Perfecting Position, Cyclocross Style

By Kenneth Lundgren

As with TT bikes, road bikes, and track bikes, the fit for the cyclocross bike is quite specific. Time trial bikes have an extreme-forward position—it's like taking your road position and rotating everything forward and down. The same with a mountain bike—many riders like to set the saddle back with a higher stem to increase power output and improve traction, making it easier to un-weight the front end through technical sections. Although in appearance the 'cross bike looks very much like a road bike, there are many subtle differences that will help the 'cross bike handle far better on a 'cross course than its cousin on the road.

When a professional fitter conducts bike fits, after taking measurements and aligning the cleats, he usually starts with the saddle height and fore-aft position. For the road, here is a typical guideline: when the cranks are parallel to the ground, the knee should be over the tip of the crankarm or just in front of the pedal spindle, depending on the rider. For saddle height, using a goniometer, the bend of the knee should be around 30 degrees, in the middle of the recommended range of 25-35 degree knee bend (in my experience, most riders set their saddle far too high).

A big key to the 'cross position is allowing the rider to always stay loose and relaxed on the bike—many riders buy 'cross—and road—bikes that are too big for them. I recommend going to a reputable shop and getting sized up if you're in the market for a new bike. Once you know your size, you want to get a 'cross bike that's similar in size to your road bike. If the sizing is different, you want to go DOWN the next size. But in terms of crank length on the 'cross bike, I recommend same crank length as used on road bike.

Regarding saddle position, traditionally riders who like to push bigger gears like to have the saddle set back a bit, and riders who like to spin smaller gears like to be a little more forward, on top of the gear, which helps with leg speed. No matter your style, it's important to feel "centered" on the bike—too far forward and you can weight the front wheel sufficiently but you will lose traction in the rear and not be able to balance and negotiate technical terrain too well. Too far back and you lose traction up front, which is key for cornering – with too much saddle setback, you are also pinching your hips closed, which inhibits both bike handling ability AND power output.

I set the 'cross saddle up almost identically to their road position—but with one catch. 'Cross is so intense, such a short fierce effort, that I do set the saddle a few millimeter lower than the road height. Many riders experience cramping in their hamstrings and lower back during 'cross races, and lowering the saddle a smidge can alleviate this. When you pedal hard, the muscles tighten, and if the saddle is too high, you will experience cramps and discomfort. With a higher saddle, the rider can only use the quads on the downstroke—no hip flexors, lower back, glutes. A lower saddle height will result in a smoother, more circular, more powerful pedal stroke. With a lower saddle, your hips will be more open, giving you a more powerful position to push from. Your center of gravity is also lower, so the bike will handle better. You will also be able to weight the outside foot while cornering and pedal through more treacherous terrain.

When the saddle is set correctly, you are in an ideal place to both pedal powerfully AND handle the bike. Many 'cross and mountain bikers run their saddles lower than the roadie – and for good reason. A lower saddle allows you to more easily "float" off the saddle through rough terrain… When the bike fits, it almost feels like an extension of your body. Top 'cross riders actually steer and control the bike with their HIPS, and this can only be done if the saddle and bike are set up correctly. I cannot stress how important it is to not feel like you are too far forward or too far back—you want your weight "neutral," which maximizes traction and allowing for maximum power output.

With the reach to the handlebar, it will be slightly shorter than the road bike. As mentioned, a big key to 'cross success is feeling loose and relaxed on the bike, always—and this is easier said than done when you're in full death-mode halfway through an arduous 'cross race. Many roadies like to have a stretched-out position on their road bikes, both on the hoods and in the drops. A huge reason for this is aerodynamics, to cheat the wind. But in 'cross, aerodynamics plays almost no part—power output and bike-handling are the two biggies. With your reach to the hoods, you want your upper arm and upper torso to make a 90-degree angle. For most road positions, the upper body is more elongated.

Stem length is dependent on the rider and bike size, but from my experience, riding with national and even world champions, training with several professionals, the most common stem length is 100-110mm. If the frame and saddle height are correct, this is where your stem will measure. The stem is typically shorter (1) to help with quick bike-handling and (2) to increase comfort on the bike. The more comfortable you are on the bike, the better you will perform. On hard, long climbs, do you ever get the sensation that the bike is "growing" on you, that you're overstretched and the bike feels longer than normal? This is because your hamstrings and lower back are all tightening up and shortening. In 'cross, with a proper fit, you should never feel this sensation.

Reach is one part of the front-end equation, but height is equally as important. Cyclocross frames have higher headtubes than road frames; the height of the 'cross handlebars, depending on rider height, are 1-3" higher than the road bike. A higher stem helps the rider feel more centered and upright on the 'cross bike, a huge component for proper traction and cornering, and also allows the rider to produce more power. True story—think about it, when you are climbing, are you in the drops or the tops? 'Cross is about pure power output, keeping those hips open, and the 'cross bike is set-up for this. Another benefit to a higher front-end is while out of the saddle you will have far better traction, especially in loose or wet conditions. I've seen it countless times: roadies who are stubborn and fit their

'cross bikes like their road bikes FAIL. 'Cross is far different and this difference needs to be respected and understood when setting up your 'cross bike.

Concerning handlebar width, many 'cross riders like to go wider. Brandon Dwight, the current 40+ National Champion and owner of Boulder Cycle Sport, runs 44 cm bars! Normally, Dwight would use 40 cm bars on his road bike. But coming from a mountain-bike background, he runs wider bars to help with balance and stability through technical sections (imagine trying to balance on a wobbleboard in a push-up position with hands together versus with hands out wide) and also to help with cornering. With wider bars, he can really counter-steer with the inside arm, the extra width allowing for better leverage and traction. Also, wide hand-position helps keep the chest open, thus allowing for—surprise surprise—greater power output.

Many successful 'cross racers position their hoods higher on the handlebar, angled up. Three-time Elite National Champion Tim Johnson is a notable example, running his hoods very high. Even with taller riders, the hoods are not much lower than the height of the saddle. Riders do this so they can hold the hood with a straight wrist. The higher hoods keeps the rider more upright, helps diminish reach, and it helps allow for superior "grip." Now the rider can remain loose and relaxed while cornering, while negotiating through loose, wet, and other technical sections of the course.

When the hoods are higher, the brakes/shifters are farther from your hands than when you are in the drops. For this reason, I recommend running compact handlebars. This will greatly diminish your reach to the levers and also allow for a more comfortable position while in the drops. Many riders like to ride in the drops—like Katie Compton—but the bike has to be set up for that. If your position on the 'cross bike mirrors your road bike, the bike just won't handle properly and you'll most likely cramp up and negatively impact your performance. If you run a higher position with a shorter stem with compact bars, however, you will be surprised how good riding in the drops can feel, both for control and power. Riding in the hoods versus the drops is completely personal and you need to find what works best for you.

I was discussing Hoods vs Drops with current 40+ World Champion Pete Webber, and he certainly thinks it's advantageous to accelerate standing on the hoods, much better for short, 3-5 second micro-bursts… He also noted that at the starts, you get far more leverage starting on the hoods. Having said that, World Number 1 Katie Compton starts in the drops, so again both can work… Most pros do stand out of corners, up power climbs etc sprint from the hoods – and I agree, it can be more powerful and effective over the course of a full 'cross race, but drops versus hoods is personal to each rider… Hoods = pure power while Drops = more leg speed. So are you a masher, or do you prefer to accelerate with a higher cadence? I recommend training both ways, perhaps alternate the first four races of the season, etc, to see not only where you're most comfortable but FASTEST.

But even if you're not in the drops a lot, I still recommend running compact bars. Because on nasty, gnarly descents, you 100% want to be in the drops. On the hoods, many riders find is difficult to both grip the hood and brake simultaneously. When you are in the drops, this is far easier: you can grip the bar loosely and still finesse the brakes. You can remain relaxed as you need to be to negotiate this fast terrain.

Also, although 'cross races usually explode to pieces after even one lap, sometimes you will come to the finish with a few other riders, and you will need to be able to SPRINT. You need to have the drops set up so you can grip the bar with a straight wrist and also be able to shift while sprinting. You might need to do this in 5% of the races you do, but you don't want to lose a race because you couldn't sprint or shift properly because of an ineffective bike fit. Sprinting in the drops opposed to sprinting from the hoods is far better because you can pull on the bars more powerfully. You're lower and more aero, and you can increase your leg speed more quickly.

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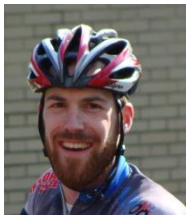

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Ken, who is one of the area's top trialists, races for the Northeastern Hardware Cycling Team, one of New England's strongest elite squads. In the last year, he won 7 time trials. He's also won the overall in the Time Trial Cup in the last three years. Northeastern Hardware has won the Garden State Cup for six consecutive years and looks to make it seven straight next year.

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