

Junior Development Programme



5. Maximizing the number of gears available to juniors on a road bike.

If you look around the junior training room at the *road bikes* used by juniors, you will see a variety of ways of dealing with the fact that juniors do not have a large range of gears available to them because of the rollout restrictions and that generally they have unused gears on their bike. Here are some observations (but if it blows your mind, - skip to the last paragraph of this section!):

Front Chainwheels

- (1) Most juniors do nothing other than lock out the front and rear derailleurs so that it can only select the small chainwheel at the front and however many cogs achieve the allowable rollout in the gear cluster at the back.
- (2) In order to save weight, some may actually take off the large chainwheel and just have the small one on the front, but most just leave it on. It would be hard to measure the benefit from stripping off less than 100grams from the weight of the bicycle.
- (3) Sometimes you see junior bikes with two identically sized front chainwheels (e.g. two 39tooth, “39T”, chainwheels). While this doesn’t seem to serve any purpose in terms of extending the gear range, on some bikes you might notice that the chain will rub on the front derailleur when it is in the extreme low or high gears. The point of two identical chainwheels is that when you are at the extremes on the back you can select a front chainring that will eliminate that scraping.
- (4) You can get smaller chainwheels than the standard 39T, so you can have a 39T as your large chainwheel and a 36 or 34T as the inside, smaller chainwheel. This gives you a greater low range (i.e. good for going up steep hills). The problem with this is the bolt pattern on the chainsets, - generally the smallest chainwheel you can get to fit most road bikes’ bolt patterns is a 39T. You might find a specialist manufacturer that can give you a 38T but this may be hard to find.
- (5) The latest thing in chainsets is the “compact” chainset and this is what you need if you want to use a smaller chainwheel than a 39T. This has a smaller bolt pattern and can thus take smaller chainwheels. You could therefore run 39T/36T, or 36T/34T combinations on the front. But it is an expensive fix if you are thinking of changing over the whole chainset on an existing bike.

Rear Cogs

- (1) We also need to consider the rear cluster of cogs. Given that most combinations of chainwheel/rear cogs means that the smallest rear cog you can use is a 13T (U17) and for U13’s, a 14 or 15T, there is no point buying a cluster that has smaller cogs than that. Rear clusters tend to come in set combinations, for instance 12-21T, 12-23T, 13-23T, 13-25T, will have at least one cog you can’t use, but if you are changing your rear cluster, - go for something like a 13-25 as it doesn’t “waste” too many small gear, and it gives you a greater range for the hills.
- (2) Some specialist after-market manufacturers do other combinations – they are harder to get, but you might try bike shops that stock BBB product, - they have some good clusters that are perfect for juniors (e.g. 14-25 in 9 and 10 speed).

All of the above sounds technical and probably confusing. For most of us it is easier (and cheaper) to simply lock out the gears on the bikes we have and get on and enjoy the thrill of riding with whatever gears we have left.