

A close-up photograph of a bicycle's rear gear cassette and chain. The bicycle frame is a vibrant purple color. The chain is dark and appears to be on a larger gear. The background is a soft, out-of-focus green, suggesting an outdoor setting. A blue circular graphic with the number '4' is in the top right corner, and a blue rounded rectangle with white text is overlaid on the right side of the image.

4

# Adjusting your gears and brakes

Bike Maintenance

we are  
**cycling**  
UK

# Introduction

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**For safe and happy cycling, it's important to understand how to check your bicycle before you set off on your journey and how to keep it maintained for optimum performance.**

This series of guides, produced by Cycling UK, provides some basic tips on maintenance and repair.

You'll find most of the common issues covered: the basic checks you should carry out before setting off, the essential tools you should always carry, how to fix a puncture, and how to adjust your brake and gear cables.

## Here's what we'll cover

**1**

**The correct position for  
brake levers**

**2**

**Adjusting brake cables  
using barrel adjusters**

**3**

**Indexing rear gears**

**4**

**Adjusting front gears**

But remember, if unsure about your repairs, seek the advice of a qualified mechanic at your local bike shop.

**At some point it's likely you'll have to adjust your gears and brakes. Over time, cables will stretch and brake blocks or pads will wear down, resulting in reduced braking capacity.**

Similarly, you may find your gears are rattling or not changing as they once did as you encounter gear indexing problems.

This guide will show a simple technique to adjust your brake cables and how to adjust your gears to make sure they're changing crisply again.

All these adjustments can be made by hand, so you shouldn't need any tools.

**1**

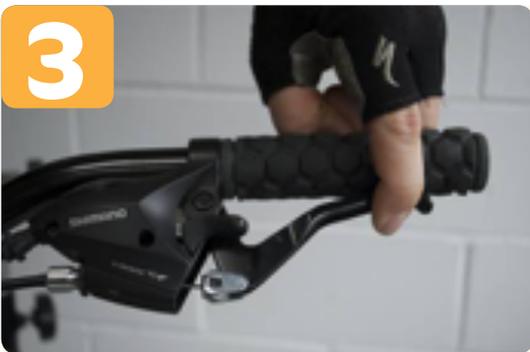
## The correct position for brake levers

**1**

Shows the correct position of brake levers. Having the lever at the correct position is important, not only for safety but comfort and braking power. Your fingers are strongest with the fingers curled around the lever, however everyone has different sized hands and allowance should be made for this.

**2**

Go through the same processes as for the front wheel: disconnect the brake then undo the quick release.

**3**

As the wheel begins to come out (where you have the bike upright, lift the frame or saddle a little to facilitate this), try to move the rear mech a little away from the frame in a vertical direction.

In both cases for (2) and (3), the brakes need adjusting.

**Before reading on, you might like to watch our short film on how to adjust your brakes.**

## 2

# Adjusting brake cables using barrel adjusters

As brake pads and blocks wear, the slack can be taken up by the barrel adjusters. Without doing this, the brake levers pull back to become close to or even touch the handlebars, preventing effective stopping.

## 1

First loosen the lock nut. The lock nut is the larger nut that sits outside the barrel adjuster and screws up against the body of the brake to secure the adjuster and prevent it from loosening over time.



## 2

Wind the adjuster in or out as appropriate to find the correct lever position. Winding it out 'tightens' the brakes (moves the brake lever further away from the handlebars), winding the adjuster in, reduces the reach of the lever (for smaller hands).



**3**

Check the lever is in the appropriate position, and cannot be pulled back to the handlebars.

**4**

Tighten the locknut back against the lever to hold the adjuster in place.



### Notes:

1. There are some levers that have barrel adjusters without locking nuts. These usually retain their position without needing one.
2. Many hydraulic brakes (e.g. most disc brakes) do not have adjusters and adjust the lever position as part of their own working system.
3. Where the brake blocks are severely worn, the adjuster may not be long enough to position the lever appropriately. At this point, the cable adjustment needs to be made at the brake calliper itself or the brake pads replaced. Do not make adjustments here unless you have received training to do so.
4. Where the brakes cannot be adjusted so that the lever is positioned correctly, the bike must be considered unusable and should be taken to your local bike shop for a service.

# 3

## Indexing rear gears

Rear Derailleur Barrel Adjuster



Rear/Right Hand Shifter Barrel Adjuster



Road Bike Barrel Adjuster – Frame



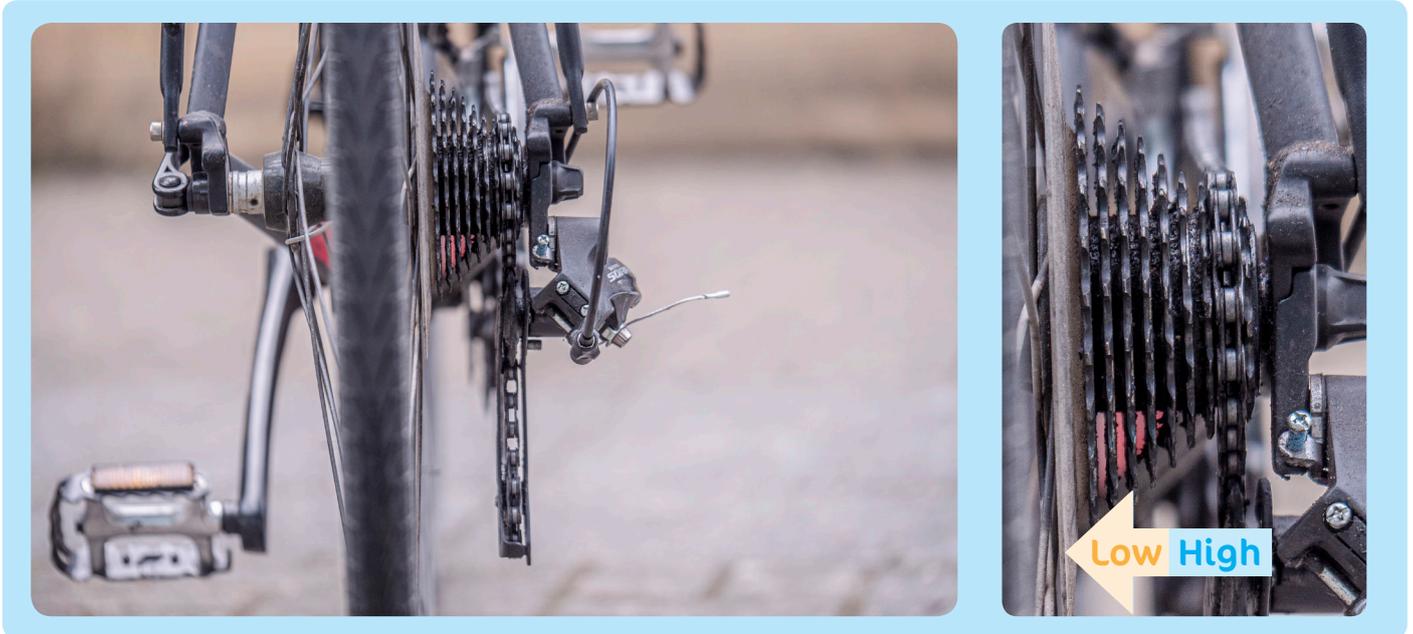
In-Line Barrel Adjuster



Barrel adjusters may be on the rear derailleur and/or the rear/right hand gear shifter (flat bar bike). There may be one on the right hand side of the frame or an in-line adjuster on the rear gear cable outer for road bikes.

**Before reading on, you might like to watch our short film on how adjust your gears.**

If the rear gears are making excessive noise or unable to shift from the smaller sprocket (high gear) to the bigger sprocket (low gear):



**1**

Turn the barrel adjuster on the derailleur or gear shifter counter clockwise, 1/4 turn at a time to ensure you don't apply too much tension to the cable.

**2**

After each adjustment, check the gears by clicking the rear/right hand gear shifter up and down one click while turning the pedals.

**3**

Repeat steps 1 and 2 until the shift is made smoothly and any excess noise has disappeared.

**4**

Shift through the gears to ensure you have the full range. If so, the rear gears are now indexed.

If the rear gears do not shift smoothly from the bigger sprocket (low gear) to the smaller sprocket (high gear):



**1**

Turn the barrel adjuster clockwise. This loosens or takes tension off the cable.

**2**

After each adjustment, check the gears by clicking the right-hand gear shifter up and down one click while turning the pedals.

**3**

Repeat steps 1 and 2 until the shift is made smoothly and any excess noise has disappeared.

**4**

Shift through the gears to ensure you have the full range. If so, the rear gears are now indexed.

The barrel adjuster will be on the front left hand shifter (flat bar bikes). Road bikes may either have a barrel adjuster on the left-hand side of the frame or an in-line adjuster on the front gear cable outer.

If the front gears do not shift smoothly from the smaller chainring (low gear) to the bigger chainring (high gear):



**1**

Turn the barrel adjuster counter clockwise,  $\frac{1}{4}$  turn at a time until the chain shifts smoothly and engages properly with the next

**2**

After each adjustment, check the gears by clicking the front left hand gear shifter up and down one click while turning the pedals.

**3**

Repeat steps 1 and 2 until the shift is made smoothly between each chain ring.

**4**

Shift through the gears to ensure you have the full range.

# 4

## Adjusting front gears

If the front gears do not shift smoothly from the bigger chainring (high gear) to the smaller chainring (low gear):



**1**

Turn the barrel adjuster clockwise,  $\frac{1}{4}$  turn at a time until the chain shifts smoothly and engages properly with the next chainring.

**2**

After each adjustment, check the gears by clicking the front left hand gear shifter up and down one click while turning the pedals.

**3**

Repeat steps 1 and 2 until the shift is made smoothly between each chainring.

**4**

Shift through the gears to ensure you have the full range.