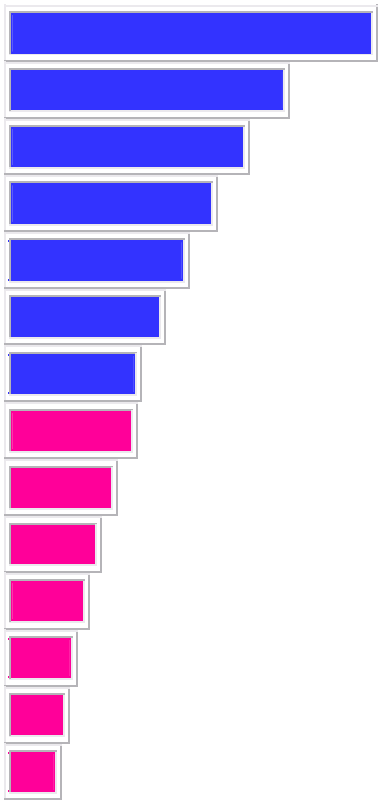
Function and effect

1. Function



With **mountain-drive** get enough low gears to climb up even the steepest hills without strain.
mountain-drive doubles the existing gears (blue bars). You get lower gears (red bars), normally without any overlap.

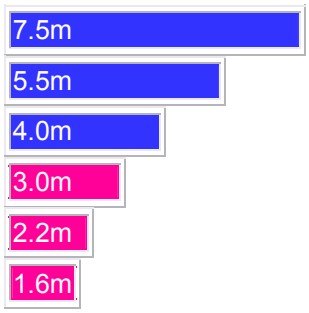
Please note, that the gear range of a bike equipped with **mountain-drive** is much wider than the range of a 24- or even 27-speed bike with derailleur, where several gears (about 10 from 24) are provided in two- or threefold (see diagram at the bottom of this page). However, the total gear range is much smaller than with **mountain-drive.**

2. How to shift?

It's so easy: push with the heel of your shoe either on the right or on the left side of the axle on the push button to change from high to low gear or vice versa! That's all!

The new easy-shift levers make shifting a real pleasure - even with clic-in-pedals or small shoes.

3. The effect

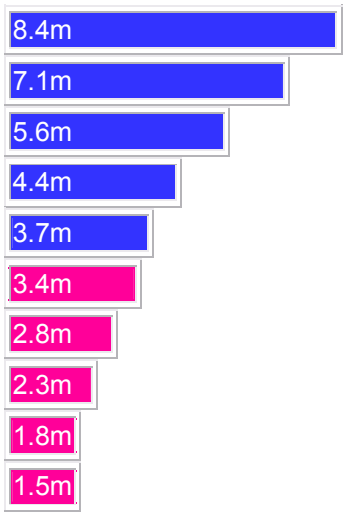


Gear range: 466%

3-speed hub + mountain-drive
The blue bars show the development (in meters) resp. the inch gears of a 3-speed bike.

The red bars show the additional 3 speeds, if **mountain-drive** is engaged. A gear range of **466%!**

(Example: 46 tooth chainring, 18 tooth cog, 700C rear wheel)



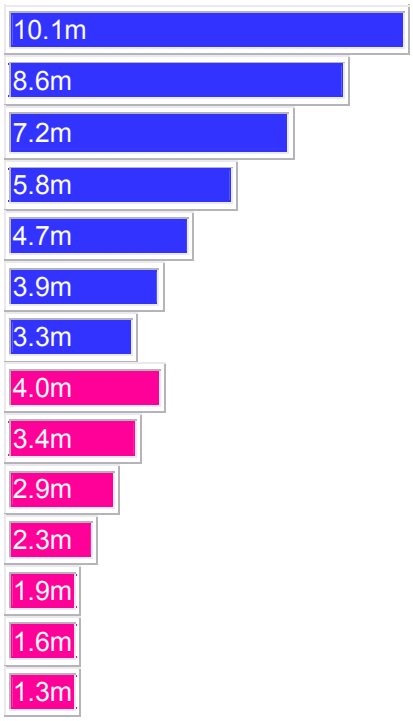
Gear range: 560%

5-speed hub + mountain-drive

The blue bars show the development (in meters) resp. the inch gears of a 5-speed bike.

The red bars show the additional 5 speeds, if **mountain-drive** is engaged. A gear range of **560%**!

(Example: 46 tooth chainring, 18 tooth cog, 700C rear wheel)



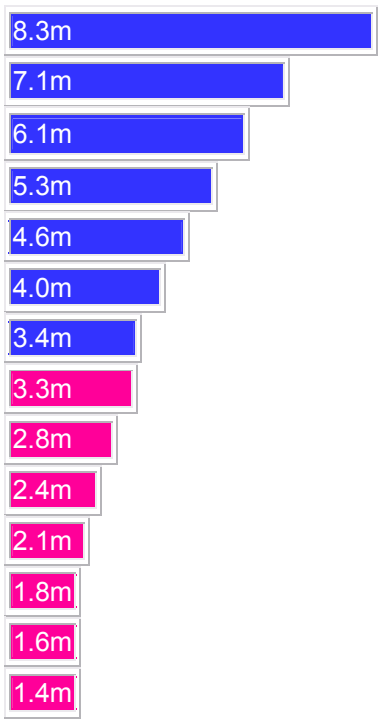
Gear range: 761%

7-speed hub (SRAM Spectro 7) + mountain-drive

The blue bars show the development (in meters) resp. the inch gears of a 7-speed bike.

The red bars show the additional 7speeds, if **mountain-drive** is engaged. A gear range of **761%!**

(Example: 42 tooth chainring, 16 tooth cog, 700C rear wheel)



Gear range: 611%

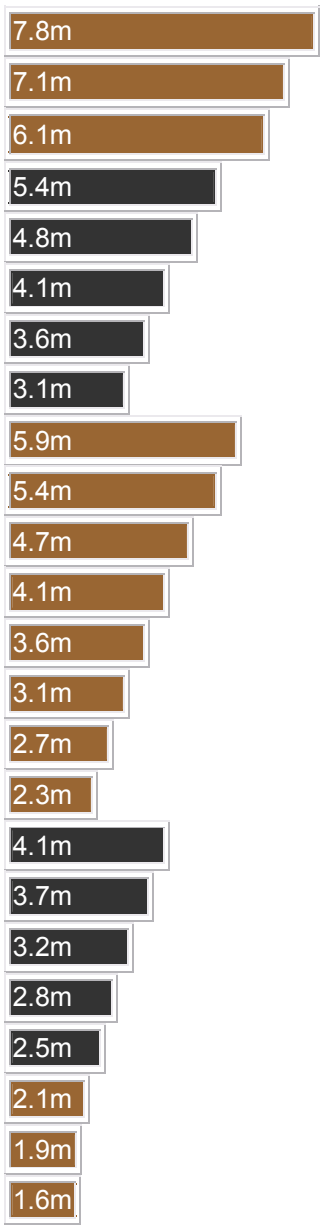
7-speed hub (Shimano Nexus) + mountain-drive

The blue bars show the development (in meters) resp. the inch gears of a 7-speed bike.

The red bars show the additional 7speeds, if **mountain-drive** is engaged. A gear range of 611%!

(Example: 44 tooth chainring, 18 tooth cog, 700C rear wheel)

You get similar diagrams for 8-, 9- and 11-speed hubs.
Please notice: the 14-speed Rohloff is not allowed to be combined with



Gear range: 486%

mountain-drive.

Comparison: 24 speed derailleur system.

(Example: triple chainrings 42/32/22, cassette 28/24/21/18/16/14/12/11, rear wheel 26")

Several gears (see black columns) are provided in two- or threefold, however, the total gear range is much smaller than with **mountain-drive.**

4. Calculation "development" and "inch gears"

For the calculation, you need the following details:
- Tooth number of the chainring
- Tooth number of the rear cog
- Circumference of the rear wheel (= diameter * 3.14)

You get the "development" by the following formula:

Tooth number of the chainring / tooth number of the cog x circumference of the rear wheel (in meters)

You get the "inch gears" by the following formula:

Tooth number of the chainring / tooth number of the cog x circumference of the rear wheel (in inches)/ 3.14

For a derailleur system, calculate all gears according to the formula above. For a rear hub, multiply all results with the internal factors of the hub.