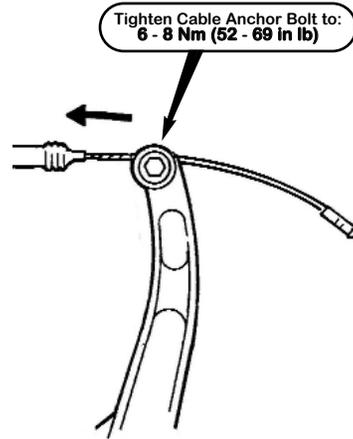
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**6****TIGHTEN THE CABLE**

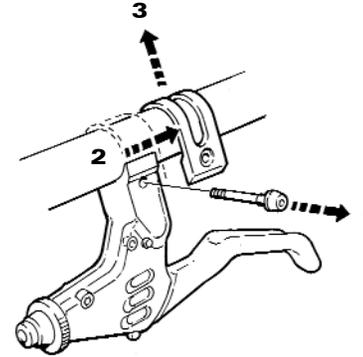
Hold brake pads against the rim and tighten the cable. Now, screw the barrel adjuster in until you get the right amount of brake pad-to-rim clearance (approx. 1 - 1.5 mm per side).

**7****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.

**Lever Removal****To remove the levers:**

1. Remove the clamp bolt and washer.
2. Slide the clamp sideways off the lever.
3. Pop the clamp off the bar. Be careful not to expand the clamp wider than the diameter of the bar.

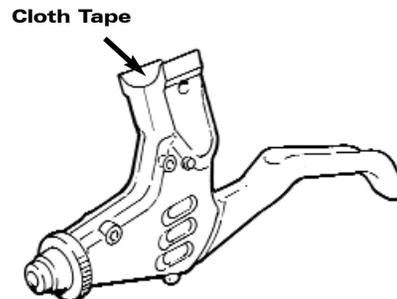
**Speed Dial™**

The primary feature that sets these levers apart is the patented Speed Dial Adjustable Leverage function. This design allows you to dial in whatever feel you want, from a soft feel (greater modulation) to a firmer feel, or anywhere in between. This adjustment can be done without any tools.

Other benefits of Speed Dial include matching the feel of the front and rear brakes, especially if the arm lengths or brake boss heights differ.

**Cam Split Clamp™**

This nifty feature allows you to install and remove your levers without having to remove your grips and shifters. This feature is designed for handlebars that are 7/8" in diameter. If you bars are undersized - as some bars are - we strongly recommend that you replace them. If you must use the bars, you can shim the lever clamp by putting a layer of cloth tape on the lever body clamp seat and reinstalling.

**LIMITED WARRANTY**

Avid, LLC (Avid) warrants to the original consumer purchaser of every Avid product that the product shall be free from defects in workmanship and materials for a period of one (1) year from the original date of purchase. The sole remedy under this warranty is limited to, at Avid's sole discretion, repair or replacement of the defective product. Labor and shipping costs are excluded from this warranty. This warranty only applies to the original consumer purchaser and is not transferable.

THIS WARRANTY DOES NOT COVER normal wear and tear (including, without limitation, brake pad wear), or defects or failures that are related in any way to improper installation or follow-up maintenance, accident, abuse or neglect (including, without limitation, thread damage). Since Avid has no control over the product's final use, Avid also does not warrant the suitability of the product for specific riders and/or uses.

IN NO EVENT SHALL AVID BE RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT OR PRODUCTS LIABILITY, INCLUDING WITHOUT LIMITATION, PERSONAL INJURY DAMAGES, PROPERTY DAMAGE OR ECONOMIC LOSSES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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Claims under this warranty may be initiated with any Avid dealer. If this is not practical, you may contact Avid in writing at the address listed below. Dated proof of purchase must accompany all warranty claims.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.