



AVID HYDRAULIC BRAKE SETUP GUIDE

TIPS FOR THE BEST POSSIBLE BRAKE SETUP.

BECAUSE AVID HELPS YOU FLY.

Avid has some amazing, one-of-a-kind product features that consistently make us the choice of the best riders in the world. But there's another big factor at play when it comes to maximizing your braking performance: proper setup.

You can easily ruin an awesome brake's performance by setting it up wrong, and you can enhance the capabilities of any brake with the right setup.

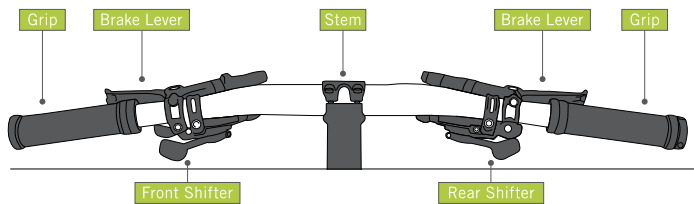
If you follow the extremely simple steps described below, you can set up your bike's cockpit just like the pros do. You'll be amazed by the difference it'll make.

The general idea is simple. Brakes are all about leverage. The more power you build into brakes, the less effort it takes to use them. To achieve power, you need leverage. All Avid brakes are designed to deliver huge power, but unlike others in the brake business, we know the story doesn't stop there.

Another huge part of maximizing power is the marriage between the physiology of your hand and operation of the brake. The proper brake setup will help your hand to take advantage of all of Avid's features, resulting in less fatigue, more power, more control and ultimately a much better ride!

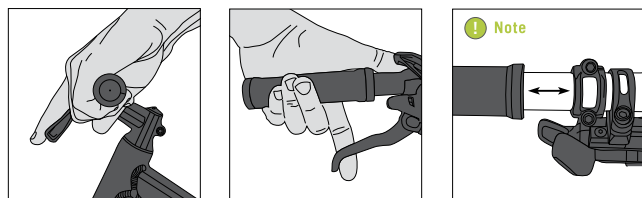
STEP 1: PLANNING FOR THE RIGHT SETUP

Determine your preference for the component placement on your handlebar. This is the typical setup:



- Note:** This is the typical setup that the vast majority of riders use, but it's not the only way to do it. Some people prefer the shifters to be "outboard" from the brake levers.
- Note:** If you are starting from scratch and you need to install your Avid brakes, refer to your installation guide with the brakes or go to www.sram.com/en/service.

STEP 2: SETTING ANGLE AND SPACING OF BRAKE LEVERS



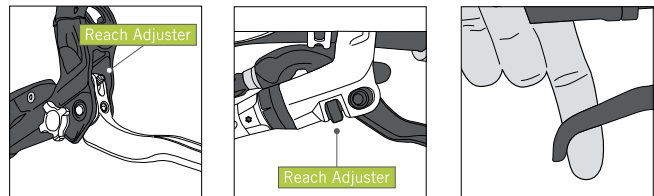
A. Pick a place where you can sit on the bike in a riding position. Keep your tools within arm's reach, because you'll need them in a second.

B. Start by placing one of your hands on the handlebar so that the heel of your hand is lined up with the end of the bar. Keep all of your fingers wrapped around the bar except your forefinger. Extend it out like you are pointing at something. While you are pointing, slide the brake lever and position it so the bend of the lever blade lines up with the base of the first knuckle on your finger. At this point, your finger may not reach the lever perfectly, but line it up so that it will when we adjust the reach in a moment.

C. Now check to make sure your finger is in a straight line with your arm, and that the lever blade just touches the bottom of your finger. Once everything is lined up, tighten your lever bolt.

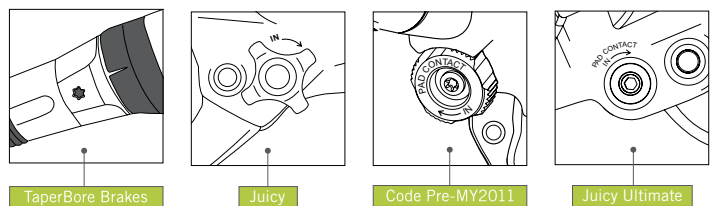
- Note:** This is the part of the process that people get wrong more than any other. Because it looks tidy, people tend to position the brake lever against the grip. That actually creates a problem because it positions your fingers too close to the pivot of the lever. The closer your fingers are to the pivot on the blade, the less leverage you have...which translates into dramatically less power and more hand fatigue. You are much better off using the end of the lever, because that gives you the best leverage. If you follow the steps above, your grip and lever clamp will likely be further apart than you are used to. That's okay though. It's just the sign of someone who knows exactly what he or she is doing.
- Note:** This setup means that most often you'll use one finger to brake, which may be new to you. Rest assured, this is the right way to go. Using one finger to brake allows the others to keep a firm grip on the handlebar. When Avid brakes are set up in this fashion, you will have all the braking power you'll ever need. And by the way, you will find that the lever is still close enough to use your middle finger as well, if that's the way you want to roll.

STEP 3: REACH ADJUSTMENT

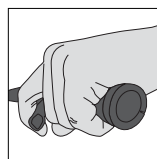


On Avid brakes the reach adjustment is always going to be a knob on the front of the lever, or a hex wrench bolt near the pivot. The goal here is to position the lever's bend exactly at the base of your first knuckle on your forefinger, so turn the reach adjuster until you get there.

STEP 4: CONTACT-POINT ADJUSTMENT



If you are the lucky owner of an Avid brake with Contact-Point Adjustment, then you aren't done dialing in the goodness quite yet. This one-of-a-kind feature allows you to adjust the point in the lever's throw where the pads contact the rotor. *It is not reach adjustment. Reach adjustment moves the lever so your finger reaches the lever nicely. Contact-Point Adjustment adjusts the place where the brake firms up and grips the rotor.* Ideally, you want to adjust that spot to where your hand's grip is strongest. Because everyone's hand is a bit different, it's nice to be able to select your own, perfect contact point. So, turn the adjuster until you feel like the contact is right where your hand feels strongest in your grip.



- Note:** There are a few different Contact-Point Adjusters on the various models of Avid brakes. If you're not sure where yours is, consult your owners manual or avidbike.com.
- Note:** The Contact-Point Adjustment DOES NOT move the pads.

STEP 5: MATCH THE OTHER SIDE

Now, set up the other side of the bar by matching the spacing of the clamps on the side you just completed. Visually adjust the vertical angle of the lever so it matches side one as well.

- Note:** Contact-Point Adjustment is also used to "even out" the levers, so the spot where each lever's throw firms up is the same. It just feels right. And while you're adjusting, take note – no matter what you do to the contact point, the reach never changes.

STEP 6: POSITION SHIFTERS

Your brake levers are in position—now it's time to move the shifters into place. It's very easy. All you need to do is grip the bars like you are riding again, and extend your thumb like you are going to shift. With your thumb extended, just move the shifter until it touches it in a comfortable spot. It's okay for this to feel like a little bit of a stretch, because you don't shift as often as you brake, and you still have four fingers on the bar anyway.

- Note:** If you are using Grip Shift shifters the steps above obviously change a bit. Since the location of the shifter is predetermined, you can skip this step.

STEP 7: RIDE

You've now completed a setup procedure that's sure to enhance your braking control dramatically, so get out there and start riding. This is the way braking should be. Enjoy it!



MORE TIPS FOR THE BEST POSSIBLE BRAKE SETUP.

UNDERSTANDING AVID'S UNIQUE TECHNOLOGIES

Not all brakes are created equal. Sure, they all go in the same spot on your bike, and they all have levers and these days most are hydraulic. But don't be fooled. There are some major differences between Avid and the others out there. We have a number of unique technologies that make dialing up true performance a snap. Let's take a moment and review some of the basics:

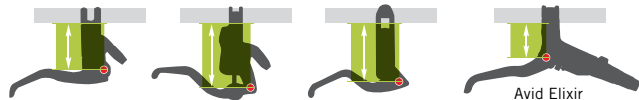
CONTACT-POINT ADJUSTMENT

We're proud to have been the company that invented this feature before people even knew how much they needed it. As the name suggests, Contact-Point Adjustment allows you to adjust the point in the lever's throw where the pads contact the rotor. That helps you do two simple – but important – things:

1. It lets you pick the position you'd like your fingers to be in when your brakes grip. That means you can perfectly match your fingers' comfort with the brake's power.
2. It allows you to balance both levers so the pads contact at the same point. No more uneven brake levers. Contact-Point Adjustment is not a reach adjuster (although all of our levers have that, too). It's an oh-so-important performance enhancement that helps you dial in the perfect ride.

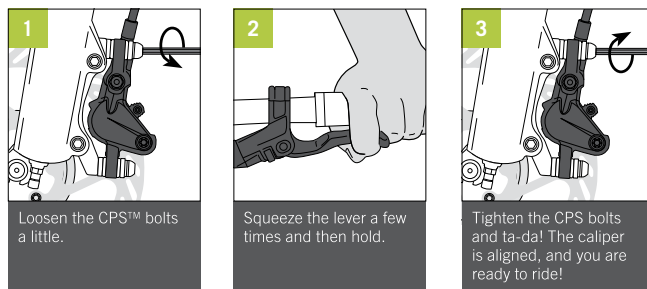
POWER RESERVE GEOMETRY™

At the end of the day, a brake lever simply multiplies the force your hand generates (just like a nutcracker). Avid's Power Reserve Geometry represents a way of thinking about the physics of leverage and your hands' comfort. This philosophy is fundamentally different than others in the business of brakes. Due to pivot placement, physics dictates that with other brake levers your fingers tend to slip off the ends as you pull. Avid is different. We designed our levers with the pivot closer to the handlebar—in fact, closer than anyone else in the industry. The resulting lever movement has less inward travel, an arc that's closer to your fingers' natural motion and one that delivers more force to the brake. The cool part is, every Avid lever has it.



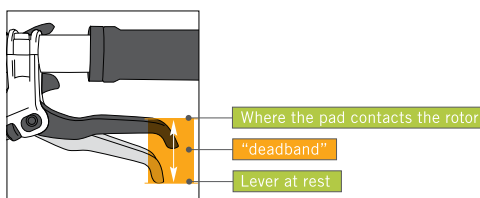
TRI-ALIGN™ CALIPER POSITIONING SYSTEM™

Another original Avid technology making your life better...There's never been an easier brake to install. With Avid's Tri-Align Caliper Positioning System, aligning the caliper to the rotor literally takes seconds.



DEADBAND

Deadband is the distance your brake lever travels before the brake pad makes contact with the rotor. "Long deadband" means your lever moves a lot before the pad contacts. "Short deadband" means the lever moves very little before the pad contacts. There isn't necessarily a right or a wrong deadband. It has a lot to do with your hand, your preference and your comfort. The quickest way to adjust the amount of deadband your brakes have is to use Avid's proprietary Pad Contact-Point Adjustment. If your particular brake model doesn't have Pad Contact-Point Adjustment, try the Tech Tuning Tidbits below.



TECH TUNING TIDBITS

ADVANCING THE PAD POSITION

- Note:** If lever pulls to the bar a bleed is not necessarily required.
1. Remove wheel or red plastic pad spacer insert from disc brake caliper.
 2. If your brake has Contact-Point Adjustment, rotate the adjuster to the full "out" position. Now it's in the most open position (short deadband).
 3. Squeeze the brake lever slowly several times while watching the brake pads move toward each other. Stop when you see an approximate 1 mm gap between the pads.
 4. Insert the red plastic pad spacer between the pads. The pads will be a little hard to push apart, so use some force to properly spread them to the correct position. Now, remove the spacer again.
 5. Install wheels with rotors mounted to bicycle and give the lever a squeeze. The brake pads should now be properly advanced to the correct position, and the brake lever will have a proper firm feel. Repeat if necessary.

ADJUSTING THE AMOUNT OF DOT FLUID IN THE BRAKE

It is possible for your brake to have too much DOT fluid in it. As a result the brakes may experience very short deadband, or in extreme cases the pistons will not retract far enough, causing the brake pads to drag on the rotor. Here's how to take care of the problem:

1. If your brake has Pad Contact-Point Adjustment, rotate the adjuster to the full "out" position. Now it's in the most open position (short deadband).
2. Remove wheel from the bicycle.
3. Using T10 Torx™ wrench (included in the Avid Bleed Kit) remove the lever body bleed screw.

4. Carefully insert the red plastic pad spacer between the brake pads to press the pads and caliper pistons apart.
5. A small amount of DOT fluid will flow from the lever body bleed port. While still applying light pressure on the pads, insert the bleed screw back into the lever body and tighten.
6. Spray lever body with soapy water and wipe clean with a rag.
7. Install the wheel back onto the bicycle and firmly squeeze the lever approximately 10 times to reset the pads; check for any leaks around the bleed port. Now there should be more deadband and less pressure in the system. If there is still excessive pressure after completing this procedure, perform a complete bleed of the system.

Symptom	First try this	Then try this
Short deadband	Check for DOT fluid overfill*	Bleed the brake
Long deadband	Advance the pads*	Bleed the brake
Sticky pistons	Advance the pads	Lubricate with DOT fluid or Avid DOT compatible grease**
Poor pad retraction	Advance the pads	Check for DOT fluid overfill
Slow lever return	Bleed the brake	Check seals

*Of course, you should start by adjusting the Contact-Point if your brake has that feature. That's what it's for.

**Never use chain lube on the pistons. The petroleum in the oil can ruin seals and brake performance.

PERFORMING A PERFECT MAINTENANCE BLEED

Our drip-free bleed process is so thorough, you'll never wonder, "Did I get all the air out?" You can see every bit of performance-robbing air being methodically extracted from the system.

Refer to the full Avid Juicy Bleed procedure at www.sram.com/en/service.

