

Instructions for installing Brake Director™

Special Note: We have provided these basic installations instructions to help any professional mechanic successfully install Brake Director™. Every bicycle setup can bring up unique issues that are not addressed by these instructions. If you encounter any issue with installation, please call Brake Director LLC for direct expert consultation and instruction. We fully support the proper installation of Brake Director™.

Brake Director direct line: (206) 283-6542

1. The Brake Director™ is an inline brake cable doubler and force doubler that is located within the cable from one brake lever to both brakes. The Brake Director™ unit is composed of a swing arm with a follower bearing and dual cable pivoting yoke mounted on a pivot to a chassis and a pivoting cam also mounted to the chassis in alignment with the follower bearing. There is a single cable input on one surface of the chassis and two cable outputs on the perpendicular bottom surface of the chassis. This assembly is accompanied by two attachable cable barrel ends.



Brake Director™ Installation Instructions

2. First select which brake lever on the handlebars (left or right) will be used to operate the brakes. Cut a short length of cable housing that reaches from the selected brake lever to the single cable input adjuster barrel that allows the Brake Director™ to be close to the selected brake lever while clear of the handlebars. Then cut cable housings to reach from the Brake Director™ to the front and rear brakes from the two output adjuster barrels following normal guidelines for relaxed efficient cable paths as the steering is turned 90 degrees to either side. The front brake cable housing should attach to the adjuster barrel furthest from the input adjuster barrel. The rear brake cable housing should attach to the adjuster barrel nearest the input. The reason will be made clear later in these instructions.
3. Now install the cable from the selected brake lever. This is done by putting the cable through the precut housing, through the single input cable adjuster and through the slot in the pivoting cam. Using one of the included attachable cable barrel ends, slide it onto the cable into the notch on the rear surface of the cam. With the selected brake lever at rest, position the cam so that the follower bearing touches at the upper end of the cable slot where the cam high travel phase begins. Tighten the attachable barrel end so that it supports the cam in this position. Pushing down with your finger, lightly on the swing arm, squeeze the brake lever and confirm that the cam comes to rest in this position. The input barrel adjuster can be used to fine-tune this position.
4. Now install the two brake cables in the pivoting cable yoke attached to the swing arm. Install the cable for the front brake in the end of the yoke furthest from the input end of the chassis. Before putting it through the far end adjuster barrel, slide the remaining attachable cable barrel end over the cable and leave it loose. Install the rear brake cable in the remaining end of the yoke and feed it through the near end output adjuster barrel. Feed both cables through their housing to their respective brakes and into the cable binders on the brakes.
5. Using a third hand tool or other means, hold both brakes in contact to their respective rims (discs, drums. Etc.). Now looking at the yoke in the Brake Director™, pull both cables gently taut and tighten them into their brake binders such that the pivoting dual cable yoke is level or parallel to the output base. Release the brake units, give the lever a squeeze and see if the dual cable yoke is level when the brakes are applied. If necessary, adjust the cables until this achieved.

6. Adjust the rim gap of the brakes until the correct cam phases are achieved. The cam has two profiles. In the initial movement of the brake lever, the follower bearing starts at the beginning of a high ratio (1:1) movement phase. In the full application of the brakes, the follower transitions to a high force ratio (1:2) surface profile. These 2 cam phases are readily seen by looking at the cam. The brakes should be gapped such that the pads of both brakes make contact as the follower reaches this transition point between these two phases.
7. Lastly adjust equal brake release. On most cantilever type rim brakes, including linear pulls, the spring adjustments on the brakes are sufficient to adjust the brake to release evenly. On road bikes with side pull brakes, dual pivots, etc., the spring adjustments are extremely limited. In this situation, the attachable cable barrel end on the front brake cable inside of the Brake Director™ can be tightened in a position to limit the release of the front brake. This will insure the release of the rear brake. This limiter is to be used in any situation where adjustments are not adequate to achieve equal release.
8. Always test ride the unit before delivery. Make sure that full brake force can be applied within the travel of the cam. If not, the rim gap should be tightened until this is achieved.

David Hawkins
Brake Director LLC

Special Note: Custom Installation of Brake Director™ on bicycles that exceed the requirements outlined in these Installation Instructions is only available per discussion and preassessment with approval through ***Brake Director LLC***.

<p>Brake Director™ is fully warranted against manufacturing defects of materials or workmanship. Installation and operation are not warranted unless done by a Brake Director™ approved professional, and the guidelines stated above are fully followed.</p>
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