

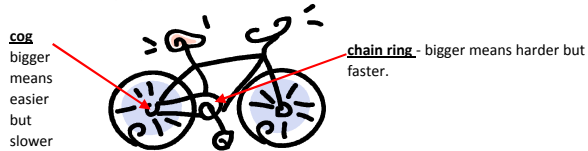


Track Bike Gearing - A rider responsibility!

How hard or easy it is to push the pedals on a bike is determined by the gear that is used. On a road bike the rider can change gear to select the one that is most suitable for the current situation. On a track bike that is not possible and gears are chosen BEFORE the rider gets on the bike by selecting the appropriate CHAIN RING (front) and COG (rear).

In an effort to safeguard junior riders Cycle Sport Victoria sets gear limits for each age group. These gear limits are:

- U13: 5.5m
- U15: 6.0m
- U17: 6.5m
- U19: 7.93m



This means that the distance travelled by the bike for one rotation of the pedals can not exceed these distances. To check whether your bike meets these limits you will need a tape measure and a marker. Start with one crank pointing straight down over the zero point on the tape. Push the bike in a straight line until the pedal is again pointing straight down. The distance on the tape at this point is your "roll-out".

If you have rolled out too far you will need to either put on a bigger cog or a smaller chain ring.

If you have rolled out a long way short of your limit you may want to go to a smaller cog or a bigger chain ring.

To change a chain ring you first need to loosen the back wheel nuts, flick the chain off the chain ring and loosen the chain ring bolts with an allen wrench. Changing the chain ring is pretty easy to do and allows smaller changes to the rollout. However new chain rings cost about \$100 so this is an expensive option.

To change a cog you again need to loosen the back wheel nuts, take off the chain, take out the back wheel and then use a lock ring wrench to remove the lock ring and a "chain whip" to remove the cog. This is a bit tricky at first and often requires a fair bit of strength. New cogs can cost between \$10 and \$60. If you don't need a top quality one make sure you are clear about this when ordering. BMX bikes use basic cogs and these are usually very cheap and do the job quite OK. If you want to have two gears available you can often put a cog on both sides of the wheel. This means that to change to an easier or harder gear you just take the wheel out and flip it over to the other side. Cogs should always be secured in place with the use of a lock ring - note that lock rings do up in the reverse direction and you need a special tool to tighten or loosen them.

BSCC provides hire bikes for club members with one cog on the rear wheel. If you need to change this cog you may be able to find a spare in the club tool box and you are free to use these on a "swap and go" basis. You must not take extra cogs from the toolbox and if you need a size that is not in the club toolbox you must purchase this yourself. Similarly the purchase of chain rings is at the user's expense. Please return your bike with the same chain ring and one cog.

CSV provides gear charts to assist you to calculate the best gear for your age group, your bike setup and your strength. These tables provide approximate roll outs but you must always check it with a tape measure. Tyre sizes effect the roll out and even if you are just one cm over the limit you WILL be disqualified in a championship event!

Having the right gear is YOUR RESPONSIBILITY. Ask if you need help but please do not expect that the club will search you out and check your bike for you.

The gear chart below lists chain ring size across the top and cog size on the left. The numbers in the middle are the estimated rollout in metres for a bike with a normal tyre. Note that roll outs for the smaller bikes need to be checked manually or a different chart located.

Lastly, those of you seeking advice from experienced riders will often hear about gears described using "inches". It is beyond the scope of this help sheet to describe how the conversion works (it is not just metres to inches). If you need to calculate your gear in inches please talk to one of the more experienced "trackies".

COG	42	43	44	45	46	47	48	49	50	51	52	53
11	8.16	8.35	8.55	8.74	8.93	9.13	9.32	9.52	9.71	9.90	10.10	10.29
12	7.48	7.66	7.83	8.01	8.19	8.37	8.55	8.72	8.90	9.08	9.26	9.44
13	6.90	7.07	7.23	7.39	7.56	7.72	7.89	8.05	8.22	8.38	8.55	8.71
14	6.41	6.56	6.71	6.87	7.02	7.17	7.32	7.48	7.63	7.78	7.93	8.09
15	5.98	6.12	6.27	6.41	6.55	6.69	6.84	6.98	7.12	7.26	7.41	7.55
16	5.61	5.74	5.87	6.01	6.14	6.28	6.41	6.54	6.68	6.81	6.94	7.08
17	5.28	5.40	5.53	5.65	5.78	5.91	6.03	6.16	6.28	6.41	6.53	6.66
18	4.98	5.10	5.22	5.34	5.46	5.58	5.70	5.82	5.93	6.05	6.17	6.29