

the **CrossFit**

JOURNAL ARTICLES

Bike Control Basics

Part 1: Static Skills

Scott Hagnas

The first several parts of this series on functional bike maneuvers will be directed toward anyone looking to improve their technical riding and will not be discipline-specific. Later installments will present strategies for improving riding performance for those already skilled on a bicycle.

In this series we will be looking at functional skills drawn from primarily from mountain biking, bicycle trials, and BMX freestyle. For our purposes, we'll consider only the skills that help you navigate your environment smoothly and efficiently or that allow you to ride terrain that you otherwise couldn't. Hopping over a log or jumping down a set of stairs would be considered functional; doing a 360-degree spin in the process wouldn't. (This doesn't discount the value of learning skills such as a 360, as pushing your level of technical skill development will only improve your overall ability as a cyclist. However, the 360 is not needed to clear the stairs, so it would be outside the scope of these articles.) Since this series won't be riding-style specific, we'll be looking at functional skills that can be done on almost any kind of bike. Moves that require BMX bikes with axle pegs or trials bikes with bashguards won't be considered here. Basically, we will be borrowing the useful skills from across a range of biking styles. My riding background is primarily in BMX, though I have competed in trials riding and done some mountain biking as well. My specialty has always been BMX flatland or ground riding. It is possibly the least functional of all the riding disciplines, but it does allow you to develop a very high level of balance and bike control. Here is a video of a recent session, to give you an idea of what flatland riding looks like.



Be sure to check out the accompanying video clips, as the movements in these skills are so subtle that still photos do not do them justice.

Rolling ratchet

Rolling Ratchet

<http://media.crossfit.com/cf-video/Ratcheting.wmv>

The rolling ratchet helps develop balance and control that will be useful in the static skills to come. What you do is simply ride forward very slowly, pumping the pedals in a back-and-forth ratcheting motion.

Ride slowly forward up a slight incline. Keep your pedals level,

Flatland Riding

<http://media.crossfit.com/cf-video/Flatland.wmv>

In this first installment, we will look at some of the static and slow-speed skills from trials riding. Future installments will progress to faster and more dynamic skills.

Bike Control Basics - Part I: Static Skills *(continued)*

with your power pedal forward. If you are not sure which is your power pedal, it should be the same foot as your front foot when doing a split jerk. Now, try to ride as slowly as you can, barely creeping forward. Propel yourself forward as needed by giving a quick forward pump with the pedals and then quickly backpedaling to the pedals-level position.

Practice this up inclines, on flat ground, and in tight circles in both directions.



Trackstands

Trackstands

<http://media.crossfit.com/cf-video/Trackstands.wmv>



In a classic trackstand, you balance in place by just barely rolling the bike forward and backward while the front wheel is turned to the side. This skill is very useful for several reasons. For one, mastering it will improve your moving bike control. It can also be useful to pause in a trackstand to check out a line before you commit to it, or, for riders who use clip-in pedals, a way to balance at a stoplight without de-clipping. Of all the stationary skills, this is the most energy-efficient method of balancing.

Start by riding slowly up a slight incline, with your pedals level and your power pedal forward. You should be standing, with your weight over the front wheel. As you come to a stop, turn your front wheel approximately 45 degrees away from your front foot. This makes for a better biomechanical position and eliminates torque in the lower back. Now, you will try to balance in place. If you turned your front wheel to the left, and you start to lose your balance to the left, use a slight ratchet to move slightly forward. This should move the bike back underneath your center of mass. If you lose your balance to the right side, let the bike backpedal slightly down the incline to bring it back underneath. Reverse these directions if you turn your wheel to the right. As you get better at

trackstands, you'll need less back and forth movement to stay balanced. Try to stay as relaxed as possible.

Once you master the uphill version, try the trackstand on flat ground. The forward ratchet motion is the same here, but you won't have the benefit of the hill to roll the bike back underneath you when you need to correct to the opposite side. There are two ways to handle this. For the simpler version, briefly lock your brakes as you create a bit of momentum by moving your shoulders and hips backward. Let off the brakes, and this momentum will roll the bike backward. Stop the backward roll with forward pressure on the front pedal when you are balanced again. Once you have the feel for this, you can do the more difficult but much smoother version by not using your brakes. Everything is the same, but without brakes you must shift your weight very smoothly.

Some more advanced trackstand variations you can work on include doing a trackstand with both brakes locked and balancing only with body English, or doing trackstands down an incline, on narrow objects, or with one or both hands off of the bars.



Hopping trackstands

Hopping Trackstands

<http://media.crossfit.com/cf-video/Hopping.wmv>



The hopping trackstand is a very useful skill in trials riding, and one that will get you over some terrain that would be impossible to roll through. With it, you keep your balance by hopping in place instead of rolling back and forth.

Bike Control Basics - Part I: Static Skills *(continued)*

Start this one on flat ground. Roll forward slowly, pedals level, power pedal forward. Lock your brakes as you come to a stop, and then hop the bike off of the ground. Do this by compressing evenly, bending both your arms and legs, then springing up and pulling the whole bike up with you. Stay light and buoyant, exhaling slightly on the effort phase of each hop. As you pull up on the bike, use a slight forward twist on the grips to make the pedals stick to your feet. To stay balanced, hop to whichever side you are falling to. Try to make your hops only as big as needed, and try for a minimum of hops to conserve energy.

Once you can stay in place, try to travel in all directions. Then, move into rougher ground. Try hopping up hills or stairs. You will soon notice that hopping up hills can have a crushing metabolic effect. Slip this into a WOD and enjoy!



Rocking Trackstands

<http://media.crossfit.com/cf-video/Rocking.wmv>

Rocking trackstands

For a rocking trackstand, you rock back and forth from the front wheel to the back to keep your balance. This is more energy-efficient than hopping, and when mastered can be taken to uneven terrain.

Set up the same as for hopping trackstands. As you come to where you want to balance, apply your front brake and immediately shift your weight forward. Visualize that you are trying to make your feet light on the pedals. Push the bars straight forward. This should endo you up onto your front wheel just a few inches. When your back wheel comes down, have your back brake locked and shift your hips back while pulling the front wheel up. Repeat this movement, rocking back and forth. As you do, swing your elevated wheel toward whichever direction you are leaning.

Once you get this mastered, learn to rock higher, and then try pivoting 90 degrees or so each time you rock. Work both directions. Learn to rock traveling to either side, then finally up hills or stairs.



Scott Hagnas is owner of [CrossFit Portland](#). He is certified as a CrossFit trainer and Circular Strength Training (clubbell training) instructor. He has been riding BMX flatland for 26 years and counting and has filmed/produced /edited several series of BMX videos. He formerly competed in bicycle trials, placing second in amateur in the World Championships in 1990. When not training or riding, Scott can usually be found in the kitchen cooking up Paleo-style meals. He writes a monthly recipe column for [The Performance Menu](#) magazine.