

the **CrossFit** JOURNAL ARTICLES

Bike Control Basics:

Part 3: Dropping Off Obstacles

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Last month, we looked at ways to get up onto some objects that you might find in your path. Now, it's time to come back down. We will be using some of the same techniques that we used to ascend the obstacles, and some more of the static skills from part 1 will come in to play as well.

Just as with getting onto objects, be sure to master these techniques from very low obstacles to start. A curb works well. You want to make sure that you have the skills down pat before attempting higher drops. Also, keep in mind that landing on hard surfaces is less forgiving than landing on softer ones. As you take these skills to higher or more unpredictable objects, you will crash now and then. Prepare yourself accordingly. Learn to bail when things go awry. Don't go down with a sinking ship! You'll usually know that you are in trouble the moment you drop.

Try not to ride over your head. If you are not feeling comfortable with a line or drop, it is best to wait until later when you have the skill or

confidence. Freezing or panicking in the middle of a line is a sure recipe for disaster (see video). Stay as relaxed as possible.

With all the drops, the landing mechanics are very similar. You want to land back wheel first to progressively absorb the shock of the landing. This is very important. Your wrists will take a beating if you land flat, even from very low drops. Keep the front wheel up and extend your legs while you are in the air. Lock your back brake as you drop. As you land on the back wheel, absorb the impact by shifting your weight back and controlling the landing of your front wheel. Absorb the impact with both arms and legs, exhaling as you do. With practice, you will see how body and bike combine as one structure to dampen the landing forces. In fact, you can drop from a higher object on a bike than you can on foot because the larger structure of combined bike and rider can absorb more force. This is why bailing and landing safely on foot from a big drop still hurts worse than if you had landed the drop properly.



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



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

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Dropping Off Obstacles (continued...)

This is assuming, of course, that nothing on the bike breaks on landing, however. Always be absolutely sure that your bike is in great condition. Make sure that your brakes, cranks, and pedals are safe. Inspect your frame and forks periodically, and finally, look at your chain.

If it breaks while you are setting up for a drop, you'll be going over the bars shortly thereafter! Be sure that your tires are inflated enough to avoid bottoming out the rims—which will give you either a pinch flat or a flat spot in your rim.

Let's check out a few ways to drop off of low things.

Rolldowns

This is the simplest way down from small drops or larger rounded obstacles. Check your chainring clearance beforehand, as catching your sprocket on the object once your front wheel drops will either damage your bike or send you over the bars—or both at the same time. Approach slowly, feathering the front brake as your front wheel rolls off. Extend your arms, keeping your weight way back over the rear wheel. Use the front brake to control the drop of the back wheel, extend your legs to land the back wheel smoothly.

This is a very useful technique for off road riding. Be careful not to get your front wheel off line or in a rut.

Endo drops

The endo drop is similar to the side drop, and it also employs elements of the hopping trackstand. Approach the drop point and apply the brakes. Hop to the edge as in the side drop. Shift your weight forward and push on the bars, and as you do, kick the back wheel out over the drop. Lean out over the drop as you do this, then pull your front wheel off of the obstacle. Stay loose, extend your legs in the air, and land back wheel first. Again, stay centered, or you'll eject.

Once you get the hang of this, skip the hopping setup part. Roll slowly into the endo drop, applying your front brake and shifting your weight off of the obstacle in one fluid movement

Side drops

This one is a bike trials-type move, but it is useful on ledges and uneven natural terrain. Prior mastery of the hopping trackstand from part I of this series is a must (see issue 49).

Ride up close to the edge of the drop, and then apply both brakes to come to a stop. Hop the bike evenly on both wheels to the edge. When you are ready to make the drop, compress both arms and legs, and shift your weight off of the obstacle. Explode up and off, pulling the bike with you. You will want to shift your weight to the rear as you do so that you can make a good back-wheel-first landing. Align yourself in the air, and stay relaxed. Stay centered over the bike, or you'll eject right after landing.

As you gain proficiency, you can play with turning yourself in the air or with making precision landings. Concentrate on where you want to land.

Check your ground before takeoff. Catching a wheel as you start your drop is big trouble. Another pitfall is loose ground that gives out as you try to jump off. A memorable crash that I experienced while competing happened as I was side hopping off of an old log. It was rotten and gave out as I tried the hop, sending me flailing sideways and impaling myself on a nearby stick. Watch out.

Speed drops

The speed drop is very similar to the wheelie drop, but you coast into this one. This can be done at any speed, and you can clear objects or gaps while in the air. There is little room for error on this one, and bigger drops and gaps require full commitment.

Approach the drop with your pedals level, power pedal forward. Judging the speed that you need will come with practice. Shift your weight back, and pull up on the bars to lift the front wheel into a coasting wheelie. Keep your center of mass low. As you drop off of the ledge, extend your legs. Keep your front wheel up, back brakes on, and land back wheel first.

Landing into a slope will allow you to do bigger or faster drops. Flat or uphill landings will be harsher. Strive to stay smooth and relaxed!

An advanced technique to absorb drops is to compress before you drop, so that your center of mass is lower. You simply then extend your legs as you drop. This is just like squatting down before jumping off of a ledge on foot; the impact is much less than if you had jumped off from a full stand. Wait until you have the standard drop versions down before trying this.

Wheelie drops

This is the standard, straight-forward ride-off. You will do this one when you don't have much speed to work with, or when you need to stop right after landing. It is easiest done with a low gear ratio.

Roll up slowly, with pedals level and your power pedal forward. One full crank length before the edge, begin to pedal forward, leaning back and pulling up on your front wheel. By the time your back wheel reaches the edge, your pedals should be level again, with your power pedal forward. With a larger gear ratio, a half crank may suffice. Extend your legs as you drop, apply the back brake, and land back wheel first. Keeping the back brake on as you land will keep you from looping out when you contact the ground (flipping straight onto your back or butt).

As you master drops, you can begin to do brakeless landings cautiously. The landing mechanics are the same, but nailing them is even more important. If you don't keep your weight back enough as you set up for the drop, your front wheel will dive off of the obstacle and you'll head for the ground like a lawn dart. You will quickly learn to avoid this.

With practice, you can learn to handle some pretty large drops with this technique.

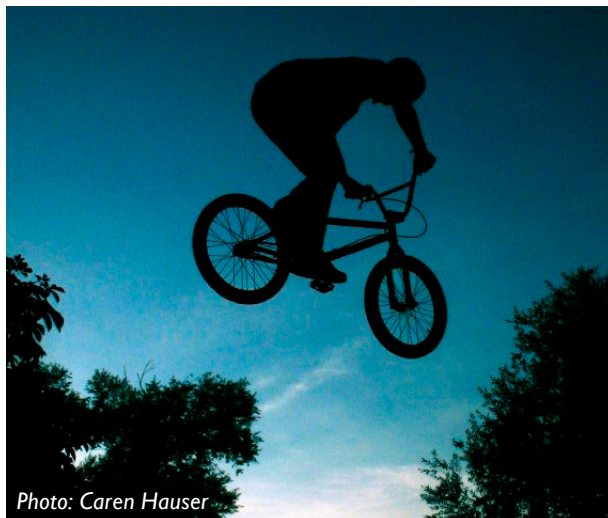


Photo: Caren Hauser



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.