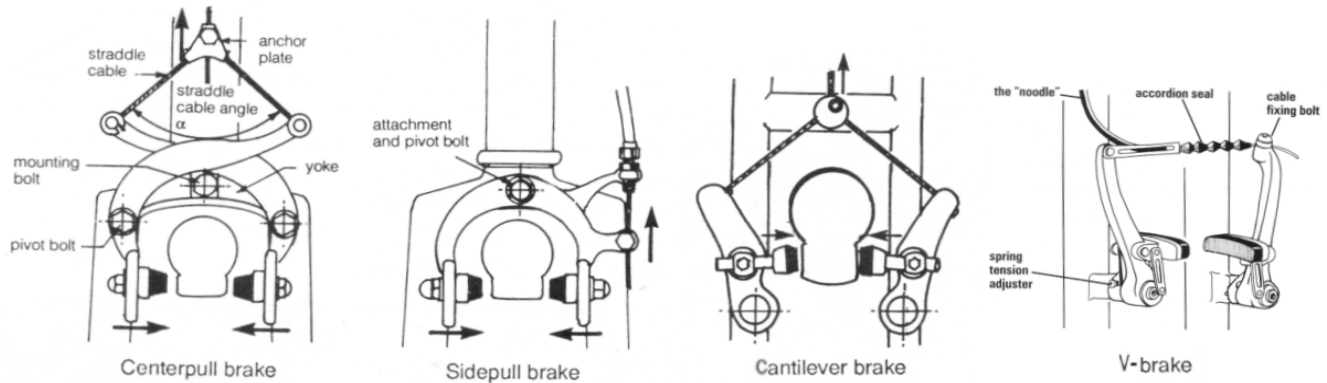


Types of Brakes



These are the main styles of brakes you'll see. Coaster brakes (or "back-pedal" brakes) are also fairly common, but we won't talk about those here. You'll also have to look elsewhere for info on any other less common brake types, like disc brakes, roller cams, or hydraulic brakes.

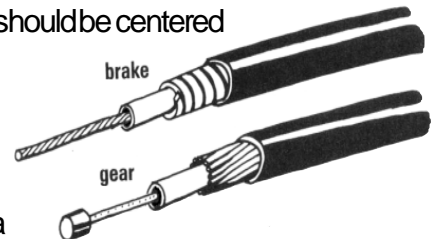
All of the above brakes are rim brakes. They stop the bike by pressing rubber brake pads against the rim of the wheel. Centerpull and sidepull brakes are both types of caliper brakes. They both attach to the frame at a single point by means of a mounting or pivot bolt. Cantilever and V-brakes attach to the frame on two posts that stick out of the frame.

A Well Adjusted Braking System

Here are a few things to look for in your brakes. They should, of course, stop you. When you aren't pulling the brake lever, the brake pads should not rub against the rim. They should, though, be nearly touching so that when you do pull the levers, you start braking almost immediately. The pads should be centered on the rim, without rubbing the tire or touching the spokes at all.

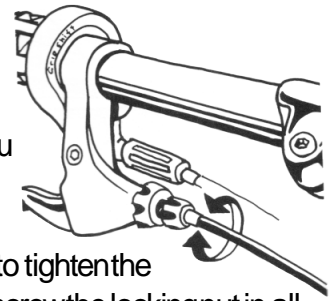
Levers, Cables, and Housing

The brake pads squeeze the rim when you pull your brake lever and a brake cable pulls them together. The cable runs inside brake housing, which keeps the cable tight and stiff, even when it's not running in a straight line. The diagram shows how brake housing is a layer of plastic wrapped in a coil of metal and covered by another layer of plastic. In time, the insides of the housing will corrode, and the brake cable won't pull through it smoothly. When this is a problem, replace the cables and housing. Before (and while) you're taking things apart, look at how they fit together, so that you'll know how to put them back afterwards. People usually make the left hand brake the front wheel, and the right hand brake the rear wheel, and the cables loop behind the handlebars, but do what you feel is best. You probably shouldn't put bearing grease on your cables, which people sometimes do, new housing generally works worse when grease. When in doubt, ask the company who made the housing what they recommend, or see if it says anything on the box it came in.

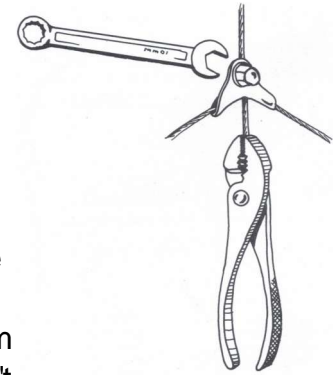


Brake Tension Adjusting

If your brakes are too tight (rubbing the rim when you ride) or too loose (don't brake right away when you pull the lever, and they're not too far off, you can use the barrel adjuster to fix the situation. Your bikes should have adjusters either on the levers (see right picture) or near the brakes (see left hand picture). You can loosen the adjuster to tighten the brakes, or tighten them to loosen the brakes. When you've finished, screw the locking nut in all the way so that your adjustment stays locked in place. You can usually do this with no tools.



If the adjustment you need to do is more serious, you'll need to loosen the cable, usually with a 10mm wrench. You'll need to simultaneously hold the cable tight with pliers and hold the brake pads in the right position while tightening the cable back on, which is tricky. The diagram to the right shows this process for center pull brakes. If you have access to a "third hand" tool, it's a lot easier.



Sticky Brakes

This can happen if the cables are corroded and in need of replacement, if the pivoting points need to be lubed with chain oil, or if the pivot bolt or pivot screws are too tight. If you can pull the brakes apart with your hands, do this and then push them together. If they spring back on their own, the problem is with the cables. If they don't, the problem is in the brake itself. If lubing the pivots doesn't work, it may be necessary to take apart the brake, clean any grit or grime off the pivots, and put bearing grease on the pivot points.

Off-Centre Brakes

Maybe the most frustrating brake problem. Is one brake hugging the rim, while the other has room to spare? Most v-brakes and some cantilevers have screws on the side to adjust the tension of the the springs inside. Tighten the screw on the side that hugs the rim (or loosen the other one). You should see the pads moving.

On center pull brakes, loosen the mounting bolt, re-centre the brake and tighten it again. Should work.

Side pull brakes are the worst. The mounting bolt could be too tight or loose on either the front or back, or the pivots could need an overhaul. If you have specialty brake levers, the best thing is to use these to adjust the front nuts. If you don't, taking a hammer and a flat-end punch and hitting the brake spring from the top on one of the sides is crude, but works surprisingly well.

Squeaky Brakes

This is more of an annoyance than a problem. It is sometimes caused by grease or grime on the rim, which you should wipe off. Usually though, the brake shoes need to be "toed in". The fronts of the brake pads should be a millimeter or two closer to the rim than the back of the pads. On cantilevers and v-brakes, you can usually loosen the adjusting nut, re-position the shoes, and tighten them up again. On side- and center pull brakes, you usually have to just bend the part of the brake the shoe is attached to. This is best done with a big adjustable wrench.

